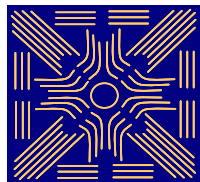


AGENDA NOTES FOR

67th PLANNING COMMITTEE MEETING



(15th July, 2019)

List of Agenda Items for the 67th meeting of the Planning Committee

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**AGENDA ITEM NO. 1: CONFIRMATION OF THE MINUTES OF 66TH MEETING OF
THE PLANNING COMMITTEE HELD ON 17.11.2017**

- 1.1 The Minutes of the 66th Meeting of the Planning Committee held on 17.11.2017 were circulated vide letter No.K-14011/100/2016-NCRPB dated 22.11.2017 to the members of the NCR Planning Board. Copy of the Minutes are at **Annexure-1/I.**
- 1.2 No comments have been received on the Minutes. Accordingly, Minutes of the 66th Meeting are placed before the Planning Committee for confirmation.

Action Point:

- ***Minutes of the 66th Meeting of the Planning Committee may be confirmed.***

**AGENDA ITEM NO. 2: ACTION TAKEN ON THE DECISIONS OF THE 66TH
MEETING OF THE PLANNING COMMITTEE HELD ON
17.11.2017**

The 66th Meeting of the Planning Committee was held on 17.11.2017 under the Chairmanship of Member Secretary, NCRPB. Action Taken Report on the issues/decisions taken in the Meeting are as follows:

Sl. No.	Agenda Item/decisions	Action Taken/Status
1	Agenda Item No. 3: Draft Revised Regional Plan-2021 (DRRP-2021) 3.1 Compliance of Directions of PMO	Matter being dealt at Agenda Item No.10
	3.2 Matter raised by Govt. of U.P. w.r.t. YEIDA After detailed deliberations, the Planning Committee observed that the decision of the 36 th meeting of the Board was varying from the earlier decisions of the Board. The Committee further noted that based on the population of Census 2011 the current population of YEIDA appears to be much below the bench mark for Metro Centre and hence, the target to achieve the proposed population by 2021 is unrealistic. Therefore, the Committee was of the view that it may not be feasible to include YEIDA as a Metro Centre in the DRRP-2021 at this stage.	<ul style="list-style-type: none">As per the recommendation of the Planning Committee, the matter was deliberated in the 37th meeting of the Board held on 04.12.2017 wherein Secretary (HUA), suggested that since the current population of YEIDA is falling in the range of a Regional Centre (i.e. 3 lakh to 10 lakh) as per RP-2021, view may be taken w.r.t considering YEIDA as a Regional Centre instead of a Metro Centre.On the request of Govt. of U.P., Board <i>decided that Govt. of U.P. may examine the matter and communicate their views to NCRPB. Thereafter, the matter be placed before the Board.</i>

Sl. No.	Agenda Item/decisions	Action Taken/Status
	<p>Planning Committee recommended that the view of the Committee may be placed before the Board for consideration.</p>	<ul style="list-style-type: none"> • NCRPB vide letter dated 25.05.18 requested the Govt. of U.P. to examine the matter and send their views. Reminders were also sent. • Matter was discussed in the State Level Steering Committee meeting held on 28.09.2018 under the chairmanship of Chief Secretary, U.P. As per the minutes of the meeting the Govt. of UP will request NCRPB to place the matter before the Board for re-consideration. It was also desired by the CS, Govt. of UP that proposal to include Jewar Airport in the RP-2021 and proposal for funding of Jewar Airport be submitted to NCRPB by the Govt. of UP. • The request for financial assistance for Development of Airport at Jewar, was received in NCRPB vide YEIDA letter dated 23.11.2018. However, as views w.r.t the decisions of the Board on consideration of YEIDA as a Regional Centre were still awaited, the same were requested to YEIDA & GoUP vide NCRPB letter dated 17.12.2018 and reminder dated 18.03.2019. • The matter was again taken up in the Review Meeting regarding

Sl. No.	Agenda Item/decisions	Action Taken/Status
		<p>various issues related to Uttar Pradesh, held at NCRPB office on 17.06.2019 under the Chairpersonship of Member Secretary, wherein Additional Commissioner, NCR Planning and Monitoring Cell, U.P. informed that as per decision of the 5th State Level Steering Committee held under the chairmanship of Chief Secretary, Govt. of U.P held on 28.09.2018 and it was decided there the request for consideration of YEIDA as Metro Centre may be sent to NCRPB. It was assured that the said proposal will be resubmitted within a week by 25th June, 2019. Commissioner, NCR Cell, UP vide its letter dated 5.7.19 (received on 8.7.2019 via email) has submitted the request for consideration of YEIDA as Metro Centre.</p> <p>Action Point:</p> <ul style="list-style-type: none"> • The committee may like to deliberate on matter as the same will be placed before the Board for consideration.
2	Agenda Item No. 4:Draft Sub-Regional Plan-2021 for Haryana Sub-Region: Compliance of directions from PMO	Matter being dealt at Agenda Item No.4

Sl. No.	Agenda Item/decisions	Action Taken/Status
3	<p>Agenda Item No. 5: Delineation and Ground Truthing of Natural Conservation Zone (NCZ) in the Sub-regions of NCR by the NCR participating States and status update on definition of “Aravallis” and “Forest”</p> <p>5.1 Delineation & Ground Truthing of NCZ in sub-regions of NCR</p>	<p>Matter placed at Agenda Item No.12.</p>
	<p>5.2 Definition of “Aravallis” and “Forest”</p> <p><i>Planning Committee after detailed deliberations concluded that:</i></p> <p><i>i) the Board has already decided that the ‘specified areas’ (i.e. the land categories of Gair Mumkin Pahar or Gair Mumkin Rada or Gair Mumkin Behed or Banjad Beed or Rundh) as given in the MoEF’s Notification dated 07.05.1992 are to be included while identifying/ delineating ‘Aravalli’ in entire NCR, by the NCR participating States. Therefore, Govt.</i></p>	<ul style="list-style-type: none"> • The matter was placed before the Board in 37th meeting wherein Board directed the NCR participating States to examine the revenue records and carry out ground truthing, considering the following and the matter be placed before the Board in the next meeting: <ul style="list-style-type: none"> a) <i>Aravalli to be identified/ delineated in the entire NCR, considering the ‘specified areas’ given in the MoEF’s Notification dated 07.05.1992, as also decided in the Special Meeting held on 20.12.2016.</i> b) <i>‘Forests’ to be identified/ delineated as per the directions of the Supreme Court and guidelines issued by MoEF&CC.</i> <p>Further, the matter regarding status of NCZ delineation was also taken up in</p>

Sl. No.	Agenda Item/decisions	Action Taken/Status
	<p><i>of Haryana should expedite the exercise of NCZ delineation and submit the final report to MoEF&CC, in compliance to the decision of the 35th Board meeting.</i></p> <p><i>ii) the NCR participating States to adhere to the policies and proposals of the notified RP-2021, in compliance with the provisions of the NCRPB Act, 1985.</i></p>	<p>the Review meeting regarding various issues related to Haryana, held at NCRPB office on 17.06.2019 under the Chairpersonship of Member Secretary, wherein CCP, NCR, Haryana apprised the status of NCZ Delineation and informed that 100% of the ground truthing exercise of nine districts has been completed. It was also informed that they will submit the report to MoEF&CC and MoHUA along with reasons for shrinkage of NCZ by 25.06.2019. Copy of same was to be sent to NCRPB as well but the same is awaited.</p> <p>Action Point:</p> <ul style="list-style-type: none"> ➤ <i>Matter is placed before the Planning Committee for information.</i> ➤ <i>NCR participating States may apprise the current status of NCZ delineation.</i>
4	<p>Agenda Item No. 6: Plan preparation for newly added districts in NCR</p> <p>6.1 Preparation of Sub-Regional Plans:</p> <p><i>After detailed discussion and deliberation, the Planning</i></p>	<ul style="list-style-type: none"> • Matter was placed before the Board in 37th meeting wherein Board directed the NCR participating States to expedite the work related to preparation of said SRPs and complete the same by March, 2018, for availing reimbursement of 100% consultancy cost.

Sl. No.	Agenda Item/decisions	Action Taken/Status
	<p>Committee decided the following:</p> <p>i) Work related to the said SRPs should be expedited and completed by March, 2018.</p> <p>ii) Matter may be placed before the Board in its forthcoming meeting for consideration and approval of time extension.</p>	<ul style="list-style-type: none"> • The matter was thereafter discussed in the Review Meeting held at NCRPB on 23.04.2018, wherein representatives from Govt. of Haryana, U.P. and Rajasthan requested for extension of time for preparation the said SRPs. • The matter related to preparation of SRPs for newly added areas in NCR is being dealt as separate agenda (item No.4 & 7).
	<p>6.2 Preparation of Regional Plan for newly added areas</p> <p>Planning Committee requested the concerned NCR participating States to provide the required data/ inputs at the earliest.</p>	<p>Matter being dealt at Agenda Item 3, separately.</p>
5	<p>Agenda Item No. 7: Review of Regional Plan-2021</p> <p>Planning Committee recommended that the action in the matter be expedited.</p>	<p>Matter being dealt at Agenda Item 8, separately.</p>
6	<p>Agenda Item No. 8: Delineation Study for NCR</p> <p>The Planning Committee decided the following:</p> <p>i) Govt. of Haryana and Govt. of U.P. to provide their views/</p>	<p>Matter being dealt at Agenda Item 10, separately.</p>

Sl. No.	Agenda Item/decisions	Action Taken/Status
	<p>comments at the earliest so that the same will be placed before the Board.</p> <p>ii) After receipt of the comments from all the NCR participating States, the Committee formed for this purpose may examine and submit its recommendations to the Board.</p>	
7	<p>Agenda Item No. 9: Inclusion of Shamli district of Uttar Pradesh in NCR</p> <p><i>Planning Committee recommended the inclusion of district Shamli of the State of Uttar Pradesh in NCR, for consideration of the Board.</i></p>	<ul style="list-style-type: none"> • Matter was placed before the Board, in its 37th meeting held on 04.12.2017, wherein <i>after deliberations, Board approved the inclusion of district Shamli of State of Uttar Pradesh in NCR.</i> • Subsequently, Gazette Notification dated 16.04.2018 has been issued in this regard. <p>Action Point:</p> <p>➤ <i>Matter is placed for information</i></p>
8	<p>Agenda Item No. 10: Study on 'Affordability and Accessibility of Housing in NCR'</p> <p>Planning Committee was informed that NCRPB has initiated the aforementioned Study and that an EOI has been published in this regard.</p> <p><i>Planning Committee had noted the Status.</i></p>	<ul style="list-style-type: none"> • In response to the EOI advertisement of 1.11.17, NCRPB received EOI from 8 consulting organisation, in January 2018. The same are under evaluation and were to be placed before the Consultancy Evaluation Committee (CEC). • Based on the inputs received at EOI stage, the RFP for the said Study was to be finalised.

Sl. No.	Agenda Item/decisions	Action Taken/Status
		<ul style="list-style-type: none"> • However, as the matter is considerably delayed and action regarding Regional Plan preparation of next horizon year, has already been initiated, a view needs to be taken whether to carryout such a vast study at this stage, as recommendations of the study were to be utilised for RP preparation only. <p>➤ <i>Matter is placed for views of the Planning Committee.</i></p>
9	<p>Agenda Item No. 11: Delineation of Counter Magnet Areas of NCR</p> <p><i>The Planning Committee decided the following:</i></p> <p><i>i) Concerned State Govts. to provide the current/ updated area details and status of preparation of Development Plan and Plan of Action for the remaining CMAs in-line with the policies & proposals of the RP-2021/ DRRP-2021.</i></p> <p><i>ii) Govt. of U.P. to prepare a Plan of Action considering the horizon year and policies &</i></p>	<p><i>Matter being dealt at Agenda Item 15, separately.</i></p>

Sl. No.	Agenda Item/decisions	Action Taken/Status
	<i>proposals of the RP-2021/ DRRP-2021 and earmark a specific area for effective development as CMA along the Kanpur-Lucknow corridor.</i>	
10	Agenda Item No. 12: Action taken by NCRPB on the directions of the Hon'ble High Court of Delhi in the matter of Raghuraj Singh vs. Union of India &Ors. [WP (C) 5559 of 2013]	<i>Matter being dealt at separate Agenda Item.</i>
11	Agenda Item No. 13: Action taken on the directions of the Hon'ble High Court of Allahabad in the matter of Raghuraj Singh vs. State of U.P. & 10 Ors. (Civil Misc. PIL. NO.-29004 OF 2016)	<i>Matter being dealt at separate Agenda Item.</i>
12	Agenda Item No. 14: Continuation of NCR Planning & Monitoring Cells in participating States of NCR	<ul style="list-style-type: none"> • The matter was placed before the 37th meeting of the Board held on 4.12.2017. Board accorded its approval for continuation of NCR Planning & Monitoring Cells for a further period of 4 years from 01.04.2017 to 31.03.2021. • Sanction Order along with the Work Plan (2017-2021) for continuation of NCR Planning & Monitoring Cells was sent to the participating States

Sl. No.	Agenda Item/decisions	Action Taken/Status
		vide NCRPB letter dated 08.01.2018. ➤ <i>Matter is placed for information.</i>
13	<p>Any other item with the permission of the Chair</p> <p>In the matter related to draft Functional Plan on “<i>Micro and Household Enterprises in NCR</i>” Planning Committee requested the NCR participating States to expeditiously provide the inputs/observations, on receipt of the draft Functional Plan from NCRPB.</p>	<i>Matter being dealt at Agenda Item 18, separately.</i>

AGENDA ITEM NO. 3: STATUS OF REGIONAL PLAN 2021 FOR NEWLY ADDED AREAS OF NCR

3.1 National Capital Region Planning Board (NCRPB) has prepared Regional Plan-2021 for NCR (RP-2021) under Section 10 of the NCRPB Act, 1985 which was notified on 17th September, 2005.

3.2 Subsequent to the notification of RP-2021, on 17.09.2005, additional districts namely Bhiwani and Mahendragarh districts of the State of Haryana and Bharatpur district of the State of Rajasthan, were included to NCR vide Government of India, Gazette Notification dated 01.10.2013. Further, the districts of Jind & Karnal of the State of Haryana and Muzzaffarnagar district of the State of Uttar Pradesh were included in NCR vide GoI Gazette Notification dated 24.11.2015. The district of Shamli, of the State of Uttar Pradesh was included in NCR vide GoI Notification dated 16.04.2018. The total additional area of NCR is now 20939 sqkm.

3.3 Subsequent to addition of seven new districts in NCR, the work of preparation of Regional Plan-2021 has been initiated. As part of this, the task of creation of Regional Landuse for the additional areas of NCR was entrusted to National Remote Sensing Centre (NRSC), Govt. of India through MoU signed on September 2015 and later in May 2017.

3.4 The matter was discussed in the 37th meeting of the Board wherein Board noted the status and requested the NCR participating States to provide the required information/ data, in the prescribed format, expeditiously. While certain information were submitted by the NCR participating States in a piecemeal manner, NCRPB prepared a list of data-gaps and shared with the concerned States, requesting for expeditious reply.

3.5 Despite efforts, including directions in the Review Meeting held at NCRPB on 23.04.2018, the requisite data could not be made available. Meanwhile, NCR participating States were required to prepare respective Sub Regional Plans as well. Further, District Shamli of the State of Uttar Pradesh was added in NCR vide Gazette Notification dated 16.04.2018 and matter was discussed in the 56th meeting of the PSMG-I held on 13.07.2018 wherein extension of time till March, 2019 was accorded for 'Study for creation and updation of Regional landuse for newly added districts in NCR (including Shamli)', to NRSC.

3.1 It was however felt that Regional Plan for newly added districts was getting delayed due to persistent data gaps and the plan was required to be in place on urgent basis. Hence a fresh approach was adopted wherein, instead of the plan being prepared on the lines of DRRP 2021 (which itself was getting delayed), an addendum covering the newly added seven districts to RP 2021 (enforce) was decided to be prepared based on the manner, the old districts of NCR had been looked into in the Regional Plan 2021 , notified in 2005.

3.2 NRSC was accordingly directed to expedite the works and it submitted its report in July 2019.

3.3 It was felt that covering the RP 2021 for newly added districts through an addendum shall also help in expediting approvals of the SRPs for the newly added areas and inturn open possibilities for NCRPB to consider and provide financial assistance for areas in the new districts.

3.4 The draft Addendum to RP 2021 is as placed at **Annexure 3/ I** for consideration of the Committee.

3.5 It may be mentioned that as the notified RP-2021 provides policies and proposals for whole NCR area, these policies and proposals of RP-2021 would also be applicable to the additional area of the NCR. However, under the provisions of Section 14(1) of NCRPB Act, 1985, modifications can be carried out in the RP-2021 and accordingly, an Addendum to RP-2021, has been prepared with respect to the above mentioned 7 additional districts, considering and assessing the available information with NCRPB .

3.6 Section 14(1) of NCRPB Act, 1985 is reproduced below:

“The Board may, subject to the provisions of sub-section (2), make such modifications in the Regional Plan as finally prepared by it, as it may think fit, being modifications which, in its opinion, do not effect important alterations in the character of the Regional Plan and which do not relate to the extent of land-uses or the standards of population density.”

3.7 It may be noted that as per procedure, the Draft Regional plan which in current case is the Addendum to RP2021, is to be placed before the Planning Committee

and along with the recommendations of the Committee, the same is to be placed before the Board for approval to invite objections and suggestions. The time to be given for inviting objection and suggestion, u/s 12 of NCRPB Act, 1985 and Chapter 5 of NCRPB Rules, is 30 days. However, in order to expedite the process, it is proposed that the addendum may be made open for objections and suggestions after consideration in the Planning Committee and thereafter addendum incorporating the received 'objections and suggestion' be placed before the Board, in anticipation of post facto concurrence of the Board for inviting 'objections and suggestion'. The Board shall be requested to provide post facto concurrence regarding inviting 'objections and suggestion' on draft Addendum and also for concurrence on the Final Addendum to RP 2021 for publication and notification under Section 13, of NCRPB Act 1985.

Action Point:

- ***Addendum to RP 2021 covering the newly added districts to NCR, is placed before the Planning Committee for consideration and approval for inviting objections and suggestions, in anticipation of post – facto approval of the Board.***

**AGENDA ITEM NO. 4: STATUS OF SUB-REGIONAL PLAN-2021 FOR HARYANA
SUB REGION - NEWLY ADDED AREAS**

Draft Sub-Regional Plan-2021 for Haryana Sub-Region: for newly added areas

4.1 The matter was placed before the Board in its 37th meeting wherein Board directed the NCR participating States to expedite the work related to preparation of SRPs and complete the same by March, 2018 for availing reimbursement of 100% consultancy cost.

4.2 Thereafter, a review meeting of the all NCR participating States/Cells held at NCRPB on 23.04.2018 wherein time extension for preparation of SRPs for newly added districts was requested by the Govts. of Haryana, Rajasthan and U.P.

4.3 Govt. of Haryana vide letter dated 30.05.2018 has submitted the revised draft SRP-2021 for Extended Haryana Sub-Region along with the Compliance Report on 30.5.2018 and 19.06.2018, respectively on the observations of NCRPB. The revised draft SRP-2021 along with the Compliance Report was examined in NCRPB and the observations which were not incorporated on the amended Draft SRP-2021 for Extended Haryana sub-region, were compiled and forwarded to Govt. of Haryana on 31.7.2018. NCRPB suggested that report may kindly looked into again and presentation may be planned to clarify the action taken on the observation raised by the NCRPB's letter dated 12.09.2017. Submissions made by NCR Planning and Monitoring Cell, Haryana vide letter dated 29.10.2018 was again discussed with concerned officers, and accordingly, the duly amended SRP based on the issues raised during the discussions, was require to be submitted by Govt. of Haryana.

4.4 Meanwhile, matter was raised by Hon'ble Chief Minister, Haryana vide his D.O. letter 30.08.2018, requesting to expedite the requisite approvals to Chairman, NCRPB and to consider the SRP for the new areas, in the Board meeting. The revised draft SRP-2021, observations of NCRPB, and compliance received were again discussed in the Review meeting with Govt. Haryana officers held under chairpersonship of Member Secretary NCRPB on 17.06.2019 in the office of NCR Planning Board wherein the matter was discussed. After detailed deliberation, following was decided:

- a. It was agreed that the NRSC data provided to the Govt. of Haryana will be used by Govt. of Haryana for preparation of Draft Sub-Regional Plan-2021 for extended Haryana sub-region. It was also agreed that

observations of NCRPB with regard to Draft Sub-Regional Plan-2021 for extended Haryana sub-region will be incorporated and NCR Cell shall submit the amended Draft Sub-Regional Plan-2021 for extended Haryana sub-region to NCRPB within 10th July, 2019 so that same may be placed before the next Planning Committee, preparatory to the Board meeting expected to be held in last July or early August, 2019.

- b. As RP-2021 for additional districts of NCR is under preparation when RP-2021 will be finalised Sub-Regional Plan-2021 for extended Haryana sub-region will be modified to bring in conformity of the RP-2021 for additional districts of NCR.
- c. Natural Conservation Zone (NCZ) to be incorporated in the Draft Sub-Regional Plan for extended Haryana sub-region as per RP-2021 but the delineation of NCZ will be carried out as per old SRP 2021. With regard to decisions of the PMO reference and MoEF&CC will be applicable in Draft Sub-Regional Plan-2021 for extended Haryana sub-region.
- d. Since decision regarding publishing of DRRP is pending, it was agreed that all references to DRRP in the draft SRP will be deleted forthwith.

The Minutes of same were circulated vide email dated 19.6.2019 and letter dated 20.6.2019. Reminder was issued on 03.07.2019 to update the status. The submissions however are still awaited. Matter was also discussed in a Video Conferencing meeting amongst NCRPB and Officers from Govt. of Haryana held on 10.07.2019, wherein Govt. of Haryana assured to expedite necessary action.

Action Point

- ***Govt. of Haryana may present the status and Matter is placed for consideration and information.***
- ***Govt. of Haryana may present the report to Planning Committee so that it may consider the revised draft SRP-2021 for Extended Haryana Sub-Region.***

AGENDA ITEM NO. 5: STATUS OF SUB-REGIONAL PLAN-2021 FOR HARYANA
SUB REGION - Draft Sub-Regional Plan-2021 for Haryana
Sub-Region: Compliance of directions from PMO

5.1 Matter was placed in the 37th meeting of the Board, where in Board decided that
“Govt. of Haryana may expeditiously prepare the final Report along with maps on NCZ delineation exercise, obtain confirmation from MoEF&CC on amended SRP-2021 and subsequently, submit Compliance Report to PMO through MoHUA & provide a copy to NCRPB.”

5.2 Govt. of Haryana vide letter dated 27.02.18 has submitted that:

“..while the SRP was finalised by it in May 2014, only the work related to geo-referencing of NCZ pockets, as suggested by MoEF&CC, was pending. However, as per directions of the Board on the issue of NCZ, States were to examine revenue records and carry out ground truthing. Hence, pending works on SRP can only be completed after works related to ground truthing and delineation of NCZ including its geo-referencing.”

5.3 NCRPB vide letter dated 28.05.18 and reminder dated 30.07.18 requested Govt. of Haryana to submit the timelines for finalization of SRP-2021. Subsequently, D.O. letters were sent from Secretary, Govt. of India, MoHUA dated 9.10.2018 & 22.2.2019 requesting Chief Secretary, Govt. of Haryana to direct the concerned Department(s) to expeditiously complete the NCZ delineation and submit a detailed reply / Action Taken Report to NCRPB and MoEF&CC. Further, a D.O. letter of Member Secretary, NCRPB dated 20.11.2018 and 9.4.2019 were also sent to Chief Secretary, Govt. of Haryana to expedite the matter.

5.4 The matter was again taken up in the Review Meeting regarding various issues related to Haryana subregion, held at NCRPB office on 17.06.2019 under the Chairpersonship of Member Secretary, wherein it was agreed and decided that with regard to decisions on the matter, since decision regarding publishing of Draft Revised Regional Plan (DRRP) is pending, all references to DRRP made in the draft SRP will be deleted forthwith.

Action Point:

Govt. of Haryana may provide the latest status on the finalization of SRP-2021 (old areas).

AGENDA ITEM NO. 6: STATUS OF SUB-REGIONAL PLAN-2021 FOR DELHI

- 6.1 The matter was discussed in the 37th Board meeting wherein it was decided that the matter be deliberated at the level of Additional Secretary (D&C), M/oHUA and resolved.
- 6.2 Meeting under the chairmanship of Additional Secretary (D&C), M/oHUA was held on 16.08.2018 regarding preparation of Sub-Regional Plan for Delhi Sub-Region. Minutes of the meeting were submitted to Secretary (HUA), M/oHUA for perusal and approval. Thereafter, as per directions of MoH&UA, DDA was informed that as per decision of competent authority, DDA/other agency be involved in creating SRP for Delhi as per provision of NCRPB Act 1985, which may be approved by GNCTD and NCRPB before its adoption as SRP of Delhi. DDA was accordingly requested to take necessary action vide DO letter dated 3.12.2018 followed by reminder dated 13.5.2019.
- 6.3 The matter was again taken up in the Review Meeting regarding various issues related to Delhi, held at NCRPB office on 18.06.2019 under the Chairpersonship of Member Secretary. During the meeting, representatives from DDA had informed the action taken by them at the time of previous SRP preparation for Delhi and decisions thereof. Further, matter regarding frequent amendments in MPD and its possible effect on SRP were also discussed. After deliberations, it was agreed that DDA may decide on the details to be given in SRP but aspects as mentioned in Section 17(2) and (3) of NCRPB Act, 1985 w.r.t Sub Regional Plan need to be covered (copy enclosed), and the required SRP for Delhi be submitted within three weeks by 10th July, 2019. The demarcation of NCZ areas need also be covered in the SRP. Regarding hiring of additional manpower for the work, it was informed that NCRPB can consider reimbursement of the expenditure incurred for preparation of SRP to DDA.
- 6.4 The matter again taken up during the Video Conferencing meeting amongst NCRPB and Officers from GNCT of Delhi and DDA held on 10.07.2019, wherein Chairperson directed that SRP may be prepared in-house as the Master Plan for Delhi is in place, as per Board decision.

Action Point

- **DDA/ GNCT of Delhi may apprise about the status**
- **Matter is placed before the Committee for information**

**AGENDA ITEM NO. 7: STATUS OF SUB-REGIONAL PLAN-2021 FOR
RAJASTHAN & UTTAR PRADESH SUB REGIONS**

7.1 Rajasthan sub-region

- i) CTP (NCR), NCR Cell, Rajasthan vide letter dated 17.01.2019 has submitted the draft SRP for Bharatpur district to NCRPB and other concerned departments of Govt. of Rajasthan, for comments and suggestions. Further, it has been informed by NCR Cell, Rajasthan vide its email dated 30.1.2019, that it shall invite the objections and suggestions on the draft SRP after incorporating the comments from NCRPB and other related departments from Bharatpur district.
- ii) The draft SRP was examined in NCRPB and it is observed that the draft plan is at premature stage and needs further improvements. The broad comments and suggestions on the draft SRP are being provided to Govt. of Rajasthan.
- iii) The matter was discussed in the Review meeting held in NCRPB on 14.6.2019 wherein it was decided that CTP, NCR Cell, Rajasthan requested for extension up to September, 2019. However, considering the delay, it was decided that extension may be considered up to July, 2019 based on the written request of the Govt. of Rajasthan. Chairperson stated that the reimbursement for SRP-2041 cannot be considered and SRP 2021 need to be finalized. Chairperson directed the CTP, NCR Cell to finalize the draft SRP for Bharatpur District for horizon year 2021 and submit the same by the first week of July, 2019. CTP, NCR Cell assured to submit by 7th July, 2019.
- iv) The matter again taken up during the Video Conferencing meeting amongst NCRPB and Officers from NCR Cell, Rajasthan held on 10.07.2019, wherein request to expedite necessary action was made. The submissions are however awaited.

Action Point

- **Govt. of Rajasthan may apprise about the status**
- **Matter is placed before the Committee for information**

7.2 Uttar Pradesh sub-region

- i) NCR Cell, U.P. has informed vide letter dated 24.04.2018 that RFP has been prepared for the work related to preparation of SRP-2021 for District Muzzaffarnagar.
- ii) NCRPB vide letter dated 25.07.2018 has requested the Govt. of U.P. to also integrate District Shamli in RFP document for preparation of SRP for both newly added districts in U.P. sub-region.
- iii) The matter was also discussed in the Review meeting held for Uttar Pradesh on 17.6.2019, wherein Chief Coordinator Planner, NCR Planning & Monitoring Cell, UP informed that the TOR has been finalized and e-tender will be called within a week. Further, they expected to appoint the Consultant by end of July, 2019. Chairperson stressed that the SRP may be prepared expeditiously and directed NCR Cell, U.P to submit the draft SRP by September, 2019.

Action Point

- **Govt. of Uttar Pradesh may apprise about the status**
- **Matter is placed before the Committee for information**

7.3 Extension of time

The work related to preparation of SRPs for newly added districts in NCR was to be completed by March, 2018 for availing reimbursement of 100% consultancy cost. However, the submission from both Govt. of Haryana and Govt. of Rajasthan are taking time. Further, the SRP for new areas of UP Sub region is still at initial stage and hence may take time.

Planning Committee may consider the request of NCR participating States for time extension as per requirement of States.

Action Point:

- ***Planning Committee may consider the request of NCR participating States for time extension.***

AGENDA ITEM NO. 8: STATUS OF REVIEW OF NCR REGIONAL PLAN-2021

8.1 A Steering Committee was constituted for the Review of the Regional Plan 2021.

Fourteen sub-groups have been constituted to undertake the said review of each sector/ chapter of the RP-2021. The representatives from NCR participating States, concerned Central Ministries/ Departments, academicians and subject experts are part of the said Study Groups.

8.2 The status was reviewed in the 37th Board meeting wherein directions were given to expedite the work.

8.3 Fifteen Meetings of the 14 study groups and two meetings Steering Committee, were convened. Discussions were also held amongst Member Secretary, NCRPB and study group chairpersons in April, 2019 to review the matter and directions were given to expedite report submission.

8.4 The Review Reports of various study groups were received and discussed in the 4th Steering Committee meeting, held under the Chairpersonship of Member Secretary, NCR Planning Board, on 04.06.19. The Steering Committee accepted the Study Group Review Reports. The Final Review Reports along with Compilation of Recommendations are as placed at **(Annexure 8/I & 8/II)** for consideration of the Planning Committee. The recommendations of the Study Groups are proposed to be considered during the preparation of RP 2041.

Action Point:

- ***Matter is placed for consideration and approval.***

AGENDA ITEM NO. 9: POPULATION PROJECTIONS FOR NATIONAL CAPITAL REGION FOR REGIONAL PLAN 2041

Consideration of Draft Report on Population Projections for NCR-2041

9.1 As Population projections are key inputs for any plan preparation, advance action on the same was initiated and NCRPB had assigned the work of population projection for NCR for year 2041 to Dr. D.K. Dey, Former Additional Director, Census of India and Professor & Head, Dept. of Statistics, Indira Gandhi National Tribal University, Amarkantak, M.P.

9.2 The Draft report on the subject was presented and deliberated in the 4th meeting of the Steering Committee constituted for review of Regional Plan-2021 held on 04.06.2019 and as per the decisions of the said Committee, the Draft Report on “Population Projections for NCR-2041” was circulated to all NCR participating States for comments /observations on 07.06.2019.

9.3 Comments/ observations received from the NCR Planning and Monitoring Cells of U.P., Rajasthan, Haryana, NCT Delhi and DDA were communicated to Dr. D. K. Day for incorporation in the Final Draft Report. The Final Draft Report received from Dr. D. K. Day along with compliance report submitted in this regard is at **Annexure-9/I**. The population project was proposed to be taken as inputs for preparation of next Regional Plan for NCR.

Action Point:

- ***Matter is placed for consideration and approval.***

AGENDA ITEM NO. 10: DELINEATION STUDY FOR NATIONAL CAPITAL REGION

10.1 The Regional Plan-2001 was notified in the year 1989 for the then area of NCR (30,242 sq. km.) as per Schedule II of the NCRPB Act, 1985. Subsequently, certain more areas were included in NCR and the Regional Plan-2021 was notified in 2005 for the new area i.e. 34,144 sq. km. Further, three more districts, namely, Mahendragarh & Bhiwani of State of Haryana and Bharatpur of State of Rajasthan were included in NCR in 2013. Thereafter, while considering and approving the proposal for inclusion of Jind, Karnal & Muzaffarnagar districts in NCR, the matter for study also came up in the 35th Board meeting held on 09.06.2015. Chairman had then stated that there is a school of thought, which emphasizes linear development along transport corridors such as National Highways, State Highways, Rail Corridors etc. Such corridor centric development is conducive to protect good agricultural land, since it involves minimum fresh land acquisition which implies that farmers may not get affected. He suggested that instead of including a complete district in NCR, such linear areas around transport corridors could be considered. States can develop rest of the district as per their policies. He added that more industries, institutions, infrastructure facilities etc. could be provided within limited resources in such corridors. He further added that a Committee under the chairmanship of Member Secretary, NCRPB could look into this.

Accordingly, the Board decided that a Committee under the Chairmanship of Member Secretary, NCRPB be constituted for undertaking a Delineation Study for NCR.

10.2 Accordingly, a Committee was constituted and two meetings were held on 08.09.2015 and 29.10.2015. During the meetings, it was deliberated that considering the huge geographical area of NCR which has been increased from 30,242 sq. km. to 55,084 sq. km., there is a need to deliberate on well-defined parameters through a detailed Study for inclusion of further area in NCR. It was also opined that the Study could recommend both inclusion as well as exclusion of areas in/ from NCR. The Committee, after detailed deliberation, *inter-alia* recommended the following in its 2nd meeting:

- *Considering the already huge geographical area of NCR, for any new proposal for addition of any area in NCR, a Delineation Study be undertaken considering the future development proposal of that particular area. The broad principles/ criteria/ parameters, as per the Minutes of the first Meeting*

of the Committee held on 08.09.2015, be considered as a starting point in undertaking the Delineation Study.

- *The recommendations of the Committee be placed before the Board, before undertaking any such Delineation Study. With respect to the aspect of exclusion of certain areas from NCR, the matter be also placed before the Board, so that the Board may take a view to authorize to examine the exclusion of certain areas from NCR based on the outcomes/recommendations of the aforesaid Delineation Study.*
- *Once the Delineation Study is undertaken, a view may be taken by the Board with respect to the new proposal (s) w.r.t. addition or exclusion of any area in/from NCR.*

10.3 The matter was deliberated by the Board in 37th meeting wherein it was noted that the comments from Govt. of U.P were awaited. Therefore, the Board directed the Govt. of UP to provide views/comments expeditiously and thereafter the Committee, formed for this purpose, may examine the views/comments and submit its recommendations to the Board.

10.4 It may be noted that Govt. of U.P vide letter dated 03.04.2018 has also submitted a proposal recommending inclusion of five new districts, namely, Saharanpur, Bijnor, Aligarh, Mathura, and Shamli in NCR. It is mentioned that out of these Shamli district has already been included in NCR vide Notification dated 16.04.2018 in accordance with the decision taken by Board in its 37th meeting held on 04.12.2017.

10.5 The comments from Govt. of U.P have also been received on 04.09.2018. The views/comments of the NCR participating States are summarised at **Annexure 10/I.**

10.6 The 3rd meeting of the Committee constituted for undertaking a Delineation Study for NCR, was held thereafter on 10.10.2018. Recommendations of the Committee, formed for the purpose is as under:

- Tehsil will be the smallest unit for the purpose of data collection, analysis and assessment etc. for the Delineation Study.*

- ii) *The study area will be the area falling within radius of 200km from the center of GNCT of Delhi, falling in the NCR participating States.*
- iii) The broad scope of work along with principles/parameters, given in Annexure-II to these minutes to be considered as a starting point in undertaking the Delineation Study for NCR, along with the comments/views received from NCR participating States.
- iv) The time schedule for the Study will be 9 months from the date of award.
- v) Consultant to develop various Scenarios considering tehsil as well as district as a unit for inclusion/exclusion of areas in/from NCR and considering corridor centric development.
- vi) The proposal from Government of Uttar Pradesh for inclusion of 4 new districts namely, Saharanpur, Bijnor, Aligarh and Mathura, and that of Govt. of Rajasthan regarding Jhunjhunu, will be examined and considered after Delineation Study is completed.
- vii) The recommendations of the Committee will be placed before the Board, before undertaking the Delineation Study for NCR.

10.7 The recommendation of the Review Reports on RP 2021 review, has also cited that Increasing the extent of area of Regional Plan on the demand of participating states without carrying out delineation study will not be advisable because the area of NCR is almost doubled compared to the Regional Plan of NCR prepared by TCPO and this may result into:

- There will be thin spread of limited resources;
- This may occur in sparse development;
- Provision of infrastructure in integrated manner will be costly affair;
- Delhi the capital of country and mother city may lose its primacy; and
- It would be administratively and financially difficult to sustain / deal with growth and development of such huge area.

10.8 Further, density issues are also raised by NCR participating states in cities and towns of NCR.

10.9 The 4th meeting of the Committee constituted for undertaking a Delineation Study for NCR, is being on 15.07.2019 for further inputs

Action Point:

- ***Recommendations of the Committee constituted for undertaking a Delineation Study for NCR as above are placed before the Planning Committee for information.***

- ***Recommendations of the Committee constituted for undertaking a Delineation Study for NCR as above regarding proposal of Govt. of U.P on inclusion of new districts in NCR as mentioned at para 10.7 above and any other similar requests for inclusion by any participating States may only be taken based on the outcome of the “Delineation Study for NCR”, as recommended by the Board in its 35th meeting, may be considered.***
- ***Further, the guidelines/ broad criteria to decide inclusion/ exclusion shall be as provided the Committee and decided by the Board, the Study shall focus on recommendation regarding areas to be included or excluded based on the criteria.***

**AGENDA ITEM NO. 11: DRAFT REVISED REGIONAL PLAN-2021:
COMPLIANCE OF DIRECTIONS FROM PMO**

11.1 As per Section 15 (1) of the NCRPB Act 1985, review of RP-2021 (notified in 2005) was carried out and the revised RP-2021 was prepared with active participation of all the Constituent State Govts., concerned Central Ministries and Subject Experts. For this, the regional landuse maps were prepared on 1:50,000 scale by NRSC based on the Satellite imageries pertaining to year 2012. The draft revised RP-2021 was deliberated and approved by the Board in its 34th meeting held on 20.01.2014.

11.2 However, owing to the subsequent directions of the PMO vide Notes dated 05.03.2014 and 23.04.2014, the finalization of the draft revised RP-2021 was kept on hold till the views/ comments of the then MoEF are obtained and issues raised by the MoEF are fully resolved and a compliance report is sent to the PMO.

11.3 Further, the status of finalization of the draft revised Regional Plan-2021 for NCR was discussed during the 35th and 36th meeting of the Board held on 09.06.2015 and 15.06.2016, respectively. Also a meeting was held under the chairmanship of Secretary (UD), Govt. of India on 07.09.2016 to discuss and resolve the issue of DRRP-2021 wherein it was decided that MoEF&CC will communicate their formal consent /acceptance so that further necessary action w.r.t notification and publication of DRRP-2021 can be initiated. Accordingly, the matter was placed before the Board in its Special Meeting held on 20.12.2016.

11.4 MoEF&CC, vide OM dated 11.01.2017 provided its inputs on 'Chapter 14: Environment' and 'Chapter 17: Regional Landuse' of the draft revised RP-2021 (DRRP-2021).

11.5 The same were placed before the Planning Committee in its 66th meeting and before the Board in its 37th meeting wherein the following was decided:

- a) *NCR participating States may provide their comments/ observations on the inputs of MoEF&CC, if any, in a month;*
- b) *MoEF&CC may reconsider their decision w.r.t exclusion of 'agriculture' from permissible uses/ activities of NCZ; and*
- c) *Thereafter, the matter may be deliberated at the level of Secretary (HUA), Gol, within two months and resolved. Member Secretary, NCRPB will follow up action accordingly.*

11.6 In compliance of above decision of the Board, the MoEF&CC was requested vide letter dated 16.01.2018 to provide their views w.r.t exclusion of 'agriculture' from permissible uses/ activities of NCZ. Also, NCR participating States were requested vide letter dated 18.01.2018 to provide the requisite comments/ observations on the inputs of MoEF&CC.

11.7 Meanwhile, concern was also raised on the matter by Hon'ble Chief Minister, Haryana vide his D.O. letter 30.08.2018, requesting to expedite the decision on the matter of Exclusion of 'Agriculture' from permissible activities in NCZ:

11.8 On receipt of comments from States and the observations from MoEF&CC, a meeting was undertaken at the level of Secretary (HUA) as decided in the 37th Board meeting. The meeting chaired by Secretary (HUA), Govt. of India on 18.12.2018 was to resolve issues relating to the Draft Revised Regional Plan-2021 (DRRP-2021) in compliance to the directions of the PMO.

11.9 After detailed deliberations and discussion, following was recommended :

- a) Since 'Agriculture' is a permissible activity under the NCZ zoning regulations of RP-2021 as well as DRRP-2021, the same should be retained.
- b) With regard to the notification of Draft Revised Regional Plan-2021 (DRRP-2021), all the NCR participating States were of the opinion that it would not be appropriate to publish the Revised RP-2021, as the perspective year 2021 is nearing. Also that, seven more districts (Jind, Mahendragarh, Bhiwani & Karnal in Haryana Sub-Region; Muzaffarnagar & Shamli in UP Sub-Region and Bharatpur in Rajasthan Sub-Region) have been added in NCR which are not part of this DRRP-2021.
- c) *The matter may accordingly be placed before the Board.*

11.10 The matter was also discussed in the Review meeting, held under chairpersonship of Member Secretary NCRPB on 17.06.2019 in the office of NCR Planning Board, with officers from Govt. Haryana. As per the decisions, it was noted that the issues have been resolved w.r.t. DRRP-2021 in the meeting chaired by Secretary, MoHUA on 18.12.2018 and the compliance of the directions of the PMO have been carried-out by NCRPB, the matter was submitted by NCRPB to MoHUA on 22.05.2019 for further submission to the PMO.

Action Point:

- ***Matter is placed before the Planning Committee for information***

AGENDA ITEM NO. 12: OPERATIONAL EFFECTIVENESS OF NCR PLANNING & MONITORING CELLS IN NCR PARTICIPATING STATES & NCT DELHI.

12.1 Background

Board in its 37th meeting HELD ON 04.12.2017 approved the continuation of NCR P&M Cells for further period from 01.04.2017 to 31.03.2021 with the following decisions:-

- a) Member Secretary, NCRPB is authorized to work out Action Plan for the Cells from time to time, as per requirement including sanction of posts and take any administrative/financial decision for smooth functioning of the Cells within the approved framework, after due examination.
- b) NCRPB shall continue to reimburse 100% of expenditure on pay & allowances and recurring office expenditure. The upper limit for reimbursement of recurring office expenditure may be increased from Rs. 3,25,000/- p.a. to Rs. 5,00,000 p.a. for NCR Cells of Haryana, Rajasthan and U.P. and Rs. 75,000/- p.a. for NCR Cell of NCT Delhi.
- c) NCRPB will also reimburse the taxi hiring charges (maximum upto Rs. 25000/- per month) to NCR Cells of Haryana, Rajasthan and U.P. over and above the recurring office expenditure.

12.2 Work Programme/Action Plan for NCR Planning Cells

Pursuant to the above decision of the Board, NCRPB vide Letter G-25020(1)/2003-04/NCRPB/Vol.V dated 08.01.2018 intimated the Work Programme/Action Plan for the NCR P&M Cells to the Nodal Officers of the NCR participating States at **Annexure-12/I**. The NCR Planning & Monitoring Cells are to prepare and submit an Action Plan for each Financial Year in the month of April.

12.3 Overview of Staff Strength of NCR P&M Cells

The details of Sanctioned Posts and Vacant Posts, as on 31.03.2019, in the NCR P&M Cells is as under:

Sl. No.	NCR Planning and Monitoring Cell	Sanctioned Posts	Vacant Posts
1.	NCT-Delhi	05	05
2.	Haryana	30	15
3.	Rajasthan	21	07
4.	Uttar Pradesh	30	17
	Total	86	44

Details of the staff strength of the NCR P&M Cells of UP, Haryana, Rajasthan and NCT-Delhi are given at **Annexure-12/II**.

12.4 NCRPB had received requests from NCT Delhi, Haryana and Rajasthan to create additional posts for further strengthening of their respective NCR Cells. Govt. of Haryana vide letter dated 05.01.2016 has requested for creation of 27 additional posts refer **Annexure-12/III**. Govt. of U.P. vide letter dated 16.10.2015 has requested to abolish 06 posts and create 04 new posts at their place refer **Annexure-12/IV**. Govt. of Rajasthan vide letter dated 30.05.2019 **Annexure-12/V** has requested for grant the permission for hiring services of one post of GIS Expert (against the post of JEN), 03 posts of Computer Operator (against the post of UDC/LDC/PA) on contractual basis.

The details are summarized as under:

S. No.	NCR Planning and Monitoring Cell	Additional Posts
1.	NCT-Delhi	05
2.	Haryana	27
3.	Rajasthan	14
4.	Uttar Pradesh*	04
	Total	50

**Note: Govt. of U.P. has proposed to surrender one posts of Planning Assistant, Investigator, Junior Engineer, Research Assistant (02) and Ferro Printer.*

12.5 Observations

12.5.1 Out of total 86 sanctioned posts in all the NCR Cells, 44 posts are lying vacant. In the case of NCT Delhi, sanctioned posts are only 05 and all posts are lying vacant. In case of Haryana 50% posts are lying vacant, however, request for additional posts has been received from the Govt. of Haryana. In case of U.P. and Rajasthan NCR Cells, more than 50% and 33% posts respectively are lying vacant.

12.5..2 It is observed that NCR P&M Cell, Rajasthan has requested for GIS expert against the post of Junior Engineer and 3 Computer Operator against UDC/LDC/PA post. Further, NCR P&M Cell, U.P. has also requested for GIS expert and surrendered one post each on Planning Assistant, Junior Engineer, Investigator and Ferro Printer.

12.5.3 It is pertinent to mention that considering the technological advancements and current requirements, some of the sanctioned posts such as Research Assistant, Planning Assistant, Assistant Architect, Senior and Ferro Printer may not be required, which need to be reviewed.

12.5.4 There is a requirement of enormous spatial (map) and non- spatial (statistical) data for preparation of Regional Plan, Sub-Regional Plans, Functional Plans, etc. However, it has been observed that there is a lack of data/ information for various sector and data/ information regarding monitoring of implementation of the policies and proposals of these Plans and projects being implemented by various concerned departments in NCR. These data/ information and statistics are crucial for the preparation of the Plans, monitoring and decision making.

12.5.5 It is also observed that the output/ performance of NCR Cells are not in-line with the current requirements of NCRPB, especially in-terms of use of modern scientific tools, for data collection, collation, innovative management of MIS of land use data for effective implementation of the Plans etc. and effective monitoring of Functional Plan. It has been felt that one of the reason could be that the present structure in NCR Cells has not been reviewed for the past 20 years whereas the present given tasks to NCR Cells have to be performed on more professional manner.

12.5.6 Accordingly, it is felt that there is a need to restructure the staff with regard to domain knowledge and strength of the NCR P & M Cells in each participating State and NCT Delhi. In order to perform the assigned work, sanctioned staff strength of NCR P&M Cells should be reviewed and some of the post like Research Assistant, Assistant Architect, Ferro printer, investigator may not be required and research and data analysis oriented positions may be created at place to appoint management professionals (MBA). Also suggested that GIS expert may be appointed in place of Senior /Planning Draftsman and Planning Assistant. The team at NCR Cells may have the uniform structure mix of Planners, Engineers, Management Professionals (MBA), GIS experts, etc. having knowledge of MIS, project management and other required IT tools and should be able to do studies and surveys, to coordinate preparation and implementation of various Plans and also to carry out the impact assessment of the projects.

12.5.7 A review meeting was held under the chairmanship of Member Secretary on 14.06.2019 for Rajasthan Sub-region, on 17.06.2019 for Uttar Pradesh Sub-region and on 18.06.2019 for Haryana Sub-region and on 18.06.2019 for Delhi sub-region. It was agreed by all that 2-3 Informatics Assistant or Computer Operators (having knowledge of GIS also) may be appointed on temporary/contract basis, till further decision of NCRPB regarding qualifications, filling of vacancies/reconstitution of posts/staff strength etc. of NCR Cells. Chairperson further stated that next course of

action w.r.t new sanctioning of posts will be based on the recommendations of 'NCR delineation exercise/study' which is to be discussed in the next Board Meeting. The qualification for Informatics Assistant will be as (i) Graduate in Computer Science/Computer Applications or Electronics or Post Polytechnic Diploma in Computer Application or 3 years Diploma in Computer Science & Engineering or Graduate with Diploma in Computer Science /Computer Applications or Graduate with 'O' or higher level Certificate Course conducted by DOEACC.

12.5.8 The office of all the NCR P&M Cells are not located in their respective NCR Sub-Regions. NCR P&M Cells of Haryana and Rajasthan are functioning from their respective State Headquarters.

12.6. Proposal

- a) Associate/ District Town Planner or Assistant Planner should be made district wise Nodal Officer for in the NCR Cell.
- b) All staff below Assistant Town Planner up to Research Investigator/ Junior Management professional should have proficiency in MS word, preparation of PPT, Excel sheets etc.
- c) Various posts may be filled up on contract basis except the posts of Commissioner, Chief Town Planner, Associate/ District Town Planner.
- d) It is proposed to re-designate Research Officer, Planning Assistant, Research Assistant, Field Investigator, Town Planning Assistant, Investigator Gr. I, UDC / Sr. Assistant, Assistant Architect, Planning Assistant, Planning Draftsman, Investigator as Knowledge Professional.
- e) It is proposed to re-designate Junior Engineer, Senior Draftsman re-designate as GIS Expert.
- f) It is proposed to re-designate Peon, Ferro Printer, Chowkidar, Class-IV as Multi-Tasking Staff.
- g) The post shall be suitably re-designated and incumbent official/employee shall continue to work till relieved/filled up with the re-designated employee with revised education and experience. The details are given at Annexure-12/VI to VIII.

Action Point:

- **The proposal is placed for consideration of the Planning Committee.**

Annexure-12/VI**Conversion of Existing Post to Proposed Post.**

SI No.	Existing Post	Proposed Post
1.	Research Officer, Planning Assistant, Research Assistant, Field Investigator, Town Planning Assistant, Investigator Gr. I, UDC / Sr. Assistant, Assistant Architect, Planning Assistant, Planning Draftsman, Investigator.	Knowledge Professional
2.	Junior Engineer, Senior Draftsman.	GIS Expert
3.	Stenographer Gr. II, Stenographer Gr. III, Assistant, Personal Assistant, Junior Scale Stenographer, LDC, Typist, Senior Personal Assistant, Jr. Assistant, Stenographer (1 Sr. 2 Jr.)	Multi-Purpose Informatics Assistant
4.	Peon, Ferro Printer, Chowkidar, Class-IV.	Multi-Tasking Staff

Annexure-12/VII**Educational Qualifications of the posts**

SI No.	Post	Qualification
1.	Knowledge Professional	(i) MBA (ii) 'O' or higher level Certificate Course conducted by DOEACC or equivalent as recognised by University/Institute of Govt. of India. (iii) Proficiency in MS word, preparation of PPT, Excel sheets etc.
2.	GIS Expert	(i) Diploma/Post Graduate Diploma in GIS and Remote Sensing from any recognised institute by the Govt. (ii) 'O' or higher level Certificate Course conducted by DOEACC or equivalent as recognised by University/Institute of Govt. of India. (iii) Proficiency in MS word, preparation of PPT, Excel sheets etc.
3.	Multi-Purpose informatics Assistant	(i) Graduate in any stream (ii) 'O' or higher level Certificate Course conducted by DOEACC or equivalent as recognised by University/Institute of Govt. of India. (iii) Proficiency in MS word, preparation of PPT, Excel sheets etc.
4.	Multi-Tasking Staff	(i) 12 Pass. (ii) Capabilities of working on Photocopying Machine, Scanning etc.

Details of the staff strength of the NCR Planning and Monitoring Cells**A. NCR Planning and Monitoring Cell, NCT-Delhi**

S. No.	Existing Designation	Proposed Designation	No. of posts Sanctioned	No. of posts vacant	No. of posts for proposed conversion
1	Additional Secretary/ Special Secretary	No Change	1	1	-
2	Associate Town & Country Planner	No Change	1	1	-
3	Stenographer Gr. II	Multipurpose Informatics Assistant	1	1	1
4	Stenographer Gr. III	Multipurpose Informatics Assistant	1	1	1
5	Peon	Multi-Tasking Staff	1	1	1
	Total		5	5	3

B. NCR Planning and Monitoring Cell, Haryana

S. No.	Existing Designation	Proposed Designation	No. of posts Sanctioned	No. of posts vacant	No. of posts for proposed conversion
1.	Chief Coordinator Planner	No Change	1	--	-
2.	Associate Planner (District Town Planner)	No Change	2	--	-
3.	Assistant Town Planner	No Change	3	2	-
4.	Research Officer	Knowledge Professional	1	1	1
5.	Junior Engineer	GIS Expert	1	1	1
6.	Planning Assistant	Knowledge Professional	2	1	1
7.	Research Assistant	Knowledge Professional	2	1	1
8.	Senior Draftsman	GIS Expert	2	--	--
9.	Field Investigator	Knowledge Professional	2	1	1
10.	Computer Programmer	Multipurpose Informatics Assistant	1	--	--
11.	Head Clerk-cum-Cashier (Dy. Superintendent)	Accountant	1	1	1
12.	Assistant	Multipurpose Informatics Assistant	1	--	--
13.	Personal Assistant	Multipurpose Informatics Assistant	1	1	1
14.	Junior Scale Stenographer	Multipurpose Informatics Assistant	2	2	2

S. No.	Existing Designation	Proposed Designation	No. of posts Sanctioned	No. of posts vacant	No. of posts for proposed conversion
15.	LDC	Multipurpose Informatics Assistant	2	1	1
16.	Typist	Multipurpose Informatics Assistant	1	1	1
17.	Ferro Printer	Multi-Tasking Staff	1	1	1
18.	Sweeper Cum Chowkidar	Multi-Tasking Staff	1	1	1
19.	Peon	Multi-Tasking Staff	3	--	--
	Total		30	15	13

C. NCR Planning and Monitoring Cell, Rajasthan

S. No.	Existing Designation	Proposed designation	No. of posts Sanctioned	No. of posts vacant	No. of posts for proposed conversion
1.	Chief Town Planner	No Change	1	--	-
2.	Senior Town Planner	No Change	1	--	-
3.	Deputy Town Planner	No Change	1	1	-
4.	Assistant Town Planner	No Change	3	--	-
5.	Research Assistant	Knowledge Professional	2	1	1
6.	Computer Programmer	Multipurpose Informatics Assistant	1	1	1
7.	Senior Personal Assistant	Multipurpose Informatics Assistant	1	--	-
8.	Personal Assistant	Multipurpose Informatics Assistant	1	1	1
9.	Town Planning Assistant	Knowledge Professional	1	--	-
10.	Junior Engineer	GIS Expert	1	1	1
11.	Investigator Gr. I	Knowledge Professional	1	--	-
12.	Senior Draftsman	GIS Expert	2	--	-
13.	UDC / Sr. Assistant	Knowledge Professional	1	1	1
14.	LDC / Jr. Assistant	Multipurpose Informatics Assistant	2	1	1
15.	Driver	Driver	1	--	-
16.	Class-IV	Multi-Tasking Staff	1	--	-
	Total		21	7	6

D. NCR Planning and Monitoring Cell, Uttar Pradesh

S. No.	Existing Designation	Proposed Designation	No. of posts Sanctioned	No. of posts vacant	No. of posts for proposed conversion
1.	Commissioner	No Change	1	--	-
2.	Chief Coordinator Planner	No Change	1	--	-
3.	Associate Planner	No Change	1	1	-
4.	Economic Planner	No Change	1	1	-
5.	Assistant Town Planner	No Change	2	2	-
6.	Assistant Architect	Knowledge Professional	1	1	1
7.	Planning Assistant	Knowledge Professional	2	1	1
8.	Junior Engineer	GIS Expert	1	1	1
9.	Research Assistant	Knowledge Professional	2	2	2
10.	Planning Draftsman	Knowledge Professional	2	1	1
11.	Investigator	Knowledge Professional	2	1	1
12.	Head Clerk-cum-Accountant	Accountant	1	--	-
13.	Computer Programmer	Multipurpose Informatics Assistant	1	1	1
14.	Stenographer (1 Sr. 2 Jr.)	Multipurpose Informatics Assistant	3	2	2
15.	LDC	Multipurpose Informatics Assistant	1	--	-
16.	Typist	Multipurpose Informatics Assistant	1	1	1
17.	Driver	Driver	2	1	1
18.	Ferro Printer	Multi-Tasking Staff	1	-	-
19.	Chowkidar	Multi-Tasking Staff	1	1	1
20.	Peon	Multi-Tasking Staff	3	--	-
	Total		30	17	13

AGENDA ITEM NO. 13: DELINEATION AND GROUND TRUTHING OF NATURAL CONSERVATION ZONE (NCZ) AND NOTICES ISSUED UNDER SECTION 29(2) OF NCRPB ACT, 1985 REGARDING NCZ

- 13.1 While considering the Draft Sub-Regional Plan for Haryana Sub-Region of NCR-2021, the Board in its Special Meeting held on 25.04.2014 decided the following:

“NCZ in NCR be delineated by each participating State based on detailed ground truthing, along with verification of State revenue records. This exercise should be carried out by a team of Officers consisting of NRSC, participating State Governments and NCRPB within 30 days. Thereafter, the SRPs would stand amended.”

- 13.2 Variations in NCZ, as observed by NCRPB in conjunction with NRSC, were conveyed to the NCR participating States requesting reasons for the variations in each case within a stipulated time. Since no response was received, Notice(s) under Section 29(2) of the NCRPB Act, 1985 were issued on 23.06.2014 for violation of RP-2021, to the NCR participating States, seeking a detailed reply.
- 13.3 Pursuant to the above decision, NCRPB vide letter dated 12.08.2014 circulated Terms of Reference (ToR) for delineation exercise, which was approved by the Ministry of Urban Development, Govt. of India. Further, in order to facilitate the NCR participating States, detailed maps/ satellite imageries (on 1:10,000 scale) superimposing NCZ boundaries as per RP-2021 and draft revised RP-2021 (prepared in 2014), were also provided to the NCR participating States.
- 13.4 Subsequently, the status regarding delineation of NCZ was discussed and reviewed in various meetings of the Planning Committee and the Board. The matter was deliberated by the Planning Committee in its last meeting and it was decided that the necessary action for NCZ delineation may be expedited in a time-bound manner by the NCR participating States. The matter was also reviewed by the Board in its 37th meeting of held on 04.12.2017 wherein the Board directed the NCR participating States to expedite the exercise of NCZ delineation in a time bound manner.

- 13.5 It may be mentioned that in the 37th meeting, the Board had also delegated the power to the Member Secretary, NCRPB for issuing Notice and taking necessary action under Section 29(2) of NCRPB Act, 1985, to deal with violation of Regional Plan. Accordingly, NCRPB has issued reminders to the concerned NCR participating States for submitting the requisite replies/ reports in response to the Notices issued under Section 29(2) dated 23.06.2014 in a time bound manner.
- 13.6 The matter was reviewed in the Review Meeting held in NCRPB office on 23.04.2018 wherein it was observed that reminders issued to the States (DO letters sent to Chief Secretaries of the NCR participating States) seeking detailed replies w.r.t. the NCZ variations informed vide afore-cited Notice(s)). It was stressed that the NCR participating States should submit the required replies at the earliest, failing which action within the ambit of Section 29(2) of NCRPB Act, 1985 may be initiated for violation of Regional Plan-2021.
- 13.7 It is to mention that in compliance to Notice dated 23.06.2014 u/s 29(2) of the NCRPB Act 1985, the NCR participating States were to submit detailed replies stating reasons for variation in NCZ in their respective sub-region, after the delineation and ground truthing exercise is completed by the participating States, as decided in its 35th Board meeting held on 09.06.2015.
- 13.8 It is apprised that D.O. letters from the Secretary, MoHUA, Govt. of India have been sent to the Chief Secretaries of the NCR participating States on 22.03.2019 requesting them to expedite the NCZ delineation and submit a detailed reply/ Action Taken Report at the earliest.
- 13.9 The Hon'ble NGT in its order dated 07.08.2018 , in the matter OA No.147 /2014, while disposing the matter, directed to constitute a Committee, which would look into the question whether the SRPs of the states are consistent with the Regional Plan. A committee in this regard was constituted by MoEF&CC vide its Office Order dtd. 25.10.2018. Two meetings of the said Committee have been held till date wherein the matter related to shrinkage in NCZ area was deliberated. The Committee in its second meeting had directed the NCR participating States to submit their reports clearly indicating the NCZ area in the year 1999 and 2012 and difference thereof, with reasons/justifications for variations in NCZ areas by 15.04.2019.

13.10 The matter was thereafter discussed in the Review Meetings held at NCRPB on 14.6.19 for Rajasthan, 17.6.2019 for UP and Haryana and 18.6.2019 for Delhi. The subregion wise status of NCZ delineation is as under:

- **Haryana:** The NCZ delineation and ground truthing is being carried out by the State and the geo-referencing work is in progress. The areas categorised as “*status yet to be decided*” the delineation and ground truthing is being carried out as per the decisions of the Board.

In case of Haryana sub-region, it may be mentioned that the Board in the 35th meeting decided that *Govt. of Haryana will prepare the final report along with Maps on the NCZ delineation exercise and amend the SRP-2021 and forward the same to MoEF&CC. MoEF&CC will examine the same and confirm whether their views/comments/suggestions have been addressed/incorporated in the SRP-2021. Subsequently, a Compliance Report will be sent to PMO by Govt. of Haryana through MoUD, Govt. of India and a copy will also be submitted to the Board's Secretariat.*

NCRPB vide letter dated 01.02.2018 requested Govt. of Haryana to take necessary action and submit Action Taken Report within 30 days. Member Secretary, NCRPB vide DO letter dated 17.04.2018 requested Chief Secretary, Govt. of Haryana to look in to the matter and direct the concerned Departments to submit ATR within stipulated time. Meanwhile, matter was raised on the matter by Hon'ble Chief Minister, Haryana vide his D.O. letter 30.08.2018, to Chairman, NCRPB requesting to resolve the matter.

Further D.O. letters were sent from Secretary, Govt. of India, MoHUA dated 9.10.2018 & 22.2.2019 requesting Chief Secretary, Govt. of Haryana to direct the concerned Department(s) to expeditiously complete the NCZ delineation and submit a detailed reply / Action Taken Report to NCRPB and MoEF&CC. D.O. letters dated 20.11.2018 and 9.4.2019 were also sent by Member Secretary, NCRPB to Chief Secretary, Govt. of Haryana requesting to expedite the matter. MoEF&CC has also requested Govt. of Haryana in this regard.

During the Review meeting with officers from Govt. of Haryana, held under chairpersonship of Member Secretary NCRPB on 17.06.2019, CCP, NCR,

Haryana apprised the status of NCZ Delineation and informed that 100% of the ground truthing exercise of nine districts has been completed. It was also informed that they will submit the report to MoEF&CC and MoHUA along with reasons for shrinkage of NCZ by 25.06.2019. Copy will be given to NCRPB. The Minutes of same were circulated vide email dated 19.6.2019 and letter dated 20.6.2019. The latest Status of NCZ delineation and detail ATR is awaited.

The matter again taken up during the Video Conferencing meeting amongst NCRPB and Officers from Govt. of Haryana, held on 10.07.2019, wherein request to expedite necessary action was made The submissions are however awaited.

- **Rajasthan:** The work is in progress and meetings in this regard were held by the District Collector, Alwar. During the Review meeting held in NCRPB on 14.6.2019, Chairperson had directed the Chief Town Planner (CTP), NCR Cell, Rajasthan to hold a meeting of concerned departments at Alwar to discuss, examine and resolve the matter of NCZ delineation and ground truthing. CTP was also to coordinate with District Collector, Alwar and Secretary, UIT, Alwar was to ensure expeditious completion of the task in a time bound manner within 15 days. A detail report of variations at each NCZ site was to be prepared and accordingly, the notified SRP was to be amended by the Govt. of Rajasthan. CTP NCR Cell Rajasthan had assured to finalise SRP accordingly by 30th June 2019.

The matter was again taken up during the Video Conferencing meeting amongst NCRPB and Officers from Govt. of Rajasthan, held on 10.07.2019, wherein request to expedite necessary action was made The submissions are however awaited.

- **U.P.:** The matter was discussed in the meeting of the State Level Steering Committee held on 28.09.2018 under the chairmanship of Chief Secretary, Govt. of U.P wherein it was decided that the opinion of Govt. of U.P. as informed by the State Minister, Govt. of U.P. in the 36th meeting of the Board will be re-communicated to the NCRPB. Although in the statement

of the State Minister, Advisor, NCRPB informed the Board that as per the earlier decision of the Board in its Special Meeting, NCZ is to be delineated by each NCR participating State based on the detailed ground truthing along with verification of State revenue records, after which the SRPs will stand amended.

Further, as per the compliance report submitted by MoEF&CC in the Hon'ble NGT on 24.05.2019, it is observed that Govt. of U.P. informed that there is no record of shrinkage in NCZ area with respect to Revenue record and SRP of UP was already approved by NCRPB

- **NCT Delhi:** Govt. of NCT Delhi informed that NIUA is looking after preparation of the Master Plan for Delhi-2041 and has been requested to ensure incorporation of NCZ pockets in the new Master Plan. It has also been informed that the area where development has already taken place will not be earmarked. In response, Secretary (H&UA) vide D.O. letter dated 24.09.2018, it has been clarified that this cannot be considered since GNCT-Delhi / DDA has to delineate NCZ and this delineation has to be carried-out as per the directions of the Board and ToR approved by the MoUD, Govt. of India. Meetings are being convened at DDA and GNCT of Delhi level in this regard.

During the Review meeting held for Delhi in NCRPB on 18.6.2019, representatives from DDA had appraised the status and informed that in pursuance of NGT orders and compliance of directions of Secretary, MoEF&CC on the matter, a table top exercise was done to analyse the shrinkage of NCZ. The analysis has been submitted to GNCT of Delhi for requesting all other land owning agencies to validate and cross check with ground truthing as per revenue records. It was updated that Department of Urban Development, GNCT of Delhi had convened a meeting on the matter and had written to all departments to expedite the process. As DDA is one of the key land owning agencies in Delhi, it was suggested that they themselves should also expedite the matter and can hold a meeting of all concerned while also taking up on priority with proper coordination amongst its Planning, Engineering and Land Management (for khasra details) departments. Maps are already provided. Representative from GNCT of Delhi also assured to look into the matter and expedite the

process by giving it top priority. DDA assured to finalise NCZ delineation by 30th June, 2019.

The matter was again taken up during the Video Conferencing meeting amongst NCRPB and Officers from GNCT of Delhi and DDA, held on 10.07.2019, wherein request to expedite necessary action was made. The submissions are however awaited.

Action Point:

- ***Matter is placed before the Planning Committee for deliberation.***
- ***NCR participating States to provide the current status of NCZ delineation.***

AGENDA ITEM NO.14: POPULATION DENSITY OF MASTER PLANS/ DEVELOPMENT PLANS & DENSITY NORMS OF RP-2021 AND NOTICES ISSUED UNDER SECTION 29(2) OF NCRPB ACT, 1985 IN THE MATTER

14.1 RP-2021 for NCR, notified in 2005, in Chapter 17 (Regional Land Use), realizing the fast urbanisation in the region and after a careful examination of the existing density norms, being followed by the constituent States, has proposed following density norms for the settlements:

S. No.	Urban Centres	Persons / hectare
a)	Below 50,000 population	60 to 80
b)	50,000 to 1 lakh population	80 to 100
c)	1 lakh to 5 lakhs population	110 to 125
d)	5 lakhs to 10 lakhs population	125 to 150
e)	10 lakhs to 50 lakhs population	150 to 200
f)	More than 50 lakh population	200 to 250

14.2 Further, at para 17.4.1 of the RP-2021 it is mentioned that *“Respective State Governments would elaborate the details of land uses, its phasing for development and zoning regulations in the Sub-regional Plans and Master/Development Plans while preparing them. Phasing of land use development would be done for the year 2011 and 2021.”*

14.3 The Hon'ble High Court of Delhi, in its order dated 30.09.2014 had *inter-alia* directed NCRPB to monitor and be vigilant of the developments at site in the NCR and also in preparation of the SRPs and the Master Plans of the towns falling in the NCR; and upon finding any violations thereof, take action under Section 29(1) of the Act.

14.4 While examining certain petitions/representations, NCRPB examined the Master Plans/ Development Plans of various towns of NCR w.r.t. the population density norms given in RP-2021 and conveyed a detailed analysis to the Govt. of Rajasthan, Haryana and U.P. requesting that the Master Plans/ Development Plans of the respective sub-region, which are not in conformity with the Regional Plan-2021 may be amended to ensure conformity with the Regional Plan-2021. It was also requested that the Master Plans/ Development Plans which are under preparation, may be prepared in conformity with the Regional Plan.

14.5 NCRPB had been pursuing with the NCR participating States to prepare the Master/ Development Plans in conformity with the RP-2021 and to modify the Master/ Development Plans wherein density norms were not in conformity with the norms given in the RP-2021. Since modifications had not been carried out, Notices under Section 29(2) of NCRPB Act, 1985 have been issued to the NCR participating States of U.P., Rajasthan and Haryana vide letter dated 21.01.2016, 22.01.2016 and 25.01.2016 respectively for violations of the density norms provided in the RP-2021.

14.6 Matter was also deliberated by the Planning Committee in its last meeting held on 17.11.2017, wherein the Committee observed the following:

- a) In Haryana sub-region, most of the Development Plans of the towns are at draft stage and the horizon year of these Plans is beyond the perspective year of Regional Plan 2021.
- b) In case of Greater Noida, the impact of increased FAR on the overall population density of the town has not been ascertained.
- c) In case of Rajasthan sub-region, Govt. of Rajasthan has submitted that the matter related to revision of Master Plans will be examined once again.

After detailed discussion and deliberation, Planning Committee *inter-alia* decided that *NCR participating States shall comply with the provisions of the NCRPB Act, 1985 and to prepare/ amend the respective Master Plans/ Development Plans ensuring conformity with the policies and proposals of the RP-2021, including population density norms.*

14.7 Subsequently, the Chief Secretaries of the Govts. of Rajasthan, Haryana and Govt. of U.P. were requested to issue necessary directions to the concerned Departments of the State to take necessary action expeditiously to comply with the Regional Plan-2021 and submit a detailed Action Report in this regard to NCRPB.

14.8 Matter was also discussed in the Review Meeting held at NCRPB on 23.04.2018 wherein representatives of the NCR Cells were requested to submit the required action taken report /replies at the earliest.

14.9 Meanwhile, matter was raised on the matter by Hon'ble Chief Minister, Haryana vide his D.O. letter 30.08.2018, to Chairman, NCRPB requesting to resolve the matter.

14.10 NCRPB has received action taken report /replies from the Govt. of Rajasthan and Govt. of Haryana. The reply from Govt. of U.P. is awaited. Sub-region wise action taken report /replies and observations of NCRPB are as under:

Action taken report /replies from NCR participating State	Observations of NCRPB
<p>Govt. of Rajasthan vide letter dated 21.05.2018 has submitted that after analyzing the future population growth of three towns, namely, Kherthal, Greater Bhiwadi and Alwar of District Alwar, the perspective year of the Master Plans of the said three towns has been increased as under and Notification for the same has been issued on 04.05.2018:</p> <ul style="list-style-type: none"> • Kherthal Master Plan-2021 – perspective year increased up to 2026 • Greater Bhiwadi Master Plan-2031 – perspective year increased up to 2041 • Alwar Master Plan-2031 – perspective year increased up to 2051 <p>Govt. of Rajasthan has requested to withdraw the Notice u/s 29(2) of NCRPB Act, 1985 in the matter.</p>	<p>NCRPB vide letter dated 06.07.2018 conveyed the following:</p> <ul style="list-style-type: none"> • Phasing of Master Plans was to be done for year 2011 and 2021. • As per the Notice dated 22.01.2016, Master Plans of six towns (Alwar-2031, Greater Bhiwadi-2031, SNB Urban Complex-2041, Kherthal-2021, Kherli-2031 & Rajgarh-2031), land use/urbanisable area phasing of five towns and amendment w.r.t. population density norms of one town was to be carried out by Govt. of Rajasthan. • As the perspective year of the above Plans is beyond the perspective year of RP-2021, Govt. of Rajasthan was requested to provide the land use/urbanisable area phasing for year 2021 and proposed population for the same.
<p>Govt. of Haryana vide DO letter dated 12.06.2018 has given the following clarifications with a request to withdraw the notice:</p> <ul style="list-style-type: none"> • Most of the Development Plans are in conformity of the density norms as provided either in Regional Plan or the draft revised Regional Plan. • The Development Plans of towns like Sonipat and Faridabad are at slight variants from the said norms due to special characters of these townships. • Development Plan of Rewari is being revised to bring the same 	<ul style="list-style-type: none"> • RP-2021 was prepared with the active participation of the NCR participating States taking into consideration changing dynamics of the development and growth. • Perspective year for most of the towns in the sub-region are beyond the perspective year of Regional Plan-2021 without phasing for 2021, as envisaged in the Regional Plan. Most of such Development Plans are still at draft stage which can be brought in conformity with the Regional Plan-2021. • The State Government has to ensure that the population density

Action taken report /replies from NCR participating State	Observations of NCRPB
<p>in conformity with the prescribed density norms.</p> <ul style="list-style-type: none"> • New Integrated Licensing Policy (NILP)-2016 and the Transit Oriented Development (TOD) Policy have been notified which would increase the population density in the urban settlements. However, the impact of these policies will be assessed after Census-2021. 	<p>norms as stipulated for 2021 are complied with.</p>

14.11 As the report /replies from Govt. of U.P. were not received, the matter of Master Plan for Greater Noida-2021 was deliberated in the Review Meeting held on 17.06.2019 under the chairpersonship of Member Secretary, NCRPB, wherein it was directed that a reply indicating the impact of increased FAR on the overall population density of the town may be provided to the NCRPB. The same is awaited.

14.12 In view of the above, it is imperative that NCR participating States have to comply with the provisions of the NCRPB Act, 1985 and to prepare/ amend the respective Master Plans/ Development Plans ensuring conformity with the policies and proposals of the RP-2021, including population density norms. As suggested in the Regional Plan-2021 phasing for year 2021 is to be clearly indicated and adhered to in the Master Plans/ Development Plans.

14.13 In addition, it may be noted that the Board in its 37th meetings, had delegated the powers *to the Member Secretary, NCRPB for issuing Notice and taking necessary action under Section 29(2) of NCRPB Act, 1985, to deal with violation of Regional Plan.* Action taken has to be apprised to the Board.

14.14 The matter was also discussed in the Review Meetings held at NCRPB on 14.6.19 for Rajasthan, 17.6.2019 for UP and Haryana and 18.6.2019 for Delhi. During the meeting, Chairperson requested officials from Uttar Pradesh that a detailed Note on the activities /uses permitted in the notified Master Plan w.r.t activities/ uses permitted in the RP-2021 may be submitted by NCR Cell, so that the matter could be resolved. During the meeting with officers from Haryana, it was agreed that the Development Plans prepared beyond the perspective year

2021 will have phasing for 2021, conforming to the RP-2021. Thereafter, State Government shall have to ensure that the population density norms as stipulated 2021 are complied with. Similarly, CTP, NCR Cell, Rajasthan, was to take necessary action and provide appropriate phasing for year 2021 in the Master Plans, to be in conformity with the Regional Plan-2021. CTP, NCR Cell, Rajasthan assured to revise it accordingly and include phasing and thereafter submit a reply within 15 days in this regard, by 30th June, 2019.

Action Point:

- ***NCR participating States to comply with the provisions of the NCRPB Act, 1985 and to prepare/amend the respective Master Plans/ Development Plans ensuring conformity with the policies and proposals of the RP-2021, including population density norms. As suggested in the Regional Plan-2021 phasing for year 2021 is to be clearly indicated and adhered to in the Master Plans/ Development Plans.***
- ***Accordingly, NCR participating States to submit detailed replies w.r.t. the Notice(s) issued under Section 29(2) of NCRPB Act, 1985 in the matter.***

AGENDA ITEM NO.15: MATTER RELATED TO COUNTER MAGNET AREAS OF NATIONAL CAPITAL REGION

15.1 The NCRPB Act, 1985 empowers the Board under Section 8 (f) to select, in consultation with the State Government concerned, any urban areas, outside the NCR having regard to its location, population and potential for growth, which may be developed in order to achieve the objectives of the Regional Plan.

The RP-2001 identified five CMAs, namely Hisar, Bareilly, Kota, Gwalior and Patiala. Thereafter, the NCRPB carried out a Study in 2006 and the recommendations of the Study were discussed in the 56th meeting of Planning Committee held on 19.09.2008. Based on the recommendations of the Planning Committee, Board in its 31st meeting held on 11.11.2009 approved three CMAs, namely, Kanpur, Ambala and Dehradun. Thereafter, upon recommendations of the Planning Committee, the Board in its 33rd meeting held on 01.07.2013, also approved Jaipur as CMA. Accordingly, there are nine CMAs to NCR.

15.2 Planning Committee in its last (66th) meeting noted the following decisions of the Board (taken in its 31st meeting):

- a) CMAs would not limit to urban area and development could be proposed in the form of corridors also (i.e. Dehradun-Haridwar, Bareilly-Rampur and Kanpur-Lucknow, etc.)
- b) Respective State Governments will notify their respective Counter Magnet Areas, and prepare Development Plan/ Master Plan and Plan of Action for its implementation.

Further, the Planning Committee noted that Govt. of U.P. proposes to merge a vast area under four Development Authorities, comprising of many smaller towns, forming Kanpur-Lucknow corridor as CMA. Planning Committee also noted that NCRPB has been requesting the concerned States for providing status/ update w.r.t. preparation of Development Plan/ Master Plan and Plan of Action for the respective CMA.

15.3 In view of the aforementioned decision of the Board, Planning Committee decided the following:

- a) *Govt. of U.P. to prepare a Plan of Action considering the horizon year and policies & proposals of the RP-2021 and earmark a specific area for effective development as CMA along the Kanpur-Lucknow corridor.*
- b) *Concerned State Govts. to provide the current/ updated area details and status of preparation of Development Plan and Plan of Action for the remaining CMAs in-line with the policies & proposals of the RP-2021.*

15.4 Thereafter, NCRPB has requested the respective State Governments to provide the current/ updated area details, and status of preparation of Development Plans and Plan of Action in line with the policies & proposals of the RP-2021/ DRRP-2021. The status of CMAs is as under:

- i) **Kanpur (U.P.):** NCRPB vide letters dated 07.12.2017 & 16.01.2018 requested the Govt. of U.P. to prepare the required Plan of Action in compliance with the decision of the Planning Committee. Further, the matter was deliberated in the Review Meeting held on 17.06.2019 under the Chairpersonship of Member Secretary, NCRPB wherein it was decided that a working Development Plan and Plan of Action considering all Master Plan of four Development Authorities may be prepared by Govt. of U.P. the said working Development Plan need not necessarily be notified by the State Govt. SWOT analysis may also be carried out for preparation Plan of Action. Response from Govt. of U.P. is awaited.
- ii) **Gwalior (M.P.):** Govt. of M.P. has informed that subsequent to the earlier Notifications vide which the area of SADA, Gwalior was notified as CMA, the State Govt. has further added the Gwalior Planning Area as part of CMA, vide notification dated 03.04.2018.
- iii) **Patiala (Punjab):** Patiala was identified as CMA in RP-2001. However, based on the recommendations of the Study carried out in 2006, Patiala was considered to be a 'low priority' town for the purpose of funding.

NCRPB has received a proposal from the Govt. of Punjab vide letter dated 15.03.2018 for selection of the area/ corridor falling under Local Planning Area (LPA) of Patiala and Rajpura towns as Patiala-Rajpura Corridor CMA. The Govt. of Punjab has mentioned that the Patiala-Rajpura Corridor has been proposed as CMA keeping in view the location and potential of urban development of Patiala and Rajpura City and its surrounding areas. LPA of

Patiala and Rajpura are contiguous and should be together considered as CMA.

The above proposal of Govt. of Punjab has been examined and observations are as under:

- Patiala is a existing CMA identified in RP-2001. However, based on the recommendations of the Study carried out in 2006, Patiala was considered to be a 'low priority' town for the purpose of funding and Ambala, a nearby town (approx. 50 km), was considered as a CMA.
- Urbanisable area of Ambala (including Cantt. Area) is approx. 96 sq. km. and LPA of Patiala is 490.33 sq.km.
- LPA of Rajpura city is 419.61 sq.km. which is almost equal to the area of Patiala.

- iv) **Dehradun (Uttarakhand):** Dehradun was identified as CMA Study in 2008 Chief Town & Country Planner, Govt. of Uttarakhand vide letter dated 23.11.2017 communicated that the decision regarding notification of Dehradun as CMA is pending with Govt. of Uttarakhand. He has further informed that Dehradun-Haridwar corridor has not been notified as CMA.

NCRPB vide its letter dated 16.01.2018 had requested Govt. of Uttarakhand to earmark a specific area for effective development along the Dehradun-Haridwar corridor as a CMA. Response from Govt. of Uttarakhand is still awaited.

- v) **Hisar & Ambala (Haryana):**

Govt. of Haryana has informed that Development Plans for the CMAs i.e. Hisar and Ambala have already been notified for 2021 and 2025, respectively. State Govt. has also requested the concerned Department(s)/ Implementing Agencies to take necessary action for preparing the requisite Plan of Action alongwith the implementation of provisions w.r.t. the Development Plan.

The Development Plan of Hisar and Ambala have been received by NCRPB, however, the Plan of Action is still awaited.

- vi) **Kota & Jaipur (Rajasthan):**

Govt. of Rajasthan has informed that draft Master Plan-2031 for Kota has been prepared and submitted for approval of the State Govt. As regards Jaipur, the Master Development Plan-2025 of Jaipur Region has been approved by the State Govt.

Copies of the Master Plans have been received by NCRPB, however, the Plan of Action is still awaited.

- 15.5 All the concerned State Govts. may apprise the Planning Committee about the status of development of their respective CMA.

Action Point:

- ***Planning Committee may deliberate the proposal of Govt. of Punjab for considering Patiala-Rajpura Corridor as a CMA.***
- ***Govt. of U.P to prepare a working Development Plan and Plan of Action for Kanpur-Lucknow corridor CMA, considering all Master Plan of four Development Authorities.***
- ***Govt. of Uttarakhand to issue a notification declaring Dehradun as CMA to NCR and earmark a specific area as a CMA, at the earliest.***
- ***All the concerned States to provide a copy of the Notification of the CMA along with area details and Development/ Master Plan along with Plan of Action for the CMA.***

AGENDA ITEM NO. 16: ACTION TAKEN BY NCRPB ON DIRECTIONS OF HON'BLE HIGH COURT OF DELHI IN MATTER OF RAGHURAJ SINGH VS. UNION OF INDIA & ORS. [WP (C) 5559 OF 2013]

16.1 In the matter of Raghuraj Singh Vs. Union of India & Ors. in WP (C) 5559 of 2013, the Hon'ble High Court of Delhi on 30.09.2014 disposed of the petition:

A. by directing the NCRPB:

- i) to monitor and be vigilant of the developments at site in the NCR and also in preparation of the Sub-Regional Plans and the Master Plans of the towns falling in the NCR;*
- ii) to immediately, upon finding any violations thereof, take action under Section 29(1) of the Act;*
- iii) to regularly, from time to time, keep the Central Government informed of the violations if any of the Regional Plan;*

C. by imploring the State Governments to, forgetting legalese and technicalities, ensure that the purpose for which the NCRPB was created is fulfilled in letter and spirit by ensuring the developments in the respective sub-regions of the NCR are in accordance with the Regional Plan and by fully cooperating with the NCRPB in this respect.

16.2 The matter was discussed by the Planning Committee in its last meeting and the following were decided:

- i) NCR participating States to regularly submit the Quarterly Report on violations in the prescribed formats. The matter may also be regularly monitored by the respective State level Steering Committees.*
- ii) NCR participating States to comply the provisions of the NCRPB Act, 1985 and to prepare/ amend the respective Master Plans/ Development Plans ensuring conformity with the policies and proposals of the RP-2021, including population density norms.*
- iii) As Notices under Section 29 (2) were issued by NCRPB to the concerned NCR participating States the matter alongwith the aforementioned decisions may be placed before the Board for approval.*

- 16.3 The decision of the Planning Committee at S.No. (i) and (ii) above is being pursued by the NCRPB with the NCR participating States. The matter was also discussed in the Review Meeting held on 23.04.2018. It is observed that the same are not being fully complied with by the NCR participating States.
- 16.4 As regards the recommendation of the Planning Committee at S.No. (iii) above the matter was proposed to be placed before the Board in its 37th meeting held on 04.12.2017, however, the same was withdrawn. Further in the said meeting, the Board observed that the meetings of the Board cannot take place frequently and therefore, delegated powers to Member Secretary, NCRPB for issuing notices and taking necessary action u/s 29 (2) of NCRPB Act, 1985, to deal with violation of Regional Plan and directed that the action taken may be apprised to the Board.
- 16.5 In the event that the NCR participating States fail to submit the requisite replies, as sought by NCRPB vide Notices issued under Section 29(2) of NCRPB Act, 1985, NCRPB will be bound to initiate action under the purview of the said Section.
- 16.6 With regard to monitoring developments at site in NCR through use of Remote Sensing and GIS technology, the matter was discussed by the Project Sanctioning and Monitoring Group-I (PSMG-I) in the 55th meeting held on 14.11.2017 wherein it was decided that a pilot study may be carried out by the Government of Haryana for Gurugram and Faridabad districts for a period of one year to monitor the developments at site. Govt. of Haryana was requested to provide the revised cost estimates for the said two districts. The revised proposal / cost estimates was received from Govt. of Haryana vide its letter dated 26.06.2018 and the matter was taken up in the 56th PSMG-I meeting, held on 13.07.2018, wherein it was decided that Govt. of Haryana should conduct a meeting with Survey of India along with NRSC and then place the matter before PSMG-I for decision.
- 16.7 Further, NCRPB deputed its officer to execute the Order of the Hon'ble DHC, regarding monitoring the developments at site in the Rajasthan sub-region and also to see the preparation of the Sub-Regional Plans and the Master Plans of the towns falling in the NCR.

Meetings were held at the level of Chief Town Planner, NCR Planning & Monitoring Cell, Rajasthan at Jaipur and District Collector at Alwar on 09.07.2018 and 13.07.2018, respectively. As a result, a District Monitoring Committee, under the Chairmanship of District Collector, Alwar, has been constituted by DC, Alwar vide Order dated 13.08.2018, to monitor the implementation and violations of policies and proposals of Regional Plan-2021. Further, the report on broad assessment of ground situation w.r.t violations/ non-compliance of RP/SRP/Master Plans was forwarded to GoRajasthan, vide NCRPB's letter dated 30.08.2018, with a request to look into the matter and submit an ATR on the same. Reminders have also been sent in this regard on 05.11.2018 followed by 31.01.2019.

16.8 It is also mentioned that the Petitioner has filed Contempt Petition before the Hon'ble High Court of Delhi in the matter. NCRPB has submitted a detailed reply regarding the actions taken for compliance of the directions of the Court. The matter was heard on 12.09.2018. The next date of hearing is 15.10.2019.

16.9 The matter was discussed during review meetings chaired by MS, NCRPB, held at NCRPB on 14.6.19 for Rajasthan, 17.6.2019 for UP and Haryana and 18.6.2019 for Delhi. It was decided that NCR Cells should ensure that Quarterly Report on violations of RP-2021 are submitted on a regular basis.

Action Point:

- ***NCR participating States to submit the Compliance Report.***
- ***District Level Monitoring Committee under the Chairmanship of the District Collectors/ Magistrate of each District may be constituted, similar to District Alwar, Rajasthan.***

AGENDA ITEM NO. 17: ACTION TAKEN ON THE DIRECTIONS OF THE HON'BLE HIGH COURT OF ALLAHABAD IN THE MATTER OF RAGHURAJ SINGH VS. STATE OF U.P. & 10 ORS. (CIVIL MISC. PIL. NO.-29004 OF 2016)

17.1 In the matter the Hon'ble High Court of Allahabad while disposing of the PIL, gave the following directions vide Judgment dated 21.06.2016:

"...Regarding the complaint of the petitioner in the matter of construction activity [being] undertaken by the Okhla Industrial Development Authority contrary to the provisions of the National Capital Region Planning Board Act, 1985 it is noted that such complaint can be made under Section 29(2) of the said Act before the NCR Board. The Board after investigation can issue appropriate direction in view of the aforesaid statutory provision.

We, therefore, dispose of the present writ petition with a direction to the NCR Board to take appropriate decision on the complaint made after affording due opportunity of hearing to the parties concerned within a period of eight weeks from the date of production of certified copy of this order".

17.2 Accordingly, hearings were held at NCRPB. The matter was also deliberated at length in the last meeting of the 66th Planning Committee wherein the following decided:

- i) *Govt. of U.P. to submit a Compliance Report / Action Taken Report in this regard, in a time bound manner and to apprise the Board of the Action taken, in its forthcoming meeting.*
- ii) *As regard the Notice under Section 29 (2) issued by NCRPB, the Govt. of U.P. to expeditiously submit reply to the Notice and the matter may be placed before the Board after receipt of reply from the Govt. of U.P.*

17.3 It is mentioned that NCRPB vide letter dated 17.05.2017 had requested Govt. of U.P. to address all the aspects w.r.t. Master Plans of Ghaziabad, Noida and YEIDA, raised by the Petitioner, in a time bound manner and submit a Compliance Report to the Board. NCRPB has received certain replies from GDA, NOIDA and YEIDA, however, a Compliance Report in this regard is awaited from the Govt. of UP. NCRPB vide letter dated 25.07.2017 has requested the Govt. of U.P. for the same.

- 17.4 Further, Notice under Section 29(2) of the NCRPB Act, 1985 was also issued on 17.05.2017 requesting Govt. of U.P. to ensure that the U.P. SRP-2021 is in conformity with the RP-2021 in accordance with the observations of the Board, and inform the same to the Board within 3 months from the date of issue of the Notice. The Compliance Report/ Action Taken Report from Govt. of U.P. is still awaited.
- 17.5 As regards the recommendation of the Planning Committee at S.No. (ii) the matter was proposed to be placed before the Board in its 37th meeting held on 04.12.2017, however, the same was withdrawn. Further in the said meeting, powers w.r.t. taking necessary action to deal with violation of Regional Plan were delegated to Member Secretary, NCRPB.
- 17.6 This matter was deliberated in the review meeting held on 17.06.2019 under the Chairpersonship of Member Secretary of NCRPB wherein with regard to notice issued u/s 29(2) of the NCRPB Act, 1985 regarding Zoning Regulation proposed in SRP U.P.-2021, it was directed that the detailed Note on the activities/ uses permitted in the notified Master Plan w.r.t. activities/ uses permitted in the RP-2021 may be submitted by the NCR Cell, so that the matter could be resolved. The same is awaited. Regarding the Compliance Report w.r.t. Master Plans of Ghaziabad, Noida and YEIDA, it was directed by the chairperson that a report may be prepared by the NCR Cell, U.P. in consultation with concerned Development Authorities and submitted to NCRPB. Addl. Commissioner, NCR Cell assured to submit both by 10th July, 2019.
- 17.7 It is mentioned that if the NCR participating States fail to submit the requisite replies, as sought by NCRPB vide Notices issued under Section 29(2) of NCRPB Act, 1985, NCRPB will be bound to initiate action as per the provision of the said Section.
- 17.8 It is also mentioned that the Petitioner has filed Contempt Petition before the Hon'ble Court in the matter, and the concerned Departments (Department of Housing & Urban Development and Industrial Development Department) are made Respondents.

Action Point:

- ***Govt. of U.P. to submit a reply / Action Taken Report w.r.t. Notice issued under Section 29(2) of the NCRPB Act, 1985.***

AGENDA ITEM NO.18 : DRAFT FUNCTIONAL PLAN ON “MICRO AND HOUSEHOLD ENTERPRISES IN NCR”

18.1 Draft Functional Plan on “*Micro and Household Enterprises in NCR*” was prepared and circulated. In the last meeting of Planning Committee, the NCR participating States were requested to expeditiously provide the inputs/observations, on receipt of the draft Functional Plan from NCRPB.

18.2 Draft Functional Plan on “*Micro and Household Enterprises in NCR*” was prepared circulated to NCR participating States; Micro, Small & Medium Enterprises Development Institute, Okhla and NISBUD, Noida vide letter dated 20.12.2017. MSME Development Institute, Okhla vide letter dated 18.01.2018 intimated that they support the draft and have no specific comments to offer on it.

18.3 Since, inputs/ observations from the NCR participating States and NISBUD were not received a reminder dated 14.03.2018 was sent. Subsequently, inputs/ observations from NIESBUD (*related to awareness; training; establishment of livelihood business incubators; mentoring & post training support; and marketing services*), were received vide letter dated 27.03.2018. The same has been incorporated. Inputs from Govt. of Rajasthan and Uttar Pradesh were received vide letter dated 21.05.18 and 03.04.18 & 07.05.18 respectively. Govts. of NCT Delhi and Haryana has no inputs/ observations/ comments.

- The status of compliance of the inputs/ observations received is placed at **Annexure-18/I**

Action Point:

- ***The draft Functional Plan (Annexure 18/II) is placed for consideration and approval.***

AGENDA ITEM NO.19: STATUS OF FINANCING OF PROJECTS BY NCR PLANNING BOARD

20.1 Under section 8 (e) of the NCRPB Act, the Board can select and approve comprehensive projects and provide assistance for the implementation of such projects. The Board under the provisions of the above section has been financing various projects within the National Capital Region with the over-arching goal of achieving the balanced development of the Region. NCR Planning Board provides financial assistance to the constituent States / NCT of Delhi and their implementing agencies in the form of loans up to a maximum of 75% of the estimated cost of projects. The constituent States of NCR / NCT of Delhi or their implementing agencies contribute 25% of the project cost as their share directly at the project level.

20.2 The Board is providing financial assistance to various sectors at the following interest rates:

Type of Project / Category	Interest Rate*
Priority Infrastructure Projects viz. Water Supply, Sewerage, Sanitation, Drainage, Solid Waste Management and Roads, ROB's & Flyovers.	7.00% p.a.
Power Sector (transmission, distribution and generation)	7.50% p.a.
Other Infrastructure Projects	8.50% p.a.

* Incentive of 0.25% by reduction in interest rate for timely payment of loan instalments.

20.3 The tenure of the loan is 15 years with 3 years moratorium for the sectors of Water Supply, Sewerage, Sanitation, Drainage and Solid Waste Management. For Metro projects loan tenure is 20 years with moratorium of 5 years in repayment of Principal. The Board has a provision of grant up to 15% of the estimated cost of the project for these sectors. In respect of other sectors, the tenure is up to 10 years with a moratorium of 2 years for repayment of the principal amount.

20.4 As on March 2019, the Board has provided financial assistance to **353** infrastructure development projects with an estimated cost of Rs. **30809** Crore, out of which an amount of Rs. **14664** Crore has been sanctioned as loan. The Board has released a loan amount of about Rs. **11512** Crore till March 2019. Out of **353** projects for which loans have been sanctioned by the Board, **262** projects have been completed and balance **91** are at various stages of implementation.

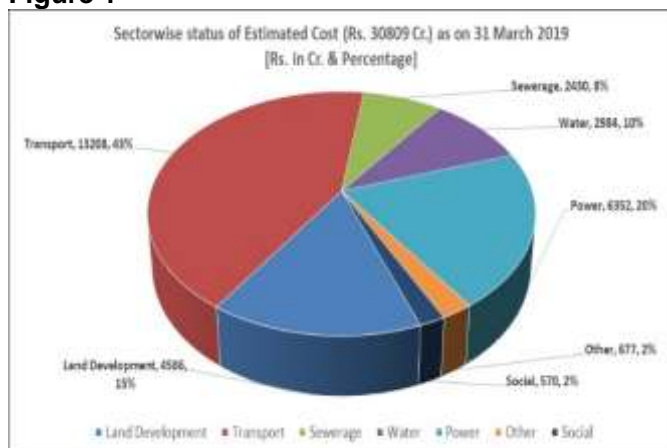
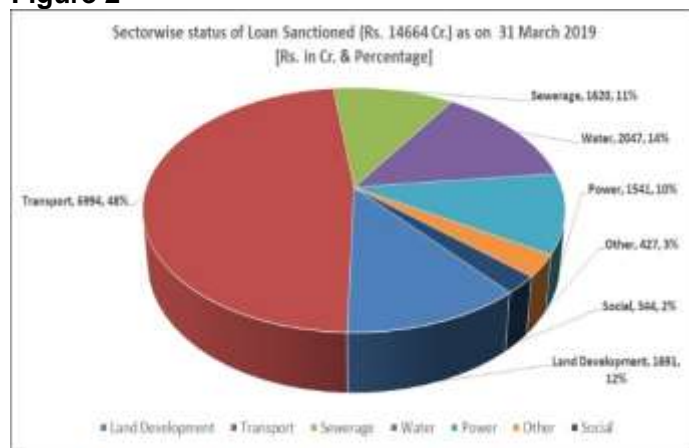
The sub-region wise break up including completed and ongoing projects is as below in Table 1.

Table 1: Sub-region wise break up of projects financed by the NCRPB (as on March 2019)

(Rs. in Cr.)

S. No.	States	Status	No. of projects	Estimated cost	Loan sanctioned	Loan released
1	Rajasthan [including CMA- Jaipur]	Ongoing	54	3591	2573	1750
		Completed	30	1679	631	595
	Sub Total		84	5270	3203	2345
2	UP [including CMA- Bareilly]	Ongoing	6	7015	2557	1962
		Completed	51	2117	919	681
	Sub Total		57	9132	3475	2643
3	Haryana [including CMA- Hissar]	Ongoing	28	1316	889	467
		Completed	173	13780	6222	5548
	Sub Total		201	15097	7111	6015
4	NCT-Delhi	Ongoing	1	102	76	20
		Completed	2	521	310	310
	Sub Total		3	623	386	330
5	CMA –Patiala in Punjab	Ongoing	0	0	0	0
		Completed	2	79	46	46
	Sub Total		2	79	46	46
6	CMA –Gwalior in M P	Ongoing	2	475	341	32
		Completed	4	134	101	101
	Sub Total		6	608	442	133
	Total	Ongoing	91	12499	6436	4230
		Completed	262	18310	8228	7282
	Grand Total		353	30809	14664	11512

The sector wise break up of estimated cost of projects and the loans sanctioned by the NCRPB are shown in Figure 1 and Figure 2 below, respectively.

Figure 1**Figure 2****Action Point:**

- **The matter is placed before the Committee for information.**

AGENDA ITEM NO. 20: STATUS OF RECIPROCAL COMMON TRANSPORT AGREEMENT

- 21.1 In pursuance to the decision of the 29th meeting of the Board held on 24.05.2006, an Empowered Committee under the chairmanship of the Secretary, Ministry of Urban Development was constituted for facilitating decisions relating to critical activities essential for making the NCR a Region of global excellence.
- 21.2 Empowered Committee in its 1st meeting held on 04.04.2007 decided to constitute a 'Committee of Transport Secretaries/Commissioners (CoTS)' of U.P., Haryana, Rajasthan & Delhi under the Chairmanship of Member Secretary, NCR Planning Board which will look into all aspects of inter-state movement of vehicles and also deliberate on a common format for multi-lateral agreements for all the constituents of NCR which could be signed by the constituent States to facilitate seamless movement of traffic in NCR.
- 21.3 In the interest of facilitating development of an effective transport system and seamless movement of traffic in National Capital Region (NCR) comprising NCT Delhi and parts of adjoining States to Delhi i.e. Rajasthan, U.P. & Haryana as defined in the Para 2.1 of Regional Plan-2021, there is dire need for unrestricted and seamless movement of interstate traffic in the National Capital Region i.e. among these States under a reciprocal common agreement.
- 21.4 Subsequently, two Reciprocal Common Transport Agreements (RCTAs) were signed amongst the Government of Haryana, NCT Delhi, Rajasthan and Uttar Pradesh as under:

A. Agreement for 'Contract Carriage'

The Agreement for 'Contract Carriage' was signed on 14.10.2008, according to which, all the Contract Carriage vehicles using clean fuel (CNG), confirming to prevailing Euro norms in NCR, and registered in NCR, would be allowed to move unrestricted.

Para 5 (ii), General of this agreement mentioned that *"this agreement shall be valid for next ten years or till such time a new Agreement is signed among the constituent States whichever is earlier. The Agreement can be reviewed after five years, if need arises. While other peripheral issues can be sorted out in the annual meeting of the Group, a re-notification for the changes within the framework of the Agreement can then be done on annual basis"*.

As per the provisions in Para 5 (ii) of Agreement, the Agreement for 'Contract Carriage' is valid for next ten years (i.e. upto 13.10.2018) or till such time new agreement is signed among the constituent states whichever is earlier. Requests in this regard were made to NCR participating states vide D.O. letter of even number dated 05.10.2018 for agreeing to extend the validity period of the prevailing agreement for another ten years.

- 21.5 In response to the above, the NCR participating States have submitted the following w.r.t. the validity period of the prevailing agreement:

- Govt. of Delhi vide letter dated 11.10.2018: *“to avoid inconvenience to general public using mode of public transport having NCR permits, extension of the expiring RCTA for a period of six months may be considered for the time being pending signing of new RCTA”*.
 - Govt. of Haryana vide D.O. letter dated 12.10.2018: *“Haryana State Government (Transport Department) agrees to clause no. 5 (2) of the existing RCTA agreement for Contract Carriage that the existing agreement may continue for smooth operation of the vehicles in the NCR till such time agreement among constituent States”*.
 - Govt. of Rajasthan vide letter dated 14.09.2018 has conveyed: *“the State of Rajasthan has no objection in further extension of validity period of RCTA (Contract Carriage) as it exists, for next ten years”*.
 - Govt. of Uttar Pradesh vide dated 12.10.2018 has conveyed its *“agreement on extending the RCTA agreement signed on 14.10.2008 for another ten years or till a new agreement is made”*.
- 21.6 Accordingly, a request letter dated 12.10.2018 was sent by Chairman, CoTS to all the NCR participating States for the extension of validity of RCTA (Contract Carriage) for further six months beyond 13.10.2018, pending signing of new RCTA (Contract Carriage) and an order was issued in this regard on 16.10.2018 extending the agreement dated 14.10.2008 for a further period of six months (i.e. till 13.04.2019). Consequently, an order was issued to avoid inconvenience to general public using mode of public transport having NCR permits, it is directed that the terms and conditions of agreement dated 14.10.2008 be abided for another six months beyond 13.10.2018 and status quo be maintained till further order. Thereafter, as the new RCTA (Contract Carriage) was still to be finalised and NCR States had sought for time to get necessary approvals and subsequent notifications as mandated by law, it was decided during the CoTS meeting held on 08.03.2019, that, in order to avoid inconvenience to general public using mode of public transport having NCR permits, an order may be issued directing NCR States that the terms and conditions of agreement dated 14.10.2008 be abided for another six months beyond 13.04.2019 and status quo be maintained till further order.

Action point:

- ***Matter placed for information of the Committee***

B. Agreement for 'Stage Carriage'

The Agreement for 'Stage Carriage' granting permissions for Stage Carriage vehicles plying on CNG (originating/ terminating within NCR) was signed on 22.04.2010. These agreements have also been notified by all the constituent States of NCR. It was also agreed that all the constituent States and other Stakeholders will endeavor to expedite the availability of CNG in NCR.

The Stage Carriage, Agreement in its para 5 (ii), General mentioned that *"this agreement shall be valid for next ten years or till such time a new Agreement is signed among the constituent States whichever is earlier. The Agreement can be reviewed after five years, if need arises. While other peripheral issues including running of feeder buses for mass transport system, etc. can be sorted out in the meeting of the participating States as and when required. A re-notification for the changes within the framework of the Agreement can then be done accordingly"*.

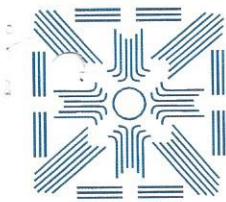
With regard to the Agreement for 'Stage Carriage', which was signed on 22.04.2010, further decision on extension / amendment will be required till 22.04.2020.

NCRPB is following up on the status of implementation of Reciprocal Common Transport Agreements among Government of Haryana, NCT-Delhi, Rajasthan and Uttar Pradesh for 'Contract Carriage' and 'Stage Carriage' with the NCR Participating States.

Action point:

- ***Matter is placed before the Planning Committee for information.***

AGENDA ITEM NO. 21: ANY OTHER ITEM WITH PERMISSION OF THE CHAIR.



राष्ट्रीय राजधानी क्षेत्र योजना बोर्ड

NATIONAL CAPITAL REGION PLANNING BOARD

प्रथम तल, कोर IV बी, / 1st Floor, Core IV B

भारत पर्यावास केन्द्र / India Habitat Centre

लोधी रोड, नई दिल्ली-110003 / Lodhi Road, New Delhi-110003

आवासन और शहरी कार्य मंत्रालय / Ministry of Housing and Urban Affairs

दूरभाष / Phone : 24642284, 24642287 फैक्स / Fax : 24642163

No.K-14011/100/2016-NCRPB

Dated: 22.11.2017

Sub: Minutes of the 66th meeting of the Planning Committee of NCR Planning Board held at 11.30 a.m. on 17.11.2017 in the Conference Room, AMDA Building, 7/6, Sirifort Institutional Area, August Kranti Marg, New Delhi.

Please find enclosed the minutes of the 66th meeting of the Planning Committee for information and necessary action.

Ruchi
22/11/17

(Ruchi Gupta)

Joint Director (Technical)

Phone No.24628179

Encl: As above.

To:

Members

1. Additional Secretary (UD), Ministry of Housing & Urban Affairs, Govt. of India, Nirman Bhawan, New Delhi.
2. Additional Chief Secretary, Department of Urban Development & Housing, Govt. of Rajasthan, Rajasthan Secretariat, Jaipur-302005, Rajasthan.
3. Principal Secretary, Town & Country Planning Department, Govt. of Haryana, Haryana Mini Secretariat, Sector-17, Chandigarh, Haryana-160017.
4. Principal Secretary, Housing & Urban Planning Department, Govt. of Uttar Pradesh, 3rd Floor, Bapu Bhawan, Uttar Pradesh Secretariat, Lucknow-226001, Uttar Pradesh.
5. Vice-Chairman, Delhi Development Authority, Vikas Sadan, New Delhi-110023.
6. Director General, Town & Country Planning Department, Govt. of Haryana, SCO 71-75, Sector-17C, Chandigarh-160017.
7. Principal Secretary (PWD), Govt. of NCT-Delhi, 5th Level, Delhi Secretariat, PWD Secretariat, I.P. Estate, New Delhi-110002.
8. Chief Planner, Town & Country Planning Organization, Govt. of India, E-Block, Vikas Bhawan, I.P. Estate, New Delhi-110002.
9. Chief Town & Country Planner, Uttar Pradesh, Town & Country Planning Department, Govt. of Uttar Pradesh, 7, Bandaria Bagh, Lucknow-226001, Uttar Pradesh.
10. Chief Town Planner (NCR), Town & Country Planning Department, Govt. of Rajasthan, Nagar Niyojan Bhawan, Jawaharlal Nehru Marg, Jaipur-302004, Rajasthan.

नारी/Issue.....22/11/17
दिनांक Date.....
हस्ताक्षर Signature.....

06

Co-opted Members

11. Joint Secretary (UT), Ministry of Housing & Urban Affairs, Govt. of India, Nirman Bhawan, New Delhi.
12. Joint Secretary (IA), Department of Environment, Ministry of Environment, Forest & Climate Change, Govt. of India, Indira Paryavaran Bhawan, Jor Bagh, New Delhi-110003.
13. Senior Advisor (HUD), NITI Aayog, Sansad Marg, New Delhi-110001.
14. Chairman & Managing Director, Housing & Urban Development Corporation, HUDCO House, Lodhi road, New Delhi-110003.
15. Chief Regional Planner, NCR Planning Board, New Delhi.

CMA

1. Secretary, Housing, Govt. of Uttarakhand, 4, Subhash Road, Dehradun-248001, Uttarakhand.
2. Chief Executive Officer, NCR Special Area Development Authority (Counter Magnet), Sheetla Sahai Administration Bhawan, Sojna Tighra, Gwalior-474001 (M.P.)_
3. The Chief Administrator, Patiala Urban Planning & Development Authority, PUDA Complex, Urban Estate, Phase-II, Patiala-147002.

NCR Planning Board

1. Shri Sushil Purohit, Director (A&F)
2. Shri J.N. Barman, Ex-Director (Tech.) & Consultant
3. Shri P.K. Jain, FAO.
4. Shri Abhijeet Samanta, Deputy Director (Tech.)
5. Shri Ramesh Dev, Deputy Director (Tech.)
6. Ms. Nilima Majhi, Assistant Director (Tech.)
7. Shri Naresh Kumar, Assistant Director (Tech.)
8. Shri Satyabir Singh, Assistant Director (Tech.)
9. PS to Member Secretary



राष्ट्रीय राजधानी क्षेत्र योजना बोर्ड

NATIONAL CAPITAL REGION PLANNING BOARD

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दूरभाष / Phone : 24642284, 24642287 फैक्स / Fax : 24642163

No.K-14011/100/2016-एनसीआरपीबी

दिनांक: 22.11.2017

विषय: राष्ट्रीय राजधानी क्षेत्र योजना बोर्ड, नई दिल्ली में दिनांक 17.11.2017 को
प्रातः 11.30 बजे आयोजित योजना समिति की 66वीं बैठक का कार्यवृत्त

योजना समिति की 66वीं बैठक का कार्यवृत्त, सूचना एवं अग्रिम कार्यवाही हेतु
संलग्न है।

रुचि गुप्ता
22/11/17
(रुचि गुप्ता)

संयुक्त निदेशक (तकनीकी)

संलग्नक: यथोपरि

MINUTES OF THE MEETING

66TH MEETING OF THE PLANNING COMMITTEE HELD ON 17.11.2017 AT 11.30 A.M. IN THE CONFERENCE HALL OF AMDA, NEW DELHI.

Chairman welcomed the members of the Planning Committee and then the Agenda Items were taken up for discussion by Joint Director (Tech.), NCRPB. List of participants is at **Annexure-I**.

AGENDA ITEM NO.1: CONFIRMATION OF THE MINUTES OF THE 65TH MEETING OF THE PLANNING COMMITTEE HELD ON 28.04.2016

Planning Committee noted that no comments have been received on the Minutes of its 65th meeting held on 28.04.2016 circulated vide letter No. K-14011/57/2015-NCRPB dated 18.05.2016. *Minutes of the 65th Meeting of the Planning Committee were confirmed.*

AGENDA ITEM NO. 2: REVIEW OF ACTION TAKEN ON THE DECISIONS OF THE 65TH MEETING OF THE PLANNING COMMITTEE HELD ON 28.04.2016

1. Agenda Item No. 2(i): Sub-Regional Plan for Haryana Sub-Region of NCR-2021

The status in the matter was briefed to the Planning Committee and it was informed that the matter related to NCZ is being further discussed at **Agenda Item no. 5**.

Planning Committee noted the status.

2. Agenda Item No. 3: Matter related to draft revised RP-2021 of NCR

Matter was discussed at Agenda Item no. 3.

3. Agenda Item No. 4: Follow up action on the Judgement dated 30.09.2014 of the Hon'ble High Court of Delhi in WP (C) No. 5559/2013 in the matter of Raghuraj Singh vs. Union of India & Ors.

Matter was discussed at Agenda Item no. 12.

4. Agenda Item No. 5: Matter related to Functional Plans

Planning Committee was informed that the copies of Functional Plan for Economic Development of NCR and Functional Plan for Drainage for NCR have been circulated to the NCR participating States.

Chairman requested the NCR participating States to formulate strategies to implement the policies and proposals of the circulated Functional Plans.

(Action: NCR participating States)

5. Agenda Item No. 6: Preparation of Sub-Regional Plans for the newly added districts in NCR and extension of financial assistance by NCR Planning Board to the participating States for infrastructure projects in these districts.

Planning Committee was updated regarding the decision of the 36th Board meeting in the matter wherein it was decided that the cost of preparation of SRPs for the newly added districts would be reimbursed by the NCRPB and the concerned States were required to prepare the SRPs within three months. Status of preparation of SRPs was discussed separately at **Agenda Item No. 6**.

Further, as per the decision of the Board, a Legal opinion was obtained regarding funding of projects without preparation of SRPs for the newly added districts. As per the legal opinion, *NCRPB can provide financial assistance only for those areas where any Plans i.e. Regional Plan, SRP, Functional Plan & Project Plan, is in existence. Hence, in case of newly added areas for which there is no such plan in existence, NCRPB funding is not possible at present.*

Planning Committee noted the status.

AGENDA ITEM NO. 3: DRAFT REVISED REGIONAL PLAN-2021 (DRRP-2021)

3.1 COMPLIANCE OF DIRECTIONS FROM PMO

Planning Committee was apprised that in compliance to directions of the PMO (Note dated 05.03.2014 and 23.04.2014) and the decisions of the Board thereafter, the views/ comments on DRRP-2021 have been received from MoEF&CC vide OM dated 11.01.2017.

Further, the Committee was informed that the inputs provided by MoEF&CC elucidate the existing provisions of the DRRP-2021 and therefore, could be incorporated. Observations on the inputs of MoEF&CC were also sent to the Ministry of Housing & Urban Affairs (MoHUA) for its inputs, if any.

Chairman requested the Members of the Committee to view the inputs provided by MoEF&CC as the matter is proposed to be placed before the Board in its forthcoming meeting.

3.2 MATTER RAISED BY GOVT. OF U.P. w.r.t. YEIDA

Planning Committee was informed that the matter w.r.t. inclusion of YEIDA in the DRRP-2021 was once again raised by the Govt. of U.P. in the 36th Board meeting, where in the Chairman, NCRPB stated that ***there is no objection in the concern raised by Govt. of U.P. and that more than the terminology, the broader issues should be understood.***

In this regard, the Committee observed that a decision on the said matter was earlier taken in the 61st meeting of the Planning Committee and accordingly a note was added in the DRRP-2021 that *U.P. SRP-2021 has proposed a new township YEIDA under the provision of para 4.3.5 (I) of the RP-2021 as a Green Field Township. DRRP-2021 was approved by the Board in its 34th meeting held on 20.01.2014. Thereafter, the Board in its Special Meeting held on 25.04.2014 had also decided that landuse proposals of U.P. SRP-2021, need not be incorporated in the proposed landuse map-2021 of DRRP-2021.*

In addition to above, the Planning Committee also noted that Master Plan-2031 (Phase-I) for YEIDA proposes to develop a total urbanisable area of about 20,000 Ha by 2021 and about 23,000 Ha. by 2031 accommodating a proposed population of approx. 35.00 lakh by 2031, with industry

as its main activity. As per Census 2001, the total population of YEIDA was 3.4 lakh out of which the population of five ULBs was 68,710 which as per Census 2011, is around 81,000. On the request of Chairman, the Additional Commissioner, NCR Planning & Monitoring Cell (NCR Cell), U.P. informed that the concern was noted and the matter will be taken up at the appropriate level.

After detailed deliberations, the Planning Committee observed that the decision of the 36th meeting of the Board was varying from the earlier decisions of the Board. The Committee further noted that based on the population of Census 2011 the current population of YEIDA appears to be much below the bench mark for Metro Centre and hence, the target to achieve the proposed population by 2021 is unrealistic. Therefore, the Committee was of the view that it may not be feasible to include YEIDA as a Metro Centre in the DRRP-2021 at this stage.

Planning Committee recommended that the view of the Committee may be placed before the Board for consideration.

(Action: NCRPB)

AGENDA ITEM NO. 4: DRAFT SUB-REGIONAL PLAN-2021 FOR HARYANA SUB-REGION: COMPLIANCE OF DIRECTIONS FROM PMO

Planning Committee was apprised that in compliance to directions of the PMO (Note dated 05.03.2014 and 23.04.2014) and the decisions of the 35th Board meeting, Govt. of Haryana was to prepare the final report along with Maps on the NCZ delineation exercise and amend the SRP-2021 and forward the same to MoEF&CC for confirmation. After necessary confirmations from MoEF&CC a Compliance Report was to be submitted to PMO.

Chairman stated that no information has been provided by Govt. of Haryana in this regard. Further, IG, Forest, MoEF&CC also added that the revised Report has not been submitted by the Govt. of Haryana to MoEF&CC, till date.

In response, Chief Coordinator Planner (CCP), NCR Cell, Haryana updated that the Haryana SRP-2021 was finalized in the year 2014, however, only the aspect of NCZ delineation was pending. He further informed that the ground truthing of NCZ of 09 districts was completed and geo-referencing work is under progress. He also stated that a clarity w.r.t. definition of 'forest' and 'Aravalli' in view of the notification of MoEF&CC dated 07.05.1992, was sought, which has now been provided by NCRPB's letter dated 12.10.2017 and the same is being taken up with the State Govt. for further directions.

Chairman highlighted that the decision w.r.t. definition of 'forest' and 'Aravalli' was already taken in the meetings held on 16.08.2016 and 16.09.2016 which was further endorsed by the Board in its Special meeting held on 20.12.2016. NCRPB's letter dated 12.10.2017 only reiterated the same and hence Govt. of Haryana should expedite their action on the matter. CCP, NCR Cell, Haryana stated that the Report will be finalized within next two months.

After deliberation, Planning Committee decided that necessary action in compliance to the decision of the 35th Board meeting may be expedited by the Govt. of Haryana.

(Action: Govt. of Haryana)

AGENDA ITEM NO. 5: DELINEATION AND GROUND TRUTHING OF NATURAL CONSERVATION ZONE (NCZ) IN THE SUB-REGIONS OF NCR BY THE NCR PARTICIPATING STATES AND STATUS UPDATE ON DEFINITION OF “ARAVALLIS” AND “FOREST”

5.1 DELINEATION AND GROUND TRUTHING OF NCZ IN SUB-REGIONS OF NCR:

Planning Committee was apprised that as per the decision of the Special meeting of the Board held on 25.04.2014 the NCZ in NCR was to be delineated by each participating State based on detailed ground truthing and verification of State revenue records and thereafter, the SRPs were to be amended. It was also noted that the NCRPB had provided required assistance and facilitated the said exercise for the NCR participating States. The status of NCZ delineation in each Sub-Region was discussed thereafter.

I. Haryana sub-region:

The matter was already discussed at **Agenda item no.4.**

II. Uttar Pradesh sub-region:

The Committee was informed that in compliance with the earlier direction of the Board, the Govt. of U.P. had initiated the said exercise of NCZ delineation and apprised the Board of the same in its subsequent meetings. However, Govt. of U.P., in the 36th meeting of the Board, stated that the landuse maps of U.P. sub-region, provided in the U.P. SRP-2021, are already geo-referenced and the boundaries of conservation zones are marked based on ground truthing. In the meeting it was then decided that the matter should be examined.

The Committee noted that the matter was technically examined by NCRPB and that as per the direction of the Board in its Special meeting held on 25.04.2014, the NCZ was to be delineated based on detailed ground truthing, along with verification with the State revenue records.

Additional Commissioner, NCR Cell, U.P. informed that the said concern has already been referred to Govt. of U.P. to take a view w.r.t further action required in the matter.

After detailed discussion, Planning Committee decided that necessary action for NCZ delineation may be expedited in a time bound manner by the Govt. of U.P.

(Action: Govt. of Uttar Pradesh)

III. Rajasthan sub-region:

The Committee was apprised that the Govt. of Rajasthan has initiated action in the said matter and the District Collector, Alwar has constituted a sub-team which will examine the matter for their respective areas/ department and submit the report to the main team which is being chaired by Additional Chief Secretary, Urban Development & Housing, Govt. of Rajasthan.

Chief Town Planner (CTP), NCR Cell, Rajasthan informed that certain information has been received from Water Resource Department, however, the same is awaited from other concerned

departments. Once the complete information is received the same will be compiled and submitted to main team for further necessary action.

After detailed discussion, Planning Committee decided that necessary action for NCZ delineation may be expedited in a time bound manner by the Govt. of Rajasthan.

(Action: Govt. of Rajasthan)

IV. NCT Delhi sub-region:

The Committee was apprised that w.r.t NCT Delhi sub-region, the work related to NCZ delineation was carried out by DDA and a status report, with reference to notified MPD-2021 and Zonal Development Plan(s), was submitted to NCRPB. Observations of NCRPB were sent to DDA vide letter dated 10.06.2016. DDA has now submitted that since landuse map of MPD-2021 is not on GIS format, accuracy of the landuses falling inside the NCZ boundaries cannot be ascertained and exact percentages of variations cannot be provided. DDA has also informed that the work related to preparation of next MPD-2041 on unified GIS based data platform has been assigned to NIUA. The representative of DDA reiterated the same. The Committee was further informed that the said matter was also deliberated in the 4th meeting of the State level Steering Committee of NCT Delhi wherein DDA has been advised to expedite the matter.

Planning Committee, after detailed discussions, decided that necessary action for NCZ delineation may be expedited in a time bound manner, in compliance with the observation of NCRPB already conveyed, by the Govt. of NCT Delhi/ DDA.

(Action: Govt. of NCT Delhi / DDA)

5.2 STATUS UPDATE ON DEFINITION OF “ARAVALLIS” AND “FOREST”:

Planning Committee was apprised that in compliance to the decision of its 65th meeting, the matter was placed before the Board in its 36th meeting. Thereafter, as per the decision of the Board, two meetings were held under the Chairmanship of the then Secretary, MoUD, Govt. of India on **16.08.2016** and **16.09.2016** to resolve the issue related to definition of ‘forest’, ‘Aravalli hills/range’ and ‘ground water recharging areas’. The decisions that emerged in the said meetings were endorsed by the Board in its Special Meeting held on **20.12.2016**.

The Committee was also informed that in the said Special Meeting, Additional Chief Secretary (ACS), TCPD, Govt. of Haryana stated that so far as issue of definition and delineation of NCZ is concerned, the matter is resolved. However, as the ACS, TCPD, had further raised certain concerns w.r.t. Zoning Regulations of RP-2021, the Board decided that *Govt. of Haryana may make a clear reference on the matter and that will be considered separately.*

Subsequently, Govt. of Haryana vide letter dated 30.12.2016 stated that as it was decided that the components of NCZ will be governed by respective Acts/ Rules/ Notifications, separate Zoning Regulations of RP-2021 may not be necessary. In this regard, detailed justifications were sought from Govt. of Haryana. Instead of submitting the same, it was conveyed vide letter dated

15.06.2017 that Govt. of Haryana has decided that the notification of MoEF dated 07.05.1992 should be followed completely, both in its specification of the areas that form part of the Aravalli Range and of the restrictions upon developmental and other activities therein. NCRPB was requested to take note of the said decision and accordingly reflect consequent changes in the DRRP-2021.

Chairman, mentioned that considering the overriding effect of the NCRPB Act, 1985, the decisions of the Board and the provisions of the notified Regional Plan (including Zoning Regulations) have to be followed by the NCR participating States. Accordingly, the Govt. of Haryana has been requested to reconsider their decision in the matter vide NCRPB's letter dated 12.10.2017.

IG (Forest), MoEF&CC, stated that Aravalli is a reality and an identifiable geological feature. He further stated that the MoEF notification dated 07.05.1992 provides for parameters/ specific areas, that constitute 'Aravalli'. In the aforementioned meetings, it was therefore, decided that these parameters will be utilized for identifying Aravallis in the entire NCR. In view of the same, it is understood that the issues raised by Govt. of Haryana regarding definition of Aravalli stands resolved. With respect to forest, he mentioned that the 'forest' area is already well defined/identified, however, certain others areas that resembled forest but were not defined as forest, were categorised as "*status yet to be decided, as forest*". He also informed that in compliance to certain directions of the Court, a Committee has been recently constituted under the chairmanship of Chief Secretary, Govt. of Haryana to identify forest as per the dictionary meaning. He accordingly suggested that the Govt. of Haryana may approach/ consult this Committee in case of any doubts regarding delineation of forest areas.

CCP, NCR Cell, Haryana informed that Aravalli has been identified for Gurugram district, however it is yet to be decided for Faridabad district. He further added that in this regard, clarity has been provided by NCRPB and the same is being taken up with the State Govt. for further directions.

Planning Committee after detailed deliberations concluded that:

- i) the Board has already decided that the 'specified areas' (i.e. the land categories of Gair Mumkin Pahar or Gair Mumkin Rada or Gair Mumkin Behed or Banjad Beed or Rundh) as given in the MoEF's Notification dated 07.05.1992 are to be included while identifying/delineating 'Aravalli' in entire NCR, by the NCR participating States. Therefore, Govt. of Haryana should expedite the exercise of NCZ delineation and submit the final report to MoEF&CC, in compliance to the decision of the 35th Board meeting.***

(Action: Govt. of Haryana)

- ii) the NCR participating States to adhere to the policies and proposals of the notified RP-2021, in compliance with the provisions of the NCRPB Act, 1985.***

(Action: NCR participating States)

AGENDA ITEM NO.6: PLAN PREPARATION FOR SIX NEWLY ADDED DISTRICTS IN NCR

6.1 PREPARATION OF SUB-REGIONAL PLANS

Planning Committee noted that draft Sub-Regional Plan (SRP) for the extended Haryana sub-region was submitted by Govt. of Haryana and observation on the same have been sent by NCRPB. CCP, NCR Cell, Haryana informed that the same being incorporated in the draft SRP and will be submitted shortly. As regard, the status of SRP for newly added district in Rajasthan and U.P. sub-region, Committee noted that the same are only at initial stages.

The CCP, NCR Cell, U.P. and CTP, NCR Cell, Rajasthan mentioned that NCRPB has been requested to provide the GIS data base for existing land use of the districts of Muzaffarnagar and Bharatpur, respectively. They also informed that the final verification of the said existing land use maps has been carried out by their respective teams at NRSC, Hyderabad. Joint Director (Tech.), NCRPB stated that the matter of sharing the GIS data base and satellite imageries was discussed with NRSC and based on their inputs, NCRPB has decided that the same can be shared with the concerned NCR participating State upon finalization. Since, the said landuse maps are being prepared at the regional scale (i.e. 1:50,000), the States can further elaborate/ detail out the same for the purpose of SRPs. NRSC has been requested to provide the finalized data base and maps at the earliest. With respect to Haryana sub-region, CCP, NCR Cell, Haryana informed that a team will be soon sent to NRSC for the said exercise, pertaining to its four newly added districts.

Reiterating the decision of the 36th Board meeting held on 15.06.2016, Finance & Accounts Officer (FAO), NCRPB informed that the Board had agreed to reimburse 100% consultancy cost for the preparation of SRPs for the newly added districts and the SRPs were to be prepared within three month, however, the same are still under preparation. In this regard, the concerned NCR participating States requested for some more time to complete the said task.

After detailed discussion and deliberation, the Planning Committee decided the following:

- i) Work related to the said SRPs should be expedited and completed by March, 2018.*
- ii) Matter may be placed before the Board in its forthcoming meeting for consideration and approval of time extension.*

(Action: Concerned NCR participating State and NCRPB)

6.2 PREPARATION OF REGIONAL PLAN

Planning Committee was informed that an initial draft of RP-2021 for the newly added districts has been prepared by NCRPB, on the basis of available secondary sources/ online data and certain data gaps have been identified and shared with the concerned NCR participating States. In this regard, the representatives of the NCR participating States informed that certain inputs have been provided to NCRPB and efforts are being made to collect the remaining data.

As regards the preparation of regional land use maps for the newly added districts, the Committee noted that the same are under finalization at NRSC. The status regarding the same was deliberated in the Agenda above.

Planning Committee requested the concerned NCR participating States to provide the required data/ inputs at the earliest.

(Action: Concerned NCR participating State)

AGENDA ITEM NO. 7: REVIEW OF REGIONAL PLAN-2021 (2nd REVIEW)

Planning Committee was apprised that in compliance with the decision of the Special Meeting of the Board held on 20.12.2016, the second review of the RP-2021 has been initiated and a Steering Committee has been constituted under the chairmanship of Member Secretary, NCRPB. As per the decision of the Steering Committee the said work was to be undertaken through NIUA. Thereafter, the proposal of NIUA was taken to PSMG-I in its 55th meeting held on 14.11.2017, for financial approval wherein it was decided that NCRPB may undertake the said task through Study Groups and appoint Consultants and additional staff, as and when required to assist the Study Groups. Minutes of the said PSMG-I meeting are awaited.

The Committee was also informed that the NCR participating States have been requested to provide the consolidated status of implementation of the policies and proposals of the RP-2021, which will be vital for the said review exercise.

Chairman stated that the recommendations of this review will be crucial for the preparation of the next Regional Plan and therefore, **consolidated status of implementation of the policies and proposals of the RP-2021 will have to be provided by the NCR participating states at the earliest.** He also added that the action regarding formulation of Study Groups and appointment of Consultants/ additional staff, etc. for this task is being taken up.

Planning Committee recommended that the action in the matter be expedited.

(Action: NCR participating State & NCRPB)

AGENDA ITEM NO. 8: DELINEATION STUDY FOR NCR

Planning Committee was apprised that as per the directions of the 36th Board meeting, the recommendations of the Committee constituted for undertaking “Delineation Study for NCR”, were circulated to the NCR participating States for their views/ comments. It was further informed that views/ comments have been received from Govt. of Rajasthan wherein it is suggested that instead of including the whole district in NCR, tehsils having development potential should be included and high density corridor centric developments [Transit Oriented Development (ToD)] should be targeted. DDA has also suggested ToD based planning. Representatives of Govt. of Haryana and Govt. of U.P. stated that the views/ comments will be provided with a week’s time.

Chief Planner, Town & Country Planning Organization (TCPO), Govt. of India, who is also a Member of the aforementioned Committee for the Study, emphasized that due to an unprecedented growth of NCR there is a vital need to arrive at well-defined parameters through a detailed Study.

He stated that the Study could recommend both inclusion as well as exclusion of areas in/ from NCR. He also informed that the NCR was first delineated by TCPO on the basis of a delineation study, wherein 45 tehsils around Delhi were studied in respect of a number of the then applicable criteria including aspects like population growth rate, migration, density, economic activity, etc. Thereafter, the first Regional Plan for NCR (RP-1981) was also prepared by the TCPO in 1973.

After detailed discussion and deliberation, the Planning Committee decided the following:

- i) Govt. of Haryana and Govt. of U.P. to provide their views/ comments at the earliest so that the same will be placed before the Board.*
- ii) After receipt of the comments from all the NCR participating States, the Committee formed for this purpose may examine and submit its recommendations to the Board.*

(Action: Govt. of Haryana & U.P. and NCRPB)

AGENDA ITEM NO. 9: INCLUSION OF SHAMLI DISTRICT OF UTTAR PRADESH IN NCR

Planning Committee observed that the Board in its 36th meeting directed Govt. of U.P. to expedite the examination of inclusion of Shamli and Mathura districts in NCR. Accordingly, Govt. of U.P. after detailed examination has recommended inclusion of Shamli district in NCR, since, it is located in between NCR districts i.e. Muzaffarnagar (U.P.) and Karnal & Panipat (Haryana). The Committee also noted that Shamli was part of the erstwhile Muzaffarnagar district which is now part of NCR.

After detailed discussions and deliberations, the Planning Committee recommended the inclusion of district Shamli of the State of Uttar Pradesh in NCR, for consideration of the Board.

(Action: NCRPB)

AGENDA ITEM NO. 10: STUDY ON 'AFFORDABILITY AND ACCESSIBILITY OF HOUSING IN NCR'

Planning Committee was informed that NCRPB has initiated a study on 'Affordability and Accessibility of housing in NCR' with a special focus on 'Low-Cost Housing' to diagnose and obtain clarity on housing related issues in NCR. This study will also be a vital input for the preparation of Regional Plan for the next perspective year. In this regard, a Consultancy Evaluation Committee (CEC), under the chairmanship of Member Secretary, NCRPB, comprising of Subject Experts from HUDCO & MoHUA and representatives from NCR participating States, was constituted. Expression of Interest (EOI) for the said Study has been published on 01.11.2017. EOIs received will be evaluated by the CEC and short listed organizations/ consortiums will be issued the Request for Proposal (RFP)/ Bid Document for detailed Technical and Financial Proposals.

Planning Committee noted the same.

AGENDA ITEM NO. 11: DELINEATION OF COUNTER MAGNET AREA TO NCR

Planning Committee was informed that the concerned State Govts. have been requested to provide the current/ updated area details and status of preparation of Development Plan and Plan of Action for all the nine CMAs.

Representatives of Govt. of Rajasthan and Govt. of Haryana provided the requisite information regarding Kota & Jaipur and Hissar & Ambala during the meeting.

Further, regarding the delineation of CMAs along corridors, Planning Committee was apprised that Govt. of U.P. has declared Kanpur-Lucknow corridor as CMA, encompassing a contiguous area falling under the jurisdiction of four Development Authorities, namely, Lucknow Development Authority, Kanpur Development Authority, Unnao-Shuklaganj Development Authority & Lucknow Industrial Development Authority. Further, the Govt. of U.P. has informed that as the Master Plans for these areas are already existing, there is no need to prepare any separate Integrated Plan for the said CMA.

It was also brought to the notice of the Committee that the area of four Development Authorities merged to form the Kanpur-Lucknow corridor based CMA is vast and comprises of many smaller towns and therefore, the development of Kanpur or an associated corridor, as a CMA, may not be much effective. Further, as per the decisions of the Board taken in its 31st meeting, a Plan of Action is required to be prepared for the identified CMA. Therefore, it may be prudent that a Plan of Action may be prepared considering the horizon year and policies & proposals of the RP-2021/DRRP-2021; and a specific area may be earmarked for effective development as CMA along the Kanpur-Lucknow corridor.

Chairman directed the representative from Govt. of U.P. to look into the matter and take necessary action.

After detailed discussion and deliberation, the Planning Committee decided the following:

- i) Concerned State Govts. to provide the current/ updated area details and status of preparation of Development Plan and Plan of Action for the remaining CMAs in-line with the policies & proposals of the RP-2021/ DRRP-2021.*

(Action: State Govts. of Uttar Pradesh, Uttarakhand, Madhya Pradesh & Punjab)

- ii) Govt. of U.P. to prepare a Plan of Action considering the horizon year and policies & proposals of the RP-2021/ DRRP-2021 and earmark a specific area for effective development as CMA along the Kanpur-Lucknow corridor.*

(Action: Govt. of Uttar Pradesh)

AGENDA ITEM NO. 12: ACTION TAKEN BY NCRPB ON THE DIRECTIONS OF THE HON'BLE HIGH COURT OF DELHI IN THE MATTER OF RAGHURAJ SINGH VS. UNION OF INDIA & ORS. [WP (C) 5559 OF 2013]

Planning Committee was informed that in the afore-cited matter the Hon'ble High Court of Delhi, in its order dated 30.09.2014 had *inter-alia* directed NCRPB to monitor and be vigilant of the developments at site in the NCR and also in preparation of the SRPs and the Master Plans of the towns falling in the NCR; and upon finding any violations thereof, take action under Section 29(1) of the Act.

The matter was discussed by the Board in its 36th Meeting held on **15.06.2016** wherein the Board noted that while the coordination & monitoring of implementation of the Regional Plan is being carried out through Committees at various levels, the NCR Planning & Monitoring Cells in each State have also been entrusted with the said task. Further, an additional mechanism was developed wherein NCR participating States were requested to submit quarterly report on violations in prescribed formats. Further, NCRPB has also been pursuing with the participating States to prepare the Master/ Development Plans in conformity with the RP-2021 and to modify the same wherein density norms were not in conformity with RP-2021. Since, modifications were not carried out, Notices under Section 29(2) of NCRPB Act, 1985 were issued to Govt. of U.P., Rajasthan and Haryana in January 2016. The NCR Participating State were requested by the Board in the said meeting, to comply with the orders of the Hon'ble Court.

Committee observed that the Quarterly Report on violations of RP-2021 is not being submitted on regular basis by the NCR Participating States. As regards the matter related to population density, Committee noted the action taken by/ response of the NCR participating States as follows:

- a) Govt. of Haryana, has approved the New Integrated Licensing Policy (NILP)-2016 and the Transit Oriented Development (TOD) Policy which would increase the population density in the urban settlements. However, it has decided that the impact of these policies will be assessed after Census-2021 and change in the projected population will be inserted in the Development Plan at that time. Further, the industries department has been requested to decide the parameter/ standard for an industrial town.
- b) GNIDA has increased the permissible FAR for Group Housing pockets, from 2.75 to 3.5 thereby increasing the population density of these pockets from 1650 ppha to 2100 ppha. The same has been approved by the Govt. of U.P.
- c) Govt. of Rajasthan has submitted that in the Rajasthan sub-region, development has taken place as per the proposals of the Master Plans, therefore, it is not possible to revise the Master Plans at this stage.

As regard the above, Committee observed that most of the Development Plans of the towns falling in Haryana sub-region are at draft stage and the horizon year of these Plans is beyond the perspective year of Regional Plan. Further, w.r.t. Greater Noida, it was observed that the impact of increased FAR on the overall population density of the town has not been ascertained. Also,

w.r.t. the towns of Rajasthan sub-region the Committee considered the submission of CTP, NCR Cell, Rajasthan that the matter will be once again examined.

After detailed discussion and deliberation, the Planning Committee decided the following:

- i) NCR participating States to regularly submit the Quarterly Report on violations in the prescribed formats. The matter may also be regularly monitored by the respective State level Steering Committees.*

(Action: NCR participating States)

- ii) NCR participating States to comply the provisions of the NCRPB Act, 1985 and to prepare/ amend the respective Master Plans/ Development Plans ensuring conformity with the policies and proposals of the RP-2021, including population density norms.*

(Action: NCR participating States)

- iii) As Notices under Section 29 (2) were issued by NCRPB to the concerned NCR participating States the matter alongwith the aforementioned decisions may be placed before the Board for approval.*

(Action: NCRPB)

AGENDA ITEM NO. 13: ACTION TAKEN ON THE DIRECTIONS OF THE HON'BLE HIGH COURT OF ALLAHABAD IN THE MATTER OF RAGHURAJ SINGH VS. STATE OF U.P. & 10 ORS. (CIVIL MISC. PIL. NO.-29004 OF 2016)

Planning Committee was informed that the afore-cited PIL was filed in the Hon'ble High Court of Allahabad, in the matter of development activities undertaken by Development Authorities in U.P. sub-region of NCR contrary to the provisions of the NCRPB Act, 1985 and the RP-2021. While disposing of the said PIL, the Hon'ble Court noted that as per the provisions of the NCRPB Act, 1985, such a complaint can be made before the NCRPB; and directed NCRPB to take appropriate decision on the complaint made, after affording due opportunity of hearing to the parties concerned. The applicant then submitted the complaint to NCRPB on 11.07.2016. The contents of the application were examined, inputs were sought from the Govt. of U.P. and hearings were held with the applicant and the concerned Authorities & Govt. of U.P and following action was taken:

- a) Copy of the application dated 08.07.2016 was forwarded to Govt. of U.P. with a request to examine specific prayers, and suitably dispose of the matter under intimation to the Board.
- b) Notice under Section 29(2) of the NCRPB Act, 1985 was issued on 17.05.2017 requesting Govt. of U.P. to ensure that the U.P. SRP-2021 is in conformity with the RP-2021 in accordance with the observations of the Board.

- c) Govt. of U.P. was requested to address all the aspects w.r.t. Master Plans of Ghaziabad, Noida and YEIDA, in a time bound manner and submit a Compliance Report to the Board.
- d) Reply Affidavit was filed by NCRPB before the Hon'ble Court indicating the above action taken.

Committee was also apprised that although certain inputs have been received from the concerned Development Authorities, yet the reply (Compliance Report/ Action Taken Report) from Govt. of U.P. is still awaited.

Planning Committee noted the status and after detailed deliberation decided the following:

- i) ***Govt. of U.P. to submit a Compliance Report / Action Taken Report in this regard, in a time bound manner and to apprise the Board of the Action taken, in its forthcoming meeting.***
- ii) ***As regard the Notice under Section 29 (2) issued by NCRPB, the Govt. of U.P. to expeditiously submit reply to the Notice and the matter may be placed before the Board after receipt of reply from the Govt. of U.P.***

(Action: Govt. of Uttar Pradesh and NCRPB)

AGENDA ITEM NO. 14: CONTINUATION OF NCR PLANNING & MONITORING CELLS IN PARTICIPATING STATES OF NCR

FAO, NCRPB appraised the Committee that NCR Planning and Monitoring Cells have been established in each of the NCR participating State under the administrative control of the respective State Govts. Since 1987-88, the Board is providing financial assistance to the State Govts. towards expenditure on pay and allowances of the core staff and recurring office expenses incurred by these Cells. The continuation of NCR Cells for XIIth Five Year Plan period was approved in the 32nd Board meeting held on 22.03.2012. The approved recurring office expense was Rs.3,25,000/- p.a. for NCR Cells of U.P., Rajasthan and Haryana and Rs. 75,000/- p.a. for NCR Cell, NCT Delhi.

Planning Committee further observed that NCRPB has already initiated 2nd review of RP-2021, which will be vital for preparing the Regional Plan for the next perspective year. In this regard, assistance of the NCR Cells would be required in terms of collection of data/ information, assessment of implementation of the policies and proposals of RP-2021, etc.

After detailed discussions and deliberations, the Committee approved the proposal for continuation of NCR Planning & Monitoring Cells for the next 5 years (2017-2022) from 01.04.2017 as contained in the Agenda notes, with the following stipulation and recommended to place the matter before the Board for consideration and approval:

- i) ***Member Secretary, NCRPB is authorized to work out Action Plan for the Cells from time to time as per requirement including sanction of posts and take any***

administrative/ financial decision for smooth functioning of the Cells within the approved framework, after due examination.

- ii) *NCRPB shall continue to reimburse 100% of expenditure on pay & allowances and recurring office expenditure. The upper limit for reimbursement of recurring office expenditure may be increased from Rs.3,25,000/- p.a. to Rs.5,00,000/- p.a. for NCR Cells of Haryana, Rajasthan & U.P. and Rs.75,000/- p.a. to Rs.1,25,000/- p.a. for NCR Cell of NCT Delhi.*
- iii) *NCRPB will also reimburse the taxi hiring charges (maximum upto Rs.25000/- per month) to NCR Cells of Haryana, Rajasthan and U.P. over and above the recurring office expenditure.*

(Action: NCRPB)

AGENDA ITEM NO. 15: ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR.

Planning Committee was apprised that NCRPB has prepared the draft Functional Plan on “Micro and Household Enterprises in NCR” which will be circulated among the NCR participating States for their inputs/ observations. Once, inputs/ observations are received, the same will be suitably incorporated in the draft Functional Plan and thereafter the same will be placed before the Committee for the approval.

Planning Committee requested the NCR participating States to expeditiously provide the inputs/ observations, on receipt of the draft Functional Plan from NCRPB.

(Action: NCRPB and NCR participating States)

The meeting ended with a vote of thanks to the Chair.

ANNEXURE-I

List of the participants of the 66th Meeting of the Planning Committee held on 17.11.2017

	Chairperson
1.	Shri B K Tripathi, Member Secretary, NCR Planning Board.
	Members
2	Shri Ashok Kumar, Special Secretary, PWD, GNCT Delhi.- <i>representing Principal Secretary, PWD, GNCT Delhi</i>
3	Shri Ravindra Godbole, Secretary, Ghaziabad Development Authority, Ghaziabad.- <i>representing Principal Secretary, Housing & Urban Planning, GoUP</i>
4	Shri K.K. Joadder, Chief Planner, TCPO, New Delhi.
5.	Shri V.K. Goyal, Chief Coordinator Planner, NCR Monitoring & Planning Cell, Haryana - <i>representing Principal Secretary, TCPD, Govt. of Haryana.</i>
6.	Shri Anil Pathria, Chief Town Planner, NCR Monitoring & Planning Cell, Jawharlal Nehru Marg, Jaipur, Rajasthan.
7.	Ms. Alka Arya, Dy. Director (Planning), MPMR&MR, Delhi Development Authority, Delhi.- <i>representing VC, DDA</i>
8.	Shri Sudhir Kashyap, Chief Coordinator Planner, NCR Monitoring & Planning Cell, 2 nd Floor, Navyug Market, Ghaziabad, Uttar Pradesh.- <i>representing CT&CP, Town & Country Planning Dept., GoUP</i>
	Co-opted Members
9.	Shri D.K. Sinha, IGF (FC), Ministry of Environment, Forest & Climate Change, Jor Bagh, New Delhi-110003
10.	Shri S.K. Singh, Director, Niti Aayog, New Delhi.
11.	Dr. D. Subramanian, Sr. ED, HUDCO, New Delhi.
	Government of Haryana
12.	Shri Vijay Kumar, Dy. Town Planner, NCR Monitoring & Planning Cell, Haryana.
13.	Shri Satish Kumar, Research Officer, NCR Monitoring & Planning Cell, Haryana.
	Govt. of NCT Delhi
14.	Shri G.P. Bansal, Project Planning, PWD, GNCT Delhi.
	Government of Uttar Pradesh
15.	Shri Rajesh Prakash, Additional Commissioner, NCR Monitoring & Planning Cell, 2 nd Floor, Navyug Market, Ghaziabad, Uttar Pradesh.
	Government of Rajasthan
16.	Shri Ravi Rai Verma, Senior Town Planner, Office of the Chief Town Planner, NCR Monitoring & Planning Cell, Jawharlal Nehru Marg, Jaipur, Rajasthan.
	CMA Gwalior
17.	Shri Tarun Bhatnagar, CEO, Counter Magnet, Gwalior.

	NCRPB
18.	Shri J.N. Barman, Consultant
19.	Smt. Ruchi Gupta, Joint Director (Tech.)
20.	Shri P.K. Jain, FAO
21.	Shri Abhijeet Samanta, Dy. Director (Tech.)
22.	Shri Sachin Suryawanshi, Dy. Director (GIS)
23.	Shri Ramesh Dev, Dy. Director (Tech.)
24.	Ms. Nilima Majhi, Asstt. Director (Tech.)
25.	Shri Naresh Kumar, Asstt. Director (Tech.)
26.	Shri Satyabir Singh, Asstt. Director (Tech.)
27.	Ms. Vandana Solanki, Consultant

**REGIONAL PLAN 2021 FOR ADDITIONAL AREAS
OF
NATIONAL CAPITAL REGION**

Addendum to the Regional Plan-2021 for NCR notified on 17.09.2005



NATIONAL CAPITAL REGION PLANNING BOARD

MINISTRY OF HOUSING AND URBAN AFFAIRS, GOVT OF INDIA

CORE 4-B, FIRST FLOOR, INDIA HABITAT CENTRE, LODHI ROAD, NEW DELHI-110003

Background

1. National Capital Region Planning Board (NCRPB) has prepared Regional Plan-2021 for NCR (RP-2021) under Section 10 of the NCRPB Act, 1985 which was notified on 17th September, 2005.
2. Subsequent to the notification of RP-2021 on 17.09.2005, additional districts namely Bhiwani and Mahendragarh districts of the State of Haryana and Bharatpur district of the State of Rajasthan, were included to NCR vide Government of India, Gazette Notification dated 01.10.2013. Further, the districts of Jind & Karnal of the State of Haryana and Muzzaffarnagar district of the State of Uttar Pradesh were included in NCR vide GoI Gazette Notification dated 24.11.2015. The district of Shamli, of the State of Uttar Pradesh was included in NCR vide GoI Notification dated 16.04.2018. The total additional area of NCR is now 20939 sqkm. Further, in addition to the existing five Counter Magnet Areas (CMAs) to NCR, four new CMAs, namely, Ambala in Haryana, Dehradun in Uttarakhand, Kanpur in Uttar Pradesh and Jaipur in Rajasthan were also identified and approved by the Board.
3. Subsequent to addition of seven new districts in NCR, the work of preparation of Regional Plan-2021 has been initiated. As part of this, the task of creation of Regional Landuse for the additional areas of NCR was entrusted to National Remote Sensing Centre (NRSC), Govt. of India.
4. At the onset, it may be mentioned that as the notified RP-2021 provides policies and proposals for whole NCR area, these policies and proposals of RP-2021 shall also be applicable to the extended new area of the NCR i.e. Bhiwani, Mahendragarh, Jind, Karnal, Bharatpur, Muzzaffarnagar and Shamli districts. However, under the provisions of Section 14(I) of NCRPB Act, 1985, modifications can be carried out in the RP-2021 and accordingly, an Addendum to RP-2021, has been prepared with respect to the 7 additional districts, considering and assessing the available information with NCRPB w.r.t. incorporation of additional districts.

Section 14(I) of NCRPB Act, 1985 is reproduced below:

“The Board may, subject to the provisions of sub-section (2), make such modifications in the Regional Plan as finally prepared by it, as it may think fit, being modifications which, in its opinion, do not effect important alterations in the character of the Regional Plan and which do not relate to the extent of land-uses or the standards of population density.”

Chapter wise addendums are as follows:

Chapter 1: INTRODUCTION

1. National Capital Region Planning Board (NCRPB) has prepared Regional Plan-2021 (RP-2021) for NCR under the provisions of Section 10 of the NCRPB Act, 1985 which was notified on 17th September, 2005.
2. Subsequent to the notification of RP-2021 on 17.09.2005, additional districts namely Bhiwani and Mahendragarh districts of the State of Haryana and Bharatpur district of the State of Rajasthan, were included to NCR vide Government of India, Gazette Notification dated 01.10.2013. Further, the districts of Jind & Karnal of the State of Haryana and Muzzaffarnagar district of the State of Uttar Pradesh were included in NCR vide GoI Gazette Notification dated 24.11.2015. The district of Shamli of the State of Uttar Pradesh was included in the NCR vide GoI Notification dated 16.04.2018. The total additional area of NCR is 20939 sq.kms.

Chapter 2: THE REGION

Para 2.1 may be read as:

2.1 CONSTITUENT AREAS OF NCR

The Constituent Areas of the National Capital Region are as under:

- a) National Capital Territory of Delhi (1,483 sq. kms.). This accounts for 3% of the total area of NCR.
- b) Haryana Sub-region comprising of Faridabad, Gurgaon, Rohtak, Sonapat, Rewari, Jhajjar, Palwal, Nuh (Mewat), Panipat, Mahendragarh, Bhiwani (including Charkhi Dadari), Jind and Karnal districts. This accounts for 52% (25,327 sqkms) of the area of the State and 46% of the area of NCR.
- c) Rajasthan Sub-region comprises of Alwar and Bharatpur districts. The area is 4% (13,447 sq. kms.) of the total area of the State and 24% of the area of NCR.
- d) Uttar Pradesh Sub-region comprising of five districts namely, Meerut, Ghaziabad, Gautam Buddha Nagar, Bulandshahr, Baghpat, Muzaffarnagar and Shamli. This accounts for 6% (14,825 sq. kms.) of the area of the State and 27% of the area of NCR.

Thus, the total area of NCR is 55,083 sq. kms. as indicated in the Map 2.1A Additional Areas Regional Plan-2021: Constituent Areas.

2.2 PHYSICAL SETTING

Para 1 for section 2.2 be read as:

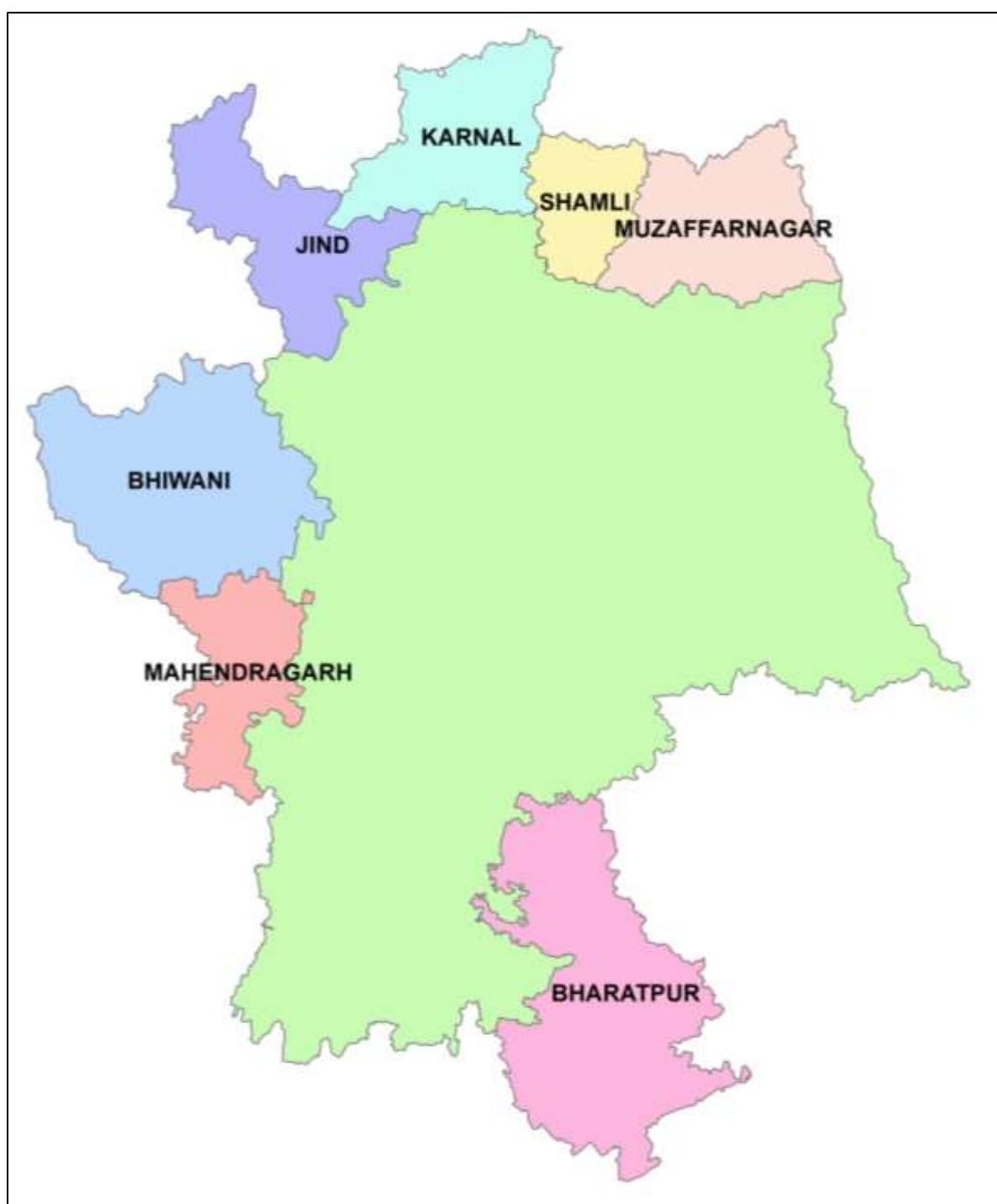
The National Capital Region lies between 26° 42' and 29° 59' North latitude and 75° 28' and 78° 29' East longitude. The region includes the National Capital Territory of Delhi (earlier Union Territory of Delhi) and parts of the States of Haryana, Rajasthan and Uttar Pradesh.

2.3 GEOLOGY - Map 2.3A on Lithology indicates geology of additional areas of NCR.

2.4 GEOMORPHOLOGY- Map 2.4A on Geomorphic Units indicates geomorphology of additional areas of NCR.

2.5 HYDROLOGY AND AVAILABILITY OF GROUND WATER- Map 2.5A on Ground Water Prospects indicates availability of ground water.

Map 2.1A Additional Areas of NCR: Constituent Areas



Chapter 3: AIMS, OBJECTIVES AND POLICY ZONES

The policies for future development of the Regional Plan-2021 given in Para 3.2 will continue for the additional areas of NCR. The additional area falls under the Policy Zone of “Rest of NCR”, and policies at para 3.2.4 with regards to ‘Rest of NCR’ will be applicable to the additional areas of NCR.

Map 3.1 (a) presents the Policy Zones of additional area of NCR.

Para 3.2.3: Highway Corridor Zone, following be added

Highway Corridor Zone (HCZ) is proposed along National Highways (NH-44, 52, 152, 352, 709, 709 A, 334-B, 11 and 148-B) falling in the additional areas of NCR in the districts of Bhiwani, Mahendragarh, Jind and Karnal of Haryana sub-region; and Bharatpur district of Rajasthan sub-region; and Muzzaffarnagar and Shamli districts of U.P. sub-region.

The policies regarding HCZ provided in para 3.2.3 of Regional Plan-2021 is applicable for additional areas of NCR.

3.2.4: Rest of NCR para be read as:

In the Rest of NCR (approximately 51,300 sqkms), the basic policy of Regional Plan-2001 for accelerated development of both urban and rural areas will continue. Infrastructure has to be substantially upgraded at local and regional level (both by State and Central Governments) in order to induce the growth in these areas, specifically in the identified settlements i.e., Metro Centres and Regional Centres. This will make them more attractive for locating economic and allied activities and for attracting private sector investment.

Chapter 4: DEMOGRAPHIC PROFILE AND SETTLEMENT PATTERN

The following Tables be added in para 4.2.1 below the Table 4.2 of Regional Plan-2021.

4.2.1 A Table 4.2.(a) reveals that decadal growth rate of additional areas has decreased, with Bharatpur district experiencing a decrease of 6%. The additional areas of Haryana constitute 21.3% of total population of Haryana.

Table 4.2 (a): Sub-region wise distribution of Population in additional area of NCR

Additional areas	Population			Decadal Growth Rate (%)		Share of Population (%)		
Year	1991	2001	2011	1991-2001	2001-2011	1991	2001	2011
1	2	3	4	5	6	7	8	9
Haryana	3861093	4701553	5396009	21.8	18	23.5	22.2	21.3
Rajasthan	1650724	2101142	2548462	27.3	21.3	3.8	3.7	3.7
Uttar Pradesh	2843000	3543362	4143512	24.7	21.1	2.0	2.1	2.1

Source: Census 1991, 2001 & 2011

Table 4.3.(a) reveals that urban population share has increased for the newly added areas by about 2% during 2001-2011.

Table 4.3 (a): Sub-region wise distribution of Urban Rural components of Population in additional area of NCR

	Population in person		% share	
Urban –Rural Component/ Year	2001	2011	2001	2011
Total additional areas of NCR	10346057	12087983	100.00%	100.00%
Urban	2272290	2900981	21.96%	24.00%
Rural	8073767	9187002	78.04%	76.00%

Source: Census 2001 & 2011

Table 4.4 (a) Population Density in Additional areas of NCR (2001-2011)

Sub-region/Additional Areas		Population		Density (per/sqkm)	
	Area (Sq. Km)	2001	2011	2001	2011
Haryana areas	11899	4701553	5396009	395	453
Rajasthan areas	5067	2101142	2548462	415	503
Uttar Pradesh areas	3973	3543362	4143512	892	1043

Source: Census 2001 & 2011

As per 2011, Census, Additional area of NCR in Uttar Pradesh have the maximum density of 1043 pph. While density of additional areas of Haryana is lowest 452 pph, the density of additional Rajasthan district is more than rest of Rajasthan sub-region (Alwar district).

4.2.2 (a) Growth of Population in additional areas

Additional area of NCR is experiencing declining in decadal growth rate of population. Jind district has a decline in decadal population growth by as much as 9.3 % followed by Bhiwani

(7.8%). The least decline is seen for Karnal district (5%). Only in case of Muzaffarnagar (Urban) and Karnal (urban) the decadal growth rate from 2001 to 2011 has increased by 2.5% and 5.7% respectively.

Table 4.12 (a) Population distribution and growth of newly added districts, 1991-2011

Additional Areas		Population (in no.)			Growth Rate (in %)	
		1991	2001	2011	1991-2001	2001-2011
Haryana	Rural	3152314	3742105	4181439	18.71	11.74
	Urban	708779	959448	1214570	35.37	26.59
	Total	3861093	4701553	5396009	21.77	14.77
Uttar Pradesh	Rural	2143313	2639480	2952200	23.15	11.85
	Urban	699230	903882	1191312	29.27	31.8
	Total	2842543	3543362	2863798	19.2	13.5
Rajasthan	Rural	1336759	1692182	2053363	26.6	21.3
	Urban	313965	408960	495099	30.3	21.1
	Total	1650724	2101142	2548462	27.3	21.3

Source: Census of India-1991, 2001, 2011

Para 4.2.3 (b) Population Projection for Additional areas of NCR for 2021

The population projection for additional areas of NCR for the year 2016 and 2021 is given in Table 4.12 (b). The population of additional areas of NCR is projected to be 134.51 lakhs by 2016 and 149.71 lakhs by 2021. The share of Haryana Sub-region (additional 4 districts): 68.47 lakhs, Rajasthan Sub-region (additional one district): 31.49 lakhs and UP Sub-region (additional 2 districts) : 49.73 lakhs by 2021.

Table 4.12(b): Sub-region wise Rural-Urban projected Population of additional areas of NCR, 2016-21 (for additional areas in sub regions of NCR)

Sr. No.	Additional areas		2011	2016	2021
1.	Haryana	Total	5396009	6078620	6847582
		Rural	4181439	4658684	5496386
		Urban	1214570	1493811	1837252
2.	Uttar Pradesh	Total	4143512	4539644	4973645
		Rural	2952200	3091769	3213957
		Urban	1191312	1447874	1759689
3.	Rajasthan	Total	2548462	2833295	3149964
		Rural	2053363	2256802	2478695
		Urban	495099	576493	671269
	Total Additional NCR Area	Total	12087983	13451559	14971191
		Rural	9187002	10007255	11189038
		Urban	2900981	3518178	4268210

Source: NCRPB Study on Population Projection of NCR, 2016-2041

4.3.1(a) Urban Settlements in Additional areas

As per the Census of India (2011), currently there are 230 urban settlements within NCR as against 168 before adding the new districts. Present composition of urban centers in the

newly added districts is given in **Table 4.13 (a)** .

Table 4.13 (a) Urban Settlements in newly added areas of NCR, 2011

Sub-region wise	District	Class –I	Class-II (50,000-99,999)	Class-III (20,000-49,999)	Class-IV (10,000-19,999)	Class-V (5,000-9,999)	Class-VI (Below 5,000)	Total
		(1 Lakh+)						
Haryana	Bhiwani (incl. CharkhiDadri)	1	1	1	3	-	-	6
	Jind	1	1	1	2	1	-	6
	Karnal	1	-	3	3	-	1	8
	Mahendragarh	-	1	1	1	-	2	5
Uttar Pradesh	Muzaffarnagar (incluShamli)	2	3	11	9	2	-	27
Rajasthan	Bharatpur	1	-	6	2	1	-	10

Source: Census of India, 2011

There are 27 urban settlements in Uttar Pradesh sub-region, followed by 25 in Haryana sub-region and 10 in Rajasthan sub-region. There are 3 Class-I urban centers in Haryana sub-region, followed by 2 in Uttar Pradesh sub-region and 1 in Rajasthan sub-region.

4.3.2 (a) Rural Settlements in additional areas

According to the Census of India (2011), there were 4147 rural settlements of various sizes in NCR as compared to 3924 settlements in 2001. The number of villages increased over the last decade except in Muzaffarnagar district. The rural population of NCR which was 78% of the total population of additional area in 2001 has declined to 76% in 2011.

4.5 Proposed Hierarchy of Settlements in Additional areas of NCR with population assignment

Regional Plan-2021 proposed a six-tier settlement system, i.e. Metro Centre, Regional Centre, Sub-Regional Centres, Service Centres, Central Villages and Basic Villages. The same settlement pattern is proposed to be continued for the additional areas. In addition to earlier centers, three Regional Centers i.e. Karnal (M.Cl.+OG) in Haryana sub-region, Muzaffarnagar (NPP) in Uttar Pradesh sub-region and Bharatpur (M.Cl.+OG) in Rajasthan sub-region are proposed in the additional areas of NCR.

Table 4.21 Proposed Regional Centre (2021) in additional areas of NCR

S. No.	Regional Centre	2011 (Existing)	2021 (Proposed)
1	Karnal (M Cl + OG)	302,140	410234
2	Muzaffarnagar (NPP)	392,768	555646
3	Bharatpur (M Cl + OG)	252,838	3,16,147

Source: As per the Report on Population Projections 2041

Policies with regards to Regional Centre, Sub Regional Centre, Service Centre, Central Village and Basic village as given in para 4.3.6 of the Regional Plan-2021 be applicable for the additional areas of NCR.

Chapter 5: ECONOMIC ACTIVITY AND FISCAL POLICY

5.2.6 Economic Structure of Additional districts of NCR

5.2.6.1 Work Participation Rate in additional areas of NCR

As per the Census of India records, during the decade 2001-11 it is found that amongst the newly added districts, apart from Bharatpur, work participation rate has decreased in all the newly added districts of NCR (refer **Table 5.11**). Further, while there is slight increase in WFPR for females in Bharatput district, the rate has considerably decreased for other districts’.

Table 5.11 Work Participation Rate (WPR) in additional areas of NCR, 2001-11

S.No.	Additional areas	Work Participation Rate (WPR in %)					
		2001			2011		
		Total	Male	Female	Total	Male	Female
1.	Haryana	41.42	49.75	31.87	37.08	50.20	22.26
2.	Uttar Pradesh	31.96	48.43	13.17	31.45	49.48	11.26
3.	Rajasthan	40.59	47.08	32.99	42.03	47.74	35.54

Source: Census of India, 2001 & 2011

5.2.6.2 Structural composition of workforce in newly added districts of NCR

It is observed that majority of the workforce in the newly added districts is engaged either in cultivation & agriculture (primary activities) or in other type of activities. During the decade 2001-2011, it is seen that the share of cultivators has reduced over the time, however, an increase is visible in agricultural labours and tertiary sector. Table 5.12 provides the percentage share of main workers in the newly added districts by type of economic activities during 2001 and 2011.

Table 5.12 Share of workers in newly added districts by type of economic activities, 2001-2011

S.No.	Additional areas	Share of Main workers, 2001 (in %)				Share of Main workers 2011 (in %)			
		Cultivators	Agricultural Labor	Household Industries	Others	Cultivators	Agricultural Labor	Household Industries	Others
		Primary		Secondary	Tertiary	Primary		Secondary	Tertiary
1.	Haryana	46.22	9.20	2.27	42.33	39.30	12.94	2.27	45.49
2.	Uttar Pradesh	30.59	15.55	3.15	50.71	27.48	20.95	2.96	48.62
3.	Rajasthan	60.79	6.27	1.84	31.09	50.43	12.86	2.07	34.64

Source: Census of India, 2001 & 2011

Census records reveals that among these newly added areas, during the decade 2001-11 share of workers engaged in primary sector decreased in all the districts but a slight increase is depicted in Bhiwani district of Haryana sub-region and Muzaffarnagar district of Uttar Pradesh sub-region. Contrary to this, workforce in secondary sector showed a minor increase in all the newly added districts but negligible decline is seen in Mahendragarh district of Haryana sub-region and Muzaffarnagar district of Uttar Pradesh sub-region. However, workers in tertiary sector increased in all the newly districts except Bhiwani district of Haryana sub-region and Muzaffarnagar district of Uttar Pradesh sub-region.

5.4a Policies and Proposals for additional areas of NCR

As the entire additional area falls in the 'Rest of NCR', all related policies of 'Rest of NCR', under 'Activity Specific Policies', and those related to Regional level under section 5.4 of the Regional Plan-2021 be applicable to additional areas of NCR.

5.5a Strategies for additional areas of NCR

Strategies suggested for 'Rest of NCR', under 'Activity Specific Strategies', and those related to Regional level, under section 5.5 of the Regional Plan be applicable to additional areas of NCR.

Chapter 6: TRANSPORT

In para 6.2.1 Transport Network following be added for Additional Areas of NCR

i) Road Network

Ten National Highways (NHs) namely NH-44, 52, 152, 352, 709, 709 A, 334-B, 11, 148-B and 9 criss-cross the Haryana sub-region, two NHs, namely, NH-119, 58 passing through UP sub-region and two, namely, NH-21 and 3A passing through Rajasthan sub-region.

Twenty-three State Highways also serve in straightening the regional road network in the additional areas of NCR

The broad road network in additional areas of NCR is shown in **Map 6.1.A**

ii) *Rail Network*

The additional areas of NCR rail network falls under four zonal railways (Northern, North-Western, North-Central and West-Central).

The rail network in NCR is shown in **Map 6.2.A**

iii) *Airport*

The State Government of Haryana intends to set up an international Cargo Airport for which site has been identified at Bhaini Maharajpur & Bhaini Bhairon villages in the State which is situated at the confluence of Rohtak, Hisar and Bhiwani Districts. The Airport Authority of India has given the site feasibility report and clearance from the Ministry of Defense has also been received.

With regards to Rajasthan sub-region, the nearest Domestic airport is Pandit Deen Dayal Upadhyay Airport, Agra which is located at the distance of 58 kms from Bharatpur. Besides Agra Airport, there are 2 Airports which serves Rajasthan Sub Region, Bharatpur that are Indira Gandhi International Airport, New Delhi located at a distance of 240km from Bharatpur and Jaipur International Airport in Jaipur which are located approximately at a distance of 175 km from Bharatpur. Apart from nearest airports, Bharatpur is also having Airstrip located 21 kms from the city of Bharatpur. This Airstrip is only suitable for small aircraft operations only (VIP & private aircraft operations) with total land area allotted of 30 Acres. U.P. sub-region is served by Indira Gandhi International Airport, New Delhi.

Following be added as para 6.9 Policies and Strategies and Action Plan for additional areas

The Policies and Strategies given in para 6.5; Transport Plan 2021 given in para 6.6 and Action Plan in para 6.6.5 of the Regional Plan-2021 be applicable to additional areas of NCR.

Chapter 7 : POWER

7.2.1.1 Existing Availability & Future Demand for additional/newly added areas of NCR

Census 2011 indicates the status of electricity in the additional areas of Haryana. Cent percent villages that are inhabited are electrified in Karnal (417), Jind(302), Mahendragarh (369) and Bhiwani,(437) while situation needs improvement in Bharatpur and Muzaffarnagar (inclShamli) districts. Respective state governments need to assess the power situation of the seven districts as applicable and plan for meeting the future requirements as per improvements planned for the districts.

The energy consumption status of newly added areas indicated below shows maximum growth of energy requirement in Mahendergarh district (24%) followed by Muzaffarnagar district (12%) from 2015 to 2017. Bharatpur need to look into the T&D losses (47%) while energy requirement is maximum for Karnal district.

Table 7.8: District wise Power Demand of additional areas of NCR

Electricity Demand & Energy data for NCR(FY2016-17)							
State	Districts	Energy Consumption for 2015-16 (MU)	Energy Consumption for 2016-17 (MU)	Growth (%)	T&D Losses (%)	Energy Requirement (MU)	Peak load (MW)
1	2	3	4	5(4-3/3)	6	7(4+6)	8
Haryana	Karnal	2873	2892	0.69	32.40	4279	1595
	Bhiwani	1494	1591	6.55	33.61	2397	569
	Mahendargarh	576	713	23.78	28.43	997	225
	Jind	1049	1128	7.47	38.37	1830	719
Uttar Pradesh	Muzzafarnagar	1287	1440	11.87	21.03	1824	2059
Rajasthan	Bharatpur	805	865	7.44	47.25	1639	343

Source: CEA

7.3 (a) Policies and Proposals

The policies and proposals provided in para 7.3 of the Regional Plan-2021 be applicable to additional areas of NCR.

Chapter 8: WATER

Following may be added in para 8.2 of Regional Plan-2021 as:

8.2 (a) Existing Situation and Issues of Additional Areas of NCR

Amongst the newly added areas, Karnal district receives the maximum average annual rainfall (605.8mm) while Mahendergarh has the lowest. (405.8mm). As per Ground Water Development Blocks in the additional areas of NCR, except Muzaffarnagar district of Uttar Pradesh sub-region, in all the additional areas of NCR an imbalance between the net annual recharge and withdrawal very clearly mean that groundwater withdrawal significantly exceeds the rate of aquifer recharge. Though, the situation is far better in Muzaffarnagar district where the stage of ground water development is 66%, but that too is higher than the all-India average of 62%. Therefore, ground water resources in NCR including the newly added areas are under pressure due to over-exploitation.

Based on stage of groundwater development, CGWB report, 2011 indicates that in the additional areas of NCR, all the districts have significant number of over-exploited blocks. This clearly underlines the urgent need to increase the ground water recharge to compensate for the annual ground water withdrawal.

Among the newly added areas of NCR, the depth of water table in Bhiwani district drops till 65.97 meters bgl during the pre-monsoon period and the situation is, somewhat same during the post-monsoon period. In rest of the districts, the situation is comparatively better. The situation is a matter of concern for all additional districts apart from Karnal and to an extent Muzaffarnagar, with respect to ground water salinity.

Drinking water has been accorded priority among water uses in successive National Water Policies. As per Census 2011, amongst the new areas added to NCR, 100% population have access to drinking water except Bharatpur district of Rajasthan sub-region where it is only 74.9%. At an average of 52.9% in 2011, tapped water (implying piped water supply) remained the major source of drinking water supply in the newly added districts of NCR. In Bharatpur district and Muzaffarnagar district, hand pumps are a major source of water i.e. 36.6% and 65.2% households respectively.

8.3 (a) Policies and Proposals for additional areas of NCR

The policies and proposals provided in Para 8.3 of the Regional Plan-2021 be extended to the additional districts of NCR.

8.4 (a) Plan of action for additional areas of NCR

The plan of action and strategies provided in para 8.4 of the Regional Plan-2021 be extended to additional areas of NCR.

Map 8.1A indicates the ground water rechargable areas in the 7 additional districts. Districts of Mahendergarh, Bhiwani, Jind, Karnal of Haryana; Muzaffarnagar & Shamli in Uttar Pradesh and Bharatput in Rajasthan district.

Map 8.2A indicates the status of ground water availability in the Districts of Mahendergarh, Bhiwani, Jind, Karnal of Haryana; Muzaffarnagar & Shamli in Uttar Pradesh and Bharatput in Rajasthan district.

Chapter 9: SEWERAGE, SOLID WASTE MANAGEMENT, DRAINAGE & IRRIGATION

In addition to 9.1.2 for NCR as notified upto 2005, 8.2 of Chapter 8 on water of RP2021, following Further,

9.1.2 A Existing Situation and Issues w.r.t Sewerage, for Newly added Districts

The coverage of sewerage network in various towns of the districts of Karnal, Jind, Mahendergarh and Bhiwani in Haryana, vary from 60% in Loharu town of Bhiwani district, to 90 % in towns like Charkha Dadri, Assandh, Narwana and Mahendergarh. The sewer network coverage in Regional centre in newly added districts of Haryana i.e. Karnal is 76 %. With respect to sewage treatment capacity in regional centres identified in newly added districts, Karnal has capacity of 48 mld while Bharatpur has capacity to handle 13 mld sewage.

As per estimates, i.e. Water Demand estimated @ 135 lpcd for Urban and 70 lpcd for rural and considering Sewage Generated estimated as 80% of Water Demand, as per CPHEEO norms, the additional areas generate another 828 MID as in 2011 and expected to generate 461 mld by 2021.

9.1.3A Policies and Proposals

All policies and proposals as provided in para 9.1.3 of the Regional Plan- 2021 be applicable to additional areas of NCR.

9.1.4A Plan of action for newly added areas

The plan of action and strategies provided in para 9.1.4 of Regional Plan-2021 be extended to additional areas of NCR.

9.2.2A Existing situation and issues w.r.t Solid waste management, for additional areas of NCR.

As per estimates, in Table 9.2.1 a, Karnal has maximum waste generation due to large urban population amongst the four newly added districts from Haryana, followed by Bhiwani, Jind and Mahendragarh districts. The Table also presents estimated solid waste generation for year 2011 and 2021 as per CPHEEO norms. Overall, as per estimates, the additional areas of NCR together produced about 641 MT. day of solid waste in 2011 and is expected to generate 1045 MT/day of solid waste by 2021.

Table No. 9.2.1 a: Estimated Solid Waste Generation by Urban Population in additional districts of NCR

State/ District	Urban Population Census 2011	Projected Urban Population 2021*	Generated in 2011 (MT/day)	Projected generation by 2021 (MT/day)
Haryana				
Karnal	4,54,810	687981	95.51	172.00
Mahendragarh	1,32,855	200967	27.90	42.20
Bhiwani	3,21,322	486056	67.48	102.07
Jind	3,05,583	462248	64.17	97.07
Uttar Pradesh				
Muzaffarnagar	8,05,210	1189377	201.30	321.13
Shamli	3,86,102	570312	81.08	142.58

State/ District	Urban Population Census 2011	Projected Urban Population 2021*	Generated in 2011 (MT/day)	Projected generation by 2021 (MT/day)
Rajasthan				
Bharatpur	4,95,099	671269	103.97	167.82
Total			641.41	1044.87

* NCR Population project Study 2019 & CPHEEO norms

Per Capita waste Generation Rates as per CPHEEO

Population range (in lakhs)	Avg. per Capita value(kg/Capita/day)
1-5	0.21
5-10	0.25
10-20	0.27
20-50	0.35
>50	0.50

9.2.3A Policies and Proposals

All policies and proposals as provided in para 9.2.3 of the Regional Plan- 2021 be applicable to additional areas of NCR.

9.2.4A Plan of action for newly added districts

The plan of action and strategies provided in para 9.2.4 of the Regional Plan-2021 be extended to additional areas of NCR.

9.3.2A Existing Situation regarding Drainage, for Newly added Districts

Jind and Bhiwani District of extended Sub Region are mainly drained through inland drainage tracts'(Ghaggar Drainage Tract/ Internal Drainage Tract). No drainage system is available in Mahendragarh District and the Karnal District drainage is linked and flows in to Yamuna River. Muzaffarnagar district is demarcated by river Ganga in the east and by river Yamuna in the west. In fact, the drainage pattern of the district is strictly governed by these two major rivers. Both the rivers in their respective course flow more or less north to south. Major tributary of Ganga is Solani river. Yamuna has the tributaries named Hindon, Krisni and Hari rivers and the Katnanala. Bharatpur district falls in parts of Rupa rail, Banganga and Gambhiri river basins. All the rivers in the district are ephemeral in nature. River Banganga, which passes through the south-central part of the district, disappears in the sandy tract near Ghana. Gambhiri River flows in the southern part, whereas Rupa rail flows in the northern part. Undersigned

9.3.3A Policies and Proposals for newly added Areas

All policies and proposals as provided in para 9.3.3 of the Regional Plan- 2021 be applicable to additional areas.

9.3.4A Plan of action for newly added districts

The plan of action and strategies provided in para 9.3.4 of the Regional Plan-2021 be extended to additional areas of NCR.

9.4.1 A Existing Situation related to Irrigation for Newly added areas of NCR

In the extended Haryana Sub-Region Karnal, Bhiwani and Mahendragarh and parts of the Jind Districts, the water is obtained from the Yamuna Canal System. Whereas in Karnal and Jind District it is through gravity but in case of Bhiwani district and parts of Mahendragarh, it is through the lift system. However the Yamuna and Bhakra system are also integrated to carry surplus water from one system to other system. The irrigation network does not confine to the administrative/District boundaries but through a network of circles serving various districts.

Bharatpur district has been divided into Deeg and Bharatpur divisions. Nadbai, Kumher, Bharatpur and Weir (partially) tehsils come under Bharatpur division comprising 52 dams in which rainy water is being collected. In the months of September and October water from these dams is being released through canals and rivers for irrigation. Under Deeg division come 185 villages of Kaman, Pahari, and Deeg tehsils for irrigation. Irrigation department has constructed 53 km long 'Gungaon canal'. Pahari, Deeg and Tail distributives have been taken from 'Gungaon canal' and total length of their rivers and distributives comes to 276 km. Total 64% of the district area is irrigated and rest of the 36% of the area is unirrigated. The total net irrigated area in the district Bharatpur is 328 Sq.km and Gross Irrigated area is 331 Sq.km.

Entire district of erstwhile Muzaffarnagar falls between the rivers Ganga and Yamuna. The loamy soils of the area is very fertile. About 80% of the total geographical area of the district is cultivated. The rabi crops are wheat and oil seeds while paddy and pulses are the main kharif crops. The abundantly produced sugarcane is a perennial crop. Muzaffarnagar district is one of the highly developed districts privileged with the Ganga and Yamuna canal systems. Besides the Ganga canal & Eastern Yamuna canals, the irrigational needs are met by ground water. The canal irrigation is maximum in Khatauli block followed by Purkaji block. The canal irrigation is minimum in Budhana block. The area irrigated by tubewells is maximum in Uoon block and minimum in Purkaji block.

9.4.3A Policies and Proposals for newly added districts

All policies and proposals as provided in para 9.3.3 of the Regional Plan- 2021 be applicable to additional areas.

9.4.4A Plan of action for newly added districts

The plan of action and strategies provided in 9.4.4 of the Regional Plan-2021 be extended to additional areas of NCR.

Chapter 10: TELECOMMUNICATIONS

10.4.1 Policies and Proposals for newly added districts

The policies and proposals provided in para 10.4 of the Regional Plan-2021 be extended to additional areas of NCR.

Chapter 11: SHELTER

11.2.1 Issues in additional districts of NCR

- a. As per Census 2011, there is lower availability of affordable housing in urban areas of Jind and Bhiwani which is indicated by less share of owned houses in urban areas of Bhiwani, Jind, Karnal and Muzaffarnagar districts among the newly added districts to NCR.
- b. There is significant gap in housing (ranging from about 6000 houses to 45000 houses) in rural areas of the newly added districts except Mahendragarh.

11.3.1 Strategies policies and Proposals for newly added districts

The policies and proposals provided in para 11.3 of the Regional Plan-2021 be applicable to additional areas of NCR.

11.4.1 Strategies policies and Proposals regarding Slum/ Informal Housing for newly added districts

The policies and proposals provided in para 11.4 of the Regional Plan-2021 be applicable to additional areas of NCR.

Chapter 12: SOCIAL INFRASTRUCTURE

12.2 (a) Existing situation of Educational Infrastructure in additional districts of NCR

According to the Census, 2011, amongst the newly added districts, the overall literacy rate in Mahendragarh district is highest (77.72%), followed by districts i.e. Bhiwani (75.21%) and Karnal (74.73%) of Haryana sub-region as against all India average of 74 percent. However, newly added areas in U.P. and Rajasthan are less than the all India average percentage i.e. 70%.

12.1(a)

Urban & Regional Development Plans Formulation & Implementation (URDPFI) guidelines for establishing health centers/facilities is given in the table below:

Box 12.1A Norms for Healthcare facility establishment

Category	No. of Beds	Population served per unit
Dispensary	-	15,000
*Sub-centre	-	5000 (plain) 3000 (tribal/hilly/desert)
*Primary Health Centre (PHC)	6 beds	30,000 rural 20,000 urban
*Community Health Centre (CHC)	30 beds	80,000 (tribal/hilly/desert) – 1,20,000 (plain)
*Sub-District/Sub-Divisional Hospitals	Category-I: 31-50 beds Category-II: 51-100	5,00,000 – 6,00,000
*District Hospital	101 – 500 beds	
Nursing Home, Child Welfare & Maternity Center	25 to 30 beds	45,000 to 1 lakh
Polyclinic	Some observation beds	1 lakh
Intermediate Hospital (Category B)	80 beds Initially maybe for 50 beds including 20 maternity beds	1 lakh
Intermediate Hospital (Category A)	200 beds Initially the provision maybe for 100 beds	1 lakh
Multi-Specialty Hospital (NBC)	200 beds Initially the provision maybe for 100 beds	1 lakh
Specialty Hospital (NBC)	200 beds Initially the provision maybe for 100 beds	1 lakh
General Hospital (NBC)	500 beds Initially the provision maybe for 300 beds	2.5 lakh
Family Welfare Centre	As per requirement	50,000

Source: URDPFI Guidelines (2014), Ministry of Urban Development

*Revised IPHS Guidelines (2012), Ministry of Health & Family Welfare

12.4.1 Strategies for newly added districts

The strategies provided in para 12.4 of the Regional Plan-2021 be applicable to additional areas of NCR.

12.5.3 Strategies regarding ‘Law & order’, for newly added districts

The strategies provided in para 12.5.2 of the Regional Plan-2021 be applicable to additional areas of NCR.

Chapter 13: HERITAGE AND TOURISM

In addition to 13.1.1 of Chapter 13 on Heritage and Tourism of RP-2021, following is added:

13.1.1(A): Heritage Sites in newly added districts of NCR

There are 46 Centrally protected monuments and 33 State protected monuments in the newly added districts of NCR as per Archaeological Survey of India. The district wise number of protected monuments is given in Table 13.1 (A).

Table 13.1(A) Number of Protected Monuments in the newly added areas of NCR

Protection/ State	Haryana sub-region	Uttar Pradesh Sub-region	Rajasthan sub-region	Total in additional areas
Centrally Protected Monuments	17	6	23	46
State Protected Monuments	8	2	23	33

Source: Archaeological Survey of India, May 2017

13.1.2 (a) Policies and Proposals for the Protection of man-made Heritage Sites in additional districts of NCR

All policies and proposal as provided in RP-2021, notified in 2005, at para 13.1.2 shall be applicable to newly added areas of NCR.

13.1.3 (a) Natural Heritage in Additional Districts

- I. Special protected areas are identified in the additional areas of NCR, include the following:
 - i) Keoladeo National Park -Bharatpur, (declared as a national park in 1982 and listed as a World Heritage Site by UNESCO in 1985)
 - ii) Bandh BarethaWild life Sanctuary, Bharatpur
 - iii) Bir Bara Van Wildlife Sanctuary/ conservation reserve –Jind, Haryana
 - iv) Hastinapur Wildlife Sanctuary, Muzaffarnagar, Uttar Pradesh

In addition, components/aspects similar to those covered at para 13.1.3 in the Regional Plan-2021 for old areas of NCR, be protected/conserved in additional areas of NCR as per 13.1.4.

13.1.4 (a) Policies and Proposals for the Protection of Natural Heritage Sites in additional areas of NCR

All policies and proposal provided in para 13.1.4 of the Regional Plan-2021 be applicable to additional areas of NCR.

13.2.1 (a) Tourist Sites in additional areas of NCR

It is observed that the additional districts of NCR have significant number of tourist attraction points which include places of religious, historic and nature interest.

13.2.2 (a) Policies and Proposals for the Protection of Tourism Sites in additional areas of NCR

All policies and proposals provided in para 13.2.2 of the Regional Plan-2021 be applicable to additional areas of NCR.

Chapter 14: ENVIRONMENT

14.1.2 Forest cover in additional areas of NCR

The major natural features identified in the additional areas as environmentally sensitive area such as Aravallis, protected forests, wildlife sanctuaries, national parks, rivers and other water bodies, flood plains, etc. These accommodated a variety of flora and fauna.

In the 7 newly added districts, the forest cover is insignificant, much less than the current national average as well as less than the NCR average. Among the districts, the highest percentage of forest cover is in Bharatpur (4%) and the lowest is in Jind (0.8%). The newly added districts in NCR have low forest cover and need lot of attention, in this direction.

14.2 (a) Policies and Proposals for Environment in additional districts of NCR

All policies and proposal provided in para 14.2 of the Regional Plan-2021 be applicable to additional areas of NCR.

Chapter 15: DISASTER MANAGEMENT

15.2.1 Vulnerability and Risk Management in additional areas of NCR due to natural Hazards

A. Earthquake

One of the major fault lines in the region, Mahendragarh – Dehradun fault line, passes through Mahendragarh, Bhiwani, Jhajjar, Rohtak, Sonapat and Panipat. Among the 4 newly added districts of Haryana sub-region, Mahendragarh, Karnal and Bhiwani fall under the high risk zone IV and III. Jind is in Zone III of moderate damage risk. There are a few fault lines passing through Mahendragarh district. Parts of Alwar and Bharatpur Districts fall in the high damage risk zone IV and Zone III. Southern part of Bharatpur comes under Zone II of low damage risk. Muzaffarnagar (inclShamli) falls in the high damage risk zone IV.

B. Floods

Bhiwani and Mahendragarh are less prone to floods as compared to Jind and Karnal districts. Jind and Karnal districts flood during heavy rains. Flooding in these two district is also caused due to the improper draining of the water due to its topography. Ghahhar River passes through Jind district. According to the District Disaster Management Plan, Jind district has an average rainfall of 400 mm (2004 – 2012). Karnal district flooding is mainly due to overflow of Yamuna River during heavy rainfall. Karnal has an average rainfall of 325 mm (as recorded from 2008 to 2012 according to district management plan for Karnal). Jind and Karnal districts have several canals passing through the districts, making the districts vulnerable to flooding. Bharatpur district falls in one of the 15 river basins in the state and hence has a high flood potential. Banganga, Ghambir and Rooparel Rivers flow through the district. The district is least affected by droughts among other districts of Rajasthan. According to Disaster Management and Relief Department, Govt. of Rajasthan, the occurrence of drought in Bharatpur is rare. Flooding is a major issue in Muzaffarnagar district due to the presence of several rivers. Ganga, Hindon, Solani and Kali rivers flow through the district. During monsoon, these rivers overflow and flood the surrounding areas.

C. Wind

The districts of Mahendragarh, Bhiwani, Jind, Karnal and Bharatpur, are at a high wind risk with wind velocities up to 47 m/s.

15.3.1 Policies and Proposals for additional areas of NCR

All policies and proposal provided in para 15.3 of the Regional Plan-2021 be applicable to additional areas of NCR.

Chapter 16: RURAL DEVELOPMENT

16.3.1 Policies and Proposals for additional districts of NCR

All policies and proposal provided in para 16.3 of the Regional Plan-2021 be applicable to additional areas of NCR.

Chapter 17: REGIONAL LANDUSE

17.2.5 Landuse Analysis of Additional Areas of NCR

Existing landuse in 2012

NCR Planning Board commissioned a Study on “Creation of Land use for seven additional districts of NCR” to National Remote Sensing Centre (NRSC), Department of Space, Government of India. The existing landuse analysis based on Resourcesat-2 LISS-IV data pertaining to 2012 was carried out at a scale of 1:50,000 by NRSC as part of the Study.

Based on the report of the said Study, the status and assessment of the additional areas of NCR that include the 7 districts (4 from Haryana, 2 from Uttar Pradesh and one from Rajasthan) is as presented below in Table 17.2(a):

Table 17.2 (a): Sub-region wise Land use in additional areas of NCR

Category	Haryana sub-region		Uttar Pradesh sub-region		Rajasthan sub-region		Total	
	Area	%	Area	%	Area	%	Area	%
Builtup Area	643.72	5.41	237.85	5.99	201.68	3.98	1083.25	5.17
Agriculture	10715.69	90.06	3546.58	89.26	4215.67	83.20	18477.94	88.25
Green Areas	244.8	2.06	51.28	1.29	567.63	11.20	863.71	4.12
Wastelands	182.27	1.53	76.92	1.94	40.57	0.80	299.76	1.43
Water Bodies	93.24	0.78	35.93	0.90	22.57	0.45	151.74	0.72
Others	18.93	0.16	24.77	0.62	18.69	0.37	62.39	0.30
	11898.65	100.00	3973.33	100.00	5066.81	100.00	20938.79	100.00

Source: NRSC Study Report, 2019

Sub-region wise distribution of land use reveals that major portion of sub-regions area is under agriculture use, which is highest in Haryana (90.06%), followed by U.P. (89.26 %), Rajasthan (83.20%). The portion of Forest in Rajasthan sub-region is highest i.e. 11.20% followed by Haryana sub-region which is 2.06%. **Map 17.1 A: Additional Areas: Land Use 2012**

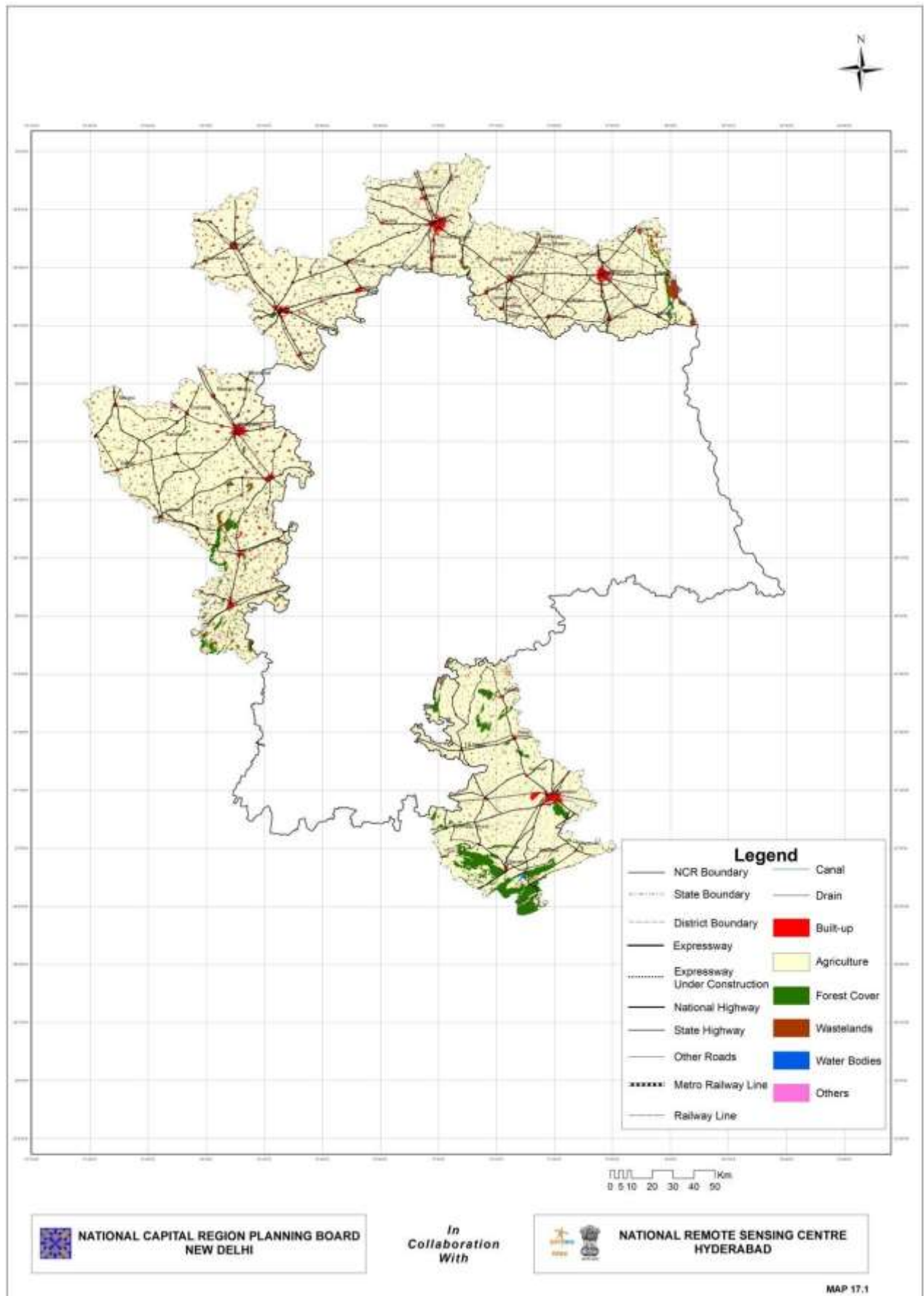
17.4 A Policies and Proposals for additional districts of NCR

All policies and proposal provided in para 17.4 of the Regional Plan-2021 be applicable to additional areas of NCR. **Map 17.2 A: Additional Areas: Proposed Land Use 2021.** Urbansisable/Control area boundaries of the towns/ cities are as per respective Master/Development Plans which might have different perspective years than Regional Plan 2021.

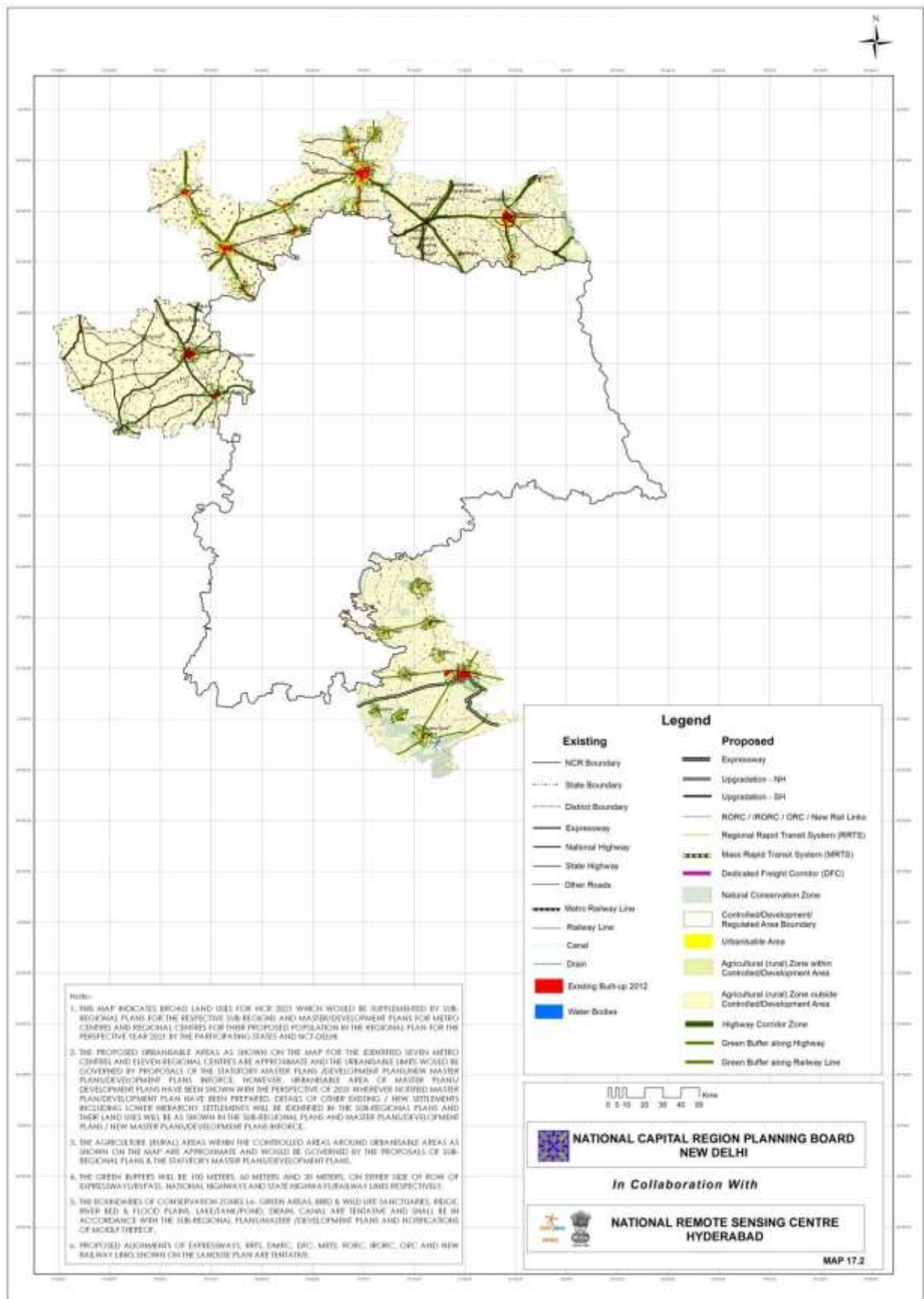
17.5A Zoning Regulations for additional districts of NCR

Zoning regulations provided in para 17.5 of the Regional Plan-2021 be applicable to additional areas of NCR.

Map 17.1A Additional Areas of NCR: Existing Land Use



Map 17.2A Additional Areas of NCR: Proposed Land Use -2021



Chapter 18: COUNTER MAGNET AREAS

18.3 A Identification of Counter Magnet Areas

Subsequent to the notification of RP-2021, on 17.09.2005, following three cities/towns were identified as Counter-Magnet Areas (CMAs) to NCR, which were approved by the Board in its 31st meeting held on 11.11.2009:

- i) Ambala in Haryana
- ii) Dehradun in Uttarakhand
- iii) Kanpur Nagar in Uttar Pradesh

It was also decided by the Board that the CMAs should not limit to urban area only and development could be proposed in the form of corridors also. Respective State Governments shall notify their respective CMAs and prepare Development Plan/Master Plan and Plan of Action for its implementation.

Thereafter, in its 33rd meeting held on 01.07.2013, Board approved Jaipur as CMA to NCR.

The additional areas of NCR are not covering any of the CMAs.

18.7A Proposals and Recommendations for Additional Identified CMAs

The proposals and recommendations provided in para 18.7 of the Regional Plan-2021 be applicable to additional identified CMAs to NCR.

Chapter 19: IMPLEMENTATION STRATEGIES, MANAGEMENT STRUCTURE & RESOURCE MOBILIZATION

Implementation Strategies, Management Structure and Resource Mobilization provided in para 19.1, para 19.2 and para 19.3 of the Regional Plan-2021 respectively be applicable to additional areas.

Compilation of Recommendations of the Review Reports of the Fourteen Study Groups constituted for Review of Regional Plan 2021

**Compilation of Recommendations of the Review Reports of the Fourteen Study Groups
constituted for Review of Regional Plan 2021**

Study Group No.	Study Group Titles (RP 2021 Chapter no.)	Pg No.
I	Region (2); Aims, Objectives & Policy Zones (3); Demography & Settlement Pattern (4) and Counter Magnet Areas (18)	2
II	Economic Profile and Fiscal Policy (5)	7
III	Transport (6)	12
IV	Power (7)	16
V	Water (8) and Sewerage, Solid Waste Management, Drainage & Irrigation (9)	17
VI	Telecommunications (10)	34
VII	Shelter (11)	37
VIII	Social Infrastructure (Health & Education) (11)	40
IX	Heritage & Tourism (13)	44
X	Environment (14)	50
XI	Disaster Management (15)	52
XII	Rural Development (16)	55
XIII	Regional Landuse (17)	65
XIV	Implementation Strategies, Management Structure & Resource Mobilisation (19)	

RECOMMENDATIONS OF THE STUDY GROUP-I COVERING THE CHAPTER REGION (2); AIMS, OBJECTIVES & POLICY ZONES (3); DEMOGRAPHY & SETTLEMENT PATTERN (4) AND COUNTER MAGNET AREAS (18) OF REGIONAL PLAN 2021

1.1. Region

1.1.1. Increasing the extent of area of Regional Plan on the demand of participating states without carrying out delineation study will not be advisable because the area of NCR is almost doubled compared to the Regional Plan of NCR prepared by TCPO, which may result into:

- Geographical area of NCR will be doubled;
- There will be thin spread of limited resources;
- This may occur in sparse development;
- Provision of infrastructure in integrated manner will be costly affair;
- Delhi the capital of country and mother city may lose its primacy; and
- It would be administratively and financially difficult to sustain / deal with growth and development of such huge area.

1.2. Aims, Objectives and Policy Zones

1.2.1. The positive approach of RP-2021, which aims to harness the spread of the developmental impulse and agglomeration economies generated by Delhi needs to be continued in next Regional Plan, and these objectives be given concentrated focus on economic and spatial development having regard to environmental conservation to make NCR an economically vibrant Megacity Region.

1.2.2. The basic policy for NCT-Delhi is not to allow new major economic activities i.e., industries, wholesale trade and commerce, which may result in a large scale job creation both in formal as well as informal sectors, should continue and only activities necessary to sustain the local population of NCT-Delhi should be permitted.

1.2.3. Unplanned and haphazard growth taking place in sensitive areas (Natural Conservation Zone) in the region be checked.

1.2.4. The constituent states needs to assess the impact of the policy, objective and aims of RP – 2021 in their region, so that collective picture of overall impact can emerge.

1.2.5. Delhi along with its surrounding towns namely Gurgaon, Faridabad, Noida, Ghaziabad and Greater Noida is emerging as one single contiguous land mass. Weather this scenario be encouraged from the point of view of safety or the towns in the bracket of 1 lakh to 5 lakh population be given overriding priority for development.

1.2.6. In the Rest of NCR, the basic policy of Regional Plan-2001 for accelerated development of both urban and rural areas should be continued by substantially upgrading the infrastructure at local and regional level, by restructuring these area so that a functional spatial order is evolved that contributes to balanced spatial development.

1.2.7. The strategy to develop small and medium towns in the region as Sub-regional centres / service centres, would play an important role in supporting the socio-economic development in their rural hinterland. Besides, the development of small and medium town needs to be more pronounced because if these towns are developed in an integrated manner can absorb more population and check, migration to the larger cities and even to mother city-Delhi.

1.2.8. The government of India launched various schemes / missions under Urban Sector namely Smart Cities, AMRUT, Swachh Bharat Mission, HRIDAY, Urban Transport, Pradhan Mantri Awas Yojana, and Deendayal Antyodaya Yojana National Urban Livelihoods Mission, etc.; and also under the Rural Development Ministry namely Gram Swaraj Abhiyan, PMAY-G, RURBAN (NRuM) and Swachh Gram, etc.; should be taken advantage of, in the process of development of NCR.

1.2.9. In the **Highway Corridor Zone (HCZ)**, excluding the mandatory green buffer, the land uses including TOD needs to be assigned by the respective State Governments depending upon de-facto conditions, economic pressure, and development potential of the zone. The Highway Corridor Zone also needs to be delineated and notified by the respective State Governments, on priority. However, some of the participating states reported:

- difficulties in delineating this Highway Corridor Zone,
 - the zone is being treated as a Development Control Zone to be regulated through DCRs;
- These issues needs to be addressed in detail in next Regional Plan. However, the Study Group suggested a new regional planning approach in planning this zone, by treating this zone as development corridor / industrial corridor / knowledge corridor / urbanisation corridor / community service corridor (areas for organising community functions) depending upon the local potentials and policy of the state government on industrialization. This approach will also result in evolving a regional spatial structure where a majority of urban activities are concentrated along the corridors and the interior, surrounded by these corridors, is, generally, available for agriculture and development of small size towns / villages having agro-based industries and services as their economic base.

1.2.10. It is observed that ribbon development is taking place along national highways and also along expressways which are not converging to Delhi, therefore, these highways and express ways should also be included in Highway Corridor Zone (HCZ) for planned development in the next Regional Plan.

1.3. Demographic Profile

1.3.1. RP – 2021 needs to be updated on the basis of census - 2011 as these figures were not available at the time of preparation of RP- 2021.

1.3.2. As the ultimate aim of this exercise is to get the inputs for the preparation of the next Regional Plan, therefore, it is suggested that the perspective year may be extended by another two to three years so that the census figures of 2021, are available and the Regional Plan is based on these figures, to make it more pragmatic and implementable.

1.3.3. The National Capital Territory of Delhi, which recorded extraordinary growth of population i.e. above 50% since 1951 except in the decade 1991-2001 when it was about 47%, which further declined to about 21% during 2001-2011, that is to say controlling the population growth of Delhi has been achieved to certain extent, therefore, this policy should be continued, in the next Regional Plan.

1.3.4. As per 2011 Census India is urbanizing fast with 31.2% of the total population living in urban areas. While NCR is even more urbanized with 62.5% of its total population living in urban areas. However, excluding NCT Delhi, NCR is less urbanized (27%). It is also observed that out of 53 million-plus cities (2011 Census, only), four cities, namely, Delhi, Meerut, Ghaziabad and Faridabad qualified as metro cities out of eight cities identified in RP-2021 and remaining cities namely Gurgaon, Noida, Sonapat-Kundli and Greater Noida could not qualify to be metropolitan town. Therefore, this aspect needs to be studied in detail.

1.3.5. As per Census 2011 the population of NCT Delhi has grown to 167 lakh as against the projected population of 179 lakh for 2011 which recorded 93% of the proposed population of Regional Plan 2021. Similarly the DMA, (now CNCR) the population projection for the CNCR towns was 51.0 lakh but the CNCR population reached 56 lakh in 2011. While the Rest of NCR envisaged for induced development especially of twelve metro and regional centers were projected to have a population of 48.60 lakh by 2011 but the actual population of these centres is 44.11 lakh thus, except CNCR towns the populations falls short. This aspect needs to be addressed in detail.

1.4. Settlement Pattern

1.4.1. According to the Census 2001, there were 7,528 rural settlements of various sizes in the National Capital Region, of these, 158 were in NCT of Delhi, 2,471 in Haryana, 1,954 in Rajasthan and 3,185 in Uttar Pradesh sub-regions. The rural population of NCR which was 44 % of the total population, increased from 162 lakh in 2001 to 172.60 lakh (Census-2011). The proportion of rural population to total population has, however, declined, from 44% in 2001 to 37.5% in 2011, that is to say rural to urban migration is taking place in NCR which is not conducive, therefore, this aspect needs to be addressed in detail, in next Regional Plan.

1.4.2. For the preparation of next Regional Plan it would be more pertinent to analyze both rural and urban settlements and also cover the regional spatial distribution pattern of these settlements for which a detailed study may be undertaken.

1.4.3. Regional Plan-2021 proposed a six-tier settlement system i.e., Metro Centre, Regional Centres, Sub-regional Centres, Service Centres, Central Village and Basic Villages, but only on the basis of population, therefore, there is a need to introduce the aspects of functions (particularly administration and economic and service area of the settlements) accordingly, the hierarchy of settlements in NCR should be:

- Megacity (Delhi-NCT);
- Regional centre (a district headquarter having 1million population and falling in CNCR);
- Sub-regional centres (district headquarters);
- Service centres (tehsil headquarters);
- Central village (one of the panchayat in the cluster of panchayats); and
- Basic village.

1.4.4. For the preparation of next Regional Plan it would be more pertinent to analyze both rural and urban settlement pattern and also cover the regional spatial distribution pattern of these settlements. In this respect it would be advisable to take up details study in the next Regional Plan.

1.4.5. The aspects of rural to urban conversion which is taking place in NCR should be addressed along with the issue of urban sprawl and steps be taken for providing income opportunities and facilities in rural areas to control rural to urban migration to maintain rural entity.

1.4.6. Rural settlements should be equipped with urban infrastructure on the pattern of PURA which will also help in checking the migration from rural areas to urban centres.

1.4.7. The Smart Cities Mission, launched by Government of India focus on Green Field development which also needs to be propagated in NCR, specifically when new Greenfield Townships are coming up in the NCR. Therefore, these areas should be considered under proposed settlement pattern and accordingly, broad policies for the development of such new Greenfield Townships should be evolved in next Regional Plan.

1.4.8. The investment regions like DMIDC are coming up as major growth nodes, in NCR, therefore, these nodes should be duly taken into consideration while planning for the areas.

1.4.9. The aspect of Transit Oriented Development (ToD) should be adequately addressed and nodes oriented facilities should be provided as per requirement of Transit Oriented Development (ToD) in the next RP.

1.5. Counter Magnet Area (CMA)

1.5.1. In Regional Plan – 2021, the Counter Magnet Areas (CMA) identified are: (i) Ambala in Haryana, (ii) Bareilly in Uttar Pradesh, (iii) Dehradun in Uttarakhand, (iv) Hisar in Haryana and (v) Kanpur in Uttar Pradesh; and it was also proposed that Gwalior in MP, Kota in

Rajasthan and Patiala in Punjab be continued as Counter-Magnet Areas. However, as per RP – 2021 financing to the projects of these Counter-Magnet Areas were to be given low priority. However, the inputs received from the States highlight ‘to provide suitable economic strategy for development of Counter Magnet Areas (CMA)’, thus, if the CMAs do not have enough economic potentials to attract additional workforce destined to Delhi, then what is the need to continue this strategy of CMAs. Therefore, NCRPB needs to take a considered view on this aspect.

RECOMMENDATIONS OF THE STUDY GROUP-II COVERING THE CHAPTER ECONOMIC PROFILE AND FISCAL POLICY (5) OF REGIONAL PLAN 2021

Recommendations for followup actions

- 1.1 Suitable economic & fiscal policies and strategies need to be evolved to take up economic development of NCR as per objective of NCRPB Act 1985. In this regard, NCRPB strategy should be guided by basic leads from earlier analysis such as: the need to have cross-regional plan/actions and state specific plan/actions on each of the issues as elaborated in table 5 of this report.

Economy in Regional Context

- 1.2 Accordingly, economy of NCR should be seen in a regional context bridging the imbalance within and outside the central NCR and the remaining portion with a particular reference to the role of housing (FSI, Low income and institutional development including education sector as emerging in NOIDA), corridor development, agricultural productivity and marketing facilities.
- 1.3 Therefore, NCR plan 2021-2040 needs to expedite the economic activity in the region to fully utilise the economic potential of Delhi, Central NCR and rest of the NCR in the overall context of equitable, sustainable and productive development of the region.

THREE PRONGED STRATEGY

- 1.4 A three-pronged strategy for balanced economic growth covering (i) NCTD, (ii) rest of Central NCR and (iii) remaining part of NCR should be devised on the basis of initiatives (programmes and schemes) such as (i) extension of Delhi Metro to other towns, (ii) Eastern/Western peripheral expressways connecting Delhi with rest of NCR, (iii) corridor development under Delhi Mumbai Industrial Corridor and Delhi Freight Corridor, (iv) the two documents prepared by NCRPB covering economic development plan, (v) draft functional plan for MSME and (vi) policies aiming at development of logistics sector.
- 1.5 Central NCR being one of the best performing metro regions in the globe should be used to as a focal point trigger pace of economic development in the entire NCR. Special emphasis should be given to service sector and selective high value manufacturing sector (electronics etc.) which needs to be linked with a network of subsidiaries operating in the rest of the NCR.
- 1.6 Central NCR (outside NCTD) should adopt a two-pronged strategy supplementing specific initiatives for NCTD and other towns in the sub region. NCTD should focus more on services and environment friendly manufacturing using vertical factories and headquarters of economic establishment in the rest of the NCR.

- 1.7 There is a need to prepare economic development plan for rest of the NCR (other than Central NCR) on the basis of mapping of existing potential (clusters of economic activities- manufacturing, artisans and services). In this regard, census towns in the rest of NCR (including recently added districts) should be identified for revival and promotion of economic activities within the towns and also to operate as a service centre to their rural hinterland.
- 1.8 Further, inter-state coordination under the overall supervision of NCRPB should be promoted for improved coordination and exchange of expertise and experience on productivity promotion in the rest of NCR.

LOGISTICS

- 1.9 The plan should also include logistic sector specifically to stimulate economic activity in the urban centres and their rural hinterland. At the same time, agricultural productivity and income should be improved through farmer /producer/APMC/marketing nexus using ENAM platform in a regional and pan India context to network and create stakeholders.
- 1.10 NCR should have its own Integrated Logistics Action Plan (ILAP) in line with initiatives taken by respective states.
- 1.11 NCR should also have NCR Logistics forum to coordinate activities of concerned stakeholders.
- 1.12 NCR should give due attention development of logistics in line with frame-work study of NCR, wholesale Market policy documents of Ministry of Commerce, Govt. of India and follow up policies of Haryana and UP. It should cover start-ups, incentives on investment, fiscal (stamp duty/electricity duty) concessions, and interest subvention, development of e-Market place, Retail Centres, Cross-regional trade, e-Commerce platform and viability gap funding.
- 1.13 The above initiatives can minimise the costs in logistics to the tune of 10% to 12%. Further, the development of suitable logistics (warehousing and transportation etc.) may reduce agricultural waste from current line of 25-30% to 20-25%. It will minimise rural urban divide and imbalance in the regional development.

COMMON ECONOMIC ZONE

- 1.14 The NCR should be viewed as unified economic space giving suitable coordination and synergy among political and legal entities (states, districts, local bodies etc.). In this regard, interstate toll, pollution tax, regional sharing of taxes etc. need appropriate cognizance.
- 1.15 Accordingly, Efforts should be made to operationalise the concept of Common Economic Zone (CEZ) as elaborate in Chapter (V) of NCR Plan 2021. Similarly, the Special

Component Plan for individual from areas such as cluster, logistics, tourism protection etc. should also be prepared to have intergovernmental convergence and synergy in the NCR.

UNFINISHED AGENDA OF DECENTRALISATION

- 1.16 The potential of local government (both rural and urban) should be fully utilised in the economic development of the region. In this regard, horizontal imbalance among the local bodies in terms of finances and services should be minimised through revenue sharing mechanism covering the overall framework of the city and its neighbouring regions.
- 1.17 Further, the strategic fiscal gap and augmentation plan should also be prepared for urban and rural local bodies. In this regard, the role of extra budgetary resources including CSR (Corporate Social Responsibility) funds should be given due cognizance.

Local Government Forum

- 1.18 Best practices and innovations taken up by local governments in the region, nation and elsewhere should be suitably shared. NCRPB should create NCR Local Government Forum (NCRLGF) to involve local government's interaction and sharing of experience & expertise on different aspects of economic development. The forum should have Annual Work Plan activities covering meetings, fairs, workshops, seminars, research and capacity building.
- 1.19 As NCR is developing as education hub as well as a hub for health facilities, floating population of young people should also be considered along with provisions for adequate infrastructure regarding mobility and housing etc. Further, efforts need to be made with regards to local skill development to support such activities of health and education in a holistic manner.
- 1.20 NCRPB should effectively act as a coordinating agency on economic activity at apex level to bring together participating states, their nodal agencies and other stakeholders (GOI-dept/agencies, multilateral/bilateral agencies, private sector, NGOs etc.). In this regard, a range of studies and assessment reports need to be carried out to draw a pointed feedback for economic activity part of RP: 2040. These include:

CIRCULAR ECONOMY

- 1.21 Potential of circular economy in the region should be fully exploited. At national level it is expected to have a potential market of Rs. 5-6 trillion. Accordingly, the region should tap the potential to promotes productivity and also improve environment and plan for climate change.
- 1.22 Circular economy has vast potential in the region which has substantial amount of waste.

Initiatives on c&d waste and Vehicular (out of use) waste are emerging. It is equally important to study the current framework of linear economy and identify stakeholders and resources; and possible convergence to minimise environmental and health risks associated with waste management including informal sector involvement and the roadmap thereon.

FEEDBACK STUDIES for NCRP:2041

NCRPB should commission series of studies to prepare the next plan evidence based research and follow –up. This should cover:

- a) Study on economic potential of new districts added in the NCR in recent years should be conducted to examine distribution of workforce, employment and income etc. with a particular reference to impact of structural transformation, migration (within and from outside the region) with a view to identify future pattern of settlements and growth.
- b) Study to identify industrial clusters outside the Central NCR so that spatial dispersal of industrial base can be planned. In this regard, potential of 133 small and medium towns should be specially examined.
- c) Study on potential and modalities for development of logistics in the entire NCR region in line with policy document of Ministry of Commerce, Government of India and follow up initiatives of governments of Haryana and UP.
- d) Study on revenue potential and levels of services in the (i) certain city region and (ii) rural local bodies to identify the barriers in the mobilisation of revenue and revenue sharing rationale in city and cluster of villages.
- e) Study to promote economic potential of census towns in the NCR focussing on a couple of areas such as potential to operate on a service centre to their rural hinterland, agro-based industries, and rural local bodies etc.
- f) Study on adequacy of basic infrastructure such as water, drainage, sewage, roads etc. to build economies of scale for expansion of economic activities in the region. Special attention should be given to inter-local body cooperation for common facilities such as STP, transportation, water etc.
- g) Study on potential economic association of NCR with nearby towns located in the periphery of NCR within the respective states.
- h) Quick assessment of impact of recent Government of reform measures such as RERA, GST and demonetisation in the economic activities of NCR.
- i) Study on the optimal pricing of urban road transport. As NCR is experimenting an increasing trend in the personalised road-based transport, appropriate road pricing would not only reduce traffic congestion but also generate significant revenues which

could be used to improve the road infrastructure which would ultimately spur the economic activities in the region.

- j) Study on potential of housing, real estate sector and associated linkages on corridor development, cluster development etc. to generate income, employment, affordable housing etc. to the economically backward/informal sector households.

Finally, the region is undergoing a process of economic transformation which needs to be strengthened suitably. The rest of the country and regions across the board look forward to see NCR as a model to follow. This provides a challenge and opportunity to sharpen NCRP:- 2041 as a model frame-work for emerging regions.

RECOMMENDATIONS OF THE STUDY GROUP III COVERING THE CHAPTER TRANSPORT (6) OF REGIONAL PLAN 2021

After having reviewed the various transport proposals, which are either in the stage of implementation/, implemented or yet to be undertaken with the period of 2021 and detailed discussions and deliberations with the study group members, the Study Group concluded the following:

1. A detailed study should be conducted covering the entire NCR of 55098 square km with the objective to understand the present status of the region, so that the outcome of the study is utilized for preparation of Regional Plan for next perspective year. An should be made to develop a sustainable transport system as a part of the regional plan.
2. The provision for helipad should be incorporated by the participating states in the Sub-regional Plan as well as Master Plan in case of disaster.
3. Strong connectivity outside Delhi between CMTs Tier -I & II cities like connectivity between Jaipur-Ambala and Jaipur-Gwalior need to be developed by efficient transport system which are also a counter magnet areas of NCR.
4. The facilities to the pedestrian/cycle track etc. as recommended by the DDA need to be integrated between transport linkage and economic activities. Cycle riding policies should be encouraged as a part of sustainable transport system. There would be strict guidelines for making cycle riding policies and cycle track and its continuity at intersections with other NCR participating states.
5. The charging stations for e-vehicles (passenger/cars, interstate e-buses, etc.) may be planned & included in the services offered at Highway Facility Centers including types of AC for slow Charger and DC for fast Charger and DC charger would be preferable for an electric top-up kind of charge.
6. There are still large imbalances occurring in certain areas like North West, south-west areas of NCR and network. These need to be addressed using improved accessibility and connectivity measures through the up gradation and expansion of NCR road/rail network. Outer Ring Road in Delhi abruptly ends at Salimgarh Fort by merging with inner Ring Road. There is a need to develop Eastern Ring Road with the continuity of the Outer Ring Road.
7. It may be mentioned that a large number of road projects related to Expressway , National Highway/ State Highway and Regional Highway have been completed or under implementation. Many road transport projects are yet to be undertaken and it is not clear whether these projects as per the target date are to be taken up or not. The details of road projects not undertaken so far should be accorded highest priority for implementation by 2021.
8. The progress of metro rail is quite satisfactory. The metro projects extending to adjoining states of NCR should be taken up as per proposed schedule time programme.
9. There are a number of Interstate Bus Terminals identified in the NCR plan for 2021, which are yet to be taken up. Out of four new Interstate Bus Terminals (ISBT) as proposed to be developed in MPD-2001, only one at Anand Vihar in East Delhi could be developed as a part of Metropolitan Rail Terminal. The development of the remaining Bus Terminals should be accorded highest priority for completion.

10. A large number of interchanges on the road network system were proposed to be developed. So far except at EPE, WPE , Delhi- Gurgaon Expressway and Noida Expressway, a large number of construction of interchanges are yet to be made and to be accorded top priority for the completion.
11. An extensive Bypass system around the Regional urban Centers is a necessity. Except the development of EPE and WPE , there has not been much effort to develop bye pass system around the urban regional centers. A priority-wise phasing for the development of hierarchy of bye passes around towns and cities in the NCR need to be made.
12. Except some efforts on Rewari -Rohtak New line project 81.26 km that has been commissioned in January, 2013, Rohtak by Pass elevated line (3.9 km) project is in progress. New rail lines linking some of the Regional Centers and Metro Centers in the form of Regional Orbital Rail Corridor (RORC) and Inner Regional Orbital Rail Corridor (IRORC) should be taken up immediately.
13. The DPR for three RRTS have been conducted with an initiative to start the construction work. These three corridors comprise of 381 km of a total network of rail based Regional Rapid Transit System (RRTS) of 640 km on dedicated tracks. An effort should be made to complete the projects in a time bound manner.
14. Though effort is being made to provide an extended network of Metro Rail System to connect Regional Centers such as Bahadurgarh, the link from Gurugaon –Manesar - Rewari, Darubhera and Bawal is under consideration as a part of DMICC development, it is strongly recommended to complete the above link as per the time schedule.
15. Though there was a recommendation on the development of Extensive fleet of Bus System along with Electric Vehicles with supporting infrastructure like depots, workshops, electric charging stations etc., there is an initiative towards this move taken by the Delhi Government on a piecemeal basis. A lot of activities in this regard are yet to be undertaken. It is therefore strongly recommended to work out a phase wise programme for implementation.
16. Up-gradation of National Highways No. 1, 2, 8, 10, 24, 58, 71, 71A and 91 is being carried out or proposed to be carried out by the Ministry of Road Transport and Highways and are part of NHDP or other programmes. Along NH-1, at Panipat, an elevated roadway for a length of 10 km has been constructed and is under operation. Elevated road on NH-2 at Badarpur Faridabad Stretch is also constructed. Up-gradation of NH-10 & 24 is also under progress. In view of high growth of traffic on these highways, it is recommended to complete these activities as per time schedule.
17. A coordinating agency like Unified Regional Metropolitan Authority needs to be constituted with representatives from various transport authorities, which would coordinate and take an overall and integrated view of the total transportation system in the region. This agency will be for the entire region, having a long-term goal of planning and development of a coordinated network of transport services. NCRTC is already developed to fulfill the role of development of RRTS corridors.. It is not clear which agency is to be accorded to perform the above responsibility. In view of this, the NCR Board should explore ways and means to evolve a system of coordination mechanism by developing a coordinating agency with representatives from various transport authorities.

18. It is also strongly felt that a Policy and Planning Group (PPG) should be established to function specifically at the State level to plan and coordinate with agencies at the State level. This group should also take into consideration the policies for overall spatial planning for the region with the objectives of i) To spell out goals and formulate policy guidelines to facilitate preparation of a Strategic Transport Plan (STP) for the State and a multi-modal plan for linkages with NCR ii) to coordinate activities of various groups/agencies at the plan formulation stage, iii) to regulate allocation of funds to different agencies for coordinated development iv) to ensure provision of land with focus on identification, reservation and protection for development of transport related projects. The policy should also promote seamless movement of multi-modal inter city traffic with the provision of last mile connectivity through strong public transport feeder services in each settlements of origin and destination.
19. As per the Phase III (2018-2022) of Metro development, the corridors proposed along i) Sonipat-Panipat, ii) Ghaziabad-Meerut, iii) Faridabad-Palwal-Jewar (TIA), iv) Bahadurgarh-Rohtak, v) Manesar-Rewari have not been taken up so far. These should be expedited.
20. The functional plan of NCR aims at achieving a modal split to the tune of 75 percent. It is therefore imperative to promote the use of public transport with help of the extension of metro system to neighboring towns of Delhi along with eight RRTS corridors spreading in different directions of NCR. The development of all forms of public transport system should be integrated in an efficient manner to ensure last mile connectivity in the region.
21. The development of Bus Terminals and Rail Terminals enabling integration and smooth transfer in terms of fare, physical, operational amongst modes and agencies using ITS should be undertaken by introducing common mobility card to be used for all modes of public transport system as earliest.
22. As recommended towards the development of Highway Transport Facility Centers, these have not been taken up so far. It is recommended that the Highway Facility Centres (HFC) needs to be planned and developed on a comprehensive basis. This would include parking, fueling, servicing and repairs, telephone and telecommunication, restaurants and motels, medical, police, godown, Weigh Bridge, entertainment, banking (ATMs), and a host of other needed services. These HFCs should be developed along the highways, spread over an area of 5 to 10 ha with a spacing of 50-60 km
23. Road Safety Cell in the NCR has not been set up so far. It is strongly recommended that A Transport Safety Authority/Cell is proposed in each sub-region, independent of functional departments and under the direct charge of the Principal Secretary of the concerned Department in the State Government. It should establish to conduct Safety Audit of all transport plans, designs and operations by a multi-disciplinary team.
24. There is a need to develop ITS based transport system which was also recommended in the functional plan. As the some portion of New Delhi area happens to fall under Smart city, it is therefore strongly felt that attempt should be made to develop ITS architecture not only for the portion of smart city but also to be extended up to NCR area so as to ensure the development ITS based sustainable transport system in the NCR.

25. As there are a large number of road planning & construction activities under implementation in the NCR based on NCR functional Plan in the transport sector, It is strongly recommended that the activities for highway construction should be made on the line of construction activity of Eastern Peripheral Expressway by considering the following::

- Installation of Weigh-in motion sensors on all entry points should be made to ensure that over-loaded vehicles are not allowed to enter the highways to be controlled through the sensors installed at all entry points with two gates -- one leading to the Expressway and the other redirecting the vehicle if it is over-loaded.
- Provision for parking of overloaded trucks at appropriate parking places should be made to unload some of the cargo to satisfy the weight criteria for further moving to the Expressway.
- For checking speeding of vehicles, cameras will be placed at every two kilometers. Over-speeding vehicles will be issued the challan at the toll plaza.
- Mandatory Facility for rainwater collection system at every 500 meters will be made as a part of rain water harvesting so as to enhance water table in the surrounding area to mitigate water scarcity in the future.
- An attempt should be made for trees plantation along the highway along which will be watered through drip irrigation system.
- Provision of cycle track of 2.5 metre should be made to be linked via underpass facility at appropriate interval on both sides to travel across the expressway if it happens to pass through the settlements.
- Solar panels should be installed at various locations which will provide power to illuminate the expressway.
- An attempt may be made to make use of earth work on the highway using fly ash from coal power plants that would help contribute to reducing pollution.
- Provision for electronic collection of toll should be made to ensure seamless travel on all expressways and highways in the NCR.

RECOMMENDATIONS OF THE STUDY GROUP IV COVERING THE CHAPTER POWER (7) OF REGIONAL PLAN 2021

Key Recommendations

1. To meet the Renewable Purchase Obligation (RPO) trajectory as notified by the Ministry of Power ground mounted and solar roof top (on all Government buildings and vacant roof top) need to be promoted.
2. Balancing power (to tackle intermittency and Time of day availability) need to be secured. Battery Energy Storage (BSS) is one of the options in this regard. Policy support can derive the scale for the battery industry.
3. Measures to be taken to improve the health of discoms, which are at the heart of the electricity market.
4. Augmentation of technology through research and design program to improve upon existing technology in terms of cost and performance.
5. To make Open Access market viable for procurement of power so as make the sector competitive.
6. To improve T&D system through proper augmentation to ensure energy access (24x7 power supply) a key priority for the growth of the sector.
7. For power procurement, Discoms need not consider the demand of open access consumers, however, the same would have to be considered for augmentation of network by the Discoms/States/UTs.
8. AT&C and T&D loss reduction road map to be prepared and implemented.
9. Implement 'smart grids' through smart meters and use communication infrastructure, control systems and information technology for efficient delivery.
10. Implement cyber security measures for ensuring secure power supply.
11. The next RP may elaborate the 'power for all scheme' and cover power inputs from Non-grid supply (generators/invertors), ABC bunching, underground cabling, T&D losses as per state inputs and targets for T&D loss to be achieved and PPP match to be worked out.
12. In order to have proper coordination, management and quick response, a separate Regional Power Committee for NCR say NCR PC may be constituted.
13. Power generation sources may be identified, increased and developed within NCR or dedicated power be tied up from outside for NCR, to enable having Islanding Scheme for NCR. Islanding for all important cities of NCR with details of islanding could be covered in the next RP.
14. The aspect of energy efficiency in Buildings and use of Non-conventional energy sources throughout NCR, could also be covered in the next RP.
15. Charging infrastructure facilities for electric vehicles to encourage its usage, may be provided in NCR and the transport authorities should coordinate for such mechanism.
16. States may endeavour to ensure 24x7 power supply for telecom facilities in NCR.

RECOMMENDATIONS OF THE STUDY GROUP V COVERING THE CHAPTER WATER (8) AND SEWERAGE, SOLID WASTE MANAGEMENT, DRAINAGE & IRRIGATION (9) OF REGIONAL PLAN 2021

1.0 Recommendations of the Study Group after Review for Water

1.1 Ensuring access to water and equitable distribution is sacrosanct and should be the guiding force to assess the water security of NCR. This security lies in putting in place a robust framework to depict the water balance. The detailed exercise on the hydrological water balance that has been performed at the level of state wise sub-regions in the NCR only that also includes the water resources available to the NCR including surface water from the Yamuna basin, groundwater as well as transported water from other basins in spatio-temporal manner. This is understandably somewhat within the natural variability and may get updated with respect to the additional resources that may become available after the proposed dams get implemented. However, this working needs to be carried further down to district and tehsil levels also; and be depicted using the GIS environment as a water resource layer. Water Demands - in the same framework, various demand layers such as domestic, industrial, irrigation and environment etc., needs to be depicted in a spatial and temporal manner. Such a depiction shall provide a very easy understanding of the status of water use for each area of the NCR and reveal the extent of water deficit created in the respective areas.

1.2 Table 8.1 (10 Chapter 8 page 6/36) reveals that Irrigation Water Demand for Agriculture in the sub-regions Haryana, Rajasthan and UP is about 90% of gross water requirement. Ground water data shows that, it is over exploited (deep tube wells with free or subsidized electricity). Therefore, in the absence of specific data for respective NCR area within the aforesaid states acute water stress exist in each of Haryana, Rajasthan and UP; and urgent measure are required to meet this water demand. Presently, water crisis is created clearly due to single use of water, and once multiple use of water is introduced, the water crisis shall ease out completely. In an agricultural area irrigated with canal water – through any intervention irrigation with renewable source of water is achieved and saving in canal water is then diverted to the domestic sector nearby to meet increased water demand. Such an approach requires identification appropriate opportunities. If this intervention is expanded to effect water saving of about 10% out of 90% demand in agriculture; it shall result in substantially meeting increased demand in Domestic Sector due to population growth. This alternative or new water (a term used in Singapore) can be a suitable combination of harvested ground water (replenished through watershed management) and processed (treated Waste Water); both of which are replenish able sources of water - this changes the water scenario completely and there shall be no deficit in water. In the absence of sharing of information with the Study Group, the group is prone to conclude that no such attempt was made nor a pilot project is attempted.

1.3 Water demand assessment for NCR regions within each state and also each sub-sector (domestic, agriculture, industrial etc.) has not been carried out and not shared - and projected water demand for urban settlements needs to be carried out. Water resource assessment, identification of each water source with water quality details and protection measures identified. Water Demand Management through multiple use of water is

increasingly common in the world (case of Singapore). Whether Statutory provisions are adequate or formulate protocols. As Irrigation is responsible for excessive pumping out of ground water in the region it is clear that it has a very competitive demand for water. Water efficient farming needs to be introduced after evaluating alternatives which should include Watershed Management.

- 1.4 The example of Thanagazi Tehsil in Alwar District (NCR) – a community driven watershed management for rural area, which catches rainfall (av. Rainfall 612mm/year) falling within the catchment area. Without any water transfer from a river/ lake, the people of Thanagazi have solved their water problem – when the johads were built on a dead Arvari river it got revived to retain water during round the year and recharge ground water table in the entire area; which is now an effective water source for farming, animal husbandry as well as domestic uses. Before the watershed project, the denuded hills in the Thanagazi Tehsil could not hold run-off which also washed away the fertile top soil and brought pebbles to agricultural lands. The entire catchment area was totally degraded, the forest had to be protected and regenerated to halt soil erosion. It also meant that the groundwater was not getting recharged with wells drying up. High run-off also led to formation of ravines. Water table dropped from 5-10 metres in the 1960s to 100-150 metres in the 1980s. Even when the wells were made deeper there was no sign of water. There was not a drop of water. It choked the livelihood of some 500,000 people in 600 villages and everyone migrated for work leaving their barren lands behind. The irrigation department declared Thanagazi block a 'dark zone', indicating absence of groundwater.

TBS started mobilising villagers for reconstruction of a damaged Johad in Gopalpura. The 426-metre-long dam was restored. In the next monsoon, the dry wells of Gopalpura had water. Villagers with TBS decided to work only on water harvesting, with people as our knowledge bank. A team of about 15 local people without formal education started taking care of Johad building work. Upto year 1997-98 about 2,500 water harvesting structures were built with TBS's help in over 500 villages at a cost of Rs. 15 crore, of which Rs. 11 crore was contributed by the villagers in cash and kind. In 1989, work started only when a village agreed to contribute at least 25 per cent of the cost (usually labour and materials for construction) - with cost of skilled labour and balance materials were borne by TBS. In 1997, this minimum participation of the community was increased from 25% to 33% per cent, and villagers contribute in cash. People understood cost-benefit analysis of Johads and responded by contributing 90% of cost. The twin villages of Bhaonta-Koylala now maintain their 14 water harvesting structures without any external financial support. A river got created by people through Watershed Management. There are several accredited persons who have carried out independent assessment of TBSs works of watershed management in Thanagazi Block, Alwar – among them are : i) Prof. G D Agrawal, former head of Civil Engineering at the I. I. T, Kanpur; ii) Sri Ranjan Samantaray, coordinator of the United Nations-Inter Agency Working Group on Water and Environmental Sanitation, New Delhi; iii) Sri Anupam Mishra of the Environment Cell of Gandhi Peace Foundation, New Delhi. Another highly successful example of watershed management is Jhabua (a poor tribal area) in Madhya Pradesh.

- 1.5 Cost wise capital as well as operating cost of piped water supply system is high, which results in poor cost recovery. Leakage in water network is related to contamination in piped

water supply. Most common contamination of ground water is biological impurities which can be dealt easily by low-cost domestic filter such as 'PureIT' (works without electricity) and in case of mineral contamination other filters may be used. Use of domestic water purifiers is a clear indication of high risk of contamination of piped water and lack of people's trust in piped water.

When rapid fall of Ground Water Table is controlled or reversed, ground water becomes a viable water source and stress on piped water supply system is reduced. Therefore, such option of reviving ground water quality through high capacity recharge needs to be considered carefully and it can be adopted in areas to manage water logging problem. In Rajasthan about 35% population were served by wells and by switching them to piped water supply (water sourced from long distance) there is significant increase in operating cost resulting in poor cost recovery. Therefore, 3 measures can be highly productive appropriate i) Watershed Management, ii) recharge of surplus water in the flood plains (during rainy season) of rivers and rivulets, and iii) rain water harvesting to deal with water logging problem – all these measures can reduce stress on ground water sources significantly.

1.6 Source of raw water for organized water supply in cities – generally it comprises of intake well from river and/ or tube well drawing water from aquifer, Treatment Plant, Treated water Reservoirs (location, capacity), Pumping station, O. H. Tank, appropriate water distribution network for urban activities. Water supply system for urban communities are expensive to operate and Cost Recovery on the face high water losses in distribution system is very important. In most cases water loss is about 50% (non-revenue water) and the so called specialised Water Supply Agencies have failed to reduce this significant water loss. It is very important to firstly map all the areas that are implemented with the water distribution systems or are in the process of implementation. And secondly, these distribution networks are required to be evaluated for non-revenue water or losses of various kind. SCADA systems are required to be put in place for the purpose of evaluating the distribution system with respect to the pressures and discharges at various strategic locations.

1.7 Water Demand Management in urban communities : CPHEEO recommendation for supply of 135 to 200 lpcd of processed water in a Metro-city has no basis and fails to consider either water resource status or cost recovery of water supplied. There are large number of cities (several metro-cities included) in India, which are not in a position to ensure sustained water supply @ 135 lpcd. The people of such large cities are happy if they get an assured supply of 70 to 100 lpcd. of treated water. The need of the hour is to identify status of water source or sources considering projected population growth and ensure first that, sustained water supply can be maintained over a longer period for the population including projected population growth. Such recommendation of 135 to 200 lpcd of processed water is patently against water efficiency. The water distribution agency needs to reduce high water loss and water saved can be availed for increasing per capita water allocation. Also as the quantum of water supply is increased quantity of sewage to be processed by STPs also increases with percentage of interception of sewage remains unchanged. This too has a bearing on cost recovery as cost of sewerage is not claimed by water agencies separately. Ensuring Cost Recovery on increased quantity of water

supplied, increase in per capita water supply may be considered. Independent 'Water Audit' needs to be introduced to determine efficiency of water distribution system so that maximum quantity of produced water is billed.

1.8 Further, as stated earlier, an elaborate study has been made by WAPCOS on "Water Supply & its Management in NCR" that analysed complete hydrological cycle and water balance in the region in 2005 and made several recommendations. However, it is a pity that the water situation has further deteriorated year by year and we are approaching a situation that shall be catastrophic. This situation is inadvertently manifested in the fact that the groundwater table in almost all the blocks of NCR are falling on annual basis, thereby indicating that the demand imposed is more than the availability of water. Therefore, this situation is not sustainable and we are slowly moving towards a catastrophic situation. Therefore, RP-2021 that has most of the desired planning and proposals embedded in it, it is important to ensure that a mechanism of monitoring and evaluating the actions and implementations by various participating states be put in place. Because that is the only way to ensure the water security. Following are some of the major recommendations to achieve the same:

- a. Framework to depict the water balance: The detailed exercise on the hydrological water balance that has been performed for the NCR that also includes the water resources available to the NCR including surface water from the Yamuna basin, groundwater as well as transported water from other basins in spatio-temporal manner be depicted using the GIS environment as a water resource layer. This is somewhat fixed within the natural variability and may get updated with respect to the additional resources that may become available after the proposed dams get implemented. Thus this availability is sacrosanct and should be the guiding force to assess the water security of NCR.
- b. Water Demands: in the same framework, various demand layers such as domestic, industrial, irrigation, etc., are to be depicted in a spatial and temporal manner. Such a depiction shall provide a very easy understanding of the status of water use for each area of the NCR and reveal the extent of water deficit created in the respective areas.
- c. Impacts of the projects implemented: The third level of information that needs to be implemented in the framework is about the range of projects that are being planned and implemented as per the functional plans. These may range from water supply projects to rainwater harvesting projects to sewage treatment projects. All these projects are part of the integrated planning and management and are having lot of interaction that needs to be kept track of. It may also be emphasized here that it is because of such interaction not been captured properly that it has not been so far possible to accomplish the integrated planning and management so far though it has been invariably claimed. For example, if rainwater recharge structures have been recommended and implemented, then the location of such implementation as well as the targeted recharge is very essential so as to do the requisite evaluation for the effectiveness of the action taken and the investment made.
- d. Demand management: It is obvious from all the analysis made at different times through various studies that the net demand is much more than the water availability in the NCR and the deficit is increasing constantly. It has been seen that the first priority has invariably been to target more water to become available from various sources, be it through rainwater harvesting or through some proposed structures such as dams. All such options equivalent to moving the water from one use to the other and is not termed

to be highly beneficial in terms of bringing about the water security. Moreover, these options also have some externalities that are not always straightforward and need to be understood through proper analysis. For example, over-abstraction of water from river or groundwater can have environmental implications. Other options that have been recommended and need implementation for demand management are through enhancement of water use efficiency and by reuse of wastewater. These aspects of water management are also required to be mapped and quantified on the GIS framework for proper evaluation.

- e. Non-revenue water: It is very important to firstly map all the areas that are implemented with the water distribution systems or are in the process of implementation. And secondly, these distribution networks are required to be evaluated for non-revenue water or losses of various kind. SCADA systems are required to be put in place for the purpose of evaluating the distribution system with respect to the pressures and discharges at various strategic locations.
- f. Water quality: It has been observed that many areas in the NCR are having poor water quality. There are varied reasons for poor water quality. It is important to map the water quality status along with the reasons. The actions required to be taken need to be identified and evaluated for effectiveness.
- g. In the same manner, it is important to bring all the projects that have been completed and are being taken up in the GIS framework so as to get a proper assessment about the most up to date status.
- h. Ample stress has been given on the capacity building of various departments engaged in various aspects of water, wastewater, storm water and many allied areas. The capacity building shall be meaningful if the above mentioned GIS framework is formulated that has the capability of integrating all the sub-components that interact with each other. The pity is that for NCT of Delhi such a GIS framework is already in place with GSDL Ltd., that needs to be extended to the NCR with some effort. The GSDL staff need to be trained with respect to some of the aspects that they lack, but it is doable with the minimum effort. Once, this organization is strengthened then it shall be easier to train all the concerned departments to use such a framework for integrated planning, operation and management of various water related systems in a sustainable manner and bring about the highly desirable water security with compromising the environmental aspects.

In nut shell, it is highly desirable to change the strategy of planning, development and management by introducing the appropriate tools of integration such as GIS and databases, if the basic requirement of integrated development of NCR has to be fulfilled. Otherwise, this shall remain business as usual and conditions shall keep on deteriorating further.

2.0 Recommendations of the Study Group after Review for Sewerage

2.1 Waste Water Management : (Based on : Chapter 9 section 9.1.2 Existing Situation - Coverage of Sewage Network Services). Out of 168 towns in NCR only 33 towns have sewerage system, out of which the coverage can at best be classified as partial, and population covered with sewer network is only 51% (in year 2011). But pace of sewer coverage is lagging far behind population growth and adding to backlog.

UP	only 6 out of 86 towns have partial sewerage
Haryana	only 24 out of 65 towns have partial sewerage
Rajasthan	only 2 out of 16 towns have partial sewerage

2.2 Table 8.2 (10 Chapter 8 page 7/36 of RP 2021) states STPs in 19 locations and 4471 mld treated effluent available for reuse and efforts are required in this direction. Almost equal amount of sewage water is available in NCR area in Haryana, Rajasthan & UP. Even starting of a pilot project is a good beginning.

2.3 On cost recovery in waste water management - as per Delhi Jal Board, collection and processing of sewage is 9 times costlier compared to cost of distribution of treated water. But in case of cost recovery for sewage it is only 25% of treated water. So the amount of subsidy going into management of sewage/ waste water can be understood.

Certainly cost effective Waste Water Management is essential. STPs/ ETPs are terminal facilities treating sewage (sullage included) or Industrial Effluent respectively. ETPs are generally similar to STPs but may have additional processes to remove chemicals. There are 2 outputs from STPs/ ETPs, first is treated effluent and the other is sludge, and both need safe disposal in accordance with stipulations laid down by CPCB, MoEF&CC of Govt. of India. In most cases it is observed that, treated effluent from STPs and/or ETPs do not meet CPCB stipulations consistently. The sludge (thick slurry) from STP or ETP contains polluting substances and in most cases it is hazardous in nature (it may contain strong chemicals) that cannot be discharged directly to a river or water body. Basic purpose of constructing STPs or ETPs is to treat the foul water (sewage or industrial effluent) in order to protect water quality in receiving water body. Extent of pollution also depends on quality of discharge effluent, dilution available (as effect of self-purification depends on quantity of effluent discharged against quantity of water in receiving water body). Impact of discharging such raw or deficiently treated sewage/ effluent in a natural water body may be ignored while locating a STP/ ETP and the discharge point on receiving water body. In addition, when sludge also reaches water body, it makes extremely difficult to clean river/ lake water; which is variably a raw water source for communities downstream. All these are a result of the 'Water & Sanitation' sector's inability to switch to new interdisciplinary approach.

2.4 Sewage Treatment Plants or STPs are secondary stage treatment (Electro-mechanically operated) designed and operated by local bodies have met with partial success only in delivering effective treatment of sewage and waste water in India. This has failed to control pollution of rivers and water bodies. But on the other hand, the entire stretch of 146 km of dying Kali Ben river in Punjab has been successfully cleaned and revived by Sant Seechewala (a Sant without any technical qualification) in 8 years. In the coastal location of Arcata, California State, USA; an existing deficient STP (Electro-mechanically operated with secondary stage treatment) of a town was found to pollute coastal waters and a threat to aquatic bio-diversity in the bay. An incubation project was taken up, which resulted in

adding of a 'Constructed Wetland' based treatment down stream of the existing under-performing STP. Constructed wetland systems have been successfully implemented in many places. In a Constructed Wetland system there is no generation of hazardous sludge for 2 reasons – first the degradation is through natural bio-degradation process, and second it gets converted into plant nutrient which is consumed for growth of aquatic plants. Some of these aquatic plants are consumed by animals and the rest is composted. Also such process does not require any power except for pumping for lifting water/ effluent. The FPA has then directed repeating the same solution for many malfunctioning STPs. Substantial progress has been made on design and operation of Constructed Wetland System in USA, Australia (in one of the states no electro-mechanically operated STP is permitted and only Constructed Wetland System based sewage treatment is built. The measure also ensures continued navigation along water channel) and Germany (for application of Constructed Wetland System in cold region). Constructed Wetland System has been adopted in Yamuna Bio-Diversity Park, New Delhi; and it is working well.

2.5 It was observed in the RP 2021 that land for construction of new STPs is a major constraint in all sub-regions and therefore it is imperative to earmark land for STPs in the Master Plans.

2.6 All the cities of NCR including NCT of Delhi are not in a position to handle its sewage properly and with the result the sewage from the NCT is entering all the natural drains that in turn land up in Yamuna and is the major source of pollution of Yamuna as well as the groundwater of NCT of Delhi. Therefore, if NCR is to ensure that the sewage and industrial effluents generated from various areas of NCR are to be handled effectively then it is important to create systems that are able to monitor the constituent infrastructure in an equally effective manner. It is a pity that all major storm water drains are carrying sewage or industrial effluent.

No effective measure has been taken to reuse the treated sewage for not-potable use. For effective implementation of reuse, consistent superior quality of treated effluent from STPs is an essential requirement. The treated sewage from STPs in India, are grossly unsuitable for reuse in farming and other forms of reuse mainly because of wrong technologies selected and poor performance of STPs. Tertiary level treatment is too costly and unaffordable. Therefore, it is essential to select the appropriate technologies if reuse has to be promoted. Constructed Wetland treatment is becoming popular because of its low cost, green footprints and easy maintenance. Constructed Wetland Treatment (there are 3 types intended for different applications) has other benefits that, supports employment & income generation through pisciculture, production of biomass for livestock (chicken and cattle feed) or composting and then irrigation to increase yield in fruit & vegetable production.

2.7 Further to above, it shall be reiterated that there is nothing lacking as far as conceiving appropriate systems required to handle the domestic sewage is concerned. However, when it comes to the issues of planning, designing and maintaining these systems, we as a society have always faltered. All our systems are either not implemented or are not managed

properly, and the end result is that nothing is functioning in a desirable manner. All the cities of NCR including NCT of Delhi is not in a position to handle its sewage properly and with the result the sewage from the NCT is entering all the natural drains that in turn land up in Yamuna and is the major source of pollution of Yamuna as well as the groundwater of NCT of Delhi. Therefore, if NCR is to ensure that the sewage and industrial effluents generated from various areas of NCR are to be handled effectively then it is important to create systems that are able to monitor the constituent infrastructure in an equally effective manner. Following are the recommendations that shall go a long way in making this happen:

- a. Map on the GIS the existing sewerage systems available in the total space of NCR categorizing with respect to the sewerage networks (combine or separate), soakpits, etc. The areas to be covered with sewerage networks or other sewage handling facilities that are proposed or in the process of implementation should also be mapped. Such mapping shall provide an overview of the status and the gaps thereof in a much better manner.
- b. It is also required to highlight the effectiveness of the sewerage system of every locality by identifying and demarcating all those storm water drains that are carrying sewage or industrial effluent. Attempt should also be made to identify the sources of such pollution. This is one of the major reasons that the River Yamuna despite all efforts has remained polluted because the pollution has not be tackled at the starting point when it enters the storm water drains, and it becomes almost impossible to tackle the pollution when it reaches the major drains like Najafgarh or Barapulla in NCT. It may be worth mentioning here that DJB had revised their Sewerage Master Plan on direction from Hon'ble NGT to ensure that no sewage from any area should be allowed to get into any storm water drain.
- c. It is also important to map all the Sewage Treatment Plants (STPs) of all kind as well as Effluent Treatment Plants (ETPs) and also evaluate their performance against stipulated norms. It is very important to make all this information online for public to get associated with for effective participation.
- d. It is also a known fact that the water demand is ever increasing. Every area is under water deficit that is evident from the fact that ground water table is constantly lowering and every block is being declared to be critical. Although, groundwater recharge through rainwater harvesting or other similar efforts is not a solution that can be taken to an extreme level because it may cause many other externalities and affect the local hydrological system. The more important solution is to reduce the water demand, for which one of the good and viable option is to reuse the treated sewage for not-potable use. But this needs to be implemented effectively. Therefore, it is important to quantify at each STP as to what is the extent of reuse and which is the area that is being served.
- e. Although, it has been accepted that we need to use an integrated approach but the reality is that the true integration cannot come about unless we have information base on GIS that is up-to-date and has a mechanism of regular updation. Such a framework is highly desirable if the true integration is to be attempted. This shall also bring about the often neglected but much needed aspect to monitoring and evaluation. Furthermore, such frameworks can result in producing much needed feedback for the policy formulation.

3.0 Recommendations of the Study Group after Review for Drainage & Irrigation

- 3.1 Drainage is also an important issue that needs immediate attention. It has been seen that the paved areas in the urban areas have increased considerably and consequently the runoff coefficients of the contributing areas to the storm water drains has increased considerably thereby increasing the runoff volume generated for the same amount of rainfall. Since the capacity of these drains carrying the storm water away to the outfall points into the rivers or waterbodies is the same as before, therefore the urban areas are getting flooded more frequently. Another factor that is impacting the urban flooding is the dumping of solid waste in the storm water drains and the waterbodies thereby reducing their capacity to absorb or convey the storm water effectively.
- 3.2 Although it has been recommended that the area of NCR should be analysed to associate the contributing areas for each of the drain for proper analyses of the adequacy of the carrying capacity of the storm water drains under the present and the future conditions of development. IIT Delhi, under the leadership of Prof A. K. Gosain has recently formulated the Drainage Master Plan for NCT of Delhi, using the simulation modelling approach and the GIS. All the drains of NCT have been analysed for their adequacy/inadequacy in the present form for rainstorms of 2 yr and 5 yr return periods. Recommendations have then been provided to reduce the flooding by generating various scenarios and quantifying the reduction in the flooding on account of the specific implementations.
- 3.3 The issue of irrigation is very important in the semi-urban and the rural areas with respect to the water security of NCR. It is a known fact that in the NCR area the water table has been falling constantly on account of the over-abstraction of the ground water for irrigation, industrial and/or domestic water supply. Consequently, there have been major implications on the environmental health of the NCR and is moving towards water insecurity. Therefore, it is important to analyse the total water demand versus the availability for the NCR and find ways and means to bring the overall demand below the water availability using primarily the options for water demand management.
- 3.4 It is stated in the under (9.3.1) :
- “Drainage is an important element of physical infrastructure and it involves removal and disposal of surplus rain/ irrigation water from the land. It has two aspects namely flood protection and removal of storm water. National Capital Region in general, is a part of well integrated drainage system of the Ganga basin. The extremely gentle gradient prevalent almost all over the region restricts the degradation activities of the streams/ drains”. However, some suggestions/ corrections are as mentioned in following paragraphs.
- 3.5 Firstly, objective of drainage scheme needs to be i) utilisation of storm water runoff for effective recharge as it is the purest form of water due to water being saturated with oxygen (recharge performance needs to be monitored) – this effective recharge also reduces quantity of runoff; ii) removal of surplus runoff; iii) prevention of water logging and flooding (disaster). When storm water is effectively recharged at macro-scale risk of flooding/ water logging is reduced. Both city level land use and regional land use plans can

be very well used to promote multi-level high capacity rainwater recharge projects to achieve this objective and it is completely unexplored.

3.6 Implication of the stated 'gentle grading of land as well as river/ drainage channels' is reduction in depth of fall at the discharge location ie. natural water body/ river, which is a natural limitation. While working out a drainage scheme over a large area, this key factor is very effectively dealt through significant reduction in runoff quantity through recharge to ground water table or aquifer as appropriate.

3.7 All flood prone areas offer excellent (unexplored) opportunity for large scale Rain Water recharge that can prevent flooding. There are several techniques that can be adopted depending upon specific situation.

3.8 De-silting of the storm water drains is a very important activity to keep the effectiveness of the drains intact. Although, the cities spend money every year for the desilting but their effectiveness is always doubtful. Therefore, it is required to change the procedure of desilting for its effectiveness towards efficient drainage. One good option for NCT is that GSDL should use the GIS layout of the drainage network made by IIT Delhi with cross-section and L-section to capture and display the schedule of de-silting by the contractors segment-wise and jurisdiction-wise. Crucial details such as time schedule of de-silting and the amount of silt/debris removed should also be captured and displayed. Such accountability shall go a long way in making the desilting process more scientific and effective.

3.9 It is another known fact that storm water drains are used to carry the sewage from the locality. These small drains in turn carry sewage to bigger drains and ultimately all the sewage is carried into Yamuna or some water bodies. It is a pity that in NCT Delhi, sewage is flowing in the drains in areas that already have well established sewerage network. It is a fact that there is no storm water drain that is not carrying sewage.

3.10 DJB should be stopped from their current practice of puncturing sewer lines and draining sewage into storm drain in the event of blockage. Such punctures are invariably never mended and sewage is allowed to flow into drain for ever. DJB should resort to using latest mechanisms such as supper suckers for de-clogging the sewer lines.

3.11 As per the Hon'ble NGT order of January 2015, Sewerage Master Plan of Delhi, no sewage should be allowed to enter the storm drains even from unauthorized colonies; interceptor sewers should be set-up wherever required by DJB to trap the sewage coming out of such colonies and take it to the nearest sewer line or STP. It is important that this implementation should be monitored for its effectiveness.

3.12 No construction should be allowed inside any storm water drains. There are two specific violations that are usually observed; utilities are laid inside the storm drains and

pillars of elevated roads/metro are built inside the storm water drains. Very often encroachments of storm drains also happen, such encroachments should be avoided at all costs.

- 3.13 Design of new storm drains should not be done in isolation. Overall impact of any new drain on the existing storm water drainage system should be studied. Data collected and modelling system deployed as part of the IIT Delhi study should be used for checking design feasibility of any new drains.
- 3.14 It is important to identify and rejuvenate the lost and ignored water bodies. Water bodies act as detention and recharge basins. They should be continuously monitored and maintained in order to reduce runoff into storm drains. Dumping of waste into water bodies should be prohibited to maintain ambient water quality. Regular desilting should be undertaken to avoid reduction in storage capacity of the water bodies.
- 3.15 Irrigation water efficiency should be evaluated in the rural areas. Efforts should be made to enhance the water use efficiency so that the demand of water can be reduced. Elaborate studies should be done to evolve various measures that can reduce the wastage of water. These measures should go get into the policy formulations in collaboration with the stakeholders. The exercise should start with the equity of the NCR from the available water resource. Unless all out efforts are made to be within this limit it shall be very difficult to achieve the long-term water security of NCR.

4.0 Recommendations of the Study Group after Review for Solid Waste Management

- 4.1 Management of Domestic or Municipal Waste: As per SWM Rules 2016, all cities practice 100% door to door collection and segregation of waste at source into minimum three categories that of Dry, Wet, Domestic Hazardous other than sanitary waste. No garbage or leaves should be burnt in the open. Home and community composting is to be encouraged and reuse, recycling of dry recyclable waste through sorting at Material Recovery Facilities is a must and 'ragpickers' or erstwhile waste workers should be integrated into sustainable solid waste management system with proper personal protective equipment and proper working conditions.

All bulk generators must have facilities for separation, collection, processing of wet biodegradable waste within their premises and hand over the non-biodegradable, non-recyclable including hazardous waste to municipalities and corporations and pay for their collection and processing. All cities in the NCR for aim for ZERO LANDFILLS and if there is a small percentage only for non-degradable items which should be placed in secured or sanitary landfills and NOT GARBAGE DUMPS. It would be a good idea to incorporate the Service Level processing parameters that have been formulated for Swachh Survekshan and Garbage star rating as monitoring parameters, which also has a high component of citizens and Resident Welfare Association and Trade association

participation besides IEC in educational institutions, public places and using ICT applications. Thereafter for decentralized and centralized or semi-centralized processing, different processing can be established in different localities and locations to enable processing and recycling of maximum waste and least amount going to secured landfills.

4.2 In the *Regional Plan* it is stated as under:

“At least controlled tipping should be adopted in the disposal of the solid waste. [what is this controlled tipping? How does it help in processing of Solid Waste other than garbage dumping?] Areas should be identified in all the towns for sanitary landfill (as per CPCB there is not even one functioning sanitary landfill in whole of India. Actually, under the garb of Sanitary Landfill mixed garbage is dumped and MSWM rules are violated – then why to identify site for garbage dump under the garb of Sanitary Landfill? When garbage dump is the means of garbage disposal (which subsequently turns into garbage hill), our cities shall always demand land and, all the towns should have arrangements to properly manage the waste disposal. When land cost is taken into consideration Sanitary LandFill/ Garbage Dump is the most expensive option [under 9.2.1 - “Solid Waste Management (SWM) is a very expensive among municipal services that a local body has to provide and it absorbs about 1% of GNP in the urban areas. about 1% to 2% of the total National Work Force. It is, therefore, imperative to optimize this huge civic expenditure and evolve an indigenous low cost technology which is technically sound, financially viable, aesthetically beautiful and socially acceptable to public”]. In this respect, the CPHEEO Manual is found to create avoidable confusion [Annexure 5 – SWM Garbage Hill at Bandhwari, Gurgaon]. Such manuals are giving wrong directions and creating confusion.

4.3 Such deficient SWM is responsible for air, water and visual pollution and major health hazard. This is an appropriate example of how Planning of Region and planning of Water and Sanitation is working at cross purposes due to lack of multi-disciplinary approach in the ‘Water and Sanitation’ Sector. In view of above discussions it is incorrect to mark location of Land area on the basis of so called Sanitary Landfill which ultimately turns into garbage dump/ hill only.

4.4 In order to contribute to prevention of extensive pollution caused by domestic Solid Waste in India, the CPCB under the Ministry of Environment & Forest as the Apex authority in India; have formulated Municipal Solid Waste Management (MSWM) Rule 2016 – no waste management proposal should be based on Sanitary LandFill or garbage dump. Instead proposal needs to be based on separation of domestic garbage into bio-degradable, recyclable, inert materials etc. for separate processing and disposal. MSWM Rule 2016 has prescribed i) bio-degradation of all organic wastes which forms about 50% of waste by weight; ii) recycling of recyclable items; iii) inert and construction wastes in construction and application of the principle Reuse, Reduce, Recycle & Recovery in Waste Management to ensure minimum waste going to landfill. Natural degradation of organic wastes in a mixed garbage heap is extremely slow and cause of health hazard.

4.5 Local bodies are found to continue transportation of unsorted garbage and dump it at unapproved locations creating pollution and health hazard. Since formulation of Municipal Solid Waste Management Rule – not a single location of Sanitary Land Fill/ garbage dump has been approved by the CPCB and/or National Green Tribunal in India. (Annexure 5 – SWM Garbage Hill at Bandhwari, Gurgaon.) The CPCB has earlier clarified that, there exists not a single approved Sanitary Landfill in whole of India and not a single functioning Sanitary Landfill exists. Landfill is also the most expensive option when land cost is taken into consideration. Also when land requirement for SWM is worked out for 2 alternatives processing based on i) existing practice of transportation of mixed wastes to garbage dumps, and ii) decentralized SWM based on biodegradation of organic waste – both land requirement as well as operational cost reduces significantly besides elimination of pollution risk.

NCRPB report on SWM states (under 9.2.5 Provision of Landfill Sites in Master Plans): It is imperative that SWM sites are identified and marked in the Master Plans which are statutory documents. An analysis of Master Plans in NCR sub regions reveals the following:

A) Uttar Pradesh Sub-Region: Master plans of 4 towns namely Noida, Ghaziabad, Hapur and Meerut have earmarked sanitary landfill sites in the land use plans. However, in the Master Plans of Bulandshar and Khurja landfill sites are not located. Information on other towns in the sub-regions is not available.

B) Haryana Sub-Region: For Gurgaon and Faridabad with population of about 19 Lakhs and 20 Lakhs respectively, and located at distance, there should have been separate processing of Solid Waste, instead of a common (large) site developed at Village **Bandhwari**. A LANDFILL site within 10 km of Asola Sanctuary and Aravali Bio-diversity Park can never be approved under SWM Rule 2016.

Comments

1. The proposed location identified in NCR Regional Plan 2021 – city and NCR Plans.
2. Garbage dump is in operation without approval.
3. Located within 10 km distance from 10 km radius of Asola wildlife sanctuary in Delhi & Aravali Bio-Diversity Park.
4. *Garbage is dumped without segregation – a clear violation of MSWM rule 2016. Proposal is also contrary to guide line for environmental clearance.*

Whether an alternative comprising of a number of smaller SWM processing sites based on bio-degradation of organic waste (leading to waste reduction) separately for GURGAON & FARDABAD was considered at all ? Such proposal would have got speedy approval and Transportation cost would have reduced substantially.

4.6 It is common experience to find that, funds available under SWM proposals are spent on purchase of heavy transport vehicles, garbage compaction equipment, construction activities related garbage dump and no funds are made available for any mode of bio-degradation of all organic wastes (any form of composting or bio-methanation) or processing and reuse of inert materials or construction materials. Heavy equipment, compactors etc. are not at all useful in bio-processing of biodegradable wastes. Mixed wastes once compacted, it leaves no scope for bio-processing option and funds get used for SWM that can not deliver objectives of SWM Rule 2016. Bio-processing of wastes can only be dealt and monitored by manpower appropriately trained in the fields of Bio-Technology & Bio-sciences and such processing generates substantial labour employment. Bio-processing of organic wastes cannot be delivered by the same manpower who were earlier engaged in merely garbage transport and dumping. Waste to Energy plants within India or abroad have been grossly unsuccessful due to creation of more lethal particulate pollution.

Once bio-degradable waste is separated from mixed wastes and bio-processing starts, pollution and health hazards are immediately brought under control. Also no additional land (highly expensive in urban settlements) for such processing is required. In order to promote environment friendly bio-degradable wastes (various methods of composting and bio-methanation at different scales) funds are ensured by stopping further funds for purchase of heavy vehicles and compactors which can be used in operation of Sanitary Land Fill. Also no land should be allotted/ permitted for illegal use of garbage dump and no funding of construction related to Sanitary Land Fill which turns into garbage dump.

4.7 When the Waste Management is deficient (evident from low interception of waste, lack of waste reduction, processing, reuse and safe disposal) then substantial quantity of wastes are bound to find its way (through drainage channels) to natural water bodies (lake/ river/ sea) and further add to pollution load already created by discharge of deficient Sewage/ Effluent treatment. There is urgent need to start with incubation models for 50 & 100 TPD SWM modules based on biodegradation of organic waste.

4.8 Hence, Solid waste management is very important issue that is not being handled adequately in all our cities and towns. Despite making a very elaborate Solid Waste Management manual it does not seem to have made much improvement in the handling of solid waste. There is no doubt that there are varied problems ranging from lack of resources and the institutional capacity to inadequate infrastructure and public participation. Therefore, just by repeating in general the overall shortcomings of the process and producing a review report is not going to help the cause. It is much better to start mapping the total process of the solid waste production at all kinds of sources as well as its fate, be it landfill site or the segregation plant. Unless one quantifies the solid waste it is not possible to make appropriate policies to handle the same properly. Therefore, it is a dynamic process and has to be captured in a dynamic manner with a long-term perspective. There is no doubt that the Manual on SWM describes all the procedures and other related aspects for its proper handling, but when it comes to the implementation it is invariably

incomplete or faulty. Therefore, it is imperative that an approach of creating the information about the implementation of procedures/infrastructure is highly desirable so that the loopholes can be identified and plugged. The following recommendations are made in this direction:

- a. All entities relevant with respect to the SWM in NCR should be mapped for both, the present infrastructure as well as the proposed infrastructure for the RP-21. For such mapping, each town should be covered and the fate of solid waste along with location (with capacity) should be indicated. For big cities it shall be more appropriate to show connection of the locality with the disposal/landfill site. It is important to understand as to what is the SWM policy of the city and is it adequate with respect to the projected growth.
- b. It is a known fact that most of the road sweeping and the Construction & demolition (C&D) waste lands up either in storm water drains and water bodies which in turn shall result in the flooding of the areas because of poor disposal of storm water. Amount of waste likely to be generated from a construction or demolition site should be assessed by the municipality and its proper disposal ascertained. Public involvement is very important in this segment and procedures should be developed to engage public by using social media and other IT based applications. The framework itself can be very conducive in identifying the problem locations and thus shall help in creating focus and eventual addressal towards solution.
- c. Such handling shall also be able to demonstrate the crux of the integration approach. Adequacy of the solid waste management has a huge reflection on the effectiveness of the sewage and storm water handling of a city. Some of the major problems of the sewerage and the storm drainage systems are on account of the solid waste mismanagement. Therefore, it is required to handle these three together along with their interaction.

5.0 General Recommendations

5.1 It is essential to depict through spatial mapping, areas all distribution networks and which are the areas that are going to be covered with water distribution networks and its timeline. All kinds of non-spatial data that are required to quantify the volume of water being distributed, population being covered, etc., is also captured. Thus, GIS besides providing an excellent base for creation of theme wise databases also helps in providing a visual understanding of the status and progress of development. Therefore, such an attempt is essential if a realistic feedback mechanism for evaluation of the actions taken by various states is to be created by NCRPB. It is highly desirable to change the strategy of planning, development and management by introducing the appropriate tools of integration such as GIS and databases, if the basic requirement of integrated development of NCR has to be fulfilled. Otherwise, this shall remain business as usual and conditions shall keep on deteriorating further.

5.2 Efficient Urban Infrastructure is a key determinant for ensuring adequate access to water and sanitation as well as safeguarding public health in an urban community. It has a key role in improving pollution remediation and improvement of urban environment. There is

urgent need for interdisciplinary approach while working on infrastructure components in Metro-cities and smaller towns. There is also another misconception about infrastructure in small settlements, that only scaled down option of metro-cities should be built in smaller settlements; without looking at the opportunities that smaller settlements for introducing new concepts which can be perfected in smaller settlement and after success it may be scaled up for larger cities or introduced as a number of small modules.

5.3 In India, generally operation of STP and SWM are dealt by staff trained in Civil, electrical & mechanical engineering fields who are trained to deal with construction and operation of electro-mechanical equipment only. This prevents utilizing specialists from bio-sciences who can deliver better operation and monitoring of STPS & Bio-degradation of solid wastes. Trained Bio-scientists are better equipped in generating and sharing data on operation and performance monitoring of these components and the problem of data generation/ sharing shall get addressed.

5.4 'Availability of Data': WHO – UNICEF led worldwide joint monitoring (JMM) of status of Water and Sanitation spanning over 2 decades are available free of cost is not used in India either at National, state levels. This data is categorized continent wise under each country also good comparison with other countries. The CPCB have several publications sharing performance of STPs, SWM facilities etc. 'Data pertaining to network service area, inflow in STPs, treated quantity, influent and effluent characteristics of sewage reuse quantity, expenditures, revenues, cost recovery, collection efficiency, sewer connections etc. at project level has to be responsibility of the projects and requires some effort.

5.5 Opportunity for employment generation through creation of livelihood (income generation) with hand-holding support which shall generate employment in the knowledge based (organising, technical knowledge and supervision) personnel:

- i) Watershed Management
- ii) Constructed Wetland Treatment
- iii) Decentralized Bio-processing (composting) of Domestic Solid Waste
- iv) Production of organic fruit, vegetable as well as livestock and pisciculture, supported by waste water irrigation and organic compost.

5.6 Suggested Incubation projects with performance monitoring:

- a. Identification of potential area for Watershed Management (Rajasthan or Haryana Sub-regions within NCR)
- b. Decentralized Bio-processing (Constructed Wetland Treatment) of sewage for safe irrigation for production of organic fruit, vegetable as well as livestock and pisciculture. (Rajasthan or Haryana or UP Sub-regions within NCR).
- c. Decentralized Bio-processing (composting) of Domestic Solid Waste to significantly reduce quantity of waste for disposal in Landfill site – (Haryana/ UP regions within NCR).

- d. Identify interventions to improving Medical Waste Management in city (Haryana/ UP Sub-regions within NCR).
- 5.7 Location for each of the above projects may be selected carefully in a peri-urban or rural area where required in-puts are available and the community is interested in participation. With respect to water supply in peri-urban area – pond based and other method of effective recharge of ground water table shall provide easy access (low cost) and it shall be appropriate, meeting both requirements ie. residents as well as cattle. Biological contamination, if any, in ground water can easily be removed with domestic water purifier – such water purifiers are most common even in areas having regular piped water supply.
- 5.8 CSR Option in SWM – There is no private sector participation in the field of SWM and CSR is welcome as a game changer. CSR can help in the process of switching from garbage dumping to bio-processing.
- 5.9 Application of the concept of 3 Rs – This concept of Reduce, Reuse & Recycle has already been highlighted in the recommendation can be applied only through switching to bio-processing of organic waste as against existing practice of Dumping Garbage.
- 5.10 It is once again reiterated that the main objective of NCRPB of ensuring that the NCR should engage with an integrated planning and development then it is very important to go proactive and collect and collate all the information on the development of various sectors by different states. There should be a procedure set up to map all this information on GIS so that all the sector experts can understand and analyse such information as well as the cross-connection of the sectors. Such a information base shall go a long way to provide the most upto-date status of development as well as any deviations from the Regional Plans. It shall also facilitate the public participation which is lacking at present mainly on account of no real information being available in an understandable manner.

RECOMMENDATIONS OF THE STUDY GROUP- VI COVERING THE CHAPTER TELECOMMUNICATIONS (10) OF REGIONAL PLAN 2021

RECOMMENDATIONS

1.1 Digital infrastructure and services are increasingly emerging as key enablers and critical determinants of a country's growth and well-being. With significant capabilities in telecommunications, poised benefits from harnessing new digital technologies and platforms to unlock productivity, catalyzing economic growth and development, generating new-age jobs and livelihoods, and ensuring access to next generation services.

1.2 Government of India has issued Nation Digital Communication policy 2018¹ with three Missions:

- Connect India: Creating Robust Digital Communications Infrastructure to promote Broadband for all as a tool for socio-economic development, while ensuring service quality and environmental sustainability.
- Propel India: Enabling Next Generation Technologies and Services through Investments, Innovation and IPR generation to harness the power of emerging digital technologies, including 5G, AI, IoT, Cloud and Big Data to enable provision of future ready products and services; and to catalyse the fourth industrial revolution (Industry 4.0) by promoting Investments, Innovation and IPR.
- Secure India: Ensuring Sovereignty, Safety and Security of Digital Communications to secure the interests of citizens and safeguard the digital sovereignty of India with a focus on ensuring individual autonomy and choice, data ownership, privacy and security; while recognizing data as a crucial economic resource.

All these missions require deployment of vast amount of telecom infrastructure in urban as well as rural areas. This calls for the right Right of Way (RoW) policies to be implemented by the State & Central agencies.

1.3 The Department of Telecommunications has released the Indian Telegraph Right of Way Rules on 15th November 2016 to regulate the installation of over ground and underground telecom infrastructure in the country. Out of 29 States only 10 States have aligned their policies with the DoT's RoW November 2016 Rules. These rules have the following enabling provisions:

- ☐ Single Window Clearance mechanism through online portal for grant of permissions
- ☐ Defined time period of approvals
- ☐ Deemed permissions
- ☐ Dispute resolution mechanism
- ☐ Nominal one – time administrative fee
 - Over ground telecom infrastructure: up to Rs. 10,000
 - Underground telecom infrastructure: up to Rs. 1,000 per KM

¹ http://dot.gov.in/sites/default/files/Final%20NDCP-2018_0.pdf

NCR constituent States of Delhi, Haryana, Rajasthan and Uttar Pradesh have more or less aligned their telecom infrastructure Policies with the Indian Telegraph Right of Way Rules 2016 except multiple fee and levies being charged such as Annual Fee, Sharing Fee, and high one-time permission fee. The current status of implementation of RoW policy is as under:

Major Clauses of RoW 2016 Policy	NCT Delhi	Haryana	Rajasthan	Uttar Pradesh
Whether State level Policy issued after issue of RoW Rules 2016	No	Yes	Yes	Yes
One time Fees @ Rs 10,000 for Mobile Towers & Rs 1,000 / km for OFC	No	No	Yes	Yes
Single Window Clearance	No	Yes	Yes	Yes
Online Application Process	No	Yes	Yes	Yes
Timeline for Clearance - 60 days / Deemed approval	Yes, but as per old policy	Yes (45 days deemed approval)	yes	Yes (45 days deemed approval)

The districts of NCR which fall under the jurisdiction of these respective States should implement the rules in letter and spirit to accelerate the telecom infrastructure roll-out. If a separate policies are issued by the districts in the NCR region falling within the NCR, it will impede the telecom infrastructure rollout besides leading to confusion and uncertainty on ground. **NCR states should ensure implementation of policy down the line. Thus, the respective state Government should focus on implementation of policy across the departments in the States for smooth and expeditious roll-out of critical telecom infrastructure.**

1.4 In order to meet the different schemes, initiatives and ambitious projects of the Government such as Digital India, Smart Cities and BharatNet, **it is essential that the infrastructure being developed as a part of the RP should be digitally ready. Thus, mandatory provisions for duct spaces, cabling, IBS, FTTx, earmarked spaces for mobile towers/micro sites/COW, Wi-Fi hotspots within the residential and commercial spaces should be included to deploy shareable digital infrastructure.**

1.5 As data, internet and voice services are majorly consumed indoors and to facilitate seamless and quality services, the provisions of these technologies are necessary to provide uninterrupted telecom services. The emergence of smart and digital ready homes which can be achieved by the aforesaid provisions will transform the NCR as a benchmark region that is digitally enabled.

Accordingly, initiatives in line with the following aspects need to be undertaken by NCR participating State Governments and concerned Central Government departments/agencies to facilitate the telecom industry:

- 1. Right of Way for laying fiber to facilitate last mile connectivity.** Regional Plan may provide broad policy for Right of Way, which should be elaborated by NCR participating States to formulate appropriate RoW policy in line with policy of DoT. Plans should address Simplification of Sectoral Policy for Right of Way regarding laying Cable Network, installation of towers, etc. There should be smooth coordination between the Telecom Service Providers and the State Governments.
- 2. Development of common ducts for laying fiber to save time, costs and efforts.** Short & long term strategies for the improvement of network designs, technical solutions, and common duct facility with standard design for new Roads etc. need to be part of Regional plan recommendations.
- 3. Deployment of mobile towers in rural and remote areas/districts.** Policy regarding the power supply for ensuring availability of 24x7 electricity to run the towers, especially in the rural areas, should be addressed.
- 4. Development of online single window portal for faster and time-bound clearances of permissions.** (*For instance, Haryana has developed its single window online portal*)
5. Initiatives such creation of facilities like Wi-Fi Chowpal (*as in Haryana*), fixed line connection (50%), provisioning of broadband, be taken up in the entire NCR.
- 6. Availability of Government land and buildings for telecom infrastructure.** States should provide land, and other facilities to the telecom services provider for setting up of telephone exchange, mobile relay towers and other installations.
- 7. Provisions of ducts, earmarked spaces for installation of digital telecom infrastructure such as In-Building Solutions**
8. DoT may consider extending Delhi Service Area (metro circle) to whole of NCR which could be termed as NCR Circle
9. Awareness campaigns to clear the Misconceptions regarding Electro Magnetic Field Radiations (EMF) being harmful, through workshops/consumer outreach programme, etc. may be taken up by concerned departments/agencies.
10. States may introduce more and more ICT enabled services so as to create demand for more bandwidths.
11. Demand for Telecom towers may be factored in new Regional Plan. In addition, mapping work of black/dark spots as well as status of service coverages being provided by different service providers, which is underway at TRAI, for whole country and should be incorporated in new Regional Plan for NCR.

RECOMMENDATIONS OF THE STUDY GROUP- VII COVERING THE CHAPTER SHELTER (11)) OF REGIONAL PLAN 2021

1.0 RECOMMENDATIONS OF THE SUB-GROUP

- 1.1 In the urban areas of the entire NCR, there is an excess of 6.69 lakhs houses (as per the NCR Regional Plan 2021 revised in the year 2014). The same document also further states that as per Housing Census Data tables of Census of India 2011, the *vacant Census Houses* are 12.98 lakh in number ! The large quantum of *vacant housing* in the NCR towns has to be reduced. The stalled and unfinished residential apartments need to be completed. For this, the Real Estate Regulation and Development Act 2016 has to be fully implemented. Unfinished projects need to be taken over and completed so that possession can be handed over to the purchasers. Necessary steps need to be initiated in this regard by both the state governments as well as the central government. Legislative provisions for the same are already available in the RERA legislation. It has been observed that the implementation of RERA has not been adequate in helping developers complete projects and hand over possession. Further, unless and until adequate connectivity and other infrastructure is provided, houses would not get occupied and the vacancy would continue. Therefore, the agencies concerned need to be closely monitored by the NCR Planning Board as well as the respective state governments to undertake the implementation in a mission mode.
- 1.2 Even where residential apartment projects have been completed, their occupation is not there. This is on account of lack of '*last mile connectivity*' in terms of public transport. The suburbs of Delhi, particularly NOIDA, Greater NOIDA, Sohna, Gurugram and Ghaziabad need to be provided with a high quality intra-city bus service so that they are well connected with various facilities which will make living possible. At the same time, sufficient social infrastructure creation, particularly schools, is also necessary for the areas to get safe and populated.
- 1.3 *Lack of occupancy of housing units* is also on account of the fact that owners are not very confident of giving their flats on rent to tenants. Fiscal incentives need to be given to property owners so that they are encouraged to put out their properties on rent without fear of eviction difficulties.
- 1.4 *Industrial worker housing* has remained a neglected area in the NCT. One belt is the NOIDA, Greater NOIDA belt and the other is the Manesar-Bhiwadi-Bawal-Daruhera and Rewari belt. Both these have huge industrial establishments which draws workers in huge numbers. Shelter arrangements for industrial workers needs to be made by the concerned stakeholders so that the proliferation of slum like settlements and over burdening of urban villages does not take place. Land could be allotted to large industries and they could be encouraged to develop housing for their own employees/workers so that they can stay close to their place of work and thereby increase productivity. This would also have a positive effect on reducing the traffic.

- 1.5 There is perhaps no other construction hub in the world, as large as the Delhi NCR, where there is so much of construction happening; be it expressways, metro lines, housing projects, commercial projects, roads and flyovers or any other projects. As a result, the Delhi NCR is the harbour to a very large construction workforce, mostly migrant labour. Shelter provisions for them are minimal, despite a legislation on Construction Workers. Efforts need to be taken to provide *temporary shelter arrangements to these construction workers and their families*.
- 1.6 Delhi NCT is also a harbour to a large number of *students and young singles* who need shelter in terms of one room accommodation with good transport facilities. There is a need to encourage development of shelter in this niche segment. The various development authorities, housing boards and other governmental agencies need to encourage housing for the elderly by giving some concessions while allotting land; either in terms of discounted land rates or a higher FAR.
- 1.7 With an increasing number of young population going abroad to work, *housing for the elderly* is becoming increasingly important. Necessary measures need to be taken to encourage housing projects for the elderly. The various development authorities, housing boards and other governmental agencies need to encourage housing for the elderly by giving some concessions while allotting land; either in terms of discounted land rates or a higher FAR.
- 1.8 There are a large number of *temporary shanties or jhuggies or slum pockets* in various towns of the NCR. As per Census 2011, 13.9 percent of the total population of the NCR lives in slums. This amounts to a slum population of 40,03,774 persons. Projects for improving / housing these slum dwellers need to be formulated so that they can be improved/rehoused/redeveloped.
- 1.9 In the rural areas of the NCR, there is a housing shortage of 3.33 lakhs (as per the NCR Regional Plan 2021 revised document prepared in the year 2014) which needs to be addressed. Therefore, *rural housing shortage needs to be addressed* through PMAY (Rural) to be implemented in the rural areas of the NCR.
- 1.10 Norms and cost structures need to be reviewed and developed for government housing.
- 1.11 Issues related to unauthorised colonisation, illegal shelter consolidation and proliferation of slums need to be addressed in the Regional Plan.
- 1.12 Concessions on property tax could be thought of, to encourage people to offer their properties on rent. Aggregators for different kinds of rentals need to be encouraged. Construction Workers Fund under a 1982 Act should be used for acquiring lands/dwelling units for workers.

- 1.13 Templates for cost and size of dwelling units could be prepared and developed which could help dwelling unit construction in proper manner, especially in *lal dora* areas and areas where no explicit approval provisions exist.
- 1.14 The issue of private entities providing cheaper houses than government as well as the template on quality of housing being provided, needs to be addressed. This area along with aspect of smaller utility accommodation/ rental housing for different income level and housing sizes should be elaborated in next Regional Plan.
- 1.15 Further Status updates on housing regarding action taken by the states could be captured during preparation of next Regional Plan preparation process, for which data formats have already been shared by NCRPB. A detailed *Shelter Information System (SINSY)* needs to be developed and put in place for the NCR.

RECOMMENDATIONS OF THE STUDY GROUP- VIII COVERING THE CHAPTER SOCIAL INFRASTRUCTURE (HEALTH & EDUCATION) (11) OF REGIONAL PLAN 2021

Recommendations and Suggestions - Education

To deal with above problems and issues, some of the major recommendations and suggestions are as follows:

1. There should be disaggregated monitoring of implementation of educational programmes and schemes in the NCR districts. Data related to the districts should be available to the educational planners of the NCR districts.
2. A Joint Task Force comprising of educational functionaries from the NCR districts should be constituted well equipped with all the infrastructure facilities, to take educational planning and monitoring needs.
3. There should be combined orientation and sensitization of educational function of NCR districts.
4. There should be built in mechanism for sharing of the best practices in the field of educational among the NCR functionaries.
5. The Educationally backward districts and Special Focus Groups in the NCR should be the focus of NCR educational planning.
6. Educational needs of the slum areas in the NCR Region should be given due attention. The area specific and group specific educational schemes should be launched for such areas such as Mewat and Bulandshahar.
7. There should be proper implementation and monitoring of RTE provisions in the Regions.
8. The educational opportunities in universities, colleges and other educational institutions (technical and professional education) should be made accessible, by making special provision for the people residing in the NCR.
9. There should be proper co-ordination and convergence among the concerned educational bodies and institutions located in different districts in the region.

10. Well performing educational institutions especially located in Delhi, should either branch out in the adjoining NCR districts or adopt low performing institutions, for capacity building and quality improvement.

Recommendations- Health

It is quite apparent that the health system in Delhi is faced with multiple challenges, some unique to the state. These include steady streams of ‘floating’ populations from the neighbouring states who come to the capital to seek treatment for emergencies and for general healthcare needs; vulnerable groups such as the homeless, or those engaged in highrisk livelihoods; and a growing share of the aged populace requiring assistance amidst fragmenting social support systems. Some of the major recommendations are as follows:

1. **Regionalization** should be the strategy adopted to organize and integrate services in national health systems which are public and universal as a central path to be followed to ensure comprehensiveness in health and the universality of the access. However, there are principles of the Unified Health System which are still invisible in our system, making us question the forms of management of the regionalized system and its real effects to the transformation of health into a right. A shift from centralised system to regionalised local community control of health services may led to significant reduction in potentially avoidable hospitalizations. Building of operational districts having good number of subcenters/ community clinics/UHC/mohalla clinics reporting to block PHCs to CHC/FRU to tertiary care centers may reduce the burden on hospitals.
2. Multiple referrals result if the hospital does not have the resources to treat certain acute conditions (eg, ischemic stroke), wasting valuable time in trying to move the patient from one facility to another. It is imperative that the government regionalizes care and identifies specific facilities for the care of patients with trauma, myocardial infarction (MI), and stroke, and coordinates with **Emergency Medical Services (EMS)** so that a patient is taken directly to the most appropriate facility at the time of emergency. It is advisable that every hospital should have the capability to provide disease specific acute care like stroke centers, neurosurgical centers, and trauma care center etc. The launch of the National Ambulance Code by Govt of India in 2014, dictates the minimum standards and guidelines for the construction and functionality of road ambulances.
3. The burden of disease scenario only reaffirms the emergence of the ‘Triple burden’ of persisting communicable diseases. emerging new diseases like Zika, Ebola virus disease and the growing predominance of chronic diseases. More often, it is the poor

and socioeconomically vulnerable population groups that are unequally exposed to both disease and premature mortality risks. Clearly, the interventions and policies need to be more pro-active and inclusive and should aim to extend effective coverage to the underserved as a development priority.

4. Adequate number of **Trauma Centres** with all diagnostic and treatment facilities for accident cases along with adequate number of BSL Ambulances is the area for comprehensive action and attention. Also there should be proper networking within the facilities with unified control command.
5. The ways to reduce **waiting time in OPDs/ clinics** includes prior collection of patient data through online system or web portals, initiation of screening OPD by interns/general physicians/ medical officers/junior residents, initiation of evening OPDs, initiation of block appointment system instead of fixed time so that short time delays may be accommodated, putting appropriate signage in each OPD. In addition, management techniques like queuing theory for tertiary care hospitals through calculating estimated numbers of patients and accordingly adding more number of registration counters and consultant chambers.
1. All public and private hospitals may set up Geriatric Clinics and Palliative Care Clinic through hospice for addressing the need of ailments arising because of ageing and non-communicable diseases. A trained "multi-disciplinary team" need to be created comprising of physician, psychiatrist, orthopaedician, diabetologist, gynecologist, cardiologist, urologist, eye surgeon, psychologist, physiotherapist, dietician, dentist, and nurses to address geriatric care. The provision for free or reasonably priced treatment through public-private partnership may be created. The best medical care for non-communicable diseases (NCD) may give relieve to some patients at prohibitively high costs but it will never prevent and control occurrence of NCDs. Day care hospitals could play an important role in providing close supervision and follow-up of patients with chronic diseases. India has very few hospices that can provide terminal patient care or palliative care. Hospices should be set up at the district level. NGOs, charitable organizations, and faith-based organizations could play an important role in this area.
6. These diseases can be prevented only through making lifestyle conducive to health. It is relevant to mention here that programmes to change lifestyle and behaviour need much more determination and inputs than those required for control and prevention of infectious diseases.

7. Efficient laboratory system of food adulterants identification for timely results of collected food samples from the different markets sites.
8. In-Service training for medical and paramedical staff on Patients Safety, Hospital Services information, Emergency Medical Response and Disaster management should be embedded in the routine curriculum.
9. Establish a National Level Central Public Health University for monitoring of existing courses as well as affiliation for distance education courses
10. The government needs to recognise that universal coverage calls not for multiple, overlapping schemes, but for a single, integrated and effective financial risk protection measure that can be availed of by the poor, without any barriers. Therefore, recently launched PM-JAY scheme of Ayushman Bharat or similar type of schemes as in practice in some other states, should have implemented with full vigour.
11. Develop a strong facility-based disease surveillance system with an integrated electronic backbone. The system would be instrumental in capturing surveillance data from community level screening, dispensaries, mobile health/school health clinics and hospitals based on a real-time software platform enabled by user-friendly data entry devices. There is need to develop brief, standardised data entry protocols suitable for different platforms (mobiles, smartphones, tablets, PCs, etc.) and data flow that can be coordinated through the DPMUs. A committed data user community could be identified, involving interested sections of the health administration, academia and civil society for aiding evidence-based decision-making.
12. Hospital violence prevention committee- to ensure safety of patients and doctors it is proposed to have one committee headed by a eminent senior doctor (preferably retired) and other members comprising of representatives from doctors and staff associations of hospital, representatives of hospital administration with one or two eminent professionals from civil society like IPS/IAS/senior doctors etc. (preferably retired) . The committee should regularly watch the activities of hospital through surveys and quarterly meetings for evaluation of services and re-dressal of grievances.
13. Legal framework on blended learning and medical tourism could be elaborated while preparing the next regional plan.
14. Standards and guidelines for social infrastructure/ facilities including recreational facilities, sports centres should be on higher side in NCR as it has to act as a model for rest of the country.

RECOMMENDATIONS OF THE STUDY GROUP- IX COVERING THE CHAPTER HERITAGE & TOURISM (13) OF REGIONAL PLAN 2021

Recommendations of the Study Group on Heritage & Tourism

1.1 The systemic approach is to enlarge the database to understand the resources in an elaborate manner unlike the linear way that was followed earlier . Therefore, it is recommended to look at the cultural resources carefully through the ‘systems approach’ is important and has to be mapped accordingly.

1.2 A protocol has to be worked out, for which a high level of lateral co-ordination is required from Centre, State, local government other agencies to integrate new tasks that are required for the NCR study group and Team to achieve the objective.

1.3 As the existing data is insufficient, it is difficult to arrive at policies for the Heritage and Tourism sectors. The existing data is to be articulated in terms of its cultural resources ranging from historic towns, villages, traditional systems, cultural landscapes and cultural regions. This will enable the formulation of policies for conserving the cultural significance of the NCR area through an interfacing of regional planning sector with the main components of this study – Heritage and Tourism. The range of cultural resources can be introduced in the database which will allow a **more holistic and integrated method** for effective communication of the cultural region of NCR. Therefore, the recommendations will deal with Regional Planning, its relationship with Heritage and Tourism.

- 1.3.1 Study Group on Heritage and Tourism strongly recommends that a regional policy should be formulated which co-ordinate and take advantage of the symbiotic relationship that exists between the imperatives of heritage protection and tourism development.
- 1.3.2 Designing a method for a systematic, data collection of the NCR using the following techniques – survey with prepared formats, field works, filling detailed inventories of the various resources and thorough mapping of the resources for Heritage & Tourism.
- 1.3.3 Mapping of the resources can be done using Geographic Information System (GIS), with the participation of states in the NCR board through the concerned districts to steer the data collection process. This is a shared and consultative process with good professional support from conservators. The exchange of knowledge among the states will help to develop the process of building up the cultural data for the NCR plan area. The end product of the exercise would be a combined map of cultural resources for the culturally rich NCR.
- 1.3.4 The **common shared database to be housed in the main NCR regional office** with copies in the district towns and headquarters. The database is called regional information center. Through this action the study group is ensuring responsible ownership for the responsible task undertaken by GOI through the NCR Board. The shared data is now available with the State Government system, the dissemination to the education sector, communities, Culture Department to update policy, protection and management plans. By giving access to a panel of experts to assist in the processing of the information to bring into contemporary / internationally

acceptable mode. Also, the collected data must be constantly upgraded therefore; the unrecognized and unidentified resources will be added to the database. An interdisciplinary technical committee can be formed with the participation of states to steer, operate and monitor the process of collection and management of the cultural resource database.

The generated cultural database will be an interface among Planning, conservation and Tourism development departments to ensure safeguarding of heritage sites and resources. Even during the Commonwealth Games large scale development projects proposed did conflict with heritage sites and local cultural contexts, lack of planning policy, dialogue and decision-making mechanism. Therefore, **there should be a common policy formulated for the cultural resources of all districts in NCR**, and it will be a reference for new planning projects without disturbing the heritage resources. And it is an ideal way of working as an interface between the sectors.

1.3.5 Critical maps to be prepared-

- Existing NCR map will comprise as per planning, as per conservation and as per tourism. The sum total will be Existing 2019.
- New upgraded map developed to show the ranges of cultural resources, tourism activities and planning projects which will be a great base for including Heritage and Tourism in the mainstream development.
- Verification of monuments from the earlier list should be done to check whether they still exist and if they can be recovered

1.3.6 Under budgeting and financing, it is important to provide funds for the preparation of a database which is a responsible action.

1.3.7 **A database on local skills and opportunities should be surveyed** and marked to help the communities for their economy. Local development and economic generation through local skills **should be encouraged for a sustainable tourism**.

1.3.8 The Heritage and Tourism sites should be clearly identified on the land use plan to prevent encroachment and inappropriate development. These sites should also receive priority in transportation and other infrastructure planning.

- a) The Heritage and Tourism sites should be used as instruments to direct land use policy towards more decentralized patterns of development. A desirable objective of the co-ordinate Heritage conservation and Tourism development policy is to declare Delhi as a World Heritage City by UNESCO.
- b) UNESCO resources relevant for Heritage, Tourism and Pilgrimage to be referred for study.

1.3.9 PRASAD AND HRIDAY schemes can mutually support the recommendations of the study group for a mainstream system. The activities under the schemes can be integrated with the policies and recommendations of the study group.

1.3.10 Detailing of the Tourist & Heritage circuits should be done in the next Plan. As the approach of circuits cannot be implemented mechanically, a SWOT analysis report of the proposed circuits should be provided by the states so that their feasibility can be accessed.

- 1.3.11 A Report/comprehensive Note to be provided by the State Tourism Departments and the concerned Department dealing with Heritage Conservation regarding their works undertaken in the NCR districts and their future proposals for the development of their respective sectors.
- 1.3.12 GIS mapping of the Heritage and Tourism sites in the NCR region and prepare various transport route maps for the destination connectivity purpose by showcasing picturesque view of the rural/ urban/ semi-urban road stretches adjoining these sites.
- 1.3.13 Land use plans and their implementation through state wise town and country legislation should be listed and implemented strictly.
- 1.3.14 Coordination of regional and master plans with developmental plans for infrastructure and industry and residential colonization should be brought under existing legislation on environmental, land use and heritage legislation.
- 1.3.15 State, ASI, Tourism and TCP departments must ensure that a conservation policy is reflected in their legislation. For heritage contents, a method has to be formulated and followed.
- 1.3.16 Pollution is the biggest problem of the region. Afforestation and the role of river, wetlands and water bodies and neighbourhood parks and city forests is critical. The burning of agricultural stubble should also be looked into to provide alternatives at low cost to farmers. Environment Protection Acts and Rules must be notified in the concerned areas for Public Hearings.
- 1.3.17 The role of the private sector has to be assessed, and given its due place, Experience suggests that resort development could be given to the private sector, with strict enforcement of legislation and rules, if data indicates the need for such products to be developed. For example, Haryana and Rajasthan have several properties which could be given to the private sector to manage on a lease basis. The resort development has to be reflected in the land use plan.
- 1.3.18 Data base should be created on the basis of a commonly defined understanding of tourism, heritage and cultural products both tangible and intangible, and then mapped for improvements in accessibility, accommodation and activities that are being planned.
- 1.3.19 **Security system** in the tourist areas & Heritage sites is important for ensuring safety for the people and also the natural and cultural resources. Tourist guides cum guards could be thought of.

In the next reviews, the heritage and tourism will be seen as two separate independent study groups.

2.0 Heritage specific Recommendations

- 2.1 This policy explains views on conservation of heritage as part of the mainstream development activity. It relates to the employment in local communities in crafts, and crafts related activities. There will be improvements, up gradation to the historic cities

- and settlements in good quality and to be achieved without undermining the heritage value because there is an informed system has been already worked out. The potential ways for using ‘special areas ‘and conservation areas such as Heritage zones, archaeological parks, cultural landscapes, historic system etc. should be explored. The NCRPB should constitute a working group including officials from the government agencies, and experts from other agencies and also the study group team to steer and regulate the guidelines for adoption.
- 2.2 A common shared conservation policy should be developed in the cultural region of NCR in which all the agencies will come together. Particularly, ASI, State department of Archaeology, Tourism and Planning departments must ensure that the conservation policy is reflected in their projects or works.
 - 2.3 A mechanism has to be developed in consultation with ASI when there is Excavations at the project sites on the procedures to be followed
 - 2.4 The natural heritage components should be identified and inventoried for example through the identification of natural resources such as rivers, streams, hilly areas and national parks. This can be done through mapping the natural resources in the region and also the issues/threats such as encroachments, degradation and pollution, which will facilitate the experts to apply the conservation policy in these areas. This is possible through the participation of the states of the NCR. **The Hauzkhas natural Heritage for example needs to be revived.**
 - 2.5 Protection of the cultural resources **has to be statutory** and should come under the culture department and never can be under planning law, even when the area of the heritage is larger. Champaner - Pavagarh Archaeological park experience can be a good reference for finding innovative answers for the protection of the heritage area.
 - 2.6 The spatial dimension, of the new redefined cultural resource such as the historic towns, villages, systems, cultural landscapes, sacred landscapes, etc. to be indicated on the plan as **“special”** areas, under cultural categories such as archaeological Park and Heritage Zone, to be included in the planning process and protected under law.
 - 2.7 Check and verify the more than 100 monuments lost from the earlier list and examine the condition and status of the monuments to find ways for recovering it.
 - 2.8 The redefinition exercise facilitates to build a database to undergo a process of evaluation and assessment of the resources to bring out the significance and values of the resources. The resources have to categorise to bring it under the heritage policy to maintain its authenticity and integrity.
 - 2.9 The other lists of resources prepared earlier have to be reflected in the conservation policies. These actions will help in safeguarding heritage effectively.
 - 2.10 At the site level, for every cultural property under ASI, State, Local or private there has to be a plan prepared for every site. The conservation policy should be reflected in the plan of each site.

- 2.11 Each sector has to come up with a management plan, where the communities can be part of the dialogue for an integrated management plan for the National Capital Region. The healthy communication among the departments and communities will be reflected on the project proposed in the region.

3.0 Tourism specific Recommendations

- 3.1** Tourism, pilgrimage and visitors to sites, constitute the visit to the variety of places in the National Capital Region. Managing the visitors, their numbers and providing the amenities required and giving the tourists a good experience of the places are the various activities associated with tourism. When the local community participates positively in these activities, it will aid in local development. The participation can happen when the community has the capacity to understand, plan and organize the process, which is the ideal situation for the enhancement of local development. It is very important to understand that tourism generates employment for the local people and is integrated in terms of education, expertise and skills. This is an ideal situation of Tourism management scenario.
- 3.2** Tourism is accepted as the potent engine for inclusive social, economic progress at the universal level through its forward and backward linkages and ability to create employment in the economy through the local skills and capabilities. There is a high scope for profuse employment generation and related activities in the form of accommodation projects, food-oriented projects, amusement parks and water sports, etc. which can be proposed only when the local community, skills and their capacities match with the scale of the project. The cultural significance and capacities of the communities should not be compromised through the tourism projects.
- 3.3** Identification of the districts in the NCR, where tourism activities are taking place and should be mapped clearly to get a larger picture about the cultural region. The different activities types of tourism should be listed out in order to understand the range of tourism available in the culturally rich NCR.
- 3.4** Tourist circuits can be designed in the cultural region covering the monuments, natural and cultural heritage like food, crafts, health spaces, etc. and the natural areas like water bodies and sanctuaries. This is an outcome of the thorough mapping of the cultural resources. This will help in the local development through new rising opportunities for community for enhancing their skills.
- 10.5 For facilitating tourism, a cultural resource database should be created for understanding the range of cultural resources such as historic towns, villages and systems, and the activities such as festivals and local practices specific to the place. This can be done through field surveys and mapping along with the identification of issues such as lack of accessibility, accommodation (for example, in the pilgrimage sites), ignorance of resources, basic infrastructure etc. in the culturally rich region.
- 10.6 The tourism policy should be pro-active to diversify the options available for tourism destinations and activities through the development of smaller tourism circuits. A good goal for this policy would be to ensure that a visitor - or local resident - can be easily

persuaded to sample the diverse range of tourism options available within the region for at least ten days. This should change the mindset of the visitor who spends only a couple of days in Delhi to see the Red Fort, QutubMinar and Humayun's Tomb, and do some shopping of traditional crafts and handloom products.

10.7 Identification of issues or negative impacts on the cultural resources due to tourism helps in regulating the tourism development responsibly without affecting the cultural resources.

10.8 Since no plans or policies are indicated, the state tourism policies and plans would be followed. The NCR should at least identify the districts where tourism activity is taking place and heritage conservation issues have arisen due to Lal Dora, determining the deteriorating urban landscape and encroachments. These could be listed and put on a map to create short circuits. That should have a mix of monumental, natural and cultural heritage thus creating a variety of composite circuits.

10.9 Pilgrimage tourism, Medical tourism, Village tourisms, leisure tourisms, etc. could also be covered in Tourism sector. It was brought out that employment generated through tourism could also help in diverting migration, and should be looked into.

10.10 States should develop a hierarchy of authorities; establish heritage committees in a hierarchy of governance for maintenance & development of heritage & cultural sites. Jurisdiction of such Authorities should be specified in the Regional Plan for next perspective year.

10.11 Detailed framework of policies of NCR participating States regarding the protection, conservation and management of heritage sites and the mechanism for social safeguard should be generated.

10.12 Tourist police and women's security is of utmost importance in an area that reports a high volume of crimes against women. The tourist police should also be trained to assume the dual role of security guards and guides.

RECOMMENDATIONS OF THE STUDY GROUP- X COVERING THE CHAPTER ENVIRONMENT (14) OF REGIONAL PLAN 2021

Recommendations:

The recommendation are based on international (FAO guidelines for India, IUCN guidelines, Ramsar convention) and national guidelines/legislation [Wildlife (Protection) Act, 1972 & its amendments, Indian Forest Act of 1927, Forest (Protection) Act of 1980, Biological Diversity Act, 2002 and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006)], and other relevant legislation as annexure

- Regional/ Sub-Regional Level
 - I. Policy guidelines for identification of Natural Conservation Zone (NCZ) based on
 - a) Identified forest areas as per FAO
 - b) Protected areas (PAs) such as Sanctuaries, National parks and Biosphere Reserves as notified by MOEF&CC and defined by IUCN 2008.
 - c) Eco sensitive areas/ such as Aravalli's (as per MoEF&CC notification)
 - d) Wetlands as defined in MoEF&CC notification dated 26.09.2017
 - e) Flood plains of rivers as per HFL of maintained by Irrigation Department
 - II. Creation of Information System and Observatory:
 - Spatial (scientific mapping of identified conservation zone – creation of database on GIS platform),
 - Non spatial database-
 - Resource profile and interactive maps
 - Resource Monitoring Systems
 - III. Inter-Agency and inter-district Coordination
 - IV. Training and awareness generation for conservation
 - V. Financial arrangement for environmental conservation and Management

District level

- I. Policies for protection of environmental resources as under
 - sustenance of Forest cover (- % as stipulated by MoEF&CC)
 - Ground water recharge zones as per GGWB
- II. Watershed Based Development
- III. Policies for identification of environmentally sensitive area including water bodies, forest, sacred groves, apart from regionally identified conservation areas etc.
- IV. Policies for Scientific Resource Mapping and profiling for assessment of status
- V. Policies for Assessing environmental impact of development activities
- VI. Policies for Integrated planning at Block, Urban, Rurban Clusters and Village level

- Policies for regulation/ management of degraded environmental areas (mining areas, wastelands) for regeneration of environmental support system
- Policies for Environmental resource based District Development Plan
- Capacity Development for Environmental Conservation and Protection
- Policies for budgetary provisions for conservation protection and management of environmental resources.
- Drainage Functional Plan to be referred
- An overall analysis of the actors (E.g.Physical features, soil types, land use, vegetational coverage, water resources, water sources, Environmental problems) mentioned in the Handbook for preparation of Watershed Based Master Plan shall be done.
- Local Level (urban and rural)
 - I. Policies for empowerment of local authorities, through regulatory and financial mechanism to work and coordinate with civil society, communities and indigenous people and migrants for environmental conservation & protection at the local level
 - II. Inclusion of permissible/ non permissible use based on resource availability
 - III. Policies for resource based Local level plans

The environmental status w.r.t air, water , land and biotic componenets need to be updated on a regular basis for this a Data Base observatory need to be constituted.

RECOMMENDATIONS OF THE STUDY GROUP- XI COVERING THE CHAPTER DISASTER MANAGEMENT (15) OF REGIONAL PLAN 2021

Recommendations

- Following the formulation of the draft plan in 2013, there are new developments, particularly adoption of three international agreements having direct bearing on disaster management and provide new direction to disaster management and disaster risk reduction measures into our development decisions and policies. These are:
 - Sendai Framework for Disaster Risk Reduction – 2015
 - Sustainable Development Goals 2015-30
 - Paris Agreement on Climate change at the 21st COP under UNFCCC on Climate Change-2015
- In line with the above agreements the NDMA has brought out National Disaster Management Plan (NDMP) in May 2016 which provides a framework and direction to the government agencies for all phases of disaster management cycle keeping up with the emerging global best practices and knowledge base in disaster management. The NDMP has been aligned broadly with the goals and priorities set out in the Sendai Framework for Disaster Risk Reduction 2015-2030 in which India is a signatory. The four priorities for action under the Sendai Framework are:
 - Understanding disaster risk
 - Strengthening disaster risk governance to manage disaster risk
 - Investing in disaster risk reduction for resilience
 - Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction
- The NDMP includes measures that will be implemented over the short, medium, and long-term more or less over the time horizon of the Sendai Framework ending in 2030. It is designed in such a way that it can be implemented as needed on a flexible and scalable manner in all phases of disaster management:
 - mitigation (prevention and risk, reduction),
 - preparedness,
 - response and
 - recovery (immediate restoration to build-back better)
- Therefore, the policies and proposals of the proposed NCR Plan for 2041 should clearly identify the priorities for action under various phases of disaster management as mentioned above and covering aspects of capacity development and financial structure, which can be implemented over short, medium and long term.

The recommendations are based on international (Sendai framework, Paris agreement) and national guidelines/legislation (National disaster management plan (NDMA), DM Act-2005, national disaster management policy-2009).

Regional/ Sub-Regional Level

The Policy guidelines need to include:

- **Identification of types of Natural Hazards** (Geophysical like Earthquake, Hydrological like Flood and Landslides, Meteorological & Climatological like Cyclones, Storms, drought, Extreme weather conditions, Forest Fires and Biological like epidemics)
- **Identification of types of human-induced Hazards-** industrial accidents, transport related accidents (road, air, rail, bridge) mine flooding, oil spills, etc. Chemical, Biological, Radiological, and Nuclear (CBRN), Stampedes, Terrorist activities and secondary incidents add to these risks
- **Creation of Information Systems and Observatory:**
 - Spatial (Mapping of identified Natural and human-induced Hazards – creation of database on GIS platform),
 - non spatial database
 - Hazard Risk Profile, multi hazard Zonation & interactive maps
 - Monitoring, Forecasting and Warning Systems
- **Enhancing Resilience pertaining to critical infrastructure**
- **Preparedness and Response**
 - Institutional Framework
 - Early Warning system
 - Agency wise Responsibility Matrix for Preparedness and Response at State & district level
 - Scope & approach of recovery process
 - Reconstruction & Rehabilitation
 - Fund mobilization – Disbursement and monitoring
- **Strengthening Disaster Risk Governance**
 - Preparation of Responsibility Matrix for Strengthening Disaster Risk Governance
- **Inter-Agency and inter-district Coordination**
- **Training and awareness generation for Preparedness**
- **Financial arrangement for risk mitigation and enhancement of resilience**
- **Policies for the protection of Aravallis for Disaster risk reduction**
- **Impact assessment of hazardous uses/activities need to be made mandatory.**

District level

The Policy guidelines should include:

- Preparedness, planning and capacity development
- Preparation of Hazard Risk Profile and multi hazard Zonation Maps, Hazard Risk and Vulnerability Assessment (HRVA) and Hazard-wise Responsibility

Matrices for Disaster Risk Mitigation with consideration to be given to the Seasonality of hazards

- Integrated planning at Block, Urban, Rurban Clusters and Village level
- Adoption of structural and non-structural measures
 - **Structural measures** are any physical construction to reduce or avoid possible impacts of hazards, or the application of engineering techniques or technology to achieve hazard resistance and resilience in structures or systems. Example: dams, flood levies, ocean wave barriers, earthquake-resistant construction and evacuation shelters. (UNISDR 2009)
 - **Non-structural measures** are measures not involving physical construction which use knowledge, practice or agreement to reduce disaster risks and impacts, in particular through policies and laws, public awareness raising, training and education. Example: building codes, land-use planning laws and their enforcement, research and assessment, information resources and public awareness programmes (UNISDR 2009)
- Fund allocation needs to be based on spatial vulnerabilities of the region i.e. spatial context of investments must be considered.
- The Functional Plan on Drainage for NCR should be considered.
- Early, Mid and Long-term Recovery measures should be considered.

Local Level (urban and rural)

The Policy guidelines should include:

- Empowerment of local authorities, as appropriate, through regulatory and financial mechanism to work and coordinate with civil society, communities and indigenous people and migrants in disaster risk management at the local level
- Development Control Regulations for Hazard zones: Permissible Activity based on hazard zones. Inclusion of permissible/ non permissible use based on hazard zones as part of Local level plans, utilization of land (regional level and urban level) and permissible activities should be based on the multi-zonation.

The policies should be translated into the plans at various hierarchies that needs to be implemented and maintained.

RECOMMENDATIONS OF THE STUDY GROUP- XII COVERING THE CHAPTER RURAL DEVELOPMENT (16) OF REGIONAL PLAN 2021

RECOMMENDATIONS OF THE SUB-GROUP AND WAY FORWARD FOR PREPARATION OF RP-2041

1.1 In the past, there used to be a continuum of rural-urban settlements in a rational and harmonious way. So, instead of a 3-tier system, a 4-tier system of rural settlements is recommended to make it more concrete, scientific and natural. In this 4-tier system, the remotest, **smallest** villages will be linked to a **medium** village which will serve as the first level of centralization of functions and activities serving 4-5 villages around in a radius of 2-3 kms. For instance, a cobbler can be made available at such a medium village and not in every village. Similarly, a potter could be there making and supplying pots to smaller villages around. A blacksmith could be there to repair the agricultural tools, etc.

The next level of centralization could be easily identified at a bigger village serving around 20-25 smaller villages in an area of about 7-8 kms radius. There could be small markets to meet the routine requirements of villages around. Generally, such villages have a weekly phenomenon called "Haat" where people from around 7-8 kms gather either for sale of their local products or as buyers for the non-local products on a weekly basis as suppliers/shopkeepers converge from outside areas to sell products not available/produced in the local area. It is also proposed to call the Central Villages as Big level villages or **Bazaar Villages**.

The next level of centralization should be the Taluka town with regular markets for local and non-local products to meet the requirements of an area of 20-25 kms covering 100 to 200 villages. This can be called as the **Nodal** point. It will be self-sustaining in terms of local resources as well as providing an interface with the non-local requirements.

This way, a new tier system of rural settlement is suggested which can be called as **NBMS** where N stands for Nodal, B for Big (Bazaar), M for Medium and S for Small Village. Sub-regional plans should identify and locate all such villages with indicated influence zone so that state administration can work on the same for provision of required infrastructure.

1.2 Nodal Points (Tehsil towns) and Big (Bazaar) Villages will be identified in the Sub-regional/District Plans by the respective State Governments based on their growth potential, size and capability of performing central functions for the small villages. Help from Centre for Rural Development and Technology, IIT Delhi could be sought to get a detailed methodology to do this. Such a program to be initiated and conducted by states/districts could be finally assisted by NCRPB.

1.3 Various schemes related to rural development which need to be dovetailed in the above NBMS structure for the rural areas and accordingly the respective Village Development Plan be prepared in line with the District Development Plans recommendation and proposals.

1.4 Participating State Governments may identify 2 or 3 Tehsil towns/ Big (Bazaar) Villages for development in their respective sub-region and also prepare Development Plans and formulate projects on pilot basis. NCRPB's financial assistance window is open for such project implementation. Some model District Development Plans and Village Development Plan should be made available to the states. For example: A report was prepared by M.N Roy Institute for Non-Formal Education and Research in collaboration with National Institute of

Science Technology and Development Studies (NISTADS) on Feasibility of Establishment of Multi-sectoral rural network system of group enterprises for Karad District in Maharashtra. It focuses

on (1) Workers owned taluka wise large scale networked system of group enterprises, (2) Multi-sectorial approach, (3) Conservation, Development and Use of local resources, (4) Strengthening of artisanal network with upto date and appropriate technology and (5) Benefits to small producers, artisans and workers through wider regional networking.

1.5 Aspects like shifting of mandis from the core urban to rural areas need to be looked into.

1.6 In addition, other strategies for rural development may be included:

i. Training and technical support in micro-entrepreneurship, processing of local produce, vocational skill upgradation etc., allied agro-economic activities such as poultry, dairy, pottery, handlooms, handicrafts and rural tourism may be provided in a time bound mission mode approach. New technologies need to be made available to the people in the region. Technologies/production processes need to be devised in a 4-tier system. It should start with surveying of the region and identifying in particular the concentration of artisans at different locations. It is interesting to find that the B level locations generally have concentration of artisans which can be called an average concentration of the region. The N level locations generally have 9 times the average concentration of the artisans. On the other hand, N level location have 1/9th the concentration of the artisans as compared to the average. The S level locations generally do not have the artisans concentration and are mainly involved in primary production activities like agriculture, animal husbandry, fisheries, forestry etc. The artisans may be considered representing the secondary level of production systems involved in servicing or processing the primary level production.

The entrepreneurship, rural industries, service industries etc. should be decided based on the availability of the artisans in the region and locate different functions/operations/production systems at different locations depending on the concentration of the expertise available with the artisans. Below are some examples to explain it in detail:

a) Agriculture sector: Say Wasteland Development.

New technologies are available in the area. For instance, IIT Delhi has come up with technologies where wastelands could be developed using locally available micro-organisms in the soil. Some major steps for the same are:

1. Isolation and identification of the desired micro-organism from the local soil.
2. Multiplication of the micro-organism isolated and identified to develop a culture for the same.
3. Combining the culture with a carrier to produce a bulk product easy for transportation and application.
4. Development of nurseries based on the above technologies and training of farmers.
5. Transportation and application of the saplings in the farmer's field.

Now, the first two steps require sophisticated and costly systems which are not feasible/practical to be provided at every village level. This would require a good laboratory. This should be taken up at a central level, say at the Nodal point. This would be a 'N' level function in the region at the Taluka level to establish the required laboratory.

The next step, combining the culture with a carrier could be done at a relatively more decentralized level, say at all Big village/Bazaar points in the region. The culture could be obtained from the 'N' level and mixing with the carrier could be carried out at the 'B' level. People would be trained in the same at the 'N' level.

The next step of developing the nurseries could be carried out at each 'M' level in the area. The last step of transportation and application of the saplings purchased from the 'M' level could be carried out at all 'S' villages by the farmers.

b) **Animal husbandry and food processing:** Animal husbandry is also a major occupation similar to agriculture in the rural areas. However, here are major difficulties encountered to maintain a good animal husbandry in the rural areas. Sometimes, we treat the cattle very poorly. Many a times beating them without understanding that this may create scratches on their skins and heavily reduce the cost of the hide/skin that the farmer could recover even after the death of the cattle. Also, there are problems in preserving and processing of products from agriculture or from animal husbandry. Just take an example of a dairy system in the rural areas. Cattle are reared in almost all households. People would like to fetch a good price for the milk produced to make dairy a profitable venture, but this generally does not happen. Many a times, they have to sell the surplus milk at throwaway prices because if they do not do that immediately after milking, it will get spoiled. There are hardly any technologies available to preserve the milk over a few hours/days at the rural level. The preservation technologies available in the market are applicable only on large scale. They are based on cooling/pasteurizing the milk which is very expensive. Again, IIT Delhi has tried technologies which can be applicable even at a very small scale, very low cost and based on heating the milk at a prescribed temperature and pressure. The steps involved in the dairy industry are:

1. Production of milk happens at the household level in almost every village and hence is a 'S' level activity.
2. The milkman/doodhiya generally collect the milk from different households and take it for distribution to nearby towns/cities. Even, for a milkman/doodhiya if there is surplus milk left, he has to sell it to Halwaiys at a very distressed price. If he is not able to get a good price, he would naturally not be able to offer a good price to the producer. If there is technology as explained above which is low cost and yet effective, the milk can be preserved and sold at a proper price benefitting all. Such processing/preserving units based on the new technologies available could even be installed at every 'M' level and hence there will be no distressed selling. At 'B' level, we could have further processing of milk into various products like sweets etc. At the 'N' level, one could go even to the making of products like chocolates/toffees which could even be exported out of the region.

c) **Leather industry:** It is unfortunate to find out that the raw material (skin/hide) for the modern leather industry is largely being imported. While, a large amount of raw materials locally available is completely wasted. The hides and skins basically come from the fallen (dead) animals in the rural areas. However, it has been completely ignored. The system for collection of hides/skins from the rural areas. Again, the steps involved in the leather industry are:

1. The cattle are reared at every household level even in the smallest villages. They will obviously die there only. Hence, the availability of the hide/skin is a 'S' level function.
2. The next step is the recovery of the hide/skin. In a traditional system, there used to be flayers located in a group of 3-4 villages each. They used to be informed about the fallen/dead animals who would attend to the same within a few hours as otherwise they will start stinking and rotting. The flayers would take the dead animal to an allotted place generally called 'Hatwara' and remove the skin there. There were techniques to preserve the skin over a few days before it could be taken for sale in the market. Thus, flaying used to be an 'M' level activity in the rural areas.
3. The next activity would be selling and processing of the skin. The flayer would take the stock of the skins collected during the week and sell it in the weekly markets (Haats) held at every 'B' level. There used to be tanners who would buy this skin at the Haat and process it into coarse leather. The tanners would take the coarse leather to the 'N' level where it could be processed further into fine leather required for making shoes and other products. There could be further processing even at higher levels say cities to make finer products.

Thus, it could be understood from these examples that almost every activity/production process needs to be looked into and designed properly so as to fit in the tier system of settlement described above. This would make these systems sustainable, viable, within the reach of the people and almost completely based on local resources and skills generating huge employment opportunities in the rural areas and improving the economy tremendously.

ii. Financial incentives and loan schemes for starting micro-enterprises may be worked out and delivered in a package through district planning.

iii. Providing urban amenities/facilities in rural areas such as housing, better sanitation, water supply, communication system, social infrastructure etc., to improve the quality of life in rural/semiurban (Mofussil areas) and also provide better connectivity among various types of settlements in the rural areas. The road map for effective implementation needs to be spelt out in the Sub-Regional Plans.

iv. Increasing demand for organic agriculture produce in the cities of NCR should be met through cultivating non-conventional crops such as mushrooms, broccoli, baby corn, bamboo shoot, etc. as well as floriculture. Similarly handicrafts, handloom, rural industries could be encouraged to supply products to the neighboring cities. The participating State Governments have to provide necessary infrastructure in terms of technical know-how, finance, management and marketing support facilities etc. to the farmers/artisans and producers to promote the non-conventional high value commercial farming /production in the rural industries in NCR. Academic/Technical/Management institutions could be involved in providing the necessary support. A program like Unnat Bharat Abhiyan launched by the Ministry of Human Resource Development could provide the necessary networking with such higher educational institutions which are involved in rural development programs already.

v. Promotion of strategic partnership between Government agencies, private sector, NGOs and Cooperatives in the areas of marketing, research and development and growth of rural infrastructure.

vi. Dissemination of relevant information on regular basis on on-going programs, sources of micro-credit, market potentials, etc.

1.7 There is a need for convergence and integration of resources by various Government agencies and other institutions for rural development from various schemes sponsored by Government of India and NCR participating States in order to provide for the basic modern fabric and infrastructure for 'Sustainable Development' and 'Self-reliance' of rural areas, so that the dichotomy and disharmony between urban and rural areas is minimized.

1.8 Participating State Governments should prepare the detailed rural development programs and incorporate the same in the related District Plans and Village Development Plan. These

programs should be prepared keeping in view the objective that migration from the villages to the neighboring towns and industrial areas should be minimized to the extent possible.

1.9 New technologies need to be made available to the rural people in different sectors such as agriculture, animal husbandry, food processing, handicrafts, handlooms and the rural/cottage industries. Such technologies should be so devised as to fit into the tier system of settlements (NBMS) as described earlier. The existing and proposed technologies could play a significant role in this.

1.10 The conversion of rural areas into urban shall be organic. Though land is a state subject and responsibility of its management lies with the State Governments. Yet, it has been observed that state governments are converting the rural areas into urban by expanding the boundaries of urban areas. This lead to lack of holistic development of the region in the absence of sub-region plan with a focus on rural areas. The defined urban areas as per Census shall only be considered as Urban and expansion of boundary engulfing the rural areas shall not be practiced without a detailed need assessment study and after preparation of master plan for the urban areas, under intimation of NCRPB. Such villages with potential to be shifted to the list of urban areas be listed in Subregional Plan (as an addendum to existing).

1.11 Infact, a good concept for urbanizing the rural areas had been given by none other than our former president Dr. APJ Abdul Kalam. It is called PURA (Providing Urban amenities in Rural Areas). It is meant to tackle the problem of migration of people from rural to urban areas for employment. Its objective is to make rural areas as attractive as cities are. This is already a scheme of Govt. of India and hence can be easily implemented under this program. Some of it's major objectives are given below:

1. Providing high cost advanced technology to villages.
2. Linking a loop of villages by a ring road about 30 km in circumference with frequent bus services. That will integrate the population of all connected village into one market. Then, those villages could become a virtual city with a potential to expand and accommodate 3-5 lakhs people.
3. Treating rural development as corporate social responsibility.
4. Replacing agriculture by connectivity as the Driving Force of rural development.
5. Rural fund are for investment not for consumption.
6. Industry and services should be given priority in job creation and employment in farm sector should decrease.

7. Compensation to farmers should be given for the land acquired by an annual fee equal to twice the price of the produce they grow, not by a lump sum amount.
8. Land to employers sub-leased for both, Business and for residences for employee within walking distance. This will solve the problem of commuting daily to work, a compulsion for the city living.
9. Providing same per capita investment to rural areas as cities do.
10. PURA is meant for reverse migration of all the facilities like water, sewer, drainage etc.
11. PURA prioritizes rural development, because $\frac{3}{4}$ of our population lives in rural areas, by neglecting them India cannot be a developed nation.

1.12 Government of India and NCR participating States are having various schemes related to rural development which need to be dovetailed with the policies and proposals of the Regional Plan/Sub Regional Plans for their implementation in the rural areas. District Administration will have to take lead to incorporate various proposals while preparing plan of action for development of respective districts in various sub-regions. Quarterly District level meeting may be held in this regard at DM level.

1.13 The preparation of District Development Plan encompassing urban and rural areas shall be systematised. The timeline shall be fixed for consolidation of plan. It shall be done once in every 5 years. The stakeholder consultation shall be made an integral part of plan preparation. The local people shall be involved in preparation of village development plan.

1.14 The preparation of village development plan, block development and the integrated district development plans shall be carried out as per the 73rd Constitutional Amendment Act. Rural Development Plan shall have spatial, sectoral and economic plan. The project appraisals i.e. economic appraisal, financial appraisal, social impact assessment and environment impact assessment of infrastructure projects shall be included in the project proposals prepared to implement the Plan recommendation around.

1.15 Institutional Mechanism: The integrated rural development plan shall be prepared by each of the Gram Panchayat on an yearly basis with a detailed implementation plan. Block Development Officer shall be entrusted with the responsibility to consolidate all the gram panchayat plans on a yearly basis for implementation of the projects.

1.16 The education in schools and colleges located in rural areas shall be linked with skill up gradation. The placement of students shall be ensured for increasing the employability of rural youth and reduce the forced migration to urban areas.

1.17 Cluster of villages may be identified for planned development by provisioning economic, social and physical infrastructure on the line of "Rurban Cluster" as envisaged in the NRuM. Sub-regional plans may identify such Rurban Clusters in the respective Sub-regions for planned development of rural settlements. Development of Rurban Cluster would help in spreading development in the rural NCR, stimulate local economic development, attract investments and create ample employment opportunities in settlements.

1.18 It was observed that notified Controlled/Development/Regulated Areas of towns covers a large number of villages. While preparing Development Plans for the Towns, infrastructure (physical and social) plans for the large villages within urbanisable area and outside may be prepared and integrated with the proposed urbanisable areas of the respective town.

1.19 It was observed that urban villages and large villages in rural areas are lacking sewage treatment facilities in NCR as a result they are facing serious environmental problems which need to be addressed on priority. It is suggested that all the urban villages be provided with facilities equivalent to the towns whose controlled area they are located. Large villages may be provided with low cost sewage treatment facilities with appropriate sewerage system. Other rural settlements should be provided with low cost sanitation measures such as sanitary latrines, septic tanks and soak pits.

1.20 It was observed that Regional Plan is prepared for development of NCR and for control of land uses and development of infrastructure in NCR (Section 2(j)). Regional Plan 2021 provided proposed landuse plan for control of land uses which need to be implemented by the NCR participating States. The prevailing Acts and Policies of the NCR participating States of Haryana, Uttar Pradesh and Rajasthan has provisions for declaration /notification of Controlled /Development/Regulated Areas for planned development & landuse control and preparation of Master Plan/Development Plans for such notified areas which constitutes about 40% NCR and do not have any control on location of urban activities in rural areas outside the such notified areas. This has resulted in large scale haphazard development of urban activities /constructions outside these notified areas which constitutes about 40% by way of conversion of rural land to urban activates. In order to manage the conversion of rural land use and to control the large scale urban activities in the rural areas, it is essential to notify the entire sub-region of each NCR constituent States. This calls for review of existing Legislations of the NCR participating states.

As has been observed above, the existing town Planning Acts of NCR participating States are not comprehensive enough to enable to enable effective landuse control in the rural areas. Vast part of the NCR is outside the notified controlled /development areas and is essential to bring them under control through modification in the existing legislations to designate the entire Sub-region as controlled /development areas in each NCR participating States and set up appropriate sub-regional level planning and development mechanism to exercise landuse and development control (may be under Ministry of Rural Development whose schemes will play a vital role in implementing projects as well).

1.21 Suitable policies and proposals on employment generation and skill upgradation in rural settlements especially in non- farm economic activities may be recommended. In this context it may be mentioned that micro and household enterprises has huge potential in rural settlements in NCR Some of micro and household enterprises functioning in rural settlements are murtikari, pottery, sports goods, scissors and blades, leather works and artificial ornaments, zari works etc. if developed with required infrastructure, technology and skill upgradation, can provide gainful employment to potential out-migrants from rural areas.

1.22 Since the perspective period of the RP-2021 is going to the expired in September, 2021, the SG's recommendations for modification in the Policies and Proposals of RP-2021 may be incorporated in the RP for the next perspective year-2041. Study Group may identify quick Studies for preparation of RP 2041 relating to Rural Development in NCR.

1.23 All the people in rural areas shall be trained to enable them to do cashless transactions and digital applications. Seminars and workshops in identified Nodal Villages shall be helpful.

1.24 Adhoc programme implementation shall be changed to planned implementation. For this, plan preparation based on people's requirement shall be given top priority.

1.25 The gram sachiv shall only be allocated the number of villages which s/he can visit in a week time. Gram Sachiv shall submit monthly progress report regarding the status of implementation of the programmes, projects including schemes.

1.26 The Gram Pradhan (elected representative) shall have an active role in preparation as well as implementation of the plan.

1.27 The baseline data shall be generated by District Administration so as to track the progress of change through continuous monitoring. Mid-term and end term evaluation of each of

government programme shall be carried out. Block office shall be custodian of such data and it shall be kept in a form where it can be viewed by general public.

1.28 Networks should be created to support entrepreneurs for micro business development.

1.29 Efforts should be made to retain local businesses and help them grow.

1.30 New businesses in the community/rural clusters should be promoted.

1.31 Initiation of revitalization programme for villages is necessary.

1.32 Farmers Markets and Community Supported Agriculture (CSA) should be promoted.

1.33 Efforts for development of visitor amenities-Rural and geo-tourism must be initiated, in co-ordination of Department of tourism of respective states.

1.34 Activities like Horticulture & forestation, Mixed Farming, Crop Exhibition, Maintenance of the Fodder land, Rain Water Harvesting, etc. must be strengthened.

1.35 Integrated Development approach for ‘Local to Regional Development’ should be followed.

1.36 Academic/Technical/Management institutions could be involved in providing the necessary support for the new initiatives in the form of technology, management, marketing etc.

1.37 Programs like Unnat Bharat Abhiyan launched by the Ministry of Human Resource Development and coordinated by IIT Delhi could provide the necessary networking with such higher educational institutions which are involved in rural development programs already.

1.38 Promotion of strategic partnership between Government agencies, private sector, NGOs and Cooperatives in the areas of marketing, research and development and growth of rural infrastructure is needed.

1.39 Dissemination of relevant information on regular basis on on-going programs, sources of micro-credit, market potentials, etc. is required.

1.40 The periodic evaluation of the states be part of High Power Committee meeting of each NCR Participating States.

1.41 TCPO should take up the aspects regarding examining and resolving the issue pertaining to implementation and enforcement of Village Development Plans, to counter the problem of

unauthorized construction in villages within controlled/regulated/development areas. Planning for areas outside controlled/regulated/development areas need to be looked into. Reference of initiatives taken in Cuba and Sikkim regarding urban agriculture and agriculture production promotion, may be considered in the next Regional Plan.

RECOMMENDATIONS OF THE STUDY GROUP-XIII COVERING THE CHAPTER REGIONAL LANDUSE (17) OF REGIONAL PLAN 2021

1.0 Recommendations of the Study Group

1.1 The issue of delineation of the NCZ and mismatching on the ground is due to the difference in scale of mapping, at Regional and local/ Master Plan level. So, it may not be possible to show each and every site in Regional Plan with specific land use category. The decision of allowing the lowest level of use, within the broad land use (and down below as mentioned in the Regional Plan), should be left with the participating states.

1.2 The delineation of the NCZ including that of forests and rivers, etc., should be based on operational definitions considering the working definition of Aravalli, forests and water bodies provided by the Ministry of Environment, Forests and Climate Change in its comments on Chapters 14 and 17 of RRP sent to NCRPB. These definitions, as and when finalised and accepted by the Competent Authority should be applicable.

1.3 The city level density norms for various towns and cities could be based on URDPFI Guidelines, as already stipulated in Table 17.9 of revised Regional Plan-2021. A footnote on the table may be modified as reduction up to 10 per cent in the density norms for “special utility area” to cover cases wherein land is being acquired and designated as controlled areas specifically for establishing power plants/ refineries etc.

1.4 There is strong need to improve the forest cover in the region and preserve the agriculture land. Bio-diversity of the region should also be taken care while formulating the strategies w.r.t. green/ forest cover.

1.5 Further the list of activities/ uses permitted in the Agricultural (Rural) Zone outside the Controlled/ Development/ Regulated Areas may be as per RP-2021. The passive Regional recreational areas may be further defined in the next RP preparation.

1.6 As briefed in the preceding paragraphs, a few other recommendations, though may not be directly under the Chapter ‘Regional Land Use’, may be considered by the Board.

1.6.1 A detailed academic/ professional study must be undertaken to assess the viability of the delineated Region and to recommend deletion (or otherwise) of some districts.

1.6.2 The information regarding the latest figures (in terms of areas) and maps/ satellite images to show the location and extent of various land uses must be acquired by the Board and the respective participating States.

1.6.3 Preparation of a Central NCR (CNCR) Plan and a Sub-Regional Plan for the Delhi Sub-Region must be taken up to fill the gap in the hierarchy of levels of planning.

RECOMMENDATIONS OF THE STUDY GROUP-XIV COVERING THE CHAPTER IMPLEMENTATION STRATEGIES, MANAGEMENT STRUCTURE & RESOURCE MOBILISATION (19) OF REGIONAL PLAN 2021

1.0. RECOMMENDATIONS

1.1. Implementation Strategies

1.1.1. A new strategy as approved in 34th Meeting of NCR Board is required to be worked out that could enable the implementation of the Plan, declaring NCRPB a main custodian of agglomeration strategy for the region, focusing on improving the level of urban infrastructure / services while responsibility of the respective state governments, their municipal and other para-statal bodies should be to work out the detailed strategies for achieving the plan objectives for each sector.

1.1.2. The performance indicators with respect to the urban services and other infrastructure should be institutionalized so that the monitoring of the projects is benchmarked against these indicators. NCRPB to enhance the participatory processes, such that there is buy-in from all stakeholders. Greater efforts are required to increase awareness about the Regional Plan amongst the elected representatives of the urban local bodies and citizens of these communities.

1.1.3. RP- 2021 also underlined the need to rationalize the tax structure, extend uniform financial and banking services, remove restriction of interstate movement of taxis and auto rickshaws, to provide uniform telecom facilities and uniform power supply, to have an integrated education policy and finally also to have an integrated law and order machinery, this policy be continued

1.1.4. The study group was of the opinion that for managing the funds in an optimal manner, NCRPB should strength their own Monitoring Wing and NCR Cells, instead of opting for creation of another separate agency or SPV, as establishment of such agencies may result in overlapping the jurisdiction and duplication of authorities.

1.1.5. In line with Act, NCPRB, may obtain the technical advice / assistance from the Town and Country Planning Organization, as mentioned in Section 30 (A) which reads ‘the Central Government may direct its Town and Country Planning Organization to provide on such terms and conditions as may be mutually agreed upon, such technical assistance to the Board as that Government may consider necessary and the Government of a participating State may direct the Town Planning Department of that Government to make such technical assistance to the Board as that Government may consider necessary’.

1.1.6. Participating States have to go beyond their token approval to the Plan, and have to recognize the Regional Plan-2021 as their own Plan and accept the responsibility of implementing its policies, projects and proposals through their physical and financial effort, reflecting it in their five-year and annual plans and work programmes, accordingly the participating States be impressed to accept this responsibility.

1.1.7. The regional land use policy - 2021 flagged the issue of natural conservation, high development pressure, etc.; and emphasized that their details be reflected in the Sub-regional Plan and Master Plan of the concerned States and towns by the respective state governments, this need to be followed up.

1.1.8. The Policy of RP - 2021 placed emphasis on rural development, disaster management and heritage and tourism development wherein the local government was required to prepare such Plan converging with the available resources and by giving priorities and to be incorporated in the District Development Plans, this policy should be continued.

1.1.9. In RP- 2021 priority has also been given to improve the connectivity and overall infrastructure in the region, among the infrastructure, transportation networks is the most important aspect which will in the long run help in decentralizing the economic activities, which is at present concentrated in NCT-Delhi, this aspect needs to be addressed in RP – 2041.

1.1.10. With regards to the policy on decentralization of industries from NCT-Delhi, the RP- 2021 emphasized that only hi-tech industries be allowed within NCT-Delhi and in the existing industrial areas. Low-tech industries be transformed into hi-tech and those which are unable to do so, be phased out and to be relocated outside NCT-Delhi, this policy be continued.

1.1.11. For effective implementation of the Plan it would be advisable:

- To set up an MIS to track and monitor / evaluate the implementation and report the progress periodically to the Board.
- To conduct Impact Assessments of projects / development works and undertaking corrective measures, where necessary.

1.2. Management Structure

1.2.1. In order to implement the policies and strategies, NCRPB should establish its own efficient Management System for speedy implementation of the Plan proposals and for proper monitoring of the projects at NCRPB level and also at the State level.

1.2.2. The Immediate steps be taken for evolving stable and transparent policies for entry and functioning of private enterprises in a competitive environment, establishing single window system for processing official clearances for development projects, adopting independent regulatory mechanisms, creating modalities for expeditious settlement of disputes between private and official agencies involved in the development projects, and setting up machinery for quick redressal of grievances of targeted beneficiaries (consumers) of various project components.

1.2.3. The coordination of the NCRPB entails that there is full commitment from all stakeholders to achieve the aims and objectives of RP-2021, and that actions and policies undertaken by State Governments and subordinate agencies and organizations would only require coordination, not ‘determination’, ‘guidance’ or ‘control’, and in case of violations and deviations from the plan, the remedy under NCRPB, Act 1985, Section 29 (2) is ‘the Board may direct the concerned participating State or the Union Territory to stop such activity and withhold financial assistance to the concerned participating State or the Union Territory’, this provision should be made more effective.

1.2.4. As the geographical area and population has almost doubled therefore, there is a need to strengthen NCRPB with adequate staff both technical and non-technical. In addition there is a need to strengthen Project Monitoring Cell at NCRPB for formulation of inter-state projects and their monitoring. It would be advisable to promote E-governance in the designing, implementation and monitoring of RP/ SRP/ FP/ projects of the Region. The Study Group noted with concern that the pivotal post of Chief Regional Planner of NCRPB is lying vacant since

long due to which it is not possible to get the progress report on implementation of policies / strategies / projects.

1.2.5. Besides restructuring and strengthening of the NCR Planning and Monitoring Cells at the state level in a manner that facilitates single line command and control, it is suggested that Secretary, Urban Development and In-charge of the NCR Cell should be vested with the responsibility to coordinate among all the agencies at the State level for implementing the schemes as proposed in the Regional Plan-2021.

1.2.6. For encouraging the private sector to actively involve in the development programmes in the NCR and in order to sustain their continued participation, a climate of mutual trust and cooperation with their counterpart public agencies are pre-requisites

1.2.7. The Private Sector be allowed to develop the land and recover a part of the value added on account of such permitted development; granting of transferable development rights (TDR), funding of infrastructure projects on innovative methods like BOT, BOLT, BOOT, etc.; by providing land as initial input.

1.2.8. The components to be undertaken by the Private Sector, exclusively and jointly with the Central and State agencies, includes acquisition and development of land, Industries and wholesale trade, social infrastructure, local and trunk services, construction of block housing, construction of expressways, mass transport system, power generation, power transmission and distribution, and telecom services, accordingly, Private Sector be encouraged and invited to participate in the implementation of NCR Plan.

1.2.9. Under current planning practices, land is ‘notified/ reserved’ for development as per Plan, whereas the land use planning, development and change is practiced at state level, through Development Control Regulations (DCR), therefore, there is a need to bridge this gap between planning and implementation.

1.3. Resource Mobilization

1.3.1. It is imperative that more innovative mechanism of resource generation are explored in addition to normal budgetary support and IEFR, so that the envisaged development programmes could be implemented within a reasonable time-frame.

1.3.2. The funds available with the Board are from the sources namely grant from the Ministry of Urban Development, Contribution from Delhi Government, Market borrowing (Taxable and Tax-free bonds) and internal accruals (Interest income). The RP-2021 also underlines that there have been resource constraints with NCRPB in financing large-scale projects in the region due to which the regional infrastructure envisaged in the Regional Plan- 2001 could not be implemented, accordingly, Strategy proposed in RP-2021 regarding evolving mechanism of ‘**Special Component Plan**’ as a part of five-year plans be taken up with NITI AYOOG.

1.3.3. Some of the methods through which land could be used as a viable resource for financing various urban development programme in the region are: creation of land banks by the public agencies for utilization for future requirements.

1.3.4. Urban land is a highly valuable asset that should be very judiciously used to raise resources by the implementing agencies to fund the repayment of loans taken for initial development and for funding future development programmes, therefore, net value addition

should be recovered in the form of development / betterment charges and use the same for funding further development programmes, in the region by loading it on to the land cost.

1.3.5. Amongst the non-tax sources, the User Charges happens to be the most important mechanism of cost recovery, however, in actual practice the municipal governments are not recovering even the maintenance cost, besides Urban Local Bodies do not levy user charges, therefore, they may be impressed to recover at least the operations and maintenance costs.

1.3.6 There exists enough scope to enhance revenue generation from the existing local taxes. Tax administration in almost all the states in the country is constrained by not-so-effective tax administration and difficulties encountered in administration of the major tax - the Property Tax. The maladies in tax administration relate to lack of proper assessment of demand, billing and collection. Tax collection and generation of additional revenue could be ensured through a scheme of incentives and penalties for municipal staff and the taxpayers.

1.3.7. It is recommended that market based funds through accessing the capital market and the involvement of the private sector by making the projects commercially viable should be resorted in the financing of urban infrastructure in the NCR.

1.3.8. NCRPB should leverage the funds from the various schemes / missions launched by the Government like Smart Cities, AMRUT, Swachh Bharat Mission, HRIDAY, Urban Transport, Pradhan Mantri Awas Yojana, and Deendayal Antyodaya Yojana National Urban Livelihoods Mission, etc. However, Study Group was of the opinion that instead of identifying world class consultant to develop concepts, etc.; it would be more advisable to identify indigenous specialist / domain experts for specific studies while ultimate aim should be to create inhouse capacity in NCPRB for taking up this responsibility, specifically when NCPRB has experience in managing extra budgetary resources since it has been managing and servicing loans taken from ADB and KfW which has reached to Rs. 222.42 crore and Rs. 108.45 crore respectively (2014).

**POPULATION PROJECTIONS
NATIONAL CAPITAL REGION
2016-2041**

**WRITTEN AND PROJECTED
BY**

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PREFACE

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List of Abbreviations

NCR National Capital Region

NCRPB National Capital Region Planning Board

CCM Cohort Component Method

ASMR Age Specific Mortality Rate

ASFR Age Specific Fertility Rate

LSE Least Square Estimate

GR Growth Rate

UA Urban Agglomeration

M Corp Municipal Corporation

M Cl Municipal Council

MC Municipal Committee

MB Municipal Board

NP Nagar Panchayat

CB Cantonment Board

CT Census Town

Chapter -1

Introduction

The national capital “Delhi” was showing an unprecedented growth till 2001. After 2001 due to commercialization and occupation of many official buildings, human habitation started shifting from the national capital to nearby areas/states. Human settlement started concentrating from National Capital to National Capital Region to allow smooth functioning of the capital offices and business houses. The area notified by the Govt. of India, under the provisions of the National Capital Region Planning Board Act, 1985 is known as ‘National Capital Region (NCR)’. Apart from Delhi, NCR constitutes some districts of Haryana, some of Rajasthan and some from Uttar Pradesh. The Composition of the NCR is given in the following statement:

Statement 1: NCR consists of districts			
Delhi	Haryana	Rajasthan	Uttar Pradesh
North West	Faridabad	Alwar	Meerut
North	Gurgaon	Bharatpur	Ghaziabad
North East	Mewat		GautamBudha Nagar
East	Rohtak		Bulandshahar
New Delhi	Sonipat		Bhagpat
Central	Rewari		Hapur
West	Jhajjar		Muzzafarnagar
South West	Panipat		Shamli
South	Palwal		
	Mahendragarh		
	Bhiwani (including CharkhiDadari)		
	Jind		
	Karnal		

As early as 1959, it was recognized that to plan the growth of Delhi, a regional approach is needed. A statutory regional planning board, called National Capital Region Planning Board,

was set up in 1985 to develop the National Capital Region in a balanced manner. The NCR planning board (NCRPB) prepared a plan for the years upto 2001 called Regional Plan 2001. Subsequently the NCRPB extend the plan upto 2021. At present, the NCRPB is preparing for the regional plan for the period upto 2041. The prime work in this process is the projection of population for the covered area. This publication covers the population projected upto 2041 of the above mentioned area.

Constituents of NCR – a brief profile

Need to add NCR area details pertaining to year 2001, 2011 and present.

As stated above, the region includes the National Capital Territory of Delhi, parts of Haryana, Rajasthan and Uttar Pradesh that covers an area of about 55,098sq. km. The administrative units and their extents as originally were:

- i. NCT of Delhi (1483sq.Km)
- ii. Haryana sub-region comprises of the above mentioned districts. This accounts for 30.33 percent (25327Sq.km.) of the area of the state.
- iii. Rajasthan sub-region comprises of the above mentioned districts. The covered area is 1.31 percent (13447 Sq.Km) of the total area of the state.
- iv. Uttar Pradesh sub-region comprises of the above mentioned districts. About 3.68 percent (14841Sq. Km) of the area of Uttar Pradesh is under this region.

Population Distribution

The NCR had a total population of 474.13 lakhs in 2001. The sub-regions of Delhi, Haryana, Rajasthan and Uttar Pradesh accounted for 29.1, 28.2, 10.7 and 31.9 percent respectively in 2001. The NCR population increased to 581.57 lakhs in 2011. The share of sub-region changed to 28.9, 28.2, 10.7 and 32.1 percent respectively. The share of Delhi declined and that of Uttar Pradesh marginally increased. Population of NCR/ sub-regions, alongwith percentages, are given in the following Statement.

Statement 2: Population of NCR and their percentages during 2001 & 2011				
States of NCR	2011		2001	
	Population	Percentages	Population	Percentages
Delhi	16787941	28.87	13820507	29.15
Haryana	16427524	28.25	13388603	28.24
Rajasthan	6222641	10.70	5093734	10.74
Uttar Pradesh	18719180	32.19	15110452	31.87
TOTAL	58157286	100.00	47413296	100.00

From the statement 2 it is clear that the pressure of population on NCT of Delhi is reducing day by day. Whereas the population of Delhi was 29.15 in 2001, it has come down to 28.87 in 2011. On the other hand, the proportion of population in Uttar Pradesh NCR has increased from 31.87 percent in 2001 to 32.19 in 2011. In Haryana it has slightly gone up, in Rajasthan, it has slightly gone down.

Chapter -2

Methodology

The National Commission on Population presently under the Ministry of Health & Family Welfare had in 2014 constituted a technical group on Population Projections to provide Population Projections which can be used by different agencies. This group had advised the Demography Division dealing with Population Projection in the Office of the Registrar General, India to project the population of various states and Union territories of India. Among the states/Union territories there are nineteen major states with a population of 10 million and above in 2011. For these states, separate assumptions are made regarding fertility, mortality and migration. The nineteen major states constitute about 97 percent of the population of India in 2011. The remaining 10 states and 6 union territories contributed about 3 percent of the population of India in 2011.

For projection of nineteen major states with a population of 10 million and above in 2011, the methodology used was Cohort Component Method (CCM) considering Fertility, Mortality and migration. The other methods used were Mathematical Method using growth rates. Other method used was Time Series Equation using the method of least Squares. As such Projection methodologies can be divided into the following categories:

1. **Cohort Component Method (CCM)** for projecting the population considering fertility, mortality and migration by age and sex. In this method we use the Balance Equation as given below:

$$P_t = P_0 + B - D + I - E$$

Where P_t = Population at time t (future population)

P_0 = Base population

B = Number of births between two points of time

D = Number of deaths between two points of time

I = Number of in-migrants and O = Number of out-migrants during the period.

$B-D$ is the natural growth rate and $I-O$ is the net migration.

2. **Mathematical methods** using growth rates.
3. Using **trend equations** through use of method least square.

Though many of the factors affecting the methodology and analysis of population projections are the same for all geographic areas, there are important differences as well. Many often data are more readily available & more reliable at national than at sub-national level, Migration typically plays a greater role in population growth at sub-national than at national level and Population growth rates are more variable at sub-national than at national level. Further choices regarding data, techniques, and assumptions may be different for projections at one geographic level than for projections at another. In the **cohort-component method**, the main

difference between national and sub-national projections is the addition of the component on internal migration. Although an assumption that future international migration will be negligible can be justified for many countries, internal migration plays a significant role in almost every country, and at the sub-national level, it is often the most important and complex component of population change. The component method simulates how a population changes according to its components of growth: fertility, mortality, and migration. Based on past information, assumptions are made about future trends in these components of change. Then, the projected rates are applied to the age and sex structure of the population, in a simulation taking into account that people die according to their sex and age, that women have children, and that some people change their residence. Base population is grouped into cohorts defined by age and sex. The projection proceeds by updating the population of each age- and sex-specific group according to assumptions about three components of population change. Each cohort survives forward to the next age group according to assumed ASMRs. Migration is accounted for by applying age- and sex-specific net migration rates to each cohort as well. Projected ASFRs rates are applied to the female population in childbearing ages to estimate the number of births. A sex ratio at birth is used to divide total births into males and females. These births are exposed to the appropriate mortality schedule and then the survivors fed into the projection model.

Mathematical method is applied mainly for projecting the population of small areas within a country for which all inputs required by the CCM are not always readily available. The method is also useful in the projection of urban and rural populations. This method is used where an area containing the population to be projected (say district) is part of a larger (“parent”) area for which projections are available. The small areas should exist in a perfect hierarchical structure. The main drawback of this method is that it assumes that all the smaller areas will grow at the same rate as the parent area, if the growth rates of the said smaller areas are not available. After the ratio of the district to national population is obtained, assumptions are made on the future values of these ratios. Once the future values of ratios are fixed, the population of the district can be obtained by applying those ratios to the projected national population in respective years. Once the projection for each small area has been made, ensure the sum of the population of all small areas tallies with the national total using the national total as a control, adjust proportionally the projections of the small areas. Apart from this ratio method one use straightway the growth rate for estimation of projected values of population of the smaller areas.

Now the projection methodologies used for the present report is the time series equations adopted following the method of least square. What has been seen that while using the mathematical equation,

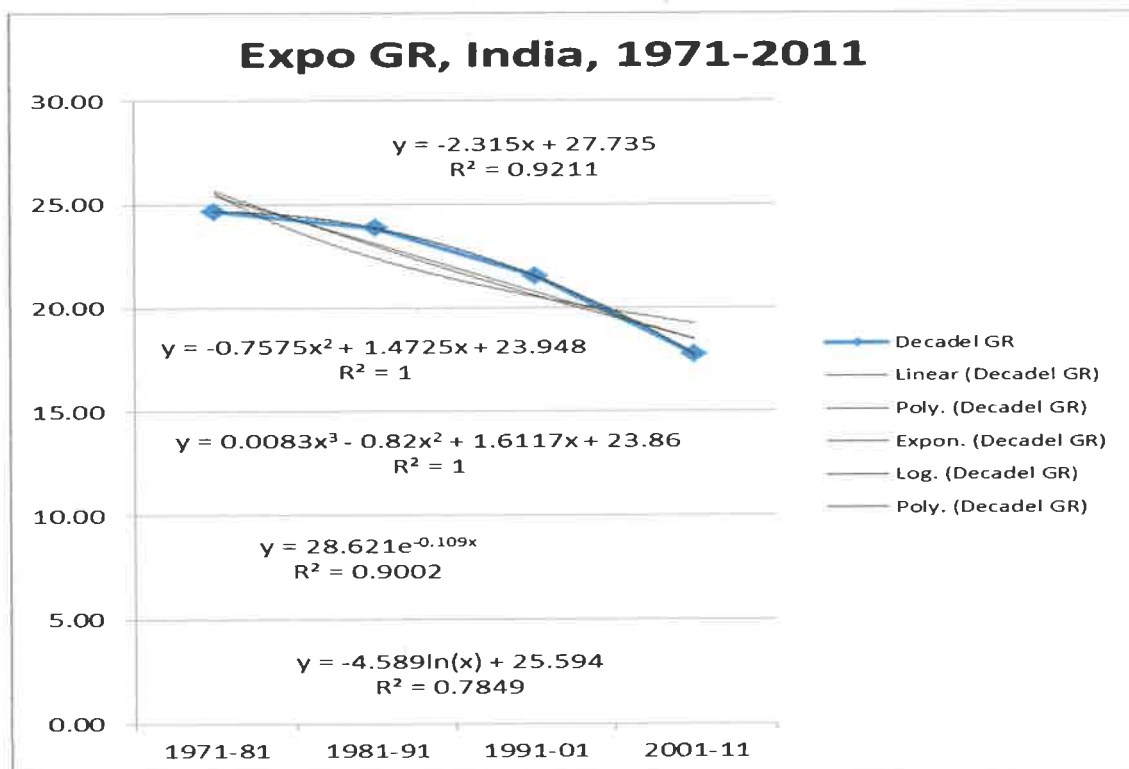
$P_t = P_0 e^{rt}$, it has been observed that the exponential growth rate r is taken from the just previous decade. For instance, to project the population for next 20 years i.e. from 2001 to 2031, it was the practice to take exponential growth of 1991-2001, which is perhaps not justified due to decline in fertility and marginal increase in mortality. In view of this, it is always advisable to estimate first the exponential growth based on the preceding available growth rates. In order to estimate the projected population for 2012 onwards, first we

estimate the most likely exponential growth rate for 2016, 2021, 2026 and 2031. For this purpose, we make first available the exponential growth of last 4 or 5 decades. These data are fitted to various types of curves such as polynomials, exponential, logarithm etc. Under polynomial, one can use linear, quadratic, cubic and degree 4 equations. Many often, it can be seen that quadratic equation has much better fitting than exponential or logarithm.

By the method of least square, we try to minimize the error due to estimation. For instance, if the equation to be fitted is $y = a+bx+cx^2$ then the equation to be minimized is $S = \sum(y - (a+bx+cx^2))^2$ or using the partial derivative $\partial y/\partial x$ and put $\partial y/\partial x = 0$, we get the normal equations and estimate the constants a,b,c. After substituting the values of a,b,c, we get the trend equations. Once we calculate the value of R^2 we can estimate the level of reliability. We fit the given data set to various different curves and find the values of R^2 , the curve which has the highest value of R^2 is used to estimate the future exponential growth rates.

For instance, the exponential growth rate of India for the decades 1961-71, 1971-81, 1981-91, 1991-2001, 2001-11 are available from published data of Census. Let us take these values and use the method of least square to find out the best fitted equation for estimation of future exponential growth rate. Using these data we can find out the best fitted equations and get the estimate. The equation which provides the highest value of R^2 will be the best estimate of growth rate. The estimated equation for estimation of growth rates are given in the following graphs.

Graph – 1: Exponential Growth Rate and their trend equations.



From the graph it can be seen that the values of R^2 of linear equation is 0.92, equation of degree 2 is 1, degree 3 is also 1, exponential equation is 0.90 and that of log is 0.78. So, the

level of reliability is highest in case of polynomial of degree 2 and 3. As such the estimated value of the growth rate should be used where the estimation is done through the equation of degree 2 or 3. The following table provides the estimated values of the growth rate for INDIA using the respective equation.

Statement 3: Actual 1971-2011, and estimated growth rate, INDIA, 1971-2031						
Period	x-values	Decadal GR	Estimated Growth Rate on Best fitted Equations			
		Actual	$y = -0.757x^2 + 1.472x + 23.94$	$y = 28.62e^{-0.10x}$	$y = 0.008x^3 - 0.82x^2 + 1.611x + 23.86$	$y = -2.315x + 27.735$
1971-81	1	24.66	24.66	25.90	24.65	25.42
1981-91	2	23.87	23.86	23.43	23.86	23.11
1991-01	3	21.54	21.54	21.20	21.52	20.79
2001-11	4	17.72	17.72	19.18	17.69	18.48
2011-21	5		12.38	17.36	12.41	16.16
2021-31	6		5.52	15.71	5.72	13.85
2031-41	7		4.70	12.42	3.75	8.25

As mentioned above that estimated trend values based on degree 2 equation are very close to actual. As such one can project the population based on the growth rates estimated based on degree 2 equation. It is therefore suggested that instead of projecting the population based on previous decade, it will be better to project population based on the growth rates that are going to come in future.

Chapter – 3

Total NCR Population Projection through various methods

On the similar line as mentioned in the chapter-2, using the method of least square we can estimate the population of NCR which will be close to the reality. Using this method, the exponential growth which will be likely for Delhi, Haryana, Rajasthan and Uttar Pradesh including India are as follows. In this connection, it may be mentioned that a number of equations have been fitted to the data pertaining to exponential growth rates of 1971, 1981, 1991, 2001 and 2011. The equation with highest values of R^2 has been fitted to get the future values of exponential growth rates. The best fitted values are given below.

Statement 4 : State-wise Annual Growth Rate based Best fitted								
Equation for 2011-41								
S. No.	State/Uts	Annual Growth Rate						
		2011	2016	2021	2026	2031	2036	2041
	India	1.77	1.48	1.24	0.82	0.55	0.47	0.35
1	Haryana	1.99	1.98	1.97	1.84	1.72	1.46	1.10
2	Delhi	2.12	1.97	1.82	1.23	0.82	0.70	0.52
3	Rajasthan	2.13	2.01	1.9	1.72	1.55	1.32	0.99
4	Uttar Pradesh	2.02	2.03	2.05	1.97	1.89	1.61	1.20

As the total fertility rates of currently married women are declining in recent years and further declining, the population growth rates will also be declining. As such it may not be fair to project the population based on a growth rate calculated on previous decade. In the method of least square growth rates are estimated based on the existing trends. In the above estimation of growth rate of India, it can be seen that growth rate of India for 2011 was 1.77, whereas for 2016, it is 1.48, for 2021 it is 1.24 and so on. Similar is the case for the states of Haryana, Delhi, Rajasthan and Uttar Pradesh. Based on these future growth rates using the method of least square, the population of areas pertaining to NCR of these states has been estimated and is given in statement 5. The population of entire NCR is projected as 95.05 million in 2041 constituting 25.95 million from NCT of Delhi, 25.22 million from Haryana, 10.58 million from Rajasthan and 33.31 million from the sub-region of Uttar Pradesh.

Statement 5: Projected Population of National Capital Region (NCR) 2001-2041 through the Method of Least Square.

Year	Population				
	Delhi	Haryana	Rajasthan	Uttar Pradesh	NCR
2001*	13820507	13388603	5093734	15110452	47413296
2011*	16787941	16427524	6222641	18719180	58157286
2016	18644531	18120874	6914192	20687757	64367354
2021	20554814	19980885	7637569	22874565	71047833
2026	22494639	21866545	8391238	25317330	78069752
2031	23912512	23244829	9138140	27911295	84206777
2036	24909137	24213626	9797702	30328640	89249104
2041	25947298	25222800	10580931	33305100	95056128
Note: * Census Population					

In order to see which method provides more growth of the population, an index based on 2001 population as 100 has been introduced. The following table provides the indices for NCT of Delhi, Uttar Pradesh, Haryana and Rajasthan. It can be seen that indices of growth by the method of least square for Delhi and Haryana is the lowest 188 percent. It means the population of Delhi and Haryana will be 188 against 100 i.e. 88 persons will be added in next 40 years, whereas in Rajasthan, it is 108 persons to be added and the highest in Uttar Pradesh. On the other hand it can be inferred that out of all these areas, the state of Uttar Pradesh sub-region will have more pressure of population.

Statement 6: Index of Projected Population - NCR and its sub-regions using the method of least square

Index of growth - 2001 =100					
Year	NCR	NCT Delhi	UP	Haryana	Rajasthan
2001*	100	100	100	100	100
2011*	123	121	124	123	122
2016	136	135	137	135	136
2021	150	149	151	149	150
2026	165	163	168	163	165
2031	178	173	185	174	179
2036	188	180	201	181	192
2041	200	188	220	188	208

Apart from the method of least square, the population has also been projected through the method of exponential growth, geometric growth and arithmetic growth along with their index of growth. The statement 7 given below provides the projected population for the period 2001-2041 with actual for 2001 and 2011. In this statement the population has been projected by using growth rates estimated through exponential formulae. The population of entire NCR is projected as 113.03 million in 2041 constituting 30.80 million from NCT of

Delhi, 33.40 million from Haryana, 11.28 million from Rajasthan and 37.54 million from the sub-region of Uttar Pradesh.

Statement 7: Projected Population of National Capital Region (NCR) 2001-2041 Using Exponential Growth Rate

Year	Population				
	Delhi	Haryana	Rajasthan	Uttar Pradesh	NCR
2001*	13820507	13388603	5093734	15110452	47413296
2011*	16787941	16427524	6222641	18719180	58157286
2016	18523134	18273666	6871000	20883667	64551466
2021	20463516	20412105	7586979	23357763	71820362
2026	22633050	22905059	8377637	26193400	80109146
2031	25058682	25830647	9250771	29452045	89592145
2036	27770712	29287348	10214993	33206534	100479587
2041	30803208	33399767	11279814	37543264	113026053
Note: * Census Population					

Statement 8 given below is based on the information of indices formed using the population projected through exponential growth. It provides the indices for NCT of Delhi, Uttar Pradesh, Haryana and Rajasthan. It can be seen that indices of growth by the exponential for Delhi is the lowest 223 percent. It means the population of Delhi will be 223 against 100 i.e. 123 persons will be added in next 40 years, whereas in Haryana it is the highest with index 249. In Rajasthan, it is the lowest growth with index 221.

Statement 8: Index of Projected Population - NCR and its sub-regions using exponential growth rates

Index of growth - 2001 =100					
Year	NCR	NCT Delhi	UP	Haryana	Rajasthan
2001*	100	100	100	100	100
2011*	123	121	124	123	122
2016	136	134	138	136	135
2021	151	148	155	152	149
2026	169	164	173	171	164
2031	189	181	195	193	182
2036	212	201	220	219	201
2041	238	223	248	249	221

The statement 9 provides the projected population of National capital region during 2001-2041. The method used is the geometric growth rates. The projected population is slightly more than the projected population estimated through the method of least squares and exponential method. The total NCR population is projected to be 114.23 million in 2041 with

NCT of Delhi as 31.02 million, Haryana 33.90 million, Rajasthan 10.27 million and Uttar Pradesh 33.50 million.

Statement 9: Projected Population of National Capital Region (NCR) 2001-2041 Using Geometric Growth Rate

Year	Population				
	Delhi	Haryana	Rajasthan	Uttar Pradesh	NCR
2001*	13820507	13388603	5093734	15110452	47413296
2011*	16787941	16427524	6222641	18719180	58157286
2016	18543795	18303229	6877805	20914922	64639751
2021	20509697	20484005	7602017	23430865	72026583
2026	22710523	23037049	8402561	26321886	80472019
2031	25174282	26047352	9287491	29653167	90162293
2036	27932516	29622863	10265711	33502208	101323299
2041	31020740	33901224	11347065	37961256	114230286
Note:* Census Population					

Again with a view to observe the growth of the population, an index based on 2001 population as 100 has been constructed. The following statement 10 provides the indices for NCT of Delhi, Uttar Pradesh, Haryana and Rajasthan. It can be seen that indices of growth by the method of Geometric growth for Rajasthan sub-region is the lowest with 223 percent. It means the population of Rajasthan will be 223 against 100 i.e. 123 persons will be added in next 40 years, whereas in Delhi, it is 124 persons to be added and the highest in Haryana. On the other hand it can be inferred that out of all these areas, the state of Haryana sub-region will have more pressure of population.

Statement 10: Index of Projected Population - NCR and its sub-regions using Geometric growth rates

Index of growth - 2001 =100					
Year	NCR	NCT Delhi	UP	Haryana	Rajasthan
2001*	100	100	100	100	100
2011*	123	121	124	123	122
2016	136	134	138	137	135
2021	152	148	155	153	149
2026	170	164	174	172	165
2031	190	182	196	195	182
2036	214	202	222	221	202
2041	241	224	251	253	223

The statement 11 provides the projected population of National capital region during 2001-2041. The method used is the Arithmetic growth rates. The projected population is highest among all the methods. In fact population projected through arithmetic or decadal growth will always be the highest, which is not at all true during present day time due to declining fertility. The total NCR population is projected by this arithmetic growth is 128.19 million in

2041 with NCT of Delhi as 33.23 million, Haryana 40.34 million, Rajasthan 12.02 million and Uttar Pradesh 42.60 million.

Statement 11: Projected Population of National Capital Region (NCR) 2001-2041 Using Arithmetic Growth Rate					
Year	Population				
	Delhi	Haryana	Rajasthan	Uttar Pradesh	NCR
2001*	13820507	13388603	5093734	15110452	47413296
2011*	16787941	16427524	6222641	18719180	58157286
2016	18745525	18614537	6943626	21231957	65535644
2021	20964045	21267356	7748247	24184974	74164623
2026	23478599	24529525	8646218	27670686	84325029
2031	26329255	28597917	9648379	31802815	96378366
2036	29561768	33744141	10766836	36721443	110794188
2041	33228399	40344803	12015099	42599364	128187666
Note: * Census Population					

Based on arithmetic growth, statement 10 provides the indices for NCT of Delhi, Uttar Pradesh, Haryana and Rajasthan. It can be seen that indices of growth by the method of arithmetic growth for Rajasthan is the lowest with 236 percent. It means the population of Rajasthan will be 236 against 100 i.e. 136 persons will be added in next 40 years, whereas in Delhi, it is 140 persons to be added and the highest in Haryana. On the other hand it can be inferred that out of all these areas, the state of Haryana sub-region will have more pressure of population with index 301.

Statement 12: Index of Projected Population - NCR and its sub-regions using Arithmetic Growth Rates					
Index of growth - 2001 =100					
Year	NCR	NCT Delhi	UP	Haryana	Rajasthan
2001*	100	100	100	100	100
2011*	123	121	124	123	122
2016	138	136	141	139	136
2021	156	152	160	159	152
2026	178	170	183	183	170
2031	203	191	210	214	189
2036	234	214	243	252	211
2041	270	240	282	301	236

The statement 13 gives an overview of all the method for entire NCR. One can compare the methods, which method will give the more values. It is clear from the statement that the highest projected population is obtained by the method using arithmetic growth, followed by geometric growth, exponential growth and the method of least square in order. Arithmetic growth provide the projected value for 2041 is 128.19 million, Geometric 114.23 million,

exponential 113.03 million and least square 95.06 million. The value obtained the method of least square is more logical.

Statement 13: Projected Population of National Capital Region (NCR) 2001-2041 Using LSE, Exponential, Arithmetic and Geometric

Year	Population			
	LSE	Exponential	Arithmetic	Geometric
2001*	47413296	47413296	47413296	47413296
2011*	58157286	58157286	58157286	58157286
2016	64367354	64551466	65535644	64639751
2021	71047833	71820362	74164623	72026583
2026	78069752	80109146	84325029	80472019
2031	84206777	89592145	96378366	90162293
2036	89249104	100479587	110794188	101323299
2041	95056128	113026053	128187666	114230286
Note: * Census Population				

Again indices obtained by the method of least square, exponential, geometric and arithmetic are given in the statement 14. The indices are also in order. The lowest index is 200 by the method of least square, followed by exponential with 238, geometric 241 and arithmetic 270.

Statement 14: Index of Projected Population of National Capital Region (NCR) Using LSE, Exponential, Arithmetic and Geometric

Year	LSE	Exponential	Arithmetic	Geometric
2001*	100	100	100	100
2011*	123	123	123	123
2016	136	136	138	136
2021	150	151	156	152
2026	165	169	178	170
2031	178	189	203	190
2036	188	212	234	214
2041	200	238	270	241

It is the authority to decide which value is to be retained. According to me as author of the publication, I will suggest to follow the method least square. It has sound reason, which has been mentioned in the methodology part. For details of data pertaining to this chapter, table 1-4 may be referred.

Chapter – 4

RURAL-URBAN NCR Population Projection through various methods

This chapter pertains to rural – urban population projection through various methods. Every method requires some pre-requisite inputs. In the absence of the pre-requisite data, the method considered cannot be used. In the total projection of NCR, the method used are method of Least Square, using exponential growth, geometric growth rate, arithmetic growth rate. The method of least square requires data of growth for last several decades. But as the rural and urban areas are variable in nature, growth rates are also variable and due to non-availability of data at rural- urban level at various sub-region of National Capital region, the method of least square cannot be used for projection for rural – urban areas. As such the projection of rural and urban has been made based on exponential, geometric and arithmetic growth rates.

Urban-Rural projection has been made using method suggested United Nation Population Division. The projected population of each component of NCR has been kept as control. At the outset the rural population of each region has been projected using exponential growth rate and also the total of each component, which has been kept as control. The proportion of urban population to total population in 2001 and 2011 was worked out separately for each component of the region. This proportion was extrapolated using logistic curve assuming that the growth differential between urban and rural areas would remain the same in future. Using the projected urban proportions and the projected population of the region the urban population of each sub region was estimated. Whereas the Tables:- 5-19 provide the projected Rural-Urban population, the Statement No:-15 provides data on projected Rural – Urban population for the entire areas of National Capital Region projected through Exponential growth rate:

Statement No:-15 : Rural and Urban Projected Population – National Capital Region using Exponential Growth Rates							
Year	Rural	Urban	Total	Urban Proportion percent	Exponential Growth Rate		
					Rural	Urban	URGD
2001	24243906	23169390	47413296	48.87			
2011	26426121	31731165	58157286	54.56	0.86	3.14	2.28
2016	27753048	36798418	64551466	57.01	0.98	2.96	1.98
2021	29221150	42599212	71820362	59.31	1.03	2.93	1.90
2026	30819391	49289755	80109146	61.53	1.07	2.92	1.85
2031	32543181	57048964	89592145	63.68	1.09	2.92	1.84
2036	34392351	66087235	100479587	65.77	1.11	2.94	1.84
2041	36369842	76656211	113026053	67.82	1.12	2.97	1.85

In 2001, urban population proportion was 48.87 percent, went up to 54.56 percent in 2011 and likely to reach 67.82 percent. In the entire area of National Capital Region, the rural population was 2.42 crores against urban population of 2.31 crores less than the rural. But in 10 years time from 2001 to 2011, the urban population went up to 3.17 crores, whereas the rural was just 2.64 crores in 2011. In 2041, the urban population goes up to 7.66 crores with 67.82 percent against 3.63 crores in rural areas with just close to 32 percent. The data shows a significant movement of rural population towards urban areas; might be for the search of their livelihood.

Statement No;-16 given below provides data on projected population by rural-urban of National Capital Region during 2001-2041 projected through Geometric Growth Rate.

Statement 16 : Rural and Urban Projected Population – National Capital Region Using Geometric Growth Rate							
Year	Rural	Urban	Total	Urban Proportion percent	Geometric Growth Rate		
					Rural	Urban	URGD
2001	24243906	23169390	47413296	48.87			
2011	26426121	31731165	58157286	54.56	0.87	3.19	2.33
2016	27767036	36872715	64639751	57.04	0.99	3.05	2.05
2021	29247102	42779482	72026583	59.39	1.04	3.02	1.97
2026	30857100	49614919	80472019	61.65	1.08	3.01	1.93
2031	32593516	57568777	90162293	63.85	1.10	3.02	1.92
2036	34456837	66866462	101323299	65.99	1.12	3.04	1.92
2041	36450432	77779854	114230286	68.09	1.13	3.07	1.94

Whereas urban growth rate projected through exponential growth rate was 67.82, the population proportion projected through geometric is 68.09 percent. Both the urban and rural population projected through Geometric growth rate is little higher than the population projected through exponential growth rate. Again it can also be seen that Urban Rural Growth Differential (URGD) is more in case of Geometric Growth rates rather than exponential growth rates.

Statement No;-17 given below provides data on projected population by rural-urban of National Capital Region during 2001-2041 projected through Arithmetic Growth Rate. It is very interesting to note that the projected population obtained through exponential, geometric and arithmetic are in order of increasing i.e. Projected population obtained through Arithmetic Growth Rate is greater than Geometric Growth Rate; and Population estimated through Geometric Growth Rate is greater than Exponential Growth Rate. For instance, Urban proportion estimated through Arithmetic Growth for the year 2041 is 70.96 percent which is higher than Urban Proportion estimated through Geometric Growth Rate of 68.09 percent. Once again it is higher than 67.82 percent for 2041 estimated through Exponential Growth Rate.

Statement 17: Rural and Urban Projected Population – National Capital Region using Arithmetic Growth Rates							
Year	Rural	Urban	Total	Urban Proportion percent	Arithmetic Growth Rate		
					Rural	Urban	URGD
2001	24243906	23169390	47413296	48.87			
2011	26426121	31731165	58157286	54.56	0.90	3.70	2.80
2016	27889030	37646615	65535644	57.44	1.11	3.73	2.62
2021	29482741	44681882	74164623	60.25	1.14	3.74	2.59
2026	31208674	53116354	84325029	62.99	1.17	3.78	2.60
2031	33070515	63307851	96378366	65.69	1.19	3.84	2.64
2036	35073876	75720312	110794188	68.34	1.21	3.92	2.71
2041	37226061	90961605	128187666	70.96	1.23	4.03	2.80

The statement No:-18 given below provides the percentage of urban population of various constituents of National Capital Region. It is seen from the table that the NCT of Delhi is 99 percent urban from 2016 itself. Very negligible areas of NCT of Delhi are rural. From 2021 onwards more than fifty percent areas of sub-region of Uttar Pradesh will be urban, in Haryana, more than fifty percent will be in 2031, whereas Rajasthan urbanization is very slow. In 2041, Rajasthan urbanization may be close to twenty five percent in 2041. If we consider entire NCR, it is already more than fifty percent urban in 2011 and will be close to seventy percent in 2041.

Statement 18: Percentage of Urban population in different constituents of National Capital Region projected through exponential growth rate.					
Year	Urban Proportion				
	NCT of Delhi	Haryana	Uttar Pradesh	Rajasthan	NCR
2001	93.16	29.31	36.57	16.57	48.87
2011	97.50	36.45	43.94	18.47	54.56
2016	98.52	40.01	47.43	19.39	57.01
2021	99.12	43.61	50.83	20.30	59.31
2026	99.48	47.24	54.13	21.21	61.53
2031	99.69	50.87	57.32	22.10	63.68
2036	99.82	54.50	60.40	22.98	65.77
2041	99.89	58.11	63.36	23.85	67.82

Another way of studying urbanization is the Urban Rural Growth Differential (URGD). The statement 19 given below provides the data of URGD for all the constituents of NCR. This can be studied relating to statement 15. For instance, it can be seen that the urbanization in NCT of Delhi is more than 99 percent, rural population is very negligible and URGD is constant. In case of Haryana, urban growth is little high, but afterwards, urban population will

grow very slowly. Same is the case with Uttar Pradesh. Rajasthan NCR sub-region is perhaps not moving towards urbanization.

Statement 19: Urban Rural Growth Differential (URGD) in different constituents of National Capital Region based on exponential growth rate					
Year	Urban Rural Growth Differential				
	NCT of Delhi	Haryana	Uttar Pradesh	Rajasthan	NCR
2011	10.53	3.24	3.07	1.32	2.28
2016	10.65	3.02	2.82	1.20	1.98
2021	10.59	2.96	2.72	1.15	1.90
2026	10.57	2.93	2.65	1.10	1.85
2031	10.56	2.91	2.59	1.05	1.84
2036	10.53	1.54	2.54	1.01	1.84
2041	10.55	1.65	2.51	0.97	1.85

Key elements in urban-rural projections are these two components. For rural proportion and annual exponential growth rates of the rural and urban population have also been shown in table no.5-19.

Projection of Population of Town

The projection of population of towns is more likely to be uncertain due to fluctuations in the growth rate of individual towns. This is particularly true in respect of towns like NOIDA, BehtaHajipur and Loni which have experienced sudden rapid growth. It is significant that all of them are in the periphery of NCT of Delhi. The projection has been attempted using the projected urban population as control figures.

Methodology

The proportion of the population of each town to the total urban population was worked out for 2001 and 2011. The change in this proportion was extrapolated using logistic curve. The population of individual towns so projected was adjusted pro-data to confirm to the projected urban population for future years. It should be borne in mind that town-wise population projections are appropriate, particularly so in view of the fluctuating growth rates in the past. A number of new towns and urban centers are likely to emerge. Most of them would be adjacent to the existing cities and towns. A number of them may probably be declared as constituents of the urban agglomerations. The projected populations are shown in tables 20, 21 and 22.

Whereas in table 20, one can see data pertaining to 90 towns of 13 districts in Haryana, the statement 20 provides the projected population of 13 district towns of Haryana sub-region which is under the National Capital Region. Among the 13 district towns of Haryana Sub-region, the biggest town in terms of population is Faridabad whose population is 1.4 million

in 2011 and likely to have population of 2.8 million in 2041. The number two town is Gurgaon with population 0.8 million in 2011 and likely to have population of 1.8 million in 2041. The town with rank number 3 is Rohtak and fourth is Karnal.

Statement 20 : Projected Population of District Towns of Haryana Urban using the urban growth rate of the state								
Sr. No.	DISTRICT TOWNS	2011	2016	2021	2026	2031	2036	2041
1	Faridabad (M Corp.)	1,414,050	1741550	1919941	2116604	2333412	2572429	2835928
2	Gurgaon (M Corp. + OG)	886,519	1091841	1203680	1326976	1462900	1612748	1777946
3	Jhajjar (MC)	48,424	59639	65748	72483	79907	88093	97116
4	Ferozepur Jhirka (MC)	24,750	30482	33605	37047	40842	45025	49637
5	Palwal (M CI + OG)	131,926	162481	179124	197472	217699	239999	264582
6	Panipat (M CI + OG)	295,970	364518	401856	443019	488399	538426	593578
7	Rewari (M CI)	143,021	176145	194188	214079	236008	260183	286834
8	Rohtak (M CI)	374,292	460980	508199	560255	617643	680909	750656
9	Sonapat (M CI + OG)	289,333	356344	392845	433085	477446	526352	580268
10	Jind (M CI)	167,592	206407	227550	250858	276554	304882	336112
11	Karnal (M CI + OG)	302,140	372117	410234	452255	498580	549651	605953
12	Narnaul (M CI)	74581	91854	101263	111635	123070	135677	149574
13	Bhiwani (M CI)	196,057	241465	266198	293466	323526	356665	393199

Whereas in table 21, one can see data pertaining to 113 towns of 8 districts in Uttar Pradesh sub-region under NCR, the statement 21 provides the projected population of 8 district towns of Uttar Pradesh sub-region which is under the National Capital Region. Among the 8 district towns of Uttar Pradesh Sub-region, the biggest town in terms of population is Ghaziabad whose population is 1.6 million in 2011 and likely to have population of 3.1 million in 2041. The second number town is Meerut with population 1.3 million in 2011 and likely to have population of 2.5 million in 2041. The town with rank number 3 is Noida and fourth is Muzaffarnagar.

Statement 21: Projected Population of Uttar Pradesh district Towns under NCR using the growth rate of Urban area of the state.								
Sr. No.	DISTRICT TOWN	2011	2016	2021	2026	2031	2036	2041
14	Baghpat (NPP)	50,310	59831	65584	71879	78778	86340	94627
15	Bulandshahr (NPP + OG)	230,024	273553	299858	328640	360185	394758	432649
16	Noida (CT)	637,272	757868	830743	910483	997877	1093660	1198637
17	Meerut (M Corp.)	1,305,429	1552465	1701748	1865093	2044116	2240324	2455364
18	Ghaziabad (M Corp.)	1,648,643	1960628	2149160	2355450	2581541	2829334	3100911
19	Hapur (NPP)	262,983	312749	342823	375729	411794	451321	494641
20	Muzaffarnagar (NPP)	392,768	467094	512010	561156	615019	674052	738752

In Rajasthan sub-region under NCR, there are only 2 districts which falls under national capital region. These two districts have 26 towns. The statement 22 provides the projected population of 2 district towns of Rajasthan sub-region which is under the National Capital Region. Among the 2 district towns of Rajasthan Sub-region, the biggest town in terms of

population is Alwar whose population is 0.32 million in 2011 and likely to have population of 0.53 million in 2041. The second number town is Bharatpur with population 0.25 million in 2011 and likely to have population of 0.42 million in 2041.

Statement 22: Projected Population of Rajasthan district Towns under NCR using the growth rate of Urban area of the state.								
Sr. No.	DISTRICT TOWN	2011	2016	2021	2026	2031	2036	2041
21	Alwar (M CI + OG)	322,568	375981	403338	432685	464167	497940	534170
22	Bharatpur (M CI + OG)	252,838	294705	316147	339151	363827	390300	418698

The growth population index of these three states under NCR is given in the statement 23. The growth index has been measured taking 2011 as 100. It can be seen that the town population growth index is highest in Haryana towns followed by Uttar Pradesh and then Rajasthan. Whereas Haryana towns show more than 100 percent growth in next 30 years, Uttar Pradesh town growth is little behind at 88 percent and Rajasthan towns at 66 percents. This is very important indicator for urban planners as it has to fulfill the growth of housing, education, health and other necessities of the growing population.

Statement 23 : Town Population Growth Index of three states under NCR taking 2011 as 100								
Sr. No.	States	2011	2016	2021	2026	2031	2036	2041
1	Haryana	100	123	136	150	165	182	201
2	Uttar Pradesh	100	119	130	143	157	172	188
3	Rajasthan	100	117	125	134	144	154	166

Chapter – 5

TOWN PROJECTION THROUGH WATER FORMULA & RATIO ESTIMATOR

Definitions of TOWN as given in the Census of India 2011 is as follows;

1. All places with a municipality, corporation, cantonment board or notified town area committee, etc.

2. All other places which satisfied the following criteria:

i) A minimum population of 5,000; ii) At least 75 per cent of the male main working population engaged in non-agricultural pursuits; and

iii) A density of population of at least 400 persons per sq. km.

The first category of urban units is known as Statutory Towns. These towns are notified under law by the concerned State/UT Government and have local bodies like municipal corporations, municipalities, municipal committees, etc., irrespective of their demographic characteristics as reckoned on 31st December 2009. Examples: Vadodara (M Corp.), Shimla (M Corp.) etc. Details of the data pertaining to statutory town and their projections are given in the table No. 20, 21 and 22.

The second category of Towns (as in item 2 above) is known as Census Town. These were identified on the basis of Census 2011 data. Projection for both the type are given in table 23, 24 and 26 using Water formula.

One can use various method of projection if data sequence for previous decades are available. If the sequence is not available, one has to use standardized method and growth rate of higher levels which are generally used for estimation of the lower geographic levels. In general, for all towns of NCR, exponential growth rate of urban areas of the concern states has been used in the previous chapter. In this chapter as the data sequence of a number of cities/towns are available, the Water formulas with Arithmetical Increase Method, Geometrical Increase Method and Incremental Increase Method to project the population for 2021, 2031 and 2041. The method description with example is given below.

POPULATION FORECASTING THROUGH WATER FORMULA

Water Formula for projection of Population in a city can be done through three different methods. These are:

- (a) ARITHMETICAL INCREASE METHOD
- (b) GEOMETRICAL INCREASE METHOD (OR GEOMETRICAL PROGRESSION METHOD)
- (c) INCREMENTAL INCREASE METHOD

ARITHMETICAL INCREASE METHOD

This method is suitable for large and old city with considerable development. If it is used for small, average or comparatively new cities, it will give lower population estimate than actual value. In this method the average increase in population per decade is calculated from the past census reports. This increase is added to the present population to find out the population of the next decade. Thus, it is assumed that the population is increasing at constant rate. Hence, $dP/dt = C$ i.e., rate of change of population with respect to time is constant.

Therefore, Population after n th decade will be $P_n = P + n \cdot C$

Where, P_n is the population after ' n ' decades and ' P ' is present population.

Example

Predict the population of Samalkhatownof Haryana for the year 2021, 2031 and 2041 based on Census population of 1981, 1991, 2001 and 2011.

Year	1981	1991	2001	2011
Population	13532	18384	29366	39710

Solution

Year	Population	Increment
1981	13532	
1991	18384	4852
2001	29366	10982
2011	39710	10344

Average Increment = 8726

$$\text{Population for the year 2021} = 39710 + 8726 \times 1 = 48436$$

$$2031 = 39710 + 8726 \times 2 = 57162$$

$$2041 = 39710 + 8726 \times 3 = 65888$$

GEOMETRICAL INCREASE METHOD (OR GEOMETRICAL PROGRESSION METHOD)

In this method the percentage increase in population from decade to decade is assumed to remain constant. Geometric mean increase is used to find out the future increment in population. Since this method gives higher values and hence should be applied for a new industrial town at the beginning of development for only few decades.

The population at the end of nth decade 'P_n' can be estimated as:

$$P_n = P (1 + IG/100)^n$$

Where, IG = geometric mean (%)

P = Present population

n = no. of decades.

Example:

Considering the data given in the above example, predict the population for the year 2021, 2031, 2041

Year	Population	Increment	Geometric increase/Rate of Growth
1981	13532		
1991	18384	4852	0.36
2001	29366	10982	0.60
2011	39710	10344	0.35

$$\text{Geometric Mean of Growth} = (0.36 \times 0.60 \times 0.35)^{1/3} = 0.42$$

$$\text{Population for 2021 is } P_{2021} = 39710 \times (1 + 0.42) = 39710 \times 1.42 = 56388$$

$$\text{For 2031 is } P_{2031} = 39710 \times (1 + 0.42)^2 = 80071$$

$$\text{For 2041 is } P_{2041} = 39710 \times (1 + 0.42)^3 = 113700.$$

INCREMENTAL INCREASE METHOD:

This method is modification of arithmetical increase method and it is suitable for an average size town under normal condition where the growth rate is found to be in increasing order. While adopting this method the increase in increment is considered for calculating future population. The incremental increase is determined for each decade from the past population and the average value is added to the present population along with the average rate of increase.

Hence, population after nth decade is:

$$P_n = P + n \cdot X + \{n(n+1)/2\} \cdot Y$$

Where, P_n = Population after n^{th} decade

X = Average increase;

Y = Incremental increase

Example:

Considering data given in the above example, predict the population for the year 2021, 2031 and 2041 using incremental increase method.

Solution:

Year	Population	Increase (X)	Incremental increase
1981	13532		
1991	18384	4852	
2001	29366	10982	6130
2011	39710	10344	-638

$$\text{Average} = \frac{8726 + 2746}{2}$$

Population for the year 2021 is $P_{2021} = 39710 + (8726 \cdot 1) + \{(1(1+1)/2\} \cdot 2746 = 51182$

For the year 2031 is $P_{2031} = 39710 + (8726 \cdot 2) + \{(2(2+1)/2\} \cdot 2746 = 65400$

For the year 2041 is $P_{2041} = 39710 + (8726 \cdot 3) + \{(3(3+1)/2\} \cdot 2746 = 82364$

The projected population of the all the towns/cities whose sequence of data for last four decades are available are projected with all the above methods and are given in the table – 23, 24 and 25.

POPULATION FORECASTING THROUGH RATIO ESTIMATE

Suppose the ratio $R = Y/X$, where Y and X are the population total for the variables y and x is to be estimated on the basis of a sample selected through any given sampling scheme. Let \check{Y} and \check{X} be unbiased estimates of Y and X respectively. Then an estimator of the ratio R is given by

$$\hat{R} = \check{Y} / \check{X}$$

Similarly, a ratio estimator of Y is given by

$$\check{Y}_R = \hat{R} X = \check{Y} / \check{X} * X$$

Here based on the total population of two consecutive decades the value of R is estimated and the population of next decade (Y) is estimated using the population (X) of immediately preceding decades i.e the population $Y = RX$.

For example, the total population of all towns of Faridabad districts in 2001 is 1221344 ($=\check{X}$) and that of 2011 is 1642623 ($=\check{Y}$), the ratio \hat{R} is 1.345. Taking X to be values of each of the town of 2011, the Ratio Estimator of each of the town i.e. the population of each town for 2021 can be estimated by taking X of 2011 for each town.

Population of 2021 for the town Faridabad $= \hat{R} * X = 1.354 * 1414050 = 1901799$

$$\text{Palwal} = \hat{R} * X = 1.354 * 131926 = 177431$$

$$\text{Hodal} = \hat{R} * X = 1.354 * 50143 = 67439$$

$$\text{Hathin} = \hat{R} * X = 1.354 * 14421 = 19395$$

$$\text{Hasanpur} = \hat{R} * X = 1.354 * 11569 = 15560$$

$$\text{Tilpet} = \hat{R} * X = 1.354 * 20514 = 27590$$

The projected population using the ratio estimator is given in Table -26.

PERI- URBAN

Peri-urban projection pertains to the projection of town/cities which have urban agglomeration or Out- growth, the areas which are newly added to the existing towns/ cities. While projecting for towns, if it has the UA, it is automatically projected. Tables 23,24,25 and 26 includes such towns

/cities with projection of their UAs.

District-wise Rural-Urban Population Projection

District-wise Rural-Urban Population Projection has been projected using exponential growth rate in case of Total. Urban population has been projected using exponential growth rate of the state. Control of the TOTAL has been maintained to find out the Rural population of the district. District-wise Rural-Urban Population Projection has been given in Annexure at Table – 27.

CHAPTER – 6

INDUCED FACTOR OF POPULATION DYNAMICS

It has been observed that due to induced development in an town, population maybe enhanced. However, it is an assumption, it may not be true. One can not even state that it will increase by 5% or 10% or any fixed quantity. As population increase is based on two factor i.e. natural increase or migration. Today Total Fertility Rate is in the declining trend, induced factor will not work there, it is only migration, which may help in increase in population. People migrate for their livelihood or progress. Livelihood include more number of people that progress. For progress negligible number of people migrate. It is the livelihood for which more number of people migrate. If the area from where people migrate is developed, people will not migrate. As such one can not just say the people will come as they like. However, the method which may be employed for induced factor of population growth may be “**WATER FORMULA with INCREMENTAL INCREASE**”. The data pertaining to this method of the towns which have the Induced factors are given in the Table No. 25. However for the selected towns of Haryana, induced population for 2021, 2031 and 2041 are given below.

Statement No.24 : POPULATION OF NCR CITIES/TOWNS BY WATER FORMULA -INCREMENTAL INCREASE METHOD- HARYANA				
S. No.				
	Sub-region/City/Town	Projected Population by Incremental Method - Induced Population		
		2021	2031	2041
1	2	3	4	6
1	Panipat	565269	704559	862394
2	Samalkha	50932	64650	80864
3	*Sonapat	364174	453868	558415
4	Gohana	84315	108357	137832
5	Ganaur	43041	51547	61119
6	Kharkhoda	31516	39190	48071
7	Rohtak	458660	558221	672975
8	Maham	22879	24749	26093
9	Kalanaur	29126	37095	47224
10	Bahadurgarh	227330	296031	376868

11	Jhajjar	59471	73506	90529
12	Beri	16126	15694	14640
13	Faridabad	1810742	2243063	2711013
14	Palwal	169807	217371	274616
15	Gurgaon	1459746	2344318	3540237
16	Sohna	47164	60427	76340
17	HailieyMandi	24846	29136	33778
18	Pataudi	25155	30631	36845
19	Farukknagar	17052	21747	27598
20	Dundahera	47702	73837	108749
21	Taoru	27653	32531	37233
22	FirozepurJhirka	31858	40956	52046
23	Punhana	35129	49115	66692
24	Nuh	21543	28687	37691
25	Rewari	182786	231829	290151
26	Dharuhera	41638	55868	73032
27	Bawal	21472	27860	35938
28	Kanina	15604	18880	22819
29	Mahendragarh	33850	38413	42817
30	Ateli	9402	11426	13691
31	Narnaul	86612	99628	113628
32	Taraori	30546	35369	40414
33	Indri	20623	23833	27117
34	Karnal (M Cl + OG)	377258	470815	582813
35	Assandh	32203	37719	43675
36	Gharaunda	46559	57216	69787

Induced Population of the selected towns of Rajasthan for 2021, 2031 and 2041 are given below.

Statement No. 25: POPULATION OF NCR CITIES/TOWNS BY WATER FORMULA -INCREMENTAL INCREASE METHOD- RAJASTHAN				
S. No.				
	Sub-region/City/Town	Projected Population by Incremental Method - Induced Population		
		2021	2031	2041
1	2	3	4	6
1	Alwar	377499	428438	475383
2	Bhiwadi	168062	259948	380577
3	Khairthal	45500	52460	59176
4	Rajgarh	28574	28316	25857
5	Behror	34774	35778	32543
6	Tijara	29743	35551	42173
7	Kherli	19786	20893	20955
8	Kaman	45490	54195	64153
9	Nagar	29998	34142	38005
10	Deeg	49708	53488	56339
11	Nadbai	30968	35147	38950
12	Kumher	26962	30220	33315
13	Bharatpur (M CI + OG)	300025	345210	388393
14	Bhusawar	22288	24009	25109
15	Weir	21459	23204	24621
16	Bayana	43910	48783	53121

Induced Population of the selected towns of Uttar Pradesh for 2021, 2031 and 2041 are given below.

Statement No.26 : POPULATION OF NCR CITIES/TOWNS BY WATER FORMULA - INCREMENTAL INCREASE METHOD- UTTAR PRADESH				
S. No.				
	Sub-region/City/Town	Projected Population by Incremental Method - Induced Population		
		2021	2031	2041
1	2	3	4	6
1	Meerut	1476965	1563767	1565833
2	Mawana	95136	107915	119779
3	Sardhana	66171	72639	77654
4	Kithaur	32067	35621	38595
5	Hastinapur	32270	38967	46544
6	SewalKhas	30904	38079	46407
7	Lawar	26047	30596	35672
8	Parikshitgarh	22720	25666	28668
9	Phalauda	22636	24909	26726
10	Karnawal	11203	9695	7137
11	Kharkhoda	16214	18028	19807
12	Daurala	27425	39181	55042
13	Bahsuma	13054	14375	15714
14	Baraut	121243	137043	151165
15	Khekada	55640	61672	66770
16	Baghpat	64433	81628	101895
17	Chhaprauli	20176	20867	21042
18	Tikri	14616	14737	14457

19	Doghat	14854	14849	14149
20	Ghaziabad	2330365	3239986	4377504
21	Modinagar	121936	90938	37331
22	Muradnagar	119616	145379	172496
23	Dasna	45483	59330	76453
24	Faridnagar	13853	14765	15521
25	Niwari	8675	6905	3895
26	Patala	9268	8252	6452
27	Hapur	320153	381110	445854
28	Pilkhuwa	101296	121131	143241
29	Garhmukteshwar	57916	72207	88949
30	Babugarh	5634	4976	3478
31	Noida	948713	1371503	1905644
32	Dadri	125318	169753	224494
33	Bulandshahr	287137	359167	446114
34	Muzaffarnagar (NPP)	459065	518007	569596

ANNEXURE – TABLES 1-27

Table - 1 : Projected Population ('000) - NCR and its sub-regions using the method of Least Square															
Year	Population ('000)					Index of growth - 2001 =100					Annual Exponential Growth Rate				
	NCR	NCT Delhi	UP	Haryana	Rajasthan	NCR	NCT Delhi	UP	Haryana	Rajasthan	NCR	NCT Delhi	UP	Haryana	Rajasthan
2001*	47413296	13820507	15110452	13388603	5093734	100	100	100	100	100					
2011*	58157286	16787941	18719180	16427524	6222641	123	121	124	123	122	2.04	1.95	2.14	2.05	2.00
2016	64367354	18644531	20687757	18120874	6914192	136	135	137	135	136	2.03	2.10	2.00	1.96	2.11
2021	71047833	20554814	22874565	19980885	7637569	150	149	151	149	150	1.97	1.95	2.01	1.95	1.99
2026	78069752	22494639	25317330	21866545	8391238	165	163	168	163	165	1.88	1.80	2.03	1.80	1.88
2031	84206777	23912512	27911295	23244829	9138140	178	173	185	174	179	1.51	1.22	1.95	1.22	1.71
2036	89249104	24909137	30328640	24213626	9797702	188	180	201	181	192	1.16	0.82	1.66	0.82	1.39
2041	95056128	25947298	33305100	25222800	10580931	200	188	220	188	208	1.26	0.82	1.87	0.82	1.54

Table - 2 : Projected Population ('000) - NCR and its sub-regions using Exponential Growth Rates															
Year	Population ('000)					Index of growth - 2001 =100					Annual Exponential Growth Rate				
	NCR	NCT Delhi	UP	Haryana	Rajasthan	NCR	NCT Delhi	UP	Haryana	Rajasthan	NCR	NCT Delhi	UP	Haryana	Rajasthan
2001*	47413296	13820507	15110452	13388603	5093734	100	100	100	100	100					
2011*	58157286	16787941	18719180	16427524	6222641	123	121	124	123	122	2.04	1.95	2.14	2.05	2.00
2016	64551466	18523134	20883667	18273666	6871000	136	134	138	136	135	2.09	1.97	2.19	2.13	1.98
2021	71820362	20463516	23357763	20412105	7586979	151	148	155	152	149	2.13	1.99	2.24	2.21	1.98
2026	80109146	22633050	26193400	22905059	8377637	169	164	173	171	164	2.18	2.02	2.29	2.30	1.98
2031	89592145	25058682	29452045	25830647	9250771	189	181	195	193	182	2.24	2.04	2.35	2.40	1.98
2036	100479587	27770712	33206534	29287348	10214993	212	201	220	219	201	2.29	2.06	2.40	2.51	1.98
2041	113026053	30803208	37543264	33399767	11279814	238	223	248	249	221	2.35	2.07	2.45	2.63	1.98

Table - 3 : Projected Population ('000) - NCR and its sub-regions using Geometric Growth Rates															
Year	Population ('000)					Index of growth - 2001 =100					Annual Geometric Growth Rate				
	NCR	NCT Delhi	UP	Haryana	Rajasthan	NCR	NCT Delhi	UP	Haryana	Rajasthan	NCR	NCT Delhi	UP	Haryana	Rajasthan
2001*	47413296	13820507	15110452	13388603	5093734	100	100	100	100	100					
2011*	58157286	16787941	18719180	16427524	6222641	123	121	124	123	122	2.06	1.96	2.16	2.07	2.02
2016	64639751	18543795	20914922	18303229	6877805	136	134	138	137	135	2.14	2.01	2.24	2.19	2.02
2021	72026583	20509697	23430865	20484005	7602017	152	148	155	153	149	2.19	2.04	2.30	2.28	2.02
2026	80472019	22710523	26321886	23037049	8402561	170	164	174	172	165	2.24	2.06	2.35	2.38	2.02
2031	90162293	25174282	29653167	26047352	9287491	190	182	196	195	182	2.30	2.08	2.41	2.49	2.02
2036	101323299	27932516	33502208	29622863	10265711	214	202	222	221	202	2.36	2.10	2.47	2.61	2.02
2041	114230286	31020740	37961256	33901224	11347065	241	224	251	253	223	2.43	2.12	2.53	2.73	2.02

Table - 4 : Projected Population ('000) - NCR and its sub-regions using Arithmetic Growth Rates															
Year	Population ('000)					Index of growth - 2001 =100					Annual Arithematic Growth Rate				
	NCR	NCT Delhi	UP	Haryana	Rajasthan	NCR	NCT Delhi	UP	Haryana	Rajasthan	NCR	NCT Delhi	UP	Haryana	Rajasthan
2001*	47413296	13820507	15110452	13388603	5093734	100	100	100	100	100					
2011*	58157286	16787941	18719180	16427524	6222641	123	121	124	123	122	2.27	2.15	2.39	2.27	2.22
2016	65535644	18745525	21231957	18614537	6943626	138	136	141	139	136	2.54	2.33	2.68	2.66	2.32
2021	74164623	20964045	24184974	21267356	7748247	156	152	160	159	152	2.63	2.37	2.78	2.85	2.32
2026	84325029	23478599	27670686	24529525	8646218	178	170	183	183	170	2.74	2.40	2.88	3.07	2.32
2031	96378366	26329255	31802815	28597917	9648379	203	191	210	214	189	2.86	2.43	2.99	3.32	2.32
2036	110794188	29561768	36721443	33744141	10766836	234	214	243	252	211	2.99	2.46	3.09	3.60	2.32
2041	128187666	33228399	42599364	40344803	12015099	270	240	282	301	236	3.14	2.48	3.20	3.91	2.32

Table 5 : Rural and Urban Projected Population - NCT of Delhi Using Exponential Growth Rate.							
Delhi National Capital Territory							
Year	Rural	Urban	Total	Urban Proportion	Exponential Growth Rate		
				percent	Rural	Urban	URGD
2001	944727	12875780	13820507	93.16			
2011	419042	16368899	16787941	97.50	-8.13	2.40	10.53
2016	274248	18248885	18523134	98.52	-8.48	2.17	10.65
2021	179486	20284030	20463516	99.12	-8.48	2.11	10.59
2026	117467	22515583	22633050	99.48	-8.48	2.09	10.57
2031	76878	24981804	25058682	99.69	-8.48	2.08	10.56
2036	50314	27720398	27770712	99.82	-8.48	2.06	10.53
2041	32929	30770279	30803208	99.89	-8.48	2.07	10.55

Table 6 : Rural and Urban Projected Population - Haryana Sub-Region Using Exponential Growth Rate							
Haryana Sub-region within NCR							
Year	Rural	Urban	Total	Urban Proportion	Exponential Growth Rate		
				percent	Rural	Urban	URGD
2001	9464477	3924126	13388603	29.31			
2011	10439814	5987710	16427524	36.45	0.98	4.23	3.24
2016	10961931	7311735	18273666	40.01	0.98	4.00	3.02
2021	11510160	8901944	20412105	43.61	0.98	3.94	2.96
2026	12085807	10819251	22905059	47.24	0.98	3.90	2.93
2031	12690244	13140403	25830647	50.87	0.98	3.89	2.91
2036	13324910	15962439	29287348	54.50	0.98	2.51	1.54
2041	13991316	19408451	33399767	58.11	0.98	2.63	1.65

Table 7 : Rural and Urban Projected Population - Uttar Pradesh Sub-region (NCR) Using Exponential Growth							
Uttar Pradesh Sub-region (NCR)							
Year	Rural	Urban	Total	Urban Proportion	Exponential Growth Rate		
				percent	Rural	Urban	URGD
2001	9584867	5525585	15110452	36.57			
2011	10494174	8225006	18719180	43.94	0.91	3.98	3.07
2016	10978441	9905226	20883667	47.43	0.90	3.72	2.82
2021	11485056	11872707	23357763	50.83	0.90	3.62	2.72
2026	12015049	14178351	26193400	54.13	0.90	3.55	2.65
2031	12569499	16882545	29452045	57.32	0.90	3.49	2.59
2036	13149536	20056998	33206534	60.40	0.90	3.45	2.54
2041	13756338	23786926	37543264	63.36	0.90	3.41	2.51

Table 8 : Rural and Urban Projected Population - Rajasthan Sub-region (NCR) Using Exponential Growth Rate							
Rajasthan Sub-region (NCR)							
Year	Rural	Urban	Total	Urban Proportion	Exponential Growth Rate		
				percent	Rural	Urban	URGD
2001	4249835	843899	5093734	16.57			
2011	5073091	1149550	6222641	18.47	1.77	3.09	1.32
2016	5538428	1332572	6871000	19.39	1.76	2.95	1.20
2021	6046448	1540531	7586979	20.30	1.76	2.90	1.15
2026	6601067	1776570	8377637	21.21	1.76	2.85	1.10
2031	7206560	2044211	9250771	22.10	1.76	2.81	1.05
2036	7867592	2347401	10214993	22.98	1.76	2.77	1.01
2041	8589259	2690555	11279814	23.85	1.76	2.73	0.97

Table 9 : Rural and Urban Projected Population - NCR (Total)							
National Capital Region (TOTAL)							
Year	Rural	Urban	Total	Urban Proportion	Exponential Growth Rate		
				percent	Rural	Urban	URGD
2001	24243906	23169390	47413296	48.87			
2011	26426121	31731165	58157286	54.56	0.86	3.14	2.28
2016	27753048	36798418	64551466	57.01	0.98	2.96	1.98
2021	29221150	42599212	71820362	59.31	1.03	2.93	1.90
2026	30819391	49289755	80109146	61.53	1.07	2.92	1.85
2031	32543181	57048964	89592145	63.68	1.09	2.92	1.84
2036	34392351	66087235	100479587	65.77	1.11	2.94	1.84
2041	36369842	76656211	113026053	67.82	1.12	2.97	1.85

Table 10 : Rural and Urban Projected Population - NCT of Delhi Using Geometric Growth Rate.							
Delhi National Capital Territory							
Year	Rural	Urban	Total	Urban Proportion	Geometric Growth Rate		
				percent	Rural	Urban	URGD
2001	944727	12875780	13820507	93.16			
2011	419042	16368899	16787941	97.50	-7.81	2.43	10.24
2016	279083	18264712	18543795	98.50	-7.81	2.22	10.02
2021	185870	20323828	20509697	99.09	-7.81	2.16	9.97
2026	123790	22586733	22710523	99.45	-7.81	2.13	9.94
2031	82444	25091838	25174282	99.67	-7.81	2.13	9.93
2036	54908	27877608	27932516	99.80	-7.81	2.13	9.94
2041	36569	30984171	31020740	99.88	-7.81	2.14	9.94

Table 11 : Rural and Urban Projected Population - Haryana Sub-Region Using Geometric Growth Rate							
Haryana Sub-region within NCR							
Year	Rural	Urban	Total	Urban Proportion	Geometric Growth Rate		
				percent	Rural	Urban	URGD
2001	9464477	3924126	13388603	29.31			
2011	10439814	5987710	16427524	36.45	0.99	4.32	3.33
2016	10964550	7338678	18303229	40.09	0.99	4.15	3.17
2021	11515662	8968343	20484005	43.78	0.99	4.09	3.11
2026	12094474	10942575	23037049	47.50	0.99	4.06	3.07
2031	12702378	13344973	26047352	51.23	0.99	4.05	3.06
2036	13340838	16282025	29622863	54.96	0.99	4.06	3.07
2041	14011389	19889835	33901224	58.67	0.99	4.08	3.10

Table 12 : Rural and Urban Projected Population - Uttar Pradesh Sub-region (NCR) Using Geometric Growth							
Uttar Pradesh Sub-region (NCR)							
Year	Rural	Urban	Total	Urban Proportion	Geometric Growth Rate		
				percent	Rural	Urban	URGD
2001	9584867	5525585	15110452	36.57			
2011	10494174	8225006	18719180	43.94	0.91	4.06	3.15
2016	10980683	9934239	20914922	47.50	0.91	3.85	2.94
2021	11489746	11941118	23430865	50.96	0.91	3.75	2.84
2026	12022409	14299477	26321886	54.33	0.91	3.67	2.76
2031	12579767	17073400	29653167	57.58	0.91	3.61	2.70
2036	13162964	20339244	33502208	60.71	0.91	3.56	2.65
2041	13773197	24188059	37961256	63.72	0.91	3.53	2.62

Table 13: Rural and Urban Projected Population - Rajasthan Sub-region (NCR) Using Geometric Growth Rate							
Rajasthan Sub-region (NCR)							
Year	Rural	Urban	Total	Urban Proportion	Geometric Growth Rate		
				percent	Rural	Urban	URGD
2001	4249835	843899	5093734	16.57			
2011	5073091	1149550	6222641	18.47	1.79	3.14	1.35
2016	5542720	1335085	6877805	19.41	1.79	3.04	1.25
2021	6055824	1546193	7602017	20.34	1.79	2.98	1.19
2026	6616427	1786134	8402561	21.26	1.79	2.93	1.14
2031	7228927	2058565	9287491	22.16	1.79	2.88	1.09
2036	7898127	2367584	10265711	23.06	1.79	2.84	1.05
2041	8629277	2717788	11347065	23.95	1.79	2.80	1.01

Table 14 : Rural and Urban Projected Population - NCR (Total) Using Geometric Growth Rate							
National Capital Region (TOTAL)							
Year	Rural	Urban	Total	Urban Proportion	Geometric Growth Rate		
				percent	Rural	Urban	URGD
2001	24243906	23169390	47413296	48.87			
2011	26426121	31731165	58157286	54.56	0.87	3.19	2.33
2016	27767036	36872715	64639751	57.04	0.99	3.05	2.05
2021	29247102	42779482	72026583	59.39	1.04	3.02	1.97
2026	30857100	49614919	80472019	61.65	1.08	3.01	1.93
2031	32593516	57568777	90162293	63.85	1.10	3.02	1.92
2036	34456837	66866462	101323299	65.99	1.12	3.04	1.92
2041	36450432	77779854	114230286	68.09	1.13	3.07	1.94

Table 15 : Rural and Urban Projected Population - NCT of Delhi Using Arithemeti Growth Rate.							
Delhi National Capital Territory							
Year	Rural	Urban	Total	Urban Proportion	Arithmetic Growth Rate		
				percent	Rural	Urban	URGD
2001	944727	12875780	13820507	93.16			
2011	419042	16368899	16787941	97.50	-5.56	2.71	8.28
2016	314728	18430796	18745525	98.32	-4.98	2.37	7.35
2021	236382	20727663	20964045	98.87	-4.98	2.35	7.33
2026	177539	23301061	23478599	99.24	-4.98	2.34	7.32
2031	133343	26195912	26329255	99.49	-4.98	2.34	7.32
2036	100150	29461619	29561768	99.66	-4.98	2.35	7.33
2041	75219	33153180	33228399	99.77	-4.98	2.36	7.34

Table 16 : Rural and Urban Projected Population - Haryana Sub-Region Using Arithmetic Growth Rate							
Haryana Sub-region within NCR							
Year	Rural	Urban	Total	Urban Proportion	Arithmetic Growth Rate		
				percent	Rural	Urban	URGD
2001	9464477	3924126	13388603	29.31			
2011	10439814	5987710	16427524	36.45	1.03	5.26	4.23
2016	10988940	7625597	18614537	40.97	1.05	4.84	3.78
2021	11566949	9700408	21267356	45.61	1.05	4.81	3.76
2026	12175361	12354165	24529525	50.36	1.05	4.84	3.78
2031	12815775	15782143	28597917	55.19	1.05	4.90	3.85
2036	13489874	20254267	33744141	60.02	1.05	4.99	3.94
2041	14199430	26145373	40344803	64.80	1.05	5.11	4.05

Table 17 : Rural and Urban Projected Population - Uttar Pradesh Sub-region (NCR) Using Arithmetic Growth							
Uttar Pradesh Sub-region (NCR)							
Year	Rural	Urban	Total	Urban Proportion	Arithmetic Growth Rate		
				percent	Rural	Urban	URGD
2001	9584867	5525585	15110452	36.57			
2011	10494174	8225006	18719180	43.94	0.95	4.89	3.94
2016	11001495	10230462	21231957	48.18	0.97	4.88	3.91
2021	11533341	12651633	24184974	52.31	0.97	4.73	3.77
2026	12090899	15579787	27670686	56.30	0.97	4.63	3.66
2031	12675411	19127404	31802815	60.14	0.97	4.55	3.59
2036	13288179	23433263	36721443	63.81	0.97	4.50	3.54
2041	13930571	28668793	42599364	67.30	0.97	4.47	3.50

Table 18 : Rural and Urban Projected Population - Rajasthan Sub-region (NCR) Using Exponential Growth Rate							
Rajasthan Sub-region (NCR)							
Year	Rural	Urban	Total	Urban Proportion	Arithmetic Growth Rate		
				percent	Rural	Urban	URGD
2001	4249835	843899	5093734	16.57			
2011	5073091	1149550	6222641	18.47	1.94	3.62	1.68
2016	5583867	1359760	6943626	19.58	2.01	3.36	1.35
2021	6146069	1602178	7748247	20.68	2.01	3.28	1.27
2026	6764876	1881342	8646218	21.76	2.01	3.21	1.20
2031	7445986	2202393	9648379	22.83	2.01	3.15	1.14
2036	8195673	2571163	10766836	23.88	2.01	3.10	1.08
2041	9020841	2994258	12015099	24.92	2.01	3.05	1.03

Table 19 : Rural and Urban Projected Population - NCR (Total) Arithmetic							
National Capital Region (TOTAL)							
Year	Rural	Urban	Total	Urban Proportion	Arithmetic Growth Rate		
				percent	Rural	Urban	URGD
2001	24243906	23169390	47413296	48.87			
2011	26426121	31731165	58157286	54.56	0.90	3.70	2.80
2016	27889030	37646615	65535644	57.44	1.11	3.73	2.62
2021	29482741	44681882	74164623	60.25	1.14	3.74	2.59
2026	31208674	53116354	84325029	62.99	1.17	3.78	2.60
2031	33070515	63307851	96378366	65.69	1.19	3.84	2.64
2036	35073876	75720312	110794188	68.34	1.21	3.92	2.71
2041	37226061	90961605	128187666	70.96	1.23	4.03	2.80

Table - 20 : Projected Population of Haryana Towns using the exponential growth rate of Urban area of the state.

Sr. No.	Level	Name	2011	2016	2021	2026	2031	2036	2041
1	DISTRICT	Faridabad							
1	TOWN	Faridabad (M Corp.)	1,414,050	1741550	1919941	2116604	2333412	2572429	2835928
2	TOWN	Tilpat (CT)	20,514	25265	27853	30706	33851	37319	41142
3	TOWN	Piala (54) (CT)	4,291	5285	5826	6423	7081	7806	8606
2	DISTRICT	Gurgaon							
4	TOWN	Hailey Mandi (MC)	20,906	25748	28385	31293	34498	38032	41928
5	TOWN	Pataudi (MC)	20,418	25147	27723	30562	33693	37144	40949
6	TOWN	Gurgaon (M Corp. + OG)	886,519	1091841	1203680	1326976	1462900	1612748	1777946
7	TOWN	Garhi Harsaru (46) (CT)	7,894	9722	10718	11816	13026	14361	15832
8	TOWN	Badshahpur (87) (CT)	15,593	19204	21172	23340	25731	28367	31272
9	TOWN	Farrukhnagar (MC)	13,513	16643	18347	20227	22299	24583	27101
10	TOWN	Manesar (154) (CT)	23,448	28879	31837	35098	38693	42656	47026
11	TOWN	Sohna (MC)	36,552	45018	49629	54712	60317	66495	73306
12	TOWN	Bhondsi (168) (CT)	17,410	21442	23639	26060	28729	31672	34916
3	DISTRICT	Jhajjar							
13	TOWN	Beri (MC)	15,934	19624	21635	23851	26294	28987	31956
14	TOWN	Bahadurgarh (M CI)	170,767	210317	231861	255611	281793	310658	342479
15	TOWN	Ladrawan (CT)	6,905	8504	9375	10336	11394	12562	13848
16	TOWN	Jhajjar (MC)	48,424	59639	65748	72483	79907	88093	97116
17	TOWN	Faizabad (87) (CT)	1,309	1612	1777	1959	2160	2381	2625
4	DISTRICT	Mewat							
18	TOWN	Taoru (MC)	22,599	27833	30684	33827	37292	41112	45323
19	TOWN	Khori Kalan (37) (CT)	6,007	7398	8156	8992	9913	10928	12047
20	TOWN	Nuh (MC)	16,260	20026	22077	24339	26832	29580	32610
21	TOWN	Salamba (154) (CT)	5,727	7053	7776	8572	9450	10419	11486
22	TOWN	Ferozepur jhirka (MC)	24,750	30482	33605	37047	40842	45025	49637
23	TOWN	Nagina (51) (CT)	11,417	14061	15502	17089	18840	20770	22897
24	TOWN	Punahana (MC)	24,734	30463	33583	37023	40815	44996	49605
25	TOWN	Pingwan (127) (CT)	12,612	15533	17124	18878	20812	22944	25294
5	DISTRICT	Palwal							

26	TOWN	Palwal (M CI + OG)	131,926	162481	179124	197472	217699	239999	264582
27	TOWN	Baghola (44) (CT)	5,413	6667	7350	8102	8932	9847	10856
28	TOWN	Palwal (Rural) (Part) (73) (CT)	23,072	28416	31326	34535	38073	41972	46272
29	TOWN	Hathin (MC)	14,421	17761	19580	21586	23797	26235	28922
30	TOWN	Hassan Pur (MC)	11,569	14248	15708	17317	19091	21046	23202
31	TOWN	Hodal (MC)	50,143	61756	68082	75056	82744	91220	100564
6	DISTRICT	Panipat							
32	TOWN	Panipat (M CI + OG)	295,970	364518	401856	443019	488399	538426	593578
33	TOWN	Kachraul (1) (CT) WARD NO.-0001	5,400	6651	7332	8083	8911	9824	10830
34	TOWN	Kabri (18) (CT) WARD	7,049	8682	9571	10551	11632	12823	14137
35	TOWN	Sikanderpur (19) (CT)	8,894	10954	12076	13313	14677	16180	17837
36	TOWN	Asan Khurd (CT)	6,873	8465	9332	10288	11342	12503	13784
37	TOWN	Panipat Taraf Ansar (CT)	42,877	52807	58217	64180	70754	78002	85991
38	TOWN	Panipat Taraf Makhdum Zadgan (CT)	67,998	83747	92325	101782	112208	123701	136372
39	TOWN	Ugra Kheri(19) (CT)	24,440	30100	33184	36583	40330	44461	49015
40	TOWN	Panipat Taraf Rajputan (CT)	28,803	35474	39108	43113	47530	52398	57765
41	TOWN	Sec. 11&12 Part II (CT)	8,876	10932	12051	13286	14647	16147	17801
42	TOWN	Kheri Nangal (131) (CT)	18,195	22409	24704	27235	30025	33100	36491
43	TOWN	Samalkha (MC + OG)	39,710	48907	53917	59439	65528	72240	79640
7	DISTRICT	Rewari							
44	TOWN	Bhakali (165) (CT)	9,970	12279	13537	14923	16452	18137	19995
45	TOWN	Dharuhera (MC)	30,344	37372	41200	45420	50073	55202	60856
46	TOWN	Rewari (M CI)	143,021	176145	194188	214079	236008	260183	286834
47	TOWN	Aakera (292) (CT)	7,110	8757	9654	10643	11733	12934	14259
48	TOWN	Ghatal Mahaniawas (291) (CT)	6,005	7396	8153	8989	9909	10924	12043
49	TOWN	Maheshari (293) (CT)	9,180	11306	12464	13741	15148	16700	18411
50	TOWN	Rampura (132) (CT)	5,954	7333	8084	8912	9825	10831	11941
51	TOWN	Manethi (28) (CT)	5,070	6244	6884	7589	8366	9223	10168
52	TOWN	Bawal (MC)	16,776	20661	22778	25111	27683	30519	33645
8	DISTRICT	Rohtak							
53	TOWN	Maham (MC)	20,484	25228	27812	30661	33802	37264	41081
54	TOWN	Rohtak (M CI)	374,292	460980	508199	560255	617643	680909	750656
55	TOWN	Kalanaur (MC)	23,319	28720	31662	34905	38480	42422	46767

56	TOWN	Sunari Kalan (101) (CT)	7,506	9244	10191	11235	12386	13655	15054
57	TOWN	Sampla (MC)	20,563	25325	27920	30779	33932	37408	41240
9	DISTRICT	Sonipat							
58	TOWN	Gohana (MC)	65,708	80926	89216	98354	108429	119535	131780
59	TOWN	Ganaur (MC)	35,603	43849	48340	53292	58751	64769	71403
60	TOWN	Sonipat (M CI + OG)	289,333	356344	392845	433085	477446	526352	580268
61	TOWN	Fazalpur (81) (CT)	3,692	4547	5013	5526	6092	6716	7404
62	TOWN	Bayyanpur (207) (CT)	5,406	6658	7340	8092	8921	9835	10842
63	TOWN	Badh Malak (68) (CT)	6,938	8545	9420	10385	11449	12622	13914
64	TOWN	Kundli (55) (CT)	21,633	26643	29372	32381	35698	39355	43386
65	TOWN	Kharkhoda (MC)	25,051	30853	34013	37497	41338	45573	50241
10	DISTRICT	Jind							
66	TOWN	Narwana (M CI)	62,090	76470	84303	92939	102459	112954	124524
67	TOWN	Uchana (MC)	16,815	20709	22831	25169	27747	30590	33723
68	TOWN	Jind (M CI)	167,592	206407	227550	250858	276554	304882	336112
69	TOWN	Julana (MC)	18,755	23099	25465	28073	30949	34119	37614
70	TOWN	Safidon (MC)	34,728	42771	47152	51982	57307	63177	69648
71	TOWN	Bhuran (16) (CT)	5,603	6901	7608	8387	9246	10193	11237
11	DISTRICT	Karnal							
72	TOWN	Nilokheri (MC)	17,938	22093	24356	26850	29601	32633	35975
73	TOWN	Taraori (MC)	25,944	31953	35226	38834	42812	47197	52032
74	TOWN	Indri (MC)	17,487	21537	23743	26175	28856	31812	35071
75	TOWN	Karnal (M CI + OG)	302,140	372117	410234	452255	498580	549651	605953
76	TOWN	Nissing (MC)	17,438	21477	23677	26102	28776	31723	34973
77	TOWN	Uncha Siwana (CT)	8,922	10988	12114	13355	14723	16231	17893
78	TOWN	Assandh (MC)	27,125	33407	36829	40602	44761	49346	54400
79	TOWN	Gharaunda (MC)	37,816	46574	51345	56604	62403	68795	75841
12	DISTRICT	Mahendragarh							
80	TOWN	Kanina (MC)	12,989	15997	17636	19442	21434	23629	26050
81	TOWN	Mahendragarh (MC)	29,128	35874	39549	43600	48066	52989	58417
82	TOWN	Ateli (MC)	7,619	9384	10345	11404	12573	13860	15280
83	TOWN	Narnaul (M CI)	74,581	91854	101263	111636	123071	135677	149575
84	TOWN	Nagal Chaudhry (CT)	8,538	10515	11593	12780	14089	15532	17123

13	DISTRICT	Bhiwani							
85	TOWN	Bawani khera (MC)	20,289	24988	27548	30369	33480	36910	40690
86	TOWN	Bhiwani (M CI)	196,057	241465	266198	293466	323526	356665	393199
87	TOWN	Tosham (CT)	15,559	19163	21125	23289	25675	28305	31204
88	TOWN	Siwani (MC)	19,143	23577	25992	28654	31589	34825	38392
89	TOWN	Loharu (MC)	13,937	17165	18923	20861	22998	25354	27951
90	TOWN	Charkhi Dadri (MC)	56,337	69385	76492	84327	92965	102488	112986

Table - 21 : Projected Population of Uttar Pradesh Towns using the exponential growth rate of Urban area of the state.

Sr. No.	Level	Name	2011	2016	2021	2026	2031	2036	2041
14	DISTRICT	Baghpat							
91	TOWN	Chhaprauli (NP)	18,970	22563	26837	31920	37966	45157	53710
92	TOWN	Tikri (NP)	14,092	16761	19936	23712	28203	33545	39899
93	TOWN	Doghat (NP)	14,166	16849	20041	23836	28351	33721	40108
94	TOWN	Baraut (NPP)	103,764	123418	146794	174598	207669	247003	293787
95	TOWN	Baghpat (NPP)	50,310	59839	71173	84654	100688	119759	142443
96	TOWN	Agarwal Mandi (Tatiri) (NP)	13,873	16501	19626	23343	27765	33024	39279
97	TOWN	Aminagar Sarai (NP)	11,174	13290	15808	18802	22363	26599	31637
98	TOWN	Khekada (NP)	48,676	57896	68862	81905	97418	115870	137817
15	DISTRICT	Bulandshahr							
99	TOWN	Sikandrabad (NPP)	81,028	96375	114630	136342	162166	192881	229415
100	TOWN	Kakod (NP)	9,213	10958	13034	15502	18438	21931	26085
101	TOWN	Aurangabad (NP)	26,544	31572	37552	44664	53124	63186	75154
102	TOWN	Bulandshahr (NPP + OG)	230,024	273593	325413	387049	460360	547556	651268
103	TOWN	Gulaothi (NPP)	50,823	60449	71899	85517	101715	120981	143895
104	TOWN	Bahalimpura (CT)	4,921	5853	6962	8280	9849	11714	13933
105	TOWN	Bhawan Bahadur Nagar (NP)	10,188	12118	14413	17143	20390	24252	28845
106	TOWN	Siana (NPP)	44,415	52828	62834	74735	88890	105727	125752
107	TOWN	Bugrasi (NP)	14,992	17832	21209	25226	30004	35687	42447
108	TOWN	Khanpur (NP)	17,247	20514	24399	29021	34517	41055	48831
109	TOWN	Anupshahr (NPP)	29,087	34596	41149	48943	58213	69240	82354
110	TOWN	Jahangirabad (NPP)	59,858	71196	84681	100720	119797	142488	169476
111	TOWN	Dibai (NPP)	39,818	47360	56330	67000	79690	94784	112737
112	TOWN	Naraura (NP)	22,775	27089	32220	38322	45581	54214	64483
113	TOWN	Shikarpur (NPP)	37,969	45161	53714	63888	75989	90383	107502
114	TOWN	Pahasu (NP)	20,672	24587	29245	34784	41372	49208	58529
115	TOWN	Chhatari (NP)	11,373	13527	16089	19137	22761	27073	32200
116	TOWN	Khurja (NPP + OG)	121,207	144165	171471	203949	242578	288525	343174
117	TOWN	Hasangarh (CT)	6,541	7780	9254	11006	13091	15570	18520
118	TOWN	Khurja Rural (CT)	21,383	25433	30250	35980	42795	50901	60542

119	TOWN	Maina Maujpur (CT)	7,351	8743	10399	12369	14712	17499	20813
16	DISTRICT	Gautam Buddha Nagar							
120	TOWN	Dadri (NPP)	91,189	108461	129004	153439	182502	217069	258184
121	TOWN	Chippyana Buzurg (CT)	17,400	20696	24616	29278	34824	41419	49265
122	TOWN	Chhapraula (CT)	15,154	18024	21438	25499	30329	36073	42906
123	TOWN	Patadi (CT)	8,479	10085	11995	14267	16969	20184	24007
124	TOWN	Noida (CT)	637,272	757977	901544	1072304	1275408	1516981	1804310
125	TOWN	Salarpur Khadar (CT)	13,600	16176	19240	22884	27218	32374	38506
126	TOWN	Bilaspur (NP)	8,980	10681	12704	15110	17972	21376	25425
127	TOWN	Dankaur (NP)	13,520	16081	19127	22749	27058	32183	38279
128	TOWN	Greater Noida (CT)	102,054	121384	144375	171721	204246	242932	288946
129	TOWN	Kherli Hafizpur (CT)	7,932	9434	11221	13347	15875	18882	22458
130	TOWN	Rabupura (NP)	15,454	18381	21863	26004	30929	36787	43755
131	TOWN	Jahangirpur (NP)	11,006	13091	15570	18519	22027	26199	31161
132	TOWN	Jewar (NP)	32,269	38381	45651	54297	64582	76814	91363
17	DISTRICT	Meerut							
133	TOWN	Karnawal (NP)	11,663	13872	16500	19625	23342	27763	33021
134	TOWN	Sardhana (NPP)	58,252	69285	82409	98018	116583	138665	164929
135	TOWN	Daurala (NP)	19,776	23522	27977	33276	39579	47075	55992
136	TOWN	Lawar (NP)	22,024	26196	31157	37059	44078	52427	62357
137	TOWN	Phalauda (NP)	19,908	23679	28164	33498	39843	47390	56366
138	TOWN	Bahsuma (NP)	11,753	13979	16627	19776	23522	27977	33276
139	TOWN	Hastinapur (NP)	26,452	31462	37421	44509	52940	62967	74894
140	TOWN	Mawana (NPP)	81,443	96869	115217	137040	162996	193869	230590
141	TOWN	Parikshitgarh (NP)	19,830	23586	28053	33367	39687	47204	56145
142	TOWN	Kithaur (NP)	27,933	33224	39517	47001	55904	66493	79087
143	TOWN	Meerut (M Corp.)	1,305,429	1552688	1846781	2196577	2612628	3107482	3696066
144	TOWN	Meerut (CB)	93,312	110986	132008	157011	186751	222123	264195
145	TOWN	Sewalkhas (NP)	24,882	29595	35200	41868	49798	59230	70448
146	TOWN	Kharkhoda (NP)	14,364	17085	20321	24170	28747	34192	40669
147	TOWN	Sindhawali (CT)	5,335	6345	7547	8977	10677	12700	15105
148	TOWN	Amehra Adipur (CT)	5,485	6524	7760	9229	10977	13057	15530
149	TOWN	Aminagar Urf Bhurbaral (CT)	6,141	7304	8688	10333	12290	14618	17387

150	TOWN	Mohiuddinpur (CT)	5,200	6185	7356	8750	10407	12378	14723
18	DISTRICT	Ghaziabad							
151	TOWN	Patala (NP)	9,500	11299	13440	15985	19013	22614	26897
152	TOWN	Niwari (NP)	9,205	10949	13022	15489	18422	21912	26062
153	TOWN	Modinagar (NPP)	130,325	155010	184370	219291	260827	310229	368990
154	TOWN	Faridnagar (NP)	12,785	15207	18087	21513	25587	30434	36198
155	TOWN	Muradnagar (NPP)	95,208	113241	134690	160202	190545	226636	269563
156	TOWN	Abupur (CT)	6,247	7430	8838	10512	12502	14871	17687
157	TOWN	Basantpur Saitli (CT)	5,563	6617	7870	9361	11134	13242	15751
158	TOWN	Muradgram Pur Pursi (CT)	5,120	6090	7243	8615	10247	12188	14496
159	TOWN	Sikri Kalan (CT)	7,037	8370	9955	11841	14084	16751	19924
160	TOWN	Rori (CT)	12,350	14689	17471	20781	24717	29398	34967
161	TOWN	Aurangabad Gadana (CT)	6,170	7339	8729	10382	12348	14687	17469
162	TOWN	Bisokhar (CT)	14,332	17047	20275	24116	28683	34116	40578
163	TOWN	Begumabad Budhana (CT)	19,898	23667	28150	33481	39823	47366	56337
164	TOWN	Ordinance Factory Muradnagar (CT)	7,569	9003	10708	12736	15148	18017	21430
165	TOWN	Loni (NPP)	516,082	613832	730097	868384	1032864	1228497	1461185
166	TOWN	Ghaziabad (M Corp.)	1,648,643	1960910	2332323	2774085	3299521	3924479	4667809
167	TOWN	Dasna (NP)	34,914	41527	49393	58748	69875	83110	98852
168	TOWN	Pavi Sadakpur (CT)	757	900	1071	1274	1515	1802	2143
169	TOWN	Haqiqatpur Urf Khudawas (CT)	15,324	18226	21679	25785	30669	36478	43387
170	TOWN	Banthla (CT)	5,766	6858	8157	9702	11540	13726	16325
171	TOWN	Khora (CT)	190,005	225994	268799	319711	380268	452294	537962
19	DISTRICT	Hapur							
172	TOWN	Pilkhuwa (NPP)	83,736	99596	118461	140898	167586	199328	237082
173	TOWN	Hapur (NPP)	262,983	312794	372040	442508	526323	626013	744585
174	TOWN	Babugarh (NP)	5,452	6485	7713	9174	10911	12978	15436
175	TOWN	Garhmukhteshwar (NPP)	46,077	54804	65185	77531	92216	109683	130458
176	TOWN	Buxer (CT)	11,499	13677	16268	19349	23014	27373	32557
20	DISTRICT	Muzaffarnagar							
177	TOWN	Purquazi (NP + OG)	29,041	34542	41084	48866	58121	69130	82224
178	TOWN	Charthawal (NP)	20,653	24565	29218	34752	41334	49163	58475
179	TOWN	Muzaffarnagar (NPP)	392,768	467162	555646	660890	786068	934957	1112045

180	TOWN	Sarwat (CT)	34,846	41446	49296	58634	69739	82948	98660
181	TOWN	Shahbudinpur (CT)	25,157	29922	35589	42330	50348	59884	71227
182	TOWN	Almaspur (CT)	13,318	15841	18841	22410	26654	31703	37707
183	TOWN	Kukra (CT)	29,454	35033	41668	49561	58948	70113	83393
184	TOWN	Sisauli (NP)	15,091	17949	21349	25393	30202	35923	42727
185	TOWN	Budhana (NP + OG)	53,722	63897	76000	90395	107517	127881	152103
186	TOWN	Shahpur (NP)	20,154	23971	28512	33912	40335	47975	57062
187	TOWN	Khatauli (NPP)	72,949	86766	103200	122747	145997	173650	206541
188	TOWN	Khanupur (CT)	6,681	7946	9452	11242	13371	15904	18916
189	TOWN	Shekhpura (CT)	9,529	11334	13481	16034	19071	22683	26979
190	TOWN	Khatauli Rural (CT)	14,949	17780	21148	25154	29918	35585	42325
191	TOWN	Jansath (NP)	19,786	23534	27991	33293	39599	47099	56020
192	TOWN	Bhokarhedi (NP)	17,829	21206	25223	30000	35682	42441	50479
193	TOWN	Miranpur (NP)	29,283	34829	41426	49273	58606	69706	82909
21	DISTRICT	Shamli							
194	TOWN	Un (NP)	15,124	18383	22344	27159	33011	40125	48771
195	TOWN	Jhinjhana (NP)	18,740	22778	27686	33652	40904	49718	60432
196	TOWN	Kairana (NPP)	89,000	108178	131489	159822	194261	236121	287002
197	TOWN	Kandhla (NPP)	46,796	56880	69136	84034	102142	124152	150905
198	TOWN	Ailam (NP)	12,110	14720	17891	21747	26433	32128	39052
199	TOWN	Shamli (NPP)	107,266	130380	158475	192624	234131	284582	345905
200	TOWN	Banat (NP)	20,728	25195	30624	37222	45243	54992	66842
201	TOWN	Garhi Pukhta (NP)	11,748	14280	17356	21097	25642	31168	37884
202	TOWN	Thana Bhawan (NP)	36,669	44571	54175	65849	80038	97285	118248
203	TOWN	Jalalabad (NP)	27,921	33938	41250	50139	60943	74076	90038

Table - 22 : Projected Population of Rajasthan Towns using the growth rate of Urban area of the state.

Sr. No.	Level	Name	2011	2016	2021	2026	2031	2036	2041
21	DISTRICT	Alwar							
204	TOWN	Behror (M)	29,531	34421	36925	39612	42494	45586	48903
205	TOWN	Neemrana (CT)	7,143	8326	8932	9581	10279	11026	11829
206	TOWN	Shahjahanpur (CT)	9,837	11466	12300	13195	14155	15185	16290
207	TOWN	Bhiwadi (M)	104,921	122295	131193	140738	150979	161964	173748
208	TOWN	Tijara (M)	24,747	28845	30944	33195	35610	38201	40981
209	TOWN	Tapookra (CT)	9,471	11039	11842	12704	13629	14620	15684
210	TOWN	Khairthal (M)	38,298	44640	47888	51372	55110	59120	63421
211	TOWN	Kishangarh (CT)	12,429	14487	15541	16672	17885	19186	20582
212	TOWN	Ramgarh (CT)	13,529	15769	16917	18147	19468	20884	22404
213	TOWN	Alwar (M CI + OG)	322,568	375981	403338	432685	464167	497940	534170
214	TOWN	Bhoogar (CT)	7,666	8935	9586	10283	11031	11834	12695
215	TOWN	Diwakari (CT)	11,188	13041	13989	15007	16099	17271	18527
216	TOWN	Desoola (CT)	7,306	8516	9135	9800	10513	11278	12099
217	TOWN	Rajgarh (M)	26,631	31041	33299	35722	38321	41110	44101
218	TOWN	Govindgarh (CT)	11,552	13465	14445	15496	16623	17833	19130
219	TOWN	Kherli (M)	17,634	20554	22049	23654	25375	27221	29202
22	DISTRICT	Bharatpur							
220	TOWN	Kaman (M)	38,040	44339	47565	51026	54739	58721	62994
221	TOWN	Nagar (M)	25,572	29806	31975	34302	36797	39475	42347
222	TOWN	Deeg (M)	44,999	52450	56267	60361	64752	69464	74518
223	TOWN	Nadbai (M)	26,411	30784	33024	35427	38005	40770	43736
224	TOWN	Kumher (M)	23,540	27438	29434	31576	33873	36338	38982
225	TOWN	Bharatpur (M CI + OG)	252,838	294705	316147	339151	363827	390300	418698
226	TOWN	Bhusawar (M)	19,946	23249	24940	26755	28702	30790	33030
227	TOWN	Weir (M)	19,385	22595	24239	26003	27895	29924	32101
228	TOWN	Bayana (M)	38,502	44877	48143	51646	55403	59435	63759
229	TOWN	Bayana (Rural) (CT)	5,866	6837	7335	7869	8441	9055	9714

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Table - 23 : POPULATION PROJECTION BY WATER FORMULA - ARITHMETIC APPROACH											
S. No.			Civic Status 2011	Population - Actual				Population Projected by Water Formula - Arithmetic Approach			
	Sub-region/ City / Town	Class		1981	1991	2001	2011	Average deviation	2021	2031	2041
1	2	3	4	5	6	7	8	9	10	11	12
I	Haryana										
1	<u>Panipat district</u>										
1	Panipat	I	UA	137927	191212	354148	444524	102199	546723	648922	751121
			MCI			268899	295970	27071	323041	350112	377183
2	Kachrauli (1)	V	CT				5400				
3	Kabri (18)	V	CT				7049				
4	Sikanderpur (19)	V	CT				8894				
5	Asan Khurd	V	CT	-	-	8066	6873	1193	8066	9259	10452
6	Panipat Taraf Ansar					31279	42877	11598	54475	66073	77671
7	Panipat Taraf Makhdum Zadgan					35155	67998	32843	100841	133684	166527
8	Kheri Nangal (131)	IV	CT				18195				
9	Panipat Taraf Rajputan					18815	28803	9988	38791	48779	58767
10	Sector 11 & + Sector 12 Part II CT						8876				
11	Ugra Kheri (19)	III	CT				24440				
12	Samalkha	III	MC	13532	18384	29866	39710	8726	48436	57162	65888
2	<u>Sonepat district</u>										
13	*Sonepat	I	UA	109369	143922	225074	289333	59988	349321	409309	469297
			MCI				293025				
14	Gohana	II	MC	26188	32496	48532	65708	13173	78881	92055	105228
15	Ganaur	III	MC	16489	20952	29006	35603	6371	41974	48346	54717
16	Kharkhoda	III	MC	9279	13151	18763	25051	5257	30308	35566	40823
17	Fazalpur		CT				3692				
18	Kundli (55)	III	CT				21633				

19	Bayyanpur (207)	V	CT				5406				
20	Badh Malak (68)	V	CT				6938				
3	<u>Rohtak district</u>										
21	Rohtak	I	UA	166767	216096	294577	374292	69175	443467	512642	581817
22	Maham	III	MC	11722	15083	18174	20484	2921	23405	26325	29246
23	Kalanaur	III	MC	12380	14524	16853	23319	3646	26965	30612	34258
24	Sampla	III	MC				20563				
25	Sunari Kalan (101)	V	CT				7506				
4	<u>Jhajjar district</u>										
26	Bahadurgarh	I	UA	37488	57235	126746	170767	44426	215193	259620	304046
			MC			131925					
27	Jhajjar	III	MC	24247	27693	39002	48424	8059	56483	64542	72601
28	Beri	IV	MC	13490	14508	16162	15934	815	16749	17563	18378
29	Ladrawan	V	CT	-	-	8008	6905	1103	8008	9111	10214
30	Sankhol	V	CT	-	-	5179					
31	Faizabad(87)	VI	CT	-	-	-	1309				
5	<u>Faridabad district</u>										
32	Faridabad	I	M. Corp	330864	617717	1055938	1414050	361062	1775112	2136174	2497236
33	Tilpat	III	CT			6369	20514	14145	34659	48804	62949
34	Piala(54)	VI	CT				4291				
6	<u>Palwal district</u>										
35	Palwal	I	MCI	47328	59168	100722	131926	28199	160125	188325	216524
			MCI				128730				
36	Hodal	II	MC	18740	25635	38309	50143	10468	60611	71078	81546
37	Hathin	IV	MC	6553	7863	10916	14421	2623	17044	19666	22289
38	Hasanpur	IV	MC	5190	7130	9090	11569	2126	13695	15822	17948
39	Palwal (Rural) (Part) (73)	III					23072				
40	Baghola (44)	V	CT				5413				
7	<u>Gurgaon district</u>										
41	Gurgaon	I	UA	100877	135884	228820	886519	261881	1148400	1410280	1672161
			UA		142651	239446	902112	379731	1281843	1661573	2041304
			M. Corp				876969				

42	Sohna	III	MC	12667	16348	27570	36552	7962	44514	52475	60437
43	Hailley Mandi	III	MC	10140	13263	17081	20906	3589	24495	28083	31672
44	Pataudi	III	MC	8422	11278	16085	20418	3999	24417	28415	32414
45	Farukknagar	IV	MC	6367	8046	9521	13513	2382	15895	18277	20659
46	Manesar (154)	III	CT				23448				
47	Bhondasi (168)	IV	CT				17410				
48	Garhi Harsaru (46)	V	CT				7894				
49	Badshahpur Part	-	CT				15593				
50	Dundahera	IV	CT	4604	6767	10626	30344	8580	38924	47504	56084
8	<u>Mewat District</u>										
51	Mewat						1089263				
52	Taoru	III	MC	6912	12534	17328	22599	5229	27828	33057	38286
53	Firozpur Jhirka	III	MC	9400	12413	17755	24750	5117	29867	34983	40100
54	Punhana	III	MC	4325	8697	13179	24734	6803	31537	38340	45143
55	Nuh	IV	MC	5992	7492	11039	16260	3423	19683	23105	26528
56	Pingwan (127)	IV	CT				12612				
57	Nagina (51)	IV	CT				11417				
58	Khori Kalan (37)	V	CT				6007				
59	Salamba (154)	V	CT				5727				
9	<u>Rewari district</u>										
60	Rewari	I	MCI	51562	75342	100684	143021	30486	173507	203994	234480
						105138					
61	Dharuhera	III	MCI	5266	10848	18892	30344	8359	38703	47063	55422
62	Bawal	IV	MC	7760	9010	12144	16776	3005	19781	22787	25792
63	Rewari (Rural)	VI	CT	-	-	4454					
64	Manethi (28)	V	CT				5070				
65	Bhakali (165)	V	CT				9970				
66	Maheshari (293)	V	CT				9180				
67	Aakera (292)	V	CT				7110				
68	Ghatal Mahaniawas (291)	V	CT				6005				
69	Rampura (132)	V	CT				5954				
10	<u>Mahendragarh district</u>										
70	Kanina	IV	MC	7,131	8,601	10,195	12,989	1953	14942	16894	18847

71	Mahendragarh	III	MC	14,488	19,610	24,323	29,128	4880	34008	38888	43768
72	Ateli	V	MC	2,993	4,457	5,673	7,619	1542	9161	10703	12245
73	Narnaul	II	MCL	41441	51976	62077	74581	11047	85628	96674	107721
74	Nagal Chaudhry	V	CT			7368	8538	2846	11384	14230	17076
11	<u>Bhiwani district</u>										
75	Bawani khera	III	MC	11,530	14,159	17,424	20,289	2920	23209	26128	29048
76	Bhiwani	I	MCL	101,277	121,629	169,531	196,057	31593	227650	259244	290837
77	Tosham	IV	CT		8,387	11,272	15,559	7172	22731	29903	37075
78	Siwani	IV	MC		11,109	15,850	19,143	4017	23160	27177	31194
79	Loharu	IV	MC	7,247	9,031	11,421	13,937	2230	16167	18397	20627
80	Charkhi Dadri	II	MC	27,315	32,253	44,895	56,337	9674	66011	75685	85359
12	<u>Jind district</u>										
81	Narwana	II	MCL	29242	38533	50435	62090	10949	73039	83989	94938
82	Uchana	IV	MC	8,091	10,216	14,111	16,815	2908	19723	22631	25539
83	Jind	I	MCL	56748	85315	135855	167592	36948	204540	241488	278436
84	Julana	IV	MC	9,294	11,424	13,635	18,755	3154	21909	25062	28216
85	Safidon	III	MC	15,116	20,056	27,541	34,728	6537	41265	47803	54340
86	Bhuran (16)	V	CT				5,603				
13	<u>Karnal district</u>										
87	Nilokheri	IV	MC	11,078	13,911	16,405	17,938	2287	20225	22511	24798
88	Taraori	III	MC	12,803	16,103	22,201	25,944	4380	30324	34705	39085
89	Indri	IV	MC	8,304	11,131	14,511	17,487	3061	20548	23609	26670
90	Karnal (M CI + OG)	I	UA	132,107	176,131	221,236	302,140	56678	358818	415495	472173
			MCI				286,827				
91	Nissing	IV	MC				17,438				
92	Uncha Siwana	V	CT		4,860	10,610	8,922	2031	10953	12984	15015
93	Assandh	III	MC	13,209	16,749	22,707	27,125	4639	31764	36402	41041
94	Gharaunda	III	MC	17,332	21,147	30,172	37,816	6828	44644	51472	58300
II	<u>Rajasthan</u>										
1	<u>Alwar district</u>										
95	Alwar	I	UA	145795	210146	266203	322568	58924	381492	440417	499341
			UA				341422				
							315379				

96	Bhiwadi	I	CT	1729	15285	33877	104921	34397	139318	173716	208113
97	Khairthal	III	M	15962	22741	32005	38298	7445	45743	53189	60634
98	Rajgarh	III	M	14199	20223	25009	26631	3204	29835	33039	36243
99	Behror	III	M	1085	16238	22856	29531	9482	39013	48495	57977
100	Tijara	III	M	12199	15399	19921	24747	4183	28930	33112	37295
101	Kherli	IV	M	8046	12263	15506	17634	2686	20320	23005	25691
102	Govindgarh	IV	CT	-	7991	10089	11552	1781	13333	15113	16894
103	Kishangarh	IV	CT	-	-	9473	12429	2956	15385	18341	21297
104	Ramgarh	IV	CT				13529				
105	Shahjahanpur	V	CT				9837				
106	Tapookra	V	CT				9471				
107	Desoola	V	CT				7306				
108	Neemrana	V	CT				7143				
109	Bhoogar		CT				7666				
110	Diwakari		CT				11188				
	<u>Bharatpur district</u>										
111	Kaman	III	M	19,451	24,190	30,793	38,040	6925	44965	51890	58815
112	Nagar	III	M	11,450	16,235	21,350	25,572	4669	30241	34909	39578
113	Deeg	III	M	28,085	34,083	40,859	44,999	5458	50457	55915	61373
114	Nadbai	III	M	11,610	17,126	21,649	26,411	4643	31054	35696	40339
115	Kumher	III	M	12,784	16,355	20,296	23,540	3593	27133	30725	34318
116	Bharatpur (M CI + OG)	I	UA	105,274	156,880	205,235	252,838	47979	300817	348796	396775
117			MCL				252,342				
118	Bhusawar	IV	M	11,060	14,524	17,723	19,946	2711	22657	25368	28079
119	Weir	IV	M	12,178	14,881	17,339	19,385	2252	21637	23889	26141
120	Bayana	III	M	20,673	26,529	33,716	38,502	5987	44489	50475	56462
			UA				44,368	22184	66552	88736	110920
121	Bayana (Rural)		CT				5,866				
III	Uttar Pradesh										
I	<u>Meerut district</u>										
122	Meerut	I	UA	536615	849799	1161715	1305429	256271	1561700	1817972	2074243
				542998	0	1172106	1420902				
123	Mawana	II	MB / NPP	37620	51701	69191	81443	14608	96051	110658	125266

124	Sardhana	II	MB / NPP	30138	42980	48314	58252	9371	67623	76995	86366
125	Kithaur	III	NP	13791	19270	23614	27933	4714	32647	37361	42075
126	Hastinapur	III	NP	11637	15081	21249	26452	4938	31390	36329	41267
127	Sewal Khas	III	NP	10278	14402	18451	24882	4868	29750	34618	39486
128	Lawar	III	NP	11535	14471	18035	22024	3496	25520	29017	32513
129	Parikshitgarh	IV	NP	11328	13677	17369	19830	2834	22664	25498	28332
130	Phalauda	IV	NP	10357	13970	17206	19908	3184	23092	26275	29459
131	Karnawal	IV	NP	9895	11047	12609	11663	589	12252	12842	13431
132	Kharkhoda	IV	NP	8708	10550	12593	14364	1885	16249	18135	20020
133	Daurala	IV	NP	9146	10025	10685	19776	3543	23319	26863	30406
134	Bahsuma	IV	NP	7906	9060	10561	11753	1282	13035	14318	15600
135	Aminagar Urf Bhurbaral		CT	-	-	5500	6141	641	6782	7423	8064
136	Mohiuddinpur		CT	-	-	4890	5200	310	5510	5820	6130
137	Meerut (CB)		CB	94210	96021	92944	93312	368	93680	94048	94416
138	Sindhawali		CT				5335				
139	Amehra Adipur		CT				5485				
2	<u>Baghpat district</u>										
140	Baraut	I	MB/NPP	46292	67705	85708	103764	19157	122921	142079	161236
141	Khekada	III	NP	24984	35191	40335	48676	7897	56573	64471	72368
142	Baghpat	II	MB/NPP	17157	24939	36384	50310	11051	61361	72412	83463
143	Chhaprauli	IV	NP	13805	16008	17798	18970	1722	20692	22413	24135
144	Tikri	IV	NP	11315	12784	13427	14092	926	15018	15943	16869
145	Doghat	IV	NP	10019	12310	13263	14166	1382	15548	16931	18313
146	Agarwal Mandi (Tatiri)	IV	NP	9353	10871	12405	13873	1507	15380	16886	18393
147	Aminagar Sarai	IV	NP	6837	8274	10112	11174	1446	12620	14065	15511
3	<u>Ghaziabad district</u>										
148	Ghaziabad	I	M Corp	287170	511759	968258	1648643	453824	2102467	2556292	3010116
			UA	297429	578680	1217543	2375820	692797	3068617	3761414	4454211
149	Modinagar	I	UA	87665	123279	139929	130325	14220	144545	158765	172985
		(a)		78,243	101,660	113,218	183,075	34944	218019	252963	287907
		UA			131,752						
150	Loni	I	NPP	10259	36561	120945	516082	168608	684690	853297	1021905
					66921	249287					

151	Muradnagar	II	MB/NPP	26047	44395	74151	95208	23054	118262	141315	164369
152	Dasna	III	NP	13037	16963	24434	34914	7292	42206	49499	56791
153	Faridnagar	IV	NP	9116	10940	11272	12785	1223	14008	15231	16454
154	Niwari	V	NP	7078	8841	9921	9205	709	9914	10623	11332
155	Patala	V	NP	7847	9181	9733	9500	551	10051	10602	11153
156	Pavi Sadanapur	VI	CT				757				
157	Sikri Kalan	V	CT				7037				
158	Abupur	V	CT				6247				
159	Basantpur Saitli	V	CT				5563				
160	Muradgram Pur Pursi	V	CT				5120				
161	Ordi. Fact. Muradnagar	V	CT	9026	12792	10756	7569	1639	9208	10847	12486
				13,147							
162	Rori		CT		8,473		12350				
163	Aurangabad Gadana		CT				6170				
164	Bisokhar		CT		8,110	10,476	14332				
165	Begumabad Budhana		CT	9,422	13,509	16,235	19898				
166	Haqiqatpur Urf Khudawas		CT				15324				
167	Banthla		CT				5766				
168	Khora		CT				190005				
169	Behta Hajipur	II	CT	4058	30360	94298	102785	32909	135694	168603	201512
170	Dharoti Khurd	III	CT	-	-	34044	50325	16281	66606	82887	99168
4	Hapur district										
171	Hapur	I	MB	102837	146262	211983	262983	53382	316365	369747	423129
172	Pilkhuwa	II	MB/NPP	37884	50162	66907	83736	15284	99020	114304	129588
173	Garhmukteshwar	III	MB/NPP	17914	25241	33847	46077	9388	55465	64852	74240
174	Babugarh	V	NP	2389	3581	5939	5452	1021	6473	7494	8515
175	Buxer	IV	CT				11499				
5	Gautam Buddh Nagar district										
176	Noida	I	CT	37000	146514	305058	637272	200091	837363	1037453	1237544
177	Greater Noida*	I	CT				102,054				
178	Dadri	II	MB/NPP	19723	32883	57416	91189	23822	115011	138833	162655
179	Jewar	III	NP	15275	21376	27016	32269	5665	37934	43598	49263

180	Rabupura	IV	NP	8999	10769	13046	15454	2152	17606	19757	21909
181	Dankaur	IV	NP	7935	9531	11999	13520	1862	15382	17243	19105
182	Salarpur Khadar	IV	CT	-	-	10750	13600	2850	16450	19300	22150
183	Jahangirpur	IV	NP	6447	8206	9510	11006	1520	12526	14045	15565
184	Bilaspur	V	NP	4661	6127	7481	8980	1440	10420	11859	13299
185	Chhapraula	IV	NP				15,154				
186	Chipyana Buzurg	IV	CT				17,400				
187	Patadi	V	CT				8,479				
188	Kherli Hafizpur	V	CT				7,932				
6	Bulandshahr district										
189	Bulandshahr	I	MB	103436	127201	176425	230024	42196	272220	314416	356612
190			UA				234,945				
			NPP				222,519				
191	Khurja	I	MB	67119	80305	98610	121207	18029	139236	157266	175295
			UA				142,590				
			NPP				111,062				
192	Sikandarabad	II	MB/NPP	43135	60992	69867	81028	12631	93659	106290	118921
193	Jahangirabad	II	MB/NPP	29301	37981	51394	59858	10186	70044	80229	90415
194	Guloathi	II	MB/NPP	24416	33982	42903	50823	8802	59625	68428	77230
195	Siana	III	MB/NPP	22410	29888	38999	44415	7335	51750	59085	66420
196	Debai	III	MB/NPP	22430	27721	34877	39818	5796	45614	51410	57206
197	Shikarpur	III	MB/NPP	21499	29197	33187	37969	5490	43459	48949	54439
198	Anupshahr	III	MB	15193	19684	23795	29087	4631	33718	38350	42981
199	Naraura	III	NP	9573	15652	20407	22775	4401	27176	31576	35977
200	Aurangabad	III	NP	11622	15402	20097	26544	4974	31518	36492	41466
201	Pahasu	III	NP	9016	13127	17122	20672	3885	24557	28443	32328
202	Khanpur	IV	NP	8311	11420	13761	17247	2979	20226	23204	26183
203	Bugrasi	IV	NP	8307	11093	12789	14992	2228	17220	19449	21677
204	Chhatari	IV	NP	5862	8202	10903	11373	1837	13210	15047	16884
205	Bhawan Bahadur Nagar	IV	NP	6779	9101	9322	10188	1136	11324	12461	13597
206	Kakod	V	NP	4299	5838	7139	9213	1638	10851	12489	14127
207	Maina Maujpur										
208	Khurja Rural		CT				21383				

209	Hasangarh	V	CT				6541				
210	Bahalimpur		CT				4921				
7	Muzaffarnagar district										
211	Muzaffarnagar (NPP)	I	NPP	171,816	247,624	331,668	392,768	73651	466419	540069	613720
			UA				495,543				
	(Rural+Urban)						2,869,934				
212	Purquazi (NP + OG)	III	UA	13,412	17,752	23,599	29,041	5210	34251	39460	44670
			NP			22,974	27,516	9172	36688	45860	55032
213	Charthawal	III	NP	15,420	18,593	19,610	20,653	1744	22397	24142	25886
214	Sarwat		CT				34,846				
215	Shahbudinpur		CT				25157				
216	Almaspur		CT				13318				
217	Kukra		CT				29,454				
218	Sisauli	IV	NP	11,057	13,437	15,245	15,091	1345	16436	17780	19125
219	Budhana (NP + OG)	II	UA	17,532	26,931	32,950	53,722	12063	65785	77849	89912
			NP				39,867				
220	Shahpur	III	NP	9,516	13,287	17,187	20,154	3546	23700	27246	30792
221	Khatauli	II	NPP	31,384	44,319	58,622	72,949	13855	86804	100659	114514
			UA	31,384	44,319	69,360	97,427	22014	119441	141456	163470
222	Khanupur	V	CT				6,681				
223	Shekhpura	II	CT				9,529				
224	Khatauli Rural	II	CT			10,738	14,949	4211	19160	23371	27582
225	Jansath	IV	NP	10,460	13,865	17,771	19,786	3109	22895	26003	29112
226	Bhokarhedi	IV	NP	12,148	14,006	15,976	17,829	1894	19723	21616	23510
227	Miranpur	III	NP	17,019	22,796	26,086	29,283	4088	33371	37459	41547
8	Shamli district										
228	Shamli (NPP)	I	NPP	51,850	70,853	90,055	107,266	18472	125738	144210	162682
229	Kairana (NPP)	II	NPP	44,505	56,079	73,011	89,000	14832	103832	118663	133495
230	Banat	III	NP		13,634	19,081	20,728	6909	27637	34547	41456
231	Kandhala	III	NPP	25,522	32,513	40,136	46,796	7091	53887	60979	68070
232	Thana Bhawan	III	NP	18,711	25,577	31,161	36,669	5986	42655	48641	54627
233	Jalalabad	III	NP	14,929	19,360	23,588	27,921	4331	32252	36582	40913
234	Jhinjhana	IV	NP	10123	13062	17670	18740	2872	21612	24485	27357

235	Un	IV	NP	11,302	13,303	14,582	15,124	1274	16398	17672	18946
236	Ailum	IV	NP		13,044	13,064	12,110	4037	16147	20183	24220
237	Garhi Pukhta	IV	NP	7,279	9,195	12,082	11,748	1490	13238	14727	16217

Table - 24 : POPULATION PROJECTION BY WATER FORMULA - GEOMETRIC APPROACH

S. No.	Sub-region/City/Town	Class	Civic Status 2001	Population - Actual				Population Projected by Water Formula -Geometric Approach						
				1981	1991	2001	2011	Geo Growth 1981-91	Geo Growth 1991-2001	Geo Growth 2001-11	Geo Mean	Projected Population		
												2021	2031	2041
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I	Haryana													
1	Panipat district													
1	Panipat	I	UA	137927	191212	354148	444524	0.39	0.85	0.26	0.44	639,211	919,165	1,321,729
			MCI			268899	295970			0.10	0.10	325,766	358,562	394,660
2	Kachrauli (1)	V	CT				5400							
3	Kabri (18)	V	CT				7049							
4	Sikanderpur (19)	V	CT				8894							
5	Asan Khurd	V	CT	-	-	8066	6873							
6	Panipat Taraf Ansar					31279	42877			0.37	0.37	58,775	80,569	110,443
7	Panipat Taraf Makhdum Zadgan					35155	67998			0.93	0.93	131,524	254,398	492,066
8	Kheri Nangal (131)	IV	CT				18195							
9	Panipat Taraf Rajputan					18815	28803			0.53	0.53	44,093	67,500	103,333
10	Sector 11 & + Sector 12 Part II CT						8876							
11	Ugra Kheri (19)	III	CT				24440							
12	Samalkha	III	MC	13532	18384	29866	39710	0.36	0.62	0.33	0.42	56,368	80,013	113,576
2	Sonepat district													
13	*Sonepat	I	UA	109369	143922	225074	289333	0.32	0.56	0.29	0.37	396,531	543,447	744,796
			MCI				293025							
14	Gohana	II	MC	26188	32496	48532	65708	0.24	0.49	0.35	0.35	88,561	119,361	160,873
15	Ganaur	III	MC	16489	20952	29006	35603	0.27	0.38	0.23	0.29	45,824	58,980	75,913
16	Kharkhoda	III	MC	9279	13151	18763	25051	0.42	0.43	0.34	0.39	34,840	48,456	67,391

[illegible]

41	Gurgaon	I	UA	100877	135884	228820	886519	0.35	0.68	2.87	0.88	1,666,933	3,134,357	5,893,572
			UA		142651	239446	902112		0.68	2.77	1.37	2,138,324	5,068,584	12,014,337
			M. Corp				876969							
42	Sohna	III	MC	12667	16348	27570	36552	0.29	0.69	0.33	0.40	51,248	71,852	100,740
43	Hailley Mandi	III	MC	10140	13263	17081	20906	0.31	0.29	0.22	0.27	26,567	33,761	42,902
44	Pataudi	III	MC	8422	11278	16085	20418	0.34	0.43	0.27	0.34	27,338	36,604	49,011
45	Farukknagar	IV	MC	6367	8046	9521	13513	0.26	0.18	0.42	0.27	17,197	21,886	27,854
46	Manesar (154)	III	CT				23448							
47	Bhondasi (168)	IV	CT				17410							
48	Garhi Harsaru	V	CT				7894							
49	Badshahpur Part	-	CT				15593							
50	Dundaheera	IV	CT	4604	6767	10626	30344	0.47	0.57	1.86	0.79	54,382	97,464	174,674
8	Mewat District													
51	Mewat						1089263							
52	Taoru	III	MC	6912	12534	17328	22599	0.81	0.38	0.30	0.46	32,897	47,889	69,712
53	Firozpur Jhirka	III	MC	9400	12413	17755	24750	0.32	0.43	0.39	0.38	34,125	47,051	64,873
54	Punhana	III	MC	4325	8697	13179	24734	1.01	0.52	0.88	0.77	43,782	77,500	137,185
55	Nuh	IV	MC	5992	7492	11039	16260	0.25	0.47	0.47	0.38	22,483	31,087	42,985
56	Pingwan (127)	IV	CT				12612							
57	Nagina (51)	IV	CT				11417							
58	Khori Kalan (37)	V	CT				6007							
59	Salamba (154)	V	CT				5727							
9	Rewari district													
60	Rewari	I	MCI	51562	75342	100684	143021	0.46	0.34	0.42	0.40	200,593	281,342	394,594
						105138								
61	Dharuhera	III	MCI	5266	10848	18892	30344	1.06	0.74	0.61	0.78	54,044	96,255	171,435
62	Bawal	IV	MC	7760	9010	12144	16776	0.16	0.35	0.38	0.28	21,431	27,379	34,977
63	Rewari (Rural)	VI	CT			4454								
64	Manethi (28)	V	CT				5070							
65	Bhakali (165)	V	CT				9970							

66	Maheshari (293)	V	CT				9180							
67	Aakera (292)	V	CT				7110							
68	Ghatal Mahaniawas (291)	V	CT				6005							
69	Rampura (132)	V	CT				5954							
10	Mahendragar district													
70	Kanina	IV	MC	7,131	8,601	10,195	12,989	0.21	0.19	0.27	0.22	15,831	19,294	23,515
71	Mahendragar	III	MC	14,488	19,610	24,323	29,128	0.35	0.24	0.20	0.26	36,586	45,953	57,719
72	Ateli	V	MC	2,993	4,457	5,673	7,619	0.49	0.27	0.34	0.36	10,345	14,045	19,069
73	Narnaul	II	MCL	41441	51976	62077	74581	0.25	0.19	0.20	0.22	90,623	110,115	133,800
74	Nagal Chaudhary	V	CT			7368	8538							
11	Bhiwani district													
75	Bawani kheda	III	MC	11,530	14,159	17,424	20,289	0.23	0.23	0.16	0.21	24,453	29,472	35,521
76	Bhiwani	I	MCL	101,277	121,629	169,531	196,057	0.20	0.39	0.16	0.23	241,416	297,268	366,043
77	Tosham	IV	CT		8,387	11,272	15,559		0.34	0.38	0.36	21,187	28,850	39,285
78	Siwani	IV	MC		11,109	15,850	19,143		0.43	0.21	0.30	24,843	32,241	41,841
79	Loharu	IV	MC	7,247	9,031	11,421	13,937	0.25	0.26	0.22	0.24	17,324	21,534	26,767
80	Charkhi Dadri	II	MC	27,315	32,253	44,895	56,337	0.18	0.39	0.25	0.26	71,118	89,776	113,330
12	Jind district													
81	Narwana	II	MCL	29242	38533	50435	62090	0.32	0.31	0.23	0.28	79,665	102,215	131,147
82	Uchana	IV	MC	8,091	10,216	14,111	16,815	0.26	0.38	0.19	0.27	21,317	27,024	34,258
83	Jind	I	MCL	56748	85315	135855	167592	0.50	0.59	0.23	0.41	236,551	333,885	471,268
84	Julana	IV	MC	9,294	11,424	13,635	18,755	0.23	0.19	0.38	0.26	23,545	29,558	37,106
85	Safidon	III	MC	15,116	20,056	27,541	34,728	0.33	0.37	0.26	0.32	45,734	60,227	79,314
86	Bhuran (16)	V	CT				5,603							
13	Karnal district													
87	Nilokheri	IV	MC	11,078	13,911	16,405	17,938	0.26	0.18	0.09	0.16	20,851	24,238	28,175
88	Taraori	III	MC	12,803	16,103	22,201	25,944	0.26	0.38	0.17	0.25	32,543	40,821	51,204
89	Indri	IV	MC	8,304	11,131	14,511	17,487	0.34	0.30	0.21	0.28	22,327	28,506	36,396
90	Karnal (M.C.)	I	UA	132,107	176,131	221,236	302,140	0.33	0.26	0.37	0.31	397,266	522,340	686,794
			MCI				286,827							
91	Nissing	IV	MC				17,438							
92	Uncha Siwani	V	CT		4,860	10,610	8,922		1.18	(0.16)	1.18	19,478	42,523	92,832
93	Assandh	III	MC	13,209	16,749	22,707	27,125	0.27	0.36	0.19	0.26	34,305	43,386	54,871

94	Gharaunda	III	MC	17,332	21,147	30,172	37,816	0.22	0.43	0.25	0.29	48,694	62,700	80,735
II	Rajasthan													
I	Alwar district													
95	Alwar	I	UA	145795	210146	266203	322568	0.44	0.27	0.21	0.29	416,799	538,558	695,885
			UA				341422							
							315379							
96	Bhiwadi	I	CT	1729	15285	33877	104921	7.84	1.22	2.10	2.71	389,718	1,447,568	5,376,840
97	Khairthal	III	M	15962	22741	32005	38298	0.42	0.41	0.20	0.32	50,707	67,137	88,891
98	Rajgarh	III	M	14199	20223	25009	26631	0.42	0.24	0.06	0.19	31,604	37,506	44,510
99	Behror	III	M	1085	16238	22856	29531	13.97	0.41	0.29	1.18	64,513	140,936	307,888
100	Tijara	III	M	12199	15399	19921	24747	0.26	0.29	0.24	0.27	31,311	39,616	50,124
101	Kherli	IV	M	8046	12263	15506	17634	0.52	0.26	0.14	0.27	22,341	28,305	35,861
102	Govindgarh	IV	CT	-	7991	10089	11552		0.26	0.15	0.20	13,806	16,500	19,719
103	Kishangarh	IV	CT	-	-	9473	12429			0.31	0.31	16,307	21,396	28,073
104	Ramgarh	IV	CT				13529							
105	Shahjahanpur	V	CT				9837							
106	Tapookra	V	CT				9471							
107	Desoola	V	CT				7306							
108	Neemrana	V	CT				7143							
109	Bhoogar		CT				7666							
110	Diwakari		CT				11188							
2	Bharatpur district													
111	Kaman	III	M	19,451	24,190	30,793	38,040	0.24	0.27	0.24	0.25	47,555	59,451	74,322
112	Nagar	III	M	11,450	16,235	21,350	25,572	0.42	0.32	0.20	0.30	33,151	42,977	55,715
113	Deeg	III	M	28,085	34,083	40,859	44,999	0.21	0.20	0.10	0.16	52,318	60,827	70,719
114	Nadbai	III	M	11,610	17,126	21,649	26,411	0.48	0.26	0.22	0.30	34,393	44,786	58,321
115	Kumher	III	M	12,784	16,355	20,296	23,540	0.28	0.24	0.16	0.22	28,737	35,080	42,825
116	Bharatpur (N)	I	UA	105,274	156,880	205,235	252,838	0.49	0.31	0.23	0.33	335,579	445,397	591,153
117			MCL				252,342							
118	Bhusawar	IV	M	11,060	14,524	17,723	19,946	0.31	0.22	0.13	0.21	24,041	28,976	34,925
119	Weir	IV	M	12,178	14,881	17,339	19,385	0.22	0.17	0.12	0.16	22,544	26,217	30,489
120	Bayana	III	M	20,673	26,529	33,716	38,502	0.28	0.27	0.14	0.22	47,037	57,464	70,202
			UA				44,368							
121	Bayana (Rural)		CT				5,866							
III	Uttar Pradesh													

1	Meerut district													
122	Meerut	I	UA	536615	849799	1161715	1305429	0.58	0.37	0.12	0.30	1,694,629	2,199,864	2,855,730
				542998	0	1172106	1420902			0.21	0.21	1,722,508	2,088,135	2,531,371
123	Mawana	II	MB / NPP	37620	51701	69191	81443	0.37	0.34	0.18	0.28	104,408	133,850	171,593
124	Sardhana	II	MB / NPP	30138	42980	48314	58252	0.43	0.12	0.21	0.22	71,159	86,926	106,186
125	Kithaur	III	NP	13791	19270	23614	27933	0.40	0.23	0.18	0.25	35,027	43,923	55,078
126	Hastinapur	III	NP	11637	15081	21249	26452	0.30	0.41	0.24	0.31	34,638	45,357	59,394
127	Sewal Khas	III	NP	10278	14402	18451	24882	0.40	0.28	0.35	0.34	33,343	44,681	59,874
128	Lawar	III	NP	11535	14471	18035	22024	0.25	0.25	0.22	0.24	27,315	33,877	42,016
129	Parikshitgarh	IV	NP	11328	13677	17369	19830	0.21	0.27	0.14	0.20	23,785	28,528	34,217
130	Phalauda	IV	NP	10357	13970	17206	19908	0.35	0.23	0.16	0.23	24,551	30,278	37,340
131	Karnawal	IV	NP	9895	11047	12609	11663	0.12	0.14	(0.08)	0.13	13,159	14,848	16,753
132	Kharkhoda	IV	NP	8708	10550	12593	14364	0.21	0.19	0.14	0.18	16,939	19,975	23,556
133	Daurala	IV	NP	9146	10025	10685	19776	0.10	0.07	0.85	0.18	23,242	27,315	32,103
134	Bahsuma	IV	NP	7906	9060	10561	11753	0.15	0.17	0.11	0.14	13,396	15,268	17,401
135	Aminagar Urf Bhurbaral		CT	-	-	5500	6141			0.12	0.12	6,857	7,656	8,548
136	Mohiuddinpur		CT	-	-	4890	5200			0.06	0.06	5,530	5,880	6,253
137	Meerut (CB)		CB	94210	96021	92944	93312	0.02	(0.03)	0.00	0.01	94,126	94,947	95,776
138	Sindhawali		CT				5335							
139	Amehra Adipur		CT				5485							
2	Baghpat district													
140	Baraut	I	MB/NPP	46292	67705	85708	103764	0.46	0.27	0.21	0.30	134,469	174,261	225,827
141	Khekada	III	NP	24984	35191	40335	48676	0.41	0.15	0.21	0.23	59,927	73,779	90,832
142	Baghpat	II	MB/NPP	17157	24939	36384	50310	0.45	0.46	0.38	0.43	71,958	102,922	147,208
143	Chhaprauli	IV	NP	13805	16008	17798	18970	0.16	0.11	0.07	0.11	20,972	23,185	25,631
144	Tikri	IV	NP	11315	12784	13427	14092	0.13	0.05	0.05	0.07	15,059	16,093	17,198
145	Doghat	IV	NP	10019	12310	13263	14166	0.23	0.08	0.07	0.11	15,674	17,342	19,187
146	Agarwal Mandi (Tatiri)	IV	NP	9353	10871	12405	13873	0.16	0.14	0.12	0.14	15,807	18,011	20,522
147	Aminagar Sarai	IV	NP	6837	8274	10112	11174	0.21	0.22	0.11	0.17	13,072	15,293	17,891

3	Ghaziabad district													
148	Ghaziabad	I	M Corp	287170	511759	968258	1648643	0.78	0.89	0.70	0.79	2,948,580	5,273,504	9,431,606
			UA	297429	578680	1217543	2375820	0.95	1.10	0.95	1.00	4,746,191	9,481,495	18,941,242
149	Modinagar	I	UA	87665	123279	139929	130325	0.41	0.14	(0.07)	0.23	160,852	198,530	245,034
		(a)		78,243	101,660	113,218	183,075	0.30	0.11	0.62	0.28	233,580	298,018	380,232
		UA			131,752									
150	Loni	I	NPP	10259	36561	120945	516082	2.56	2.31	3.27	2.68	1,901,180	7,003,705	25,800,756
					66921	249287								
151	Muradnagar	II	MB/NPP	26047	44395	74151	95208	0.70	0.67	0.28	0.51	143,937	217,607	328,983
152	Dasna	III	NP	13037	16963	24434	34914	0.30	0.44	0.43	0.38	48,342	66,934	92,676
153	Faridnagar	IV	NP	9116	10940	11272	12785	0.20	0.03	0.13	0.09	13,979	15,285	16,713
154	Niwari	V	NP	7078	8841	9921	9205	0.25	0.12	(0.07)	0.17	10,811	12,696	14,911
155	Patala	V	NP	7847	9181	9733	9500	0.17	0.06	(0.02)	0.10	10,460	11,518	12,682
156	Pavi Sadanapur	VI	CT				757							
157	Sikri Kalan	V	CT				7037							
158	Abupur	V	CT				6247							
159	Basantpur Saitli	V	CT				5563							
160	Muradgram Pur Pursi	V	CT				5120							
161	Ordi. Fact. Muradnagar	V	CT	9026	12792	10756	7569	0.42	(0.16)	(0.30)	0.27	9,612	12,207	15,503
				13,147										
162	Rori		CT		8,473		12350							
163	Aurangabad Gadana		CT				6170							
164	Bisokhar		CT		8,110	10,476	14332		0.29	0.37	0.33	19,029	25,264	33,543
165	Begumabad Budhana		CT	9,422	13,509	16,235	19898	0.43	0.20	0.23	0.27	25,276	32,109	40,788
166	Haqiqatpur Urf Khudawas		CT				15324							
167	Banthla		CT				5766							
168	Khora		CT				190005							
169	Behta Hajipur	II	CT	4058	30360	94298	102785	6.48	2.11	0.09	1.07	212,869	440,855	913,017
170	Dharoti Khurd	III	CT	-	-	34044	50325			0.48	0.48	74,392	109,969	162,560

4	Hapur district													
171	Hapur	I	MB	102837	146262	211983	262983	0.42	0.45	0.24	0.36	356,971	484,549	657,723
172	Pilkhuwa	II	MB/NPP	37884	50162	66907	83736	0.32	0.33	0.25	0.30	108,923	141,685	184,301
173	Garhmukteshwar	III	MB/NPP	17914	25241	33847	46077	0.41	0.34	0.36	0.37	63,096	86,401	118,313
174	Babugarh	V	NP	2389	3581	5939	5452	0.50	0.66	(0.08)	0.57	8,577	13,493	21,228
175	Buxer	IV	CT				11499							
5	Gautam Buddh Nagar district													
176	Noida	I	CT	37000	146514	305058	637272	2.96	1.08	1.09	1.52	1,603,730	4,035,873	10,156,496
177	Greater Noida*	I	CT				102,054							
178	Dadri	II	MB/NPP	19723	32883	57416	91189	0.67	0.75	0.59	0.66	151,743	252,507	420,185
179	Jewar	III	NP	15275	21376	27016	32269	0.40	0.26	0.19	0.27	41,099	52,346	66,670
180	Rabupura	IV	NP	8999	10769	13046	15454	0.20	0.21	0.18	0.20	18,503	22,152	26,522
181	Dankaur	IV	NP	7935	9531	11999	13520	0.20	0.26	0.13	0.19	16,056	19,068	22,646
182	Salarpur Khadar	IV	CT	-	-	10750	13600			0.27	0.27	17,206	21,767	27,538
183	Jahangirpur	IV	NP	6447	8206	9510	11006	0.27	0.16	0.16	0.19	13,093	15,576	18,530
184	Bilaspur	V	NP	4661	6127	7481	8980	0.31	0.22	0.20	0.24	11,141	13,821	17,146
185	Chhapraula	IV	NP				15,154							
186	Chipyana Buzurg	IV	CT				17,400							
187	Patadi	V	CT				8,479							
188	Kherli Hafizpur	V	CT				7,932							
6	Bulandshahr district													
189	Bulandshahr	I	MB	103436	127201	176425	230024	0.23	0.39	0.30	0.30	299,041	388,766	505,412
190			UA				234,945							
			NPP				222,519							
191	Khurja	I	MB	67119	80305	98610	121207	0.20	0.23	0.23	0.22	147,546	179,609	218,640
			UA				142,590							
			NPP				111,062							
192	Sikandarabad	II	MB/NPP	43135	60992	69867	81028	0.41	0.15	0.16	0.21	98,263	119,163	144,509
193	Jahangirabad	II	MB/NPP	29301	37981	51394	59858	0.30	0.35	0.16	0.26	75,318	94,771	119,248
194	Guloathi	II	MB/NPP	24416	33982	42903	50823	0.39	0.26	0.18	0.27	64,382	81,557	103,315

195	Siana	III	MB/NPP	22410	29888	38999	44415	0.33	0.30	0.14	0.24	55,152	68,484	85,039
196	Debai	III	MB/NPP	22430	27721	34877	39818	0.24	0.26	0.14	0.21	47,984	57,826	69,685
197	Shikarpur	III	MB/NPP	21499	29197	33187	37969	0.36	0.14	0.14	0.19	45,250	53,927	64,267
198	Anupshahr	III	MB	15193	19684	23795	29087	0.30	0.21	0.22	0.24	36,052	44,685	55,385
199	Narauna	III	NP	9573	15652	20407	22775	0.64	0.30	0.12	0.28	29,194	37,421	47,968
200	Aurangabad	III	NP	11622	15402	20097	26544	0.33	0.30	0.32	0.32	34,954	46,029	60,612
201	Pahasu	III	NP	9016	13127	17122	20672	0.46	0.30	0.21	0.31	27,006	35,282	46,093
202	Khanpur	IV	NP	8311	11420	13761	17247	0.37	0.20	0.25	0.27	21,883	27,766	35,230
203	Bugrasi	IV	NP	8307	11093	12789	14992	0.34	0.15	0.17	0.21	18,091	21,831	26,343
204	Chhatari	IV	NP	5862	8202	10903	11373	0.40	0.33	0.04	0.18	13,401	15,790	18,605
205	Bhawan Bahadur Nagar	IV	NP	6779	9101	9322	10188	0.34	0.02	0.09	0.09	11,123	12,144	13,258
206	Kakod	V	NP	4299	5838	7139	9213	0.36	0.22	0.29	0.29	11,840	15,215	19,554
207	Maina Maujpur													
208	Khurja Rural		CT				21383							
209	Hasangarh	V	CT				6541							
210	Bahalimpur		CT				4921							
7	Muzaffarnagar district													
211	Muzaffarnag	I	NPP	171,816	247,624	331,668	392,768	0.44	0.34	0.18	0.30	511,446	665,984	867,216
			UA				495,543							
	(Rural+Urban)						2,869,934							
212	Purquazi (NF	III	UA	13,412	17,752	23,599	29,041	0.32	0.33	0.23	0.29	37,485	48,383	62,450
			NP			22,974	27,516			0.20	0.20	32,956	39,471	47,275
213	Charthawal	III	NP	15,420	18,593	19,610	20,653	0.21	0.05	0.05	0.08	22,394	24,281	26,327
214	Sarwat		CT				34,846							
215	Shahbudin pur		CT				25157							
216	Almaspur		CT				13318							
217	Kukra		CT				29,454							
218	Sisauli	IV	NP	11,057	13,437	15,245	15,091	0.22	0.13	(0.01)	0.17	17,659	20,665	24,181
219	Budhana (NF	II	UA	17,532	26,931	32,950	53,722	0.54	0.22	0.63	0.42	76,431	108,740	154,706
			NP				39,867							
220	Shahpur	III	NP	9,516	13,287	17,187	20,154	0.40	0.29	0.17	0.27	25,632	32,599	41,459
221	Khatauli	II	NPP	31,384	44,319	58,622	72,949	0.41	0.32	0.24	0.32	96,231	126,943	167,457
			UA	31,384	44,319	69,360	97,427	0.41	0.57	0.40	0.46	141,762	206,272	300,139

222	Khanupur	V	CT				6,681							
223	Shekhpura	II	CT				9,529							
224	Khatauli Rur	II	CT			10,738	14,949			0.39	0.39	20,811	28,973	40,335
225	Jansath	IV	NP	10,460	13,865	17,771	19,786	0.33	0.28	0.11	0.22	24,105	29,366	35,775
226	Bhokarhedi	IV	NP	12,148	14,006	15,976	17,829	0.15	0.14	0.12	0.14	20,247	22,993	26,112
227	Miranpur	III	NP	17,019	22,796	26,086	29,283	0.34	0.14	0.12	0.18	34,605	40,895	48,328
8	Shamli district													
228	Shamli (NPP)	I	NPP	51,850	70,853	90,055	107,266	0.37	0.27	0.19	0.27	135,880	172,128	218,044
229	Kairana (NPP)	II	NPP	44,505	56,079	73,011	89,000	0.26	0.30	0.22	0.26	111,972	140,873	177,234
230	Banat	III	NP		13,634	19,081	20,728		0.40	0.09	0.19	24,577	29,141	34,553
231	Kandhala	III	NPP	25,522	32,513	40,136	46,796	0.27	0.23	0.17	0.22	57,094	69,658	84,987
232	Thana Bhawan	III	NP	18,711	25,577	31,161	36,669	0.37	0.22	0.18	0.24	45,540	56,558	70,241
233	Jalalabad	III	NP	14,929	19,360	23,588	27,921	0.30	0.22	0.18	0.23	34,297	42,128	51,748
234	Jhinjhana	IV	NP	10123	13062	17670	18740	0.29	0.35	0.06	0.18	22,183	26,259	31,083
235	Un	IV	NP	11,302	13,303	14,582	15,124	0.18	0.10	0.04	0.09	16,422	17,832	19,363
236	Ailum	IV	NP		13,044	13,064	12,110		0.00	(0.07)	0.00	12,129	12,147	12,166
237	Garhi Pukhta	IV	NP	7,279	9,195	12,082	11,748	0.26	0.31	(0.03)	0.29	15,125	19,474	25,072

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Table - 25 : POPULATION OF NCR CITIES/TOWNS BY WATER FORMULA -INCREMENTAL INCREASE METHOD

S. No.	Sub-region/City/Town	Class	Civic Status 2001	Population				Increase (X)			Average	Incremental Increase (Y)			Projected Population by Incremental Method		
				1981	1991	2001	2011	1981-91	1991-2001	2001-2011				Average	2021	2031	2041
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
I	Haryana																
1	Panipat district																
1	Panipat	I	UA	137927	191212	354148	444524	53285	162936	90376	102199	109651	-72560	18546	565269	704559	862394
			MCI			268899	295970										
2	Kachrauli (1)	V	CT				5400										
3	Kabri (18)	V	CT				7049										
4	Sikanderpur (19)	V	CT				8894										
5	Asan Khurd	V	CT			8066	6873										
6	Panipat Taraf Ansar					31279	42877										
7	Panipat Taraf Makhdum Zadgan					35155	67998										
8	Kheri Nangal (131)	IV	CT				18195										
9	Panipat Taraf Rajputan					18815	28803										
10	Sector 11 & + Sector 12 Part-II CT						8876										
11	Ugra Kheri (19)	III	CT				24440										
12	Samalkha	III	MC	13532	18384	29866	39710	4852	11482	9844	8726	6630	-1638	2496	50932	64650	80864
2	Sonepat district																
13	*Sonepat	I	UA	109369	143922	225074	289333	34553	81152	64259	59988	46599	-16893	14853	364174	453868	558415
			MCI				293025										
14	Gohana	II	MC	26188	32496	48532	65708	6308	16036	17176	13173	9728	1140	5434	84315	108357	137832
15	Ganaur	III	MC	16489	20952	29006	35603	4463	8054	6597	6371	3591	-1457	1067	43041	51547	61119
16	Kharkhoda	III	MC	9279	13151	18763	25051	3872	5612	6288	5257	1740	676	1208	31516	39190	48071
17	Fazalpur		CT				3692										
18	Kundli (55)	III	CT				21633										
19	Bayyanpur (207)	V	CT				5406										

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20	Badh Malak (68)	V	CT				6938										
3	Rohtak district																
21	Rohtak	I	UA	166767	216096	294577	374292	49329	78481	79715	69175	29152	1234	15193	458660	558221	672975
22	Maham	III	MC	11722	15083	18174	20484	3361	3091	2310	2921	-270	-781	-526	22879	24749	26093
23	Kalanaur	III	MC	12380	14524	16853	23319	2144	2329	6466	3646	185	4137	2161	29126	37095	47224
24	Sampla	III	MC				20563										
25	Sunari Kalan (101)	V	CT				7506										
4	Jhajjar district																
26	Bahadurgarh	I	UA	37488	57235	126746	170767	19747	69511	44021	44426	49764	-25490	12137	227330	296031	376868
			MC			131925											
27	Jhajjar	III	MC	24247	27693	39002	48424	3446	11309	9422	8059	7863	-1887	2988	59471	73506	90529
28	Beri	IV	MC	13490	14508	16162	15934	1018	1654	-228	815	636	-1882	-623	16126	15694	14640
29	Ladrawan	V	CT	-	-	8008	6905										
30	Sankhol	V	CT	-	-	5179											
31	Faizabad(87)	VI	CT	-	-	-	1309										
5	Faridabad district																
32	Faridabad	I	M. Corp	330864	617717	1055938	1414050	286853	438221	358112	361062	151368	-80109	35630	1810742	2243063	2711013
33	Tilpat	III	CT			6369	20514										
34	Piala(54)	VI	CT				4291										
6	Palwal district																
35	Palwal	I	MCI	47328	59168	100722	131926	11840	41554	31204	28199	29714	-10350	9682	169807	217371	274616
			MCI				128730										
36	Hodal	II	MC	18740	25635	38309	50143	6895	12674	11834	10468	5779	-840	2470	63080	78487	96363
37	Hathin	IV	MC	6553	7863	10916	14421	1310	3053	3505	2623	1743	452	1098	18141	22959	28874
38	Hasanpur	IV	MC	5190	7130	9090	11569	1940	1960	2479	2126	20	519	270	13965	16630	19565
39	Palwal (Rural) (Part) (73)	III					23072										
40	Baghola (44)	V	CT				5413										
7	Gurgaon district																
41	Gurgaon	I	UA	100877	135884	228820	886519	35007	92936	657699	261881	57929	564763	311346	1459746	2344318	3540237
			UA		142651	239446	902112	142651	96795	662666	300704	-45856	565871	260008	1462824	2283543	3364269
			M. Corp				876969										
42	Sohna	III	MC	12667	16348	27570	36552	3681	11222	8982	7962	7541	-2240	2651	47164	60427	76340
43	Hailley Mandi	III	MC	10140	13263	17081	20906	3123	3818	3825	3589	695	7	351	24846	29136	33778
44	Pataudi	III	MC	8422	11278	16085	20418	2856	4807	4333	3999	1951	-474	739	25155	30631	36845
45	Farukkknagar	IV	MC	6367	8046	9521	13513	1679	1475	3992	2382	-204	2517	1157	17052	21747	27598

46	Manesar (154)	III	CT				23448										
47	Bhondasi (168)	IV	CT				17410										
48	Garhi	V	CT				7894										
49	Badshahpur Part		CT				15593										
50	Dundahera	IV	CT	4604	6767	10626	30344	2163	3859	19718	8580	1696	15859	8778	47702	73837	108749
8	Mewat District																
51	Mewat						1089263										
52	Taoru	III	MC	6912	12534	17328	22599	5622	4794	5271	5229	-828	477	-176	27653	32531	37233
53	Firozpur Jhirka	III	MC	9400	12413	17755	24750	3013	5342	6995	5117	2329	1653	1991	31858	40956	52046
54	Punhana	III	MC	4325	8697	13179	24734	4372	4482	11555	6803	110	7073	3592	35129	49115	66692
55	Nuh	IV	MC	5992	7492	11039	16260	1500	3547	5221	3423	2047	1674	1861	21543	28687	37691
56	Pingwan (127)	IV	CT				12612										
57	Nagina (51)	IV	CT				11417										
58	Khori Kalan (37)	V	CT				6007										
59	Salamba (154)	V	CT				5727										
9	Rewari district																
60	Rewari	I	MCI	51562	75342	100684	143021	23780	25342	42337	30486	1562	16995	9279	182786	231829	290151
						105138											
61	Dharuhera	III	MCI	5266	10848	18892	30344	5582	8044	11452	8359	2462	3408	2935	41638	55868	73032
62	Bawal	IV	MC	7760	9010	12144	16776	1250	3134	4632	3005	1884	1498	1691	21472	27860	35938
63	Rewari (Rural)	VI	CT			4454											
64	Manethi (28)	V	CT				5070										
65	Bhakali (165)	V	CT				9970										
66	Maheshari (293)	V	CT				9180										
67	Aakera (292)	V	CT				7110										
68	Ghatal Mahaniawas (291)	V	CT				6005										
69	Rampura (132)	V	CT				5954										
10	Mahendragarh district																
70	Kanina	IV	MC	7,131	8,601	10,195	12,989	1470	1594	2794	1953	124	1200	662	15604	18880	22819
71	Mahendragarh	III	MC	14,488	19,610	24,323	29,128	5122	4713	4805	4880	-409	92	-159	33850	38413	42817
72	Ateli	V	MC	2,993	4,457	5,673	7,619	1464	1216	1946	1542	-248	730	241	9402	11426	13691
73	Narnaul	II	MCL	41441	51976	62077	74581	10535	10101	12504	11047	-434	2403	985	86612	99628	113628

140	Baraut	I	MB/NPP	46292	67705	85708	103764	21413	18003	18056	19157	-3410	53	-1679	121243	137043	151165
141	Khekada	III	NP	24984	35191	40335	48676	10207	5144	8341	7897	-5063	3197	-933	55640	61672	66770
142	Baghpat	II	MB/NPP	17157	24939	36384	50310	7782	11445	13926	11051	3663	2481	3072	64433	81628	101895
143	Chhaprauli	IV	NP	13805	16008	17798	18970	2203	1790	1172	1722	-413	-618	-516	20176	20867	21042
144	Tikri	IV	NP	11315	12784	13427	14092	1469	643	665	926	-826	22	-402	14616	14737	14457
145	Doghat	IV	NP	10019	12310	13263	14166	2291	953	903	1382	-1338	-50	-694	14854	14849	14149
146	Agarwal Mandi (Tatiri)	IV	NP	9353	10871	12405	13873	1518	1534	1468	1507	16	-66	-25	15355	16811	18243
147	Aminagar Sarai	IV	NP	6837	8274	10112	11174	1437	1838	1062	1446	401	-776	-188	12432	13503	14386
3	Ghaziabad district																
148	Ghaziabad	I	M Corp	287170	511759	968258	1648643	224589	456499	680385	453824	231910	223886	227898	2330365	3239986	4377504
			UA	297429	578680	1217543	2375820	281251	638863	1158277	692797	357612	519414	438513	3507130	5076953	7085289
149	Modinagar	I	UA	87665	123279	139929	130325	35614	16650	-9604	14220	-18964	-26254	-22609	121936	90938	37331
		(a)		78,243	101,660	113,218	183,075	23417	11558	69857	34944	-11859	58299	23220	241239	322623	427227
		UA			131,752												
150	Loni	I	NPP	10259	36561	120945	516082	26302	84384	395137	168608	58082	310753	184418	869107	1406550	2128410
					66921	249287											
151	Muradnagar	II	MB/NPP	26047	44395	74151	95208	18348	29756	21057	23054	11408	-8699	1355	119616	145379	172496
152	Dasna	III	NP	13037	16963	24434	34914	3926	7471	10480	7292	3545	3009	3277	45483	59330	76453
153	Faridnagar	IV	NP	9116	10940	11272	12785	1824	332	1513	1223	-1492	1181	-156	13853	14765	15521
154	Niwari	V	NP	7078	8841	9921	9205	1763	1080	-716	709	-683	-1796	-1240	8675	6905	3895
155	Patala	V	NP	7847	9181	9733	9500	1334	552	-233	551	-782	-785	-784	9268	8252	6452
156	Pavi Sadnapur	VI	CT				757										
157	Sikri Kalan	V	CT				7037										
158	Abupur	V	CT				6247										
159	Basantpur Saitli	V	CT				5563										
160	Muradgram Pur Pursi	V	CT				5120										
161	Ordi. Fact. Muradnagar	V	CT	9026	12792	10756	7569	3766	-2036	-3187	-486	-5802	-1151	-3477	3607	-3832	-14747
				13,147													
162	Rori		CT		8,473		12350										
163	Aurangabad Gadana		CT				6170										
164	Bisokhar		CT		8,110	10,476	14332	8110	2366	3856	4777	-5744	1490	-2127	16982	17506	15902
165	Begumabad Budhana		CT	9,422	13,509	16,235	19898	4087	2726	3663	3492	-1361	937	-212	23178	26246	29102
166	Haqiqatpur Urf Khudawas		CT				15324										
167	Banthla		CT				5766										
168	Khora		CT				190005										

169	Behta Hajipur	II	CT	4058	30360	94298	102785	26302	63938	8487	32909	37636	-55451	-8908	126787	141881	148067
170	Dharoti Khurd	III	CT			34044	50325										
4	Hapur district																
171	Hapur	I	MB	102837	146262	211983	262983	43425	65721	51000	53382	22296	-14721	3788	320153	381110	445854
172	Pilkhuwa	II	MB/NPP	37884	50162	66907	83736	12278	16745	16829	15284	4467	84	2276	101296	121131	143241
173	Garhmukteshwar	III	MB/NPP	17914	25241	33847	46077	7327	8606	12230	9388	1279	3624	2452	57916	72207	88949
174	Babugarh	V	NP	2389	3581	5939	5452	1192	2358	-487	1021	1166	-2845	-840	5634	4976	3478
175	Buxer	IV	CT				11499										
5	Gautam Buddh Nagar district																
176	Noida	I	CT	37000	146514	305058	637272	109514	158544	332214	200091	49030	173670	111350	948713	1371503	1905644
177	Greater Noida*	I	CT				102,054										
178	Dadri	II	MB/NPP	19723	32883	57416	91189	13160	24533	33773	23822	11373	9240	10307	125318	169753	224494
179	Jewar	III	NP	15275	21376	27016	32269	6101	5640	5253	5665	-461	-387	-424	37510	42326	46719
180	Rabupura	IV	NP	8999	10769	13046	15454	1770	2277	2408	2152	507	131	319	17925	20714	23823
181	Dankaur	IV	NP	7935	9531	11999	13520	1596	2468	1521	1862	872	-947	-38	15344	17131	18880
182	Salarpur Khadar	IV	CT			10750	13600										
183	Jahangirpur	IV	NP	6447	8206	9510	11006	1759	1304	1496	1520	-455	192	-132	12394	13651	14776
184	Bilaspur	V	NP	4661	6127	7481	8980	1466	1354	1499	1440	-112	145	17	10436	11909	13398
185	Chhapraula	IV	NP				15,154										
186	Chipyana Buzurg	IV	CT				17,400										
187	Patadi	V	CT				8,479										
188	Kherli Hafizpur	V	CT				7,932										
6	Bulandshahr district																
189	Bulandshahr	I	MB	103436	127201	176425	230024	23765	49224	53599	42196	25459	4375	14917	287137	359167	446114
190			UA				234,945										
			NPP				222,519										
191	Khurja	I	MB	67119	80305	98610	121207	13186	18305	22597	18029	5119	4292	4706	143942	171382	203528
			UA				142,590										
			NPP				111,062										
192	Sikandarabad	II	MB/NPP	43135	60992	69867	81028	17857	8875	11161	12631	-8982	2286	-3348	90311	96246	98833
193	Jahangirabad	II	MB/NPP	29301	37981	51394	59858	8680	13413	8464	10186	4733	-4949	-108	69936	79905	89767
194	Gulaothi	II	MB/NPP	24416	33982	42903	50823	9566	8921	7920	8802	-645	-1001	-823	58802	65959	72292
195	Siana	III	MB/NPP	22410	29888	38999	44415	7478	9111	5416	7335	1633	-3695	-1031	50719	55992	60234
196	Debai	III	MB/NPP	22430	27721	34877	39818	5291	7156	4941	5796	1865	-2215	-175	45439	50885	56156

228	Shamli (NP	I	NPP	51,850	70,853	90,055	107,266	19003	19202	17211	18472	199	-1991	-896	124842	141522	157306
229	Kairana (NP	II	NPP	44,505	56,079	73,011	89,000	11574	16932	15989	14832	5358	-943	2208	106039	125286	146740
230	Banat	III	NP		13,634	19,081	20,728	13634	5447	1647	6909	-8187	-3800	-5994	21644	16566	5495
231	Kandhala	III	NPP	25,522	32,513	40,136	46,796	6991	7623	6660	7091	632	-963	-166	53722	60482	67077
232	Thana Bhawan	III	NP	18,711	25,577	31,161	36,669	6866	5584	5508	5986	-1282	-76	-679	41976	46604	50553
233	Jalalabad	III	NP	14,929	19,360	23,588	27,921	4431	4228	4333	4331	-203	105	-49	32203	36435	40619
234	Jhinjhana	IV	NP	10123	13062	17670	18740	2939	4608	1070	2872	1669	-3538	-935	20678	21681	21750
235	Un	IV	NP	11,302	13,303	14,582	15,124	2001	1279	542	1274	-722	-737	-730	15669	15484	14569
236	Ailum	IV	NP		13,044	13,064	12,110	13044	20	-954	4037	-13024	-974	-6999	9148	-814	-17774
237	Garhi Pukhta	IV	NP	7,279	9,195	12,082	11,748	1916	2887	-334	1490	971	-3221	-1125	12113	11352	9467

Table - 26 : POPULATION PROJECTION BY RATIO ESTIMATOR

S. No.			Civic Status 2001	Population - Actual				Population projected through R-estimator		
	Sub-region/City/Town	Class		1981	1991	2001	2011	2021	2031	2041
1	2	3	4	5	6	7	8	10	11	12
1	Haryana									
1	<u>Panipat district</u>									
1	Panipat	I	UA	137927	191212	354148	444524	551210	683500	847540
			MCI			268899	295970	367003	455083	564304
2	Kachrauli (1)	V	CT				5400	6696	8303	10296
3	Kabri (18)	V	CT				7049	8741	10839	13440
4	Sikanderpur (19)	V	CT				8894	11029	13675	16958
5	Asan Khurd	V	CT	-	-	8066	6873	8523	10568	13104
6	Panipat Taraf Ansar					31279	42877	53167	65928	81750
7	Panipat Taraf Makhdum Zadgan					35155	67998	84318	104554	129647
8	Kheri Nangal (131)	IV	CT				18195	22562	27977	34691
9	Panipat Taraf Rajputan					18815	28803	35716	44287	54916
10	Sector 11 & + Sector 12 Part II CT						8876	11006	13648	16923
11	Ugra Kheri (19)	III	CT				24440	30306	37579	46598
12	Samalkha	III	MC	13532	18384	29866	39710	49240	61058	75712
2	<u>Sonepat district</u>									
13	*Sonepat	I	UA	109369	143922	225074	289333	370346	490788	650400
			MCI				293025	375072	497051	658699
14	Gohana	II	MC	26188	32496	48532	65708	84106	111459	147707
15	Ganaur	III	MC	16489	20952	29006	35603	45572	60392	80033
16	Kharkhoda	III	MC	9279	13151	18763	25051	32065	42493	56313
17	Fazalpur		CT				3692	4726	6263	8299
18	Kundli (55)	III	CT				21633	27690	36696	48629
19	Bayyanpur (207)	V	CT				5406	6920	9170	12152
20	Badh Malak (68)	V	CT				6938	8881	11769	15596
3	<u>Rohtak district</u>									

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21	Rohtak	I	UA	166767	216096	294577	374292	479094	634902	841382
22	Maham	III	MC	11722	15083	18174	20484	26220	34746	46047
23	Kalanaur	III	MC	12380	14524	16853	23319	29848	39555	52419
24	Sampla	III	MC				20563	26321	34880	46224
25	Sunari Kalan (101)	V	CT							
4	Jhajjar district									
26	Bahadurgarh	I	UA	37488	57235	126746	170767	217624	277338	353438
			MC			131925				
27	Jhajjar	III	MC	24247	27693	39002	48424	61711	78644	100224
28	Beri	IV	MC	13490	14508	16162	15934	20306	25878	32979
29	Ladrawan	V	CT	-	-	8008	6905	8800	11214	14291
30	Sankhol	V	CT	-	-					
31	Faizabad(87)	VI	CT	-	-	-				
5	Faridabad district									
32	Faridabad	I	M. Corp	330864	617717	1055938	1414050	1901897	2558052	3440580
33	Tilpat	III	CT			6369	20514	27591	37110	49913
34	Piala(54)	VI	CT				4291	5771	7763	10441
6	Palwal district									
35	Palwal	I	MCI	47328	59168	100722	131926	177440	238657	320994
			MCI				128730	173142	232876	313218
36	Hodal	II	MC	18740	25635	38309	50143	67442	90710	122005
37	Hathin	IV	MC	6553	7863	10916	14421	19396	26088	35088
38	Hasanpur	IV	MC	5190	7130	9090	11569	15560	20929	28149
39	Palwal (Rural) (Part) (73)	III					23072	31032	41738	56137
40	Baghola (44)	V	CT				5413	7280	9792	13171
7	Gurgaon district									
41	Gurgaon	I	UA	100877	135884	228820	886519	3085086	10736100	37361627
			UA		142651	239446	902112	3139350	10924937	38018781
			M. Corp				876969	3051852	10620445	36959150

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42	Sohna	III	MC	12667	16348	27570	36552	127201	442659	1540455
43	Hailley Mandi	III	MC	10140	13263	17081	20906	72753	253180	881066
44	Pataudi	III	MC	8422	11278	16085	20418	71055	247270	860500
45	Farukknagar	IV	MC	6367	8046	9521	13513	47025	163648	569494
46	Manesar (154)	III	CT				23448	81599	283965	988197
47	Bhondasi (168)	IV	CT				17410	60587	210842	733730
48	Garhi Harsaru (46)	V	CT				7894	27471	95599	332686
49	Badshahpur Part	-	CT				15593	54264	188837	657154
50	Dundahera	IV	CT	4604	6767	10626	30344	105597	367478	1278823
8	<u>Mewat District</u>									
51	Mewat						1089263	1623002	2418273	3603226
52	Taoru	III	MC	6912	12534	17328	22599	33673	50172	74756
53	Firozepur Jhirka	III	MC	9400	12413	17755	24750	36878	54947	81872
54	Punhana	III	MC	4325	8697	13179	24734	36854	54912	81819
55	Nuh	IV	MC	5992	7492	11039	16260	24227	36099	53787
56	Pingwan (127)	IV	CT				12612	18792	28000	41720
57	Nagina (51)	IV	CT				11417	17011	25347	37767
58	Khori Kalan (37)	V	CT				6007	8950	13336	19871
59	Salamba (154)	V	CT				5727	8533	12715	18945
9	<u>Rewari district</u>									
60	Rewari	I	MCI	51562	75342	100684	143021	205950	296568	427058
						105138				
61	Dharuhera	III	MCI	5266	10848	18892	30344	43695	62921	90607
62	Bawal	IV	MC	7760	9010	12144	16776	24157	34787	50093
63	Rewari (Rural)	VI	CT	-	-	4454				
64	Manethi (28)	V	CT				5070	7301	10513	15139
65	Bhakali (165)	V	CT				9970	14357	20674	29770
66	Maheshari (293)	V	CT				9180	13219	19036	27411
67	Aakera (292)	V	CT				7110	10238	14743	21230
68	Ghatal Mahaniawas (291)	V	CT				6005	8647	12452	17931
69	Rampura (132)	V	CT				5954	8574	12346	17779

10	<u>Mahendragarh district</u>									
70	Kanina	IV	MC	7,131	8,601	10,195	12,989	15740	19073	23113
71	Mahendragarh	III	MC	14,488	19,610	24,323	29,128	35297	42772	51830
72	Ateli	V	MC	2,993	4,457	5,673	7,619	9233	11188	13557
73	Narnaul	II	MCL	41441	51976	62077	74581	90376	109516	132710
74	Nagal Chaudhry	V	CT			7368	8538	10346	12537	15193
11	<u>Bhiwani district</u>									
75	Bawani khera	III	MC	11,530	14,159	17,424	20,289	24110	28652	34048
76	Bhiwani	I	MCL	101,277	121,629	169,531	196,057	232985	276868	329016
77	Tosham	IV	CT		8,387	11,272	15,559	18490	21972	26111
78	Siwani	IV	MC		11,109	15,850	19,143	22749	27033	32125
79	Loharu	IV	MC	7,247	9,031	11,421	13,937	16562	19682	23389
80	Charkhi Dadri	II	MC	27,315	32,253	44,895	56,337	66948	79558	94543
12	<u>Jind district</u>									
81	Narwana	II	MCL	29242	38533	50435	62090	77116	95778	118956
82	Uchana	IV	MC	8,091	10,216	14,111	16,815	20884	25938	32215
83	Jind	I	MCL	56748	85315	135855	167592	208149	258521	321084
84	Julana	IV	MC	9,294	11,424	13,635	18,755	23294	28931	35932
85	Safidon	III	MC	15,116	20,056	27,541	34,728	43132	53570	66534
86	Bhuran (16)	V	CT				5,603	6959	8643	10735
13	<u>Karnal district</u>									
87	Nilokheri	IV	MC	11,078	13,911	16,405	17,938	23140	29851	38507
88	Taraori	III	MC	12,803	16,103	22,201	25,944	33468	43173	55694
89	Indri	IV	MC	8,304	11,131	14,511	17,487	22558	29100	37539
90	Karnal (M Cl + OG)	I	UA	132,107	176,131	221,236	302,140	389761	502791	648601
			MCL				286,827	370007	477309	615728
91	Nissing	IV	MC				17,438	22495	29019	37434
92	Uncha Siwana	V	CT		4,860	10,610	8,922	11509	14847	19153
93	Assandh	III	MC	13,209	16,749	22,707	27,125	34991	45139	58229

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94	Gharaunda	III	MC	17,332	21,147	30,172	37,816	48783	62930	81179
II	Rajasthan									
1	<u>Alwar district</u>									
95	Alwar	I	UA	145795	210146	266203	322568	436606	590961	799884
96	Bhiwadi	III	CT	1729	15285	33877	104921	142014	192221	260177
97	Khairthal	III	M	15962	22741	32005	38298	51838	70164	94969
98	Rajgarh	III	M	-	20223	25009	26631	36046	48789	66038
99	Behror	III	M	1085	16238	22856	29531	39971	54102	73229
100	Tijara	IV	M	12199	15399	19921	24747	33496	45338	61366
101	Kherli	IV	M	-	12263	15506	17634	23868	32306	43728
102	Govindgarh	IV	CT	-	7991	10089	11552	15636	21164	28646
103	Kishangarh	V	CT	-	-	9473	12429	16823	22771	30821
2	<u>Bharatpur district</u>									
104	Kaman	III	M	19,451	24,190	30,793	38,040	45496	54413	65078
105	Nagar	III	M	11,450	16,235	21,350	25,572	30584	36579	43748
106	Deeg	III	M	28,085	34,083	40,859	44,999	53819	64367	76983
107	Nadbai	III	M	11,610	17,126	21,649	26,411	31588	37779	45183
108	Kumher	III	M	12,784	16,355	20,296	23,540	28154	33672	40272
109	Bharatpur (M CI + OG)	I	UA	105,274	156,880	205,235	252,838	302394	361664	432550
110			MCL				252,342	301801	360954	431701
111	Bhusawar	IV	M	11,060	14,524	17,723	19,946	23855	28531	34123
112	Weir	IV	M	12,178	14,881	17,339	19,385	23184	27729	33163
113	Bayana	III	M	20,673	26,529	33,716	38,502	46048	55074	65868
114			UA				44,368	53064	63465	75904
115	Bayana (Rural)		CT				5,866	7016	8391	10035
III	Uttar Pradesh									
1	<u>Meerut district</u>									
116	Meerut	I	UA	536615	849799	1161715	1305429	1488001	1696106	1933316
117	Mawana	II	MB	37620	51701	69191	81443	92833	105817	120616
118	Sardhana	III	MB	30138	42980	48314	58252	66399	75685	86270

119	Kithaur	III	NP	13791	19270	23614	27933	31840	36293	41368
120	Hastinapur	III	NP	11637	15081	21249	26452	30151	34368	39175
121	Sewal Khas	IV	NP	10278	14402	18451	24882	28362	32328	36850
122	Lawar	IV	NP	11535	14471	18035	22024	25104	28615	32617
123	Parikshitgarh	IV	NP	11328	13677	17369	19830	22603	25765	29368
124	Phalauda	IV	NP	10357	13970	17206	19908	22692	25866	29483
125	Karnawal	IV	NP	9895	11047	12609	11663	13294	15153	17273
126	Kharkhoda	IV	NP	8708	10550	12593	14364	16373	18663	21273
127	Daurala	IV	NP	9146	10025	10685	19776	22542	25694	29288
128	Behsuma	IV	NP	7906	9060	10561	11753	13397	15270	17406
129	Aminagar urf Bhurbaral	V	CT	-	-	5500	6141	7000	7979	9095
130	Mohiuddinpur	V	CT	-	-	4890	5200	5927	6756	7701
2	<u>Baghpat district</u>									
131	Baraut	II	MB	46292	67705	85708	103764	124384	149102	178732
132	Khekada	III	NP	24984	35191	40335	48676	58349	69944	83844
133	Baghpat	III	MB	17157	24939	36384	50310	60308	72292	86658
134	Chhaprauli	IV	NP	13805	16008	17798	18970	22740	27259	32675
135	Tikri	IV	NP	11315	12784	13427	14092	16892	20249	24273
136	Doghat	IV	NP	10019	12310	13263	14166	16981	20356	24401
137	Aggarwal Mandi	IV	NP	9353	10871	12405	13873	16630	19935	23896
138	Aminagar Sarai	IV	NP	6837	8274	10112	11174	13395	16056	19247
3	<u>Ghaziabad district</u>									
139	Ghaziabad	I	M Corp	287170	511759	968258	1648643	2737053	4544016	7543908
140	Hapur	I	MB	102837	146262	211983	262983	436601	724838	1203365
141	Loni	I	NP	10259	36561	120945	516082	856792	1422433	2361503
142	Modinagar	I	UA	87665	123279	139929	130325	216364	359204	596345
143	Behta Hajipur	II	CT	4058	30360	94298	102785	170642	283298	470327
144	Muradnagar	II	MB	26047	44395	74151	95208	158063	262414	435656
145	Pilkhuwa	II	MB	37884	50162	66907	83736	139017	230794	383162
146	Dharoti Khurd	III	CT	-	-	34044	50325	83549	138707	230279
147	Garhmukteshwar	III	MB	17914	25241	33847	46077	76496	126998	210840
148	Dasna	III	NP	13037	16963	24434	34914	57964	96231	159760

149	Faridnagar	IV	NP	9116	10940	11272	12785	21225	35238	58502
150	Ordi. Fact. Muradnagar	IV	CT	9026	12792	10756	7569	12566	20862	34634
151	Niwari	V	NP	7078	8841	9921	9205	15282	25371	42121
152	Patala	V	NP	7847	9181	9733	9500	15772	26184	43470
153	Babugarh	V	NP	2389	3581	5939	5452	9051	15027	24947
4	<u>Hapur district</u>									
154	Hapur	I	MB	102837	146262	211983	262983	338138	434771	559019
155	Pilkhuwa	II	MB/NPP	37884	50162	66907	83736	107666	138435	177997
156	Garhmukteshwar	III	MB/NPP	17914	25241	33847	46077	59245	76176	97945
157	Babugarh	V	NP	2389	3581	5939	5452	7010	9013	11589
158	Buxer	IV	CT				11499	14785	19010	24443
5	<u>Gautam Buddh Nagar district</u>									
159	NOIDA	I	CT	37000	146514	305058	637272	1180492	2186761	4050788
160	Dadri	II	MB	19723	32883	57416	91189	168920	312910	579638
161	Jewar	III	NP	15275	21376	27016	32269	59776	110729	205116
162	Rabupura	IV	NP	8999	10769	13046	15454	28627	53029	98233
163	Dankaur	IV	CT	7935	9531	11999	13520	25045	46393	85939
164	<i>Salarpur Khadar</i>	IV	CT	-	-	10750	13600	25193	46668	86448
165	Jahangirpur	V	NP	6447	8206	9510	11006	20388	37766	69959
166	Bilaspur	V	NP	4661	6127	7481	8980	16635	30814	57081
167	Kakod	V	NP	4299	5838	7139	9213	17066	31614	58562
6	<u>Bulandshahr district</u>									
168	Bulandshahr	I	MB	103436	127201	176425	230024	278986	338369	410393
169	Khurja	II	MB	67119	80305	98610	121207	147007	178298	216249
170	Sikandarabad	II	MB	43135	60992	69867	81028	98275	119194	144565
171	Jahangirabad	II	MB	29301	37981	51394	59858	72599	88052	106795
172	Guloathi	III	MB	24416	33982	42903	50823	61641	74762	90675
173	Siana	III	MB	22410	29888	38999	44415	53869	65335	79242
174	Debai	III	MB	22430	27721	34877	39818	48293	58573	71041
175	Shikarpur	III	MB	21499	29197	33187	37969	46051	55853	67742

206	Shamli (NPP)	I	NPP	51,850	70,853	90,055	107,266	117829	136034	157052
207	Kairana (NPP)	II	NPP	44,505	56,079	73,011	89,000	97764	112869	130308
208	Banat	III	NP		13,634	19,081	20,728	22769	26287	30349
209	Kandhala	III	NPP	25,522	32,513	40,136	46,796	51404	59346	68516
210	Thana Bhawan	III	NP	18,711	25,577	31,161	36,669	40280	46503	53689
211	Jalalabad	III	NP	14,929	19,360	23,588	27,921	30670	35409	40880
212	Jhinjhana	IV	NP	10123	13062	17670		20585	23766	27438
213	Un	IV	NP	11,302	13,303	14,582	15,124	16613	19180	22144
214	Ailum	IV	NP		13,044	13,064	12,110	13302	15358	17731
215	Garhi Pukhta	IV	NP	7,279	9,195	12,082	11,748	12905	14899	17201

Table - 27: District - wise Rural-Urban projected Population of NCR, 2011-41

Sr. No.	Level	Name	T R U	2011	2016	2021	2026	2031	2036	2041
HARAYANA STATE										
1	DISTRICT	Faridabad	Total	1,809,733	2075246	2379713	2728851	3129211	3588310	4114765
			Rural	370,878	305585	203190	51924	14555	0	0
			Urban	1,438,855	1769661	2176523	2676927	3114656	3588310	4114765
2	DISTRICT	Gurgaon	Total	15,14,432	1981572	2592807	3392582	4439054	5808321	7599951
			Rural	4,72,179	699696	1016214	1453516	2054179	2875140	3992404
			Urban	1,042,253	1281877	1576592	1939066	2384876	2933181	3607547
3	DISTRICT	Jhajjar	Total	958,405	999474	1042304	1086968	1133547	1182121	1232777
			Rural	715,066	700189	674210	634247	576740	497299	390509
			Urban	243,339	299285	368093	452722	556806	684822	842269
4	DISTRICT	Mewat	Total	1,089,263	1280736	1505867	1770572	2081807	2447752	2878023
			Rural	965,157	1128097	1318135	1539678	1797829	2098484	2448456
			Urban	124,106	152639	187732	230894	283978	349268	429568
5	DISTRICT	Palwal	Total	1,042,708	1167480	1307182	1463601	1638737	1834830	2054388
			Rural	806,164	876552	949367	1023521	1097479	1169132	1235639
			Urban	236,544	290928	357815	440080	541258	665699	818749
6	DISTRICT	Panipat	Total	1,205,437	1343495	1497365	1668857	1859991	2073015	2310436
			Rural	650,352	660791	657700	636146	589850	510856	389122
			Urban	555,085	682704	839664	1032711	1270141	1562159	1921314
7	DISTRICT	Rewari	Total	900,332	974135	1053989	1140388	1233870	1335015	1444451
			Rural	666,902	687038	700885	706102	699737	678080	636480
			Urban	233,430	287098	353104	434286	534133	656935	807971
8	DISTRICT	Rohtak	Total	1,061,204	1126185	1195144	1268326	1345989	1428408	1515874
			Rural	615,040	577443	520242	438258	325080	172782	-28432
			Urban	446,164	548741	674902	830069	1020909	1255626	1544306
9	DISTRICT	Sonipat	Total	1,450,001	1559657	1677606	1804475	1940939	2087722	2245607
			Rural	996,637	1002061	991813	961012	903555	811834	676379
			Urban	453,364	557597	685793	843464	1037384	1275889	1569227
10	DISTRICT	Jind	Total	1,334,152	1502926	1693050	1907226	2148496	2420286	2726459

			Rural	1,028,569	1127087	1230802	1338702	1449263	1560293	1668746
			Urban	305,583	375839	462248	568524	699233	859993	1057713
11	DISTRICT	Karnal	Total	1,505,324	1695752	1910269	2151924	2424148	2730810	3076265
			Rural	1,050,514	1136377	1222288	1305770	1383455	1450852	1502032
			Urban	454,810	559375	687981	846154	1040693	1279958	1574232
12	DISTRICT	Mahendragarh	Total	922,088	1038735	1170138	1318163	1484915	1672761	1884370
			Rural	789,233	875335	969171	1070992	1180917	1298871	1424519
			Urban	132,855	163400	200967	247171	303998	373890	459851
13	DISTRICT	Bhiwani	Total	1,634,445	1841207	2074125	2336507	2632082	2965048	3340135
			Rural	1,313,123	1510091	1721504	1945300	2198189	2461971	2732788
			Urban	321,322	331115	352621	391208	433893	503077	607347
	UTTAR PRADESH STATE									
14	DISTRICT	Baghpat	Total	1,303,048	1378304	1457907	1542108	1631171	1725378	1825025
			Rural	1,028,023	1044050	1051667	1048380	1031113	996091	938679
			Urban	275,025	334255	406240	493728	600058	729286	886346
15	DISTRICT	Bulandshahr	Total	3,499,171	3772322	4066795	4384256	4726498	5095456	5493215
			Rural	2,631,742	2718083	2785515	2827038	2833916	2795286	2697680
			Urban	867,429	1054239	1281281	1557218	1892582	2300170	2795536
16	DISTRICT	Gautam Buddh	Total	1,648,115	2022942	2483016	3047722	3740859	4591635	5635901
			Rural	673,806	838805	1043862	1298632	1615084	2008051	2495914
			Urban	974,309	1184137	1439153	1749091	2125776	2583584	3139987
17	DISTRICT	Meerut	Total	3,443,689	3707564	3991659	4297522	4626823	4981356	5363056
			Rural	1,684,507	1569523	1393168	1139419	788588	316516	-306407
			Urban	1,759,182	2138041	2598491	3158103	3838235	4664840	5669463
18	DISTRICT	Ghaziabad	Total	3,343,334	3958317	4686422	5548457	6569057	7777390	9207987
			Rural	590,534	612672	620257	606599	562918	477764	336309
			Urban	2,752,800	3345645	4066165	4941858	6006140	7299626	8871678
19	DISTRICT	Hapur	Total	1,338,311	1466257	1606435	1760015	1928277	2112626	2314599
			Rural	928,564	968267	1001197	1024433	1034279	1026096	994073
			Urban	409,747	497990	605238	735582	893998	1086530	1320526
20	DISTRICT	Muzaffarnagar	Total	2,869,934	3144308	3444912	3774255	4135084	4530409	4963529

			Rural	2,064,724	2165687	2255535	2328733	2378253	2395226	2368511
			Urban	805,210	978621	1189377	1445522	1756831	2135183	2595018
21	DISTRICT	Shamli	Total	1,273,578	1395336	1528733	1674884	1835008	2010440	2202643
			Rural	887,476	926082	958422	981750	992599	986609	958320
			Urban	386,102	469253	570312	693135	842409	1023830	1244323
	RAJASTHAN STATE									
21	DISTRICT	Alwar	Total	3,674,179	4084830	4541379	5048954	5613260	6240636	6938132
			Rural	3,019,728	3322787	3654056	4015755	4410202	4839795	5306993
			Urban	654,451	762043	887323	1033199	1203057	1400840	1631139
22	DISTRICT	Bharatpur	STATE	2,548,462	2833295	3149964	3502025	3893435	4328592	4812385
			Rural	2,053,363	2256802	2478695	2720399	2983310	3268842	3578412
			Urban	495,099	576493	671269	781626	910125	1059750	1233973
	NCT of DELHI									
23	DISTRICT	North West	Total	3656539	4127747	4659677	5260157	5938018	6703233	7567060
			Rural	213950	170741.8	111389.1	32231	0	0	0
			Urban	3442589	3957005	4548288	5227926	5938018	6703233	7567060
24	DISTRICT	North	Total	887978	946142	1008116	1074149	1144507	1219475	1299352
			Rural	17746	10683	6432	3872	2331	1403	845
			Urban	870232	956825	1014547	1078021	1146838	1220878	1300197
25	DISTRICT	North East	Total	2241624	2520540	2834160	3186802	3583323	4029180	4530514
			Rural	21527	7584	2672	941	332	117	41
			Urban	2220097	2528123	2836831	3187743	3583654	4029297	4530555
26	DISTRICT	East	Total	1709346	1846194	1993998	2153635	2326053	2512274	2713403
			Rural	3530	1440	588	240	98	40	16
			Urban	1705816	1847634	1994586	2153875	2326150	2512313	2713419
27	DISTRICT	New Delhi	Total	142004	126268	112276	99835	88772	78935	70188
			Rural	0	0	0	0	0	0	0
			Urban	142004	126268	112276	99835	88772	78935	70188
28	DISTRICT	Central	Total	582320	552558	524317	497519	472091	447963	425068
			Rural	0	0	0	0	0	0	0
			Urban	582320	552558	524317	497519	472091	447963	425068

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29	DISTRICT	West	Total	2543243	2777564	3033473	3312961	3618199	3951560	4315635
			Rural	6420	1421	314	70	15	3	1
			Urban	2536823	2778984	3033788	3313030	3618214	3951564	4315636
30	DISTRICT	South West	Total	2292958	2616303	2985245	3406214	3886546	4434613	5059967
			Rural	143676	114097	90608	71954	57141	45377	36035
			Urban	2149282	2730400	3075853	3478168	3943687	4479991	5096002
31	DISTRICT	South	Total	2731929	2996422	3286522	3604708	3953700	4336479	4756317
			Rural	12193	2744	618	139	31	7	2
			Urban	2719736	2999166	3287140	3604847	3953731	4336486	4756319
	STATE	NCT OF DELHI	Total	16,787,941	18523134	20463516	22633050	25058682	27770712	30803208
			Rural	419,042	274248	179486	117467	76878	50314	32929
			Urban	16,368,899	18248885	20284030	22515583	24981804	27720398	30770279

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Annexure 10/I

Summary of views/comments of the NCR participating States on the minutes of the Committee constituted for undertaking a Delineation Study for NCR

	Views/Comments
Haryana	<ul style="list-style-type: none">• Administrative unit for inclusion/exclusion of area should not be below Tehsil level• Weightage be assigned to parameters and an index be worked out for assessment• Headquarter of administrative unit instead of any part of its hinterland, should be considered for assessment of connectivity with mother city• State Development plans/ Controlled Area Plans/ proposals and state regulatory/plan enforcement mechanism may also be considered• Selection criteria of each parameter need also be elaborated (whether high or low values of defined parameter enables inclusion/exclusion)
Rajasthan	<ul style="list-style-type: none">• The tehsils around transport corridors having development potential should be considered for purpose of delineation of NCR• High density corridor centric development (TOD) should be targeted while preparing lower hierarchy plans (Master Plan/Development Plan /Local Area Plan etc.)• Tehsils having development potential should be included instead of whole district and those tehsils not having the potential should be excluded
Uttar Pradesh	<ul style="list-style-type: none">• Tehsil boundary may be considered as the smallest administrative unit for inclusion or exclusion in NCR.• Apart from this, taking into account the aspects such as physical continuity with NCR, mutual economic activities, potential of development in terms of historical, religious, traffic and transport,

	Views/Comments
	public services, industries and other physical development aspects, shall also be creditable
Delhi	➤ ToD policy drafted as part of Transportation chapter of MPD 2021 and it has been suggested that high density corridor centric developments (ToD) should be targeted.



NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING
 भारत सरकार, नई दिल्ली-110 056
 भारत प्रयोगशाला / India Habitat Centre
 लोधी रोड, नई दिल्ली-110 003 / Lodhi Road, New Delhi-110 003
 आवासन और शहरी कार्य मंत्रालय / Ministry of Housing and Urban Affairs
 दूरभाष / Phone: 24642284, 24642287 फैक्स / Fax: 24642163
 Dt.08.01.2018

G-25020(1)/2003-04/NCRPB/Vol.V

To

The Principal Secretary
 Town & Country Planning Deptt.
 Govt. of Uttar Pradesh,
 Bapu Bhawan,
 Lucknow-226001.

Sub.: Financial Assistance to the NCR Planning and Monitoring Cells of the Participating States and NCT of Delhi during the period – (2017-2021) Comprehensive instructions.

Sir,

1. The proposal to continue the financing of the Planning and Monitoring Cells for NCR was considered by the NCR Planning Board in its 37th Board Meeting held on 04.12.2017 and it has been decided to continue the scheme four year period from 1.4.2017 to 31.3.2021.
2. The Action Plan for filling up the vacant posts may be submitted to the Board secretariat duly recommended by State Government to ensure filling up these posts by 31st March, 2018;
3. The Staff strength of all NCR Planning and Monitoring Cell Uttar Pradesh will be continued for four years period (2017-2021) as approved for 12th Plan period (2012-2017) Annexure-I.
4. The duties and functions to be performed by the Cell are given in Annexure-II. The Cell should function to its full strength and should play an important role in achieving objectives and goals envisaged in the Regional Plan – 2021.
5. The Headquarter of the Cell could be located in the capital or any other town but the entire strength of the Cell (both officers and staff) should be at one place. This is a mandatory requirement for eligibility for reimbursement of expenditure by the Board.
6. The Board will reimburse to the State Govt. 100% of the expenditure incurred on pay and allowances, including travel allowances and medical charges in respect of the officers and staff and appointed as well as employed by the State Govt. for the exclusive functioning of the Cell.
7. The Board will also reimburse to the State Government, the expenditure incurred on recurring office expenses of the Cell upto the ceiling of Rs.5,00,000/- per annum.
8. Taxi charges maximum upto 25,000/- per month to NCR Cell Uttar Pradesh over and above the recurring office expenditure shall also be reimbursed.
9. The reimbursement of expenditure towards pay and allowances as well as office expenses would however, be subject to the following usual conditions:-


- i). Expenditure should be incurred as per norms and scales approved by the State Govt.,

- ii). The expenditure shall be sanctioned by the competent authority of the State Govt.,
- iii). Procedure laid down by the State Govt. for payment accounting and auditing of expenditure shall be followed,
- iv). The claim for reimbursement of expenditure shall be supported by full details.

10. In view of the enormous responsibility in implementing the NCR Regional Plan and other matters connected thereto in a time bound manner, the Cells are required to prepare and submit an Action Plan for each Financial Year in the month of April.

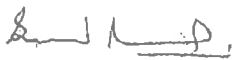
11. The State Government is requested to take suitable action in the matter and intimate the same to this Board at an early date.

Yours faithfully,


(Sushil Purohit)
Director(A&F)

Copy to :

1. Private Secretary to Chief Secretary, Govt. of Uttar Pradesh, Sachivalaya, Lucknow, Uttar Pradesh-226020.
2. The Commissioner, NCR, NCR Planning & Monitoring Cell, Nagar Nigam Building, IInd Floor, Navyug Market, Ghaziabad - 201 001.
3. Chief Co-coordinator Planner, NCR Planning & Monitoring Cell, Nagar Nigam Building, IInd Floor, Navyug Market, Ghaziabad - 201 001.
4. Planning Wing, National Capital Region Planning Board.
5. PMC Wing, National Capital Region Planning Board.


(Sushil Purohit)
Director(A&F)

ANNEXURE-I

Staff Strength for Continuation of NCR Cells, UP
approved in the 30th Board meeting held on 21.8.2007

Sl.No.	Name of the post	No. of post sanctioned
1	Commissioner	1
2	Chief Coordinator Planner	1
3	Associate Planner	1
4	Economic Planner	1
5	Assistant Town Planner	2
6	Assistant Architect	1
7	Planning Assistant	2
8	Junior Engineer	1
9	Research Assistant	2
10	Planning Draftsman	2
11	Investigator	2
12	Head Clerk-cum-Accountant	1
13	Computer Programmer	1
14	Stenographer (1 sr. and 2 jr.)	3
15	LDC	1
16	Typist	1
17	Driver	2
18	FerroPrinter	1
19	Chowkidar	1
20	Peon	3
	Total	30

Work Programme/Action Plan for the NCR Planning & Monitoring Cells for next Four Years i.e. 2017-21

The major tasks of Planning & Monitoring Cells functioning in the Haryana, Uttar Pradesh, Rajasthan and NCT Delhi sub-regions of NCR would be as follows:

1. Assist the Board in preparation of the Regional Plan and Functional Plan(s) by means of collecting & collating data, information, maps etc. from various Departments/Agencies at the State level; verification of maps and analysis of data, etc.
2. Prepare and/or coordinate preparation of Sub-Regional Plan
3. Coordinate with various Departments/Agencies at the State level for enforcement and implementation of the Regional Plan, Functional Plans, Sub-Regional Plan and Project Plans.
4. Monitor implementation of Regional Plan and in case of any violation, bringing the same to the notice of NCRPB.
5. Coordinate with the State Government for preparation of Master/Development Plans of settlements to ensure conformity with the Regional Plan and Sub-Regional Plan.
6. Prepare and/or coordinate preparation of Project Plans, after carrying out systematic programming with regard to project formulation, determination of priorities in the sub-region and phasing of development on the basis of existing situation analysis, proposed development scenario, etc.
7. Assist the implementing agencies and parastatals for preparation of projects/schemes and forward/ recommend such projects/schemes to the NCRPB for financing, after thorough examination/scrutiny.
8. Monitor the NCRPB assisted projects plans/schemes and submit periodic reports/ returns in this regard. Maintain & update the data of physical and financial progress of each project/scheme and upload it on their website.
9. Coordinate with implementing agencies/State Govt. for timely repayment of principal and interest on NCRPB's financial assistance/loan.
10. Monitor and adhere to the Environmental and Social Management Safeguard (ESMS) guidelines in every project/scheme in the sub-region through the respective implementing agencies.
11. Ensure compliance of procurement/ disbursement guidelines of multilateral and bilateral aid Agency, for sub - loan to implementing agencies/parastatal/State Govt. etc.
12. Any other work as assigned by the Member Secretary, NCR Planning Board/Board Secretariat.

Annexure-II**Details of the staff strength of the NCR Planning and Monitoring Cells****A. NCR Planning and Monitoring Cell, NCT-Delhi**

S. No.	Existing Designation	No. of posts Sanctioned	No. of posts vacant
1	Additional Secretary/ Special Secretary	1	1
2	Associate Town & Country Planner	1	1
3	Stenographer Gr. II	1	1
4	Stenographer Gr. III	1	1
5	Peon	1	1
	Total	5	5

B. NCR Planning and Monitoring Cell, Haryana

S. No.	Existing Designation	No. of posts Sanctioned	No. of posts vacant
1.	Chief Coordinator Planner	1	--
2.	Associate Planner (District Town Planner)	2	--
3.	Assistant Town Planner	3	2
4.	Research Officer	1	1
5.	Junior Engineer	1	1
6.	Planning Assistant	2	1
7.	Research Assistant	2	1
8.	Senior Draftsman	2	--
9.	Field Investigator	2	1
10.	Computer Programmer	1	--
11.	Head Clerk-cum- Cashier (Dy. Superintendent	1	1
12.	Assistant	1	--
13.	Personal Assistant	1	1
14.	Junior Scale Stenographer	2	2
15.	LDC	2	1
16.	Typist	1	1
17.	Ferro Printer	1	1
18.	Sweeper Cum Chowkidar	1	1
19.	Peon	3	--
	Total	30	15

C. NCR Planning and Monitoring Cell, Rajasthan

S. No.	Existing Designation	No. of posts Sanctioned	No. of posts vacant
1.	Chief Town Planner	1	--
2.	Senior Town Planner	1	--

3.	Deputy Town Planner	1	1
4.	Assistant Town Planner	3	--
5.	Research Assistant	2	1
6.	Computer Programmer	1	1
7.	Senior Personal Assistant	1	--
8.	Personal Assistant	1	1
9.	Town Planning Assistant	1	--
10.	Junior Engineer	1	1
11.	Investigator Gr. I	1	--
12.	Senior Draftsman	2	--
13.	UDC / Sr. Assistant	1	1
14.	LDC / Jr. Assistant	2	1
15.	Driver	1	--
16.	Class-IV	1	--
	Total	21	7

D. NCR Planning and Monitoring Cell, Uttar Pradesh

S. No.	Existing Designation	No. of posts Sanctioned	No. of posts vacant
1.	Commissioner	1	--
2.	Chief Coordinator Planner	1	--
3.	Associate Planner	1	1
4.	Economic Planner	1	1
5.	Assistant Town Planner	2	2
6.	Assistant Architect	1	1
7.	Planning Assistant	2	1
8.	Junior Engineer	1	1
9.	Research Assistant	2	2
10.	Planning Draftsman	2	1
11.	Investigator	2	1
12.	Head Clerk-cum-Accountant	1	--
13.	Computer Programmer	1	1
14.	Stenographer (1 Sr. 2 Jr.)	3	2

S. No.	Existing Designation	No. of posts Sanctioned	No. of posts vacant
15.	LDC	1	--
16.	Typist	1	1
17.	Driver	2	1
18.	Ferro Printer	1	-
19.	Chowkidar	1	1
20.	Peon	3	--
	Total	30	17

To

The Member Secretary,
National Capital Region Planning Board
1st floor, Core -IVB, India Habitat Centre,
Lodhi Road, New Delhi-110003.

Memo No. 47

Dated: 08-01-2016

Subject: Creation of new posts in NCR Planning & Monitoring Cell Haryana.

Reference your office memo No.G-25020/1/2003-04/NCRPB dated 7.10.2015 vide which you have sought the justification for creation of the additional posts. It is intimated that in view of nature of work assigned to CCP(NCR) Cell Haryana by the Board which can be divided into four segments to be dealt by the following four separate wings:

1. **Planning Wing & its functions:**

- a) Declaration of the Controlled Areas under Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963, preparation of the Development Plans/Project Plans and Zoning Plans.
- b) Preparation of Sub Regional Plan for Haryana Sub Region under NCRPB Act, 1985.

Justification:- In 1990 the total area of the Controlled Areas of 9 districts and one Counter Magnet town (Hisar) was 3017.11sq.mtr. However, the area of the Controlled Areas as on date for 13 districts comes to 8508 sq.km. and that of 2 Counter Magnet towns comes to 1012.88 say 1013 sq.km. totalling to 9521 sq.km. having 439 Controlled Areas which comes to 33.59 % age of NCR Sub-Region. Apart from that there are 55 urban centres falling in NCR for which the Development Plans are to be prepared/revised. The detail status is annexed at Annexure 'A'. Similarly, there are 11 Urban Areas in the Counter Magnet areas of Ambala & Hisar. It is amply clear from the above figures that the work of NCR Cell, Haryana has increased manifold and in order to check/keep a vigil on violation of provisions of Regional Plan 2021 in the Controlled Areas & districts and to prepare the Development Plans for 66 urban centres (55 for 13 districts and 11 for Counter Magnet areas), preparation of revised Sub-Regional Plan-2021 after inclusion of 4 new districts of Bhiwani, Mahendergarh, Jind & Karnal and to demarcate the extent of Counter Magnet areas, the demand of more staff is justified.

2. **Regional Plan Implementation Wing & its functions:**

- (a) To assist NCRPB in preparation of Regional Plan. Implementation of Regional Plan.

- (1) To assist NCRPB in preparation of Functional Plans on Transportation (RRTS, MRTS connectivity), drainage, water supply, sanitation,
- (c) Monitoring & Implementation of the Regional Plan and detection of the violations.
- d) Coordination with various Departments and implementing agencies for implementation of Regional plan.

Justification:- In order to perform multidisciplinary duties and to coordinate with various agencies/Department to ensure implementation of Regional Plan, implementation of Comprehensive Mobility Plan, planning and coordination of DMIC projects, coordination with NHAI about Greenfield Expressway, pursuing metro/RRTS projects, a separate Wing as proposed in the flow chart at (Annexure-B) is required for this purpose.

3. **NCRPB Financed Project Wing & its functions:**

- (a) To assist the implementing agencies and parastatal in preparation of projects and schemes for financial assistance of NCRPB, their implementation to ensure their repayment and maintenance and update of physical and financial data of each projects & schemes and to upload on the website of NCRPB site.
- (b) Monitoring and guidelines of Environmental and Social Management Safeguard (ESMS) guidelines in every project and to ensure compliance of procurement, disbursement, guidelines of multi lateral agencies for sub norms to implement of Regional Plan.

Justification:- In view of the functions assigned to NCR Cell in the Action Plan of XII Five Year Plan period, follow up with the Planning and Finance Department for budgetary provisions in the Annual Plan for State's contribution to major infrastructure projects, to assist various Government agencies /Department for preparation of projects/schemes for financial assistance from NCRPB, to ensure repayment and maintenance, to update finance and physical data of each scheme as well as monitoring of physical progress of these NCRPB assisted projects, a separate NCR financed projects Wing is required as shown in flow chart (Annexure-B).

4. **Establishment Wing & its functions:**

In order to keep personal record as well as their other job related matters, a separate establishment is required.

Since the work of the Cell has increased manifold and it is really difficult for CCP(NCR) to supervise the work of all the Wings effectively, therefore, the work of monitoring of implementation of Regional Plan and NCRPB financed projects will be supervised by an officer of STP rank. Similarly, due to increased work load, three

Wings; Planning Wing, Regional Plan Implementation Wing and NCRPB financed project Wings will be headed by a DTP. Since there are two already sanctioned posts of DTP, one more/additional post is required. Similarly monitoring of these NCRPB projects is also to be carried out, one additional post of ATP, one Accounts Officer, one Planning Assistant, two Draftsman, one more Junior Engineer, two Section Officers, one JSS, one Assistant, two Clerks, two Steno Typist & two peons are required alongwith one driver for field duty. Hence, this Wing alongwith Regional Plan Implementation Wing two ATP's & one PA, one clerk one JSS & two peons are required.

The status of existing (filled up and vacant) and new posts prepared in the requisite proforma is as under:

क्रम संख्या	वर्तमान में स्वीकृत पदों का वेतनमान सहित ब्यौरा	वर्तमान में भरे पदों का पद अनुसार ब्यौरा	वर्तमान में रिक्त पदों का पद अनुसार ब्यौरा	नये पदों की मांग का पद अनुसार ब्यौरा	कुल पदों की संख्या वर्तमान तथा नये पदों सहित आवश्यकता है
1	Chief Coordinator Planner (मुख्य संयोजक योजनाकार) 37400-67000+10000	1	-	-	1
2	Senior Town Planner (वरिष्ठ नगर योजनाकार) 37400-67000+8700	-	-	1	1
3	District Town Planner (जिला नगर योजनाकार) 18600-39100+6000	2	-	1	3
4	Assistant Town Planner (सहायक नगर योजनाकार) 15600-39100+5400	3	-	2	5
5	Accountant Officer (लेखा-अधिकारी) 9300-34800+5400	-	-	1	1
6	Section Officer अनुभाग अधिकारी 9300-34800+4200	-	-	2	2
7	Research Officer रिसर्च आफिसर (अनुबन्ध आधार) 22500	1	-	-	1
8	Research Assistant रिसर्च सहायक (अनुबन्ध आधार) 22500	2	-	-	2
9	Computer Programmer कम्प्यूटर प्रोग्रामर (अनुबन्ध आधार) 18500	1	-	-	1
10	Junior Engineer (कनिष्ठ अभियंता) 9300-34800+4000	1	-	1	2

11	Planning Assistant (योजना सहायक) 9300-34800+4000+100 स्पेशल पे	2	—	2	4
12	Senior Draftsman (वरिष्ठ प्रारूपकार) 9300-34800+4000	1	1	2	4
13	Field Investigator (क्षेत्रान्वेषक) 9300-34800+3600	—	2	1	3
14	Deputy Superintendent (उप-अधीक्षक) 9300-34800+4000	1	—	—	1
15	Assistant (सहायक) 9300-34800+3600	1	—	1	2
16	Personal Assistant निजी सहायक 9800-34800+4000	1	—	—	1
17	Junior Scale Stenographer (कनिष्ठ आशुलिपिक) 9300-34800+3600	—	2	2	4
18	Steno - typist स्टेनो-टाईपिस्ट 5200-20200+1900+100SP	—	—	3	3
19	Clerk लिपिक 5200-20200+1900	1	1	3	5
20	Driver (चालक) 5200-20200+2400	—	1	1	2
21	Fero Printer फैरोप्रिटर 5200-20200+1900	—	1	—	1
22	Peon (सेवादार) 5200-20200+1900	—	3	4	7
	कुल जोड़	18	11	27	56

The total staff strength (sanctioned & additional) is shown in the flow chart annexed as Annexure 'B' & 'C'. As stated earlier, the demand of additional posts is bare minimum required for efficient functioning of this cell. In view of above justification, it is requested to sanction these additional posts.


 District Town Planner,
 For: Chief Coordinator Planner,
 Haryana, Panchkula.

Annexure-A

No. & areas of Controlled Areas falling in NCR Sub-Region of Haryana & Counter Magnet Areas

Sr.No.	District	No. of CA delcare upto 1990	No. of CA 1990 to till date	Total	Area up to 1990	Area 1990 to 2015	Total as on date 2015
1	Faridbad	12	8	20	413.67	319.75	733.42
2	Gurgaon	18	98	116	385.9	934.25	1320.15
3	Jhajjar	3	74	77	290.32	565.61	855.93
4	Mewat	5	34	39	212.11	256.56	468.67
5	Panipat	3	12	15	327.3	322.64	649.94
6	Rewari	3	13	16	135.8	985.05	1120.85
7	Rohtak	2	16	18	373.27	254.21	627.48
8	Sonapat	25	36	61	408.82	571.36	980.18
9	Palwal	0	30	30	197.57	464.05	661.62
	Total	71	321	392	2744.76	4673.48	7418.24
					37%	73%	

Newly added Districts

Sr.No.	District	No. of CA delcare upto 1990	No. of CA 1990 to till date	Total	Area up to 1990	Area 1990 to 2015	Total as on date 2015
10	Bhiwani	2	1	3	191	44	235
11	Meerendergarh	0	3	3	0	158.63	158.63
12	Jind	4	5	9	107.88	186.61	294.49
13	Karnal	6	4	10	138.81	262.77	401.58
	Total	12	13	25	437.69	652.01	1089.7

Counter Magnet Areas

Sr.No.	District	No. of CA delcare upto 1990	No. of CA 1990 to till date	Total	Area up to 1990	Area 1990 to 2015	Total as on date 2015
14	Hissar	4	9	13	272.35	501.94	774.29
15	Ambala	5	4	9	38.7	199.89	238.59
	Total	9	13	22	311.05	701.83	1012.88

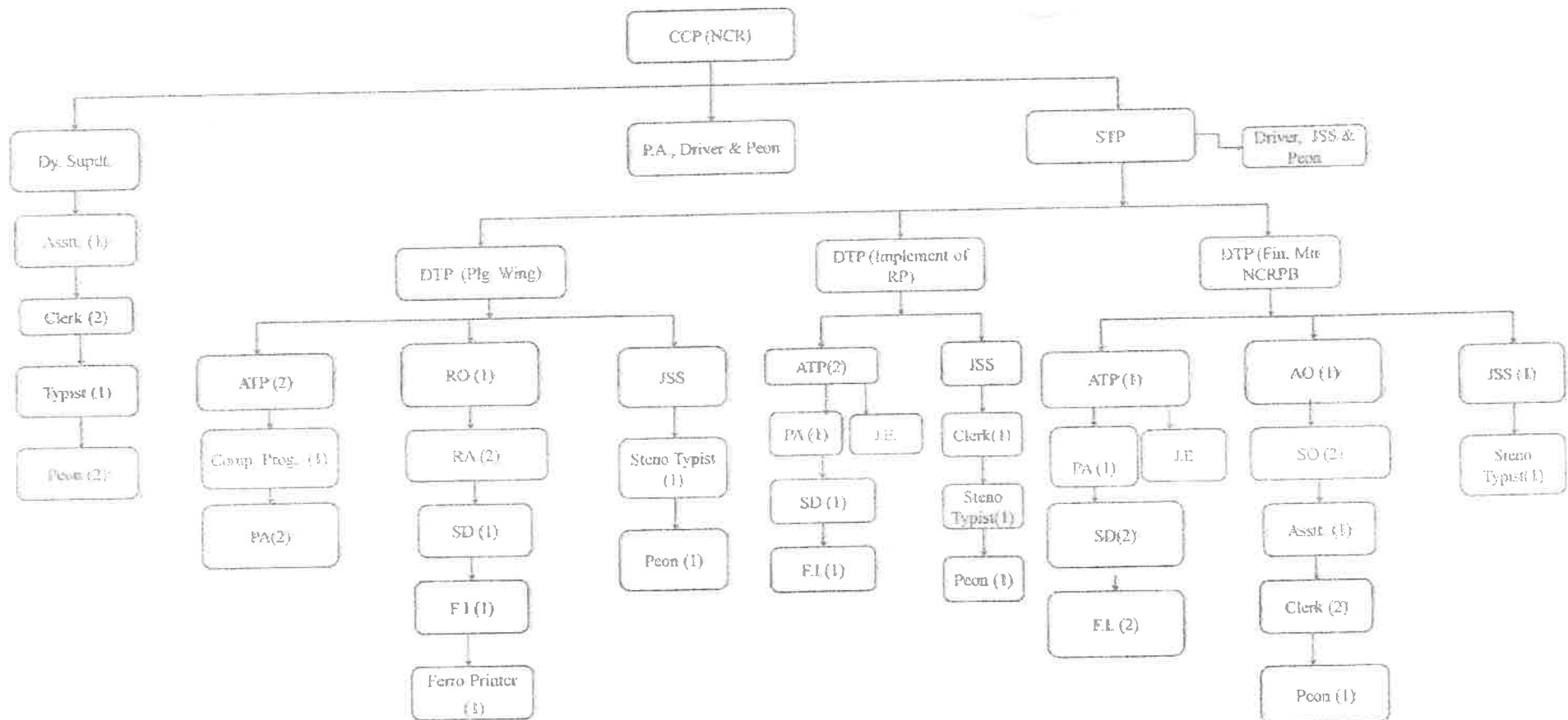
% of total area of NCR as per Notified RF-2021 (9 districts)=39.9%

% of total area of NCR on 24.11.2015 (13 districts)=46.74%

% of area of Haryana Falling in the NCR = $25327/44212 = 57.28\%$

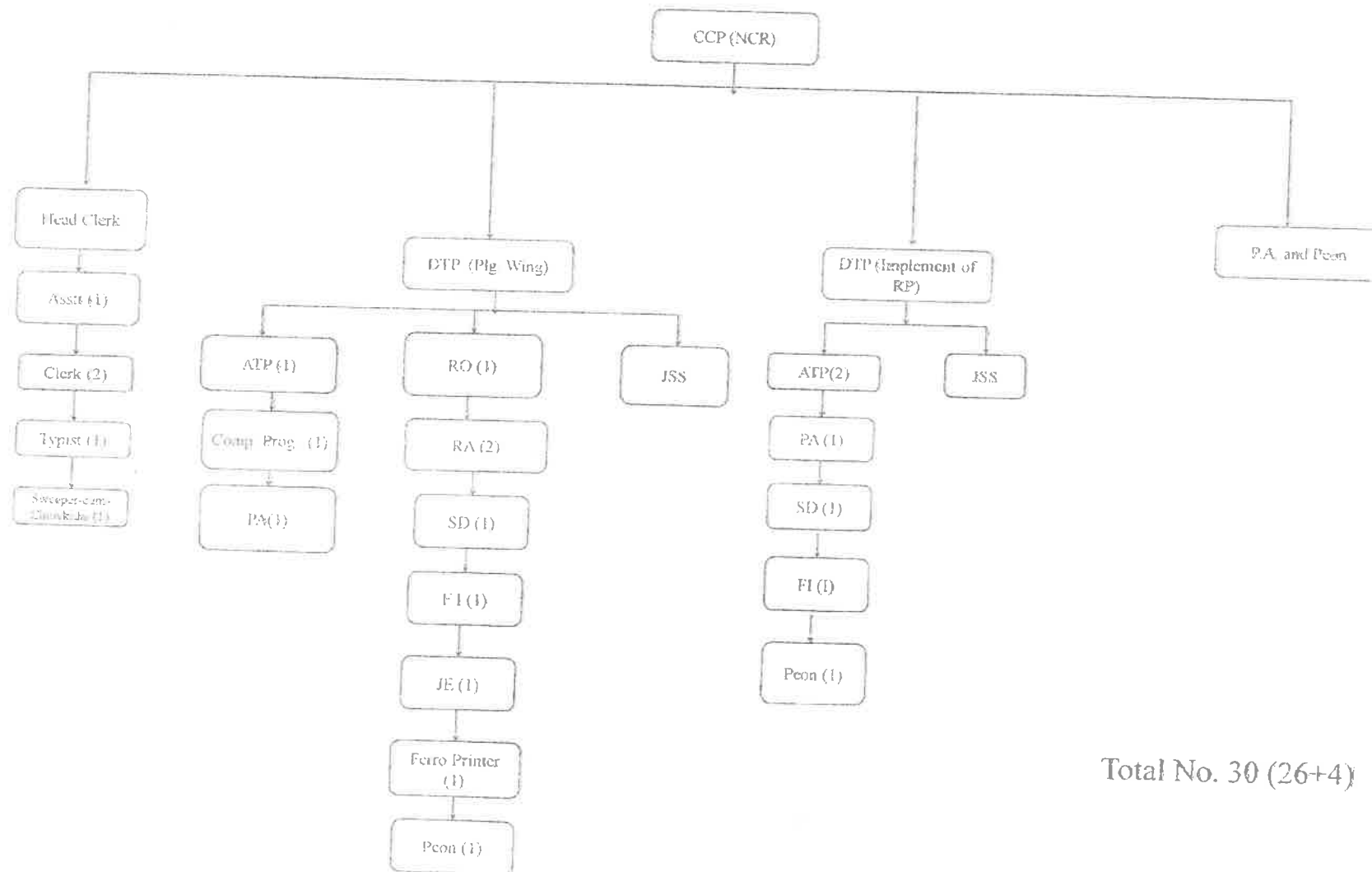
**STAFF STRENGTH (EXISTING & PROPOSED)
OFFICE OF CHIEF CO-ORDINATOR PLANNER,
(NCR), HARYANA, PANCHKULA**

Annexure - 'B'



EXISTING STAFF STRENGTH
OFFICE OF CHIEF CO-ORDINATOR PLANNER,
(NCR), HARYANA, PANCHKULA

Annexure- 'C'



Total No. 30 (26+4)

कार्यालय आयुक्त, राष्ट्रीय राजधानी क्षेत्र, उ०प्र०

द्वितीय तल, नगर नियम भवन, नवयुग मार्केट, गाजियाबाद (उ०प्र०)

पत्रांक:

03/स्थापना/एन०सी०आर०/2015-16

दिनांक:

16-10-15

सेवा में,

सदस्य सचिव,
एन०सी०आर० योजना बोर्ड,
इंडिया हैवीटैट सेंटर,
लोधी रोड, नई दिल्ली।

विषय:-राष्ट्रीय राजधानी क्षेत्र सैलों में नये पदों का सृजन करना।
महोदय,

कृपया उपरोक्त विषयक एन.सी.आर. योजना बोर्ड, नई दिल्ली के पत्रांक जी-25020/1 / 2003-04/एनसीआरपीबी दिनांक 07.10.2015 का सन्दर्भ ग्रहण करने का कष्ट करें।

उक्त के सम्बन्ध में अवगत कराना है कि एन०सी०आर० सैल कार्यालय के द्वारा उ०प्र० प्रभाग में स्थित नगरों की महायोजनाओं की सारवना करने से सम्बन्धित कार्यों के साथ-साथ क्षेत्रीय योजना, फंक्शनल प्लान एवं उपक्षेत्रीय योजना की नीतियों एवं प्रस्तावों के कियान्वयन को सुनिश्चित करने हेतु को-ऑर्डिनेटर की भूमिका निभाई जाती है। साथ ही प्रभाग के विभिन्न अधिकारियों को नियोजन से सम्बन्धित मार्गदर्शन भी दिया जाता है।

वर्तमान में तकनीकी क्षेत्र में हो रहे निरन्तर बदलाव एवं योजना तैयार किये जाने में तकनीकी के निरन्तर उपयोग की आवश्यकता के दृष्टिगत एन०सी०आर० सैल कार्यालय में 12वीं पंचवर्षीय योजनाकाल हेतु स्वीकृत 30 पदों के स्टाफिंग पैटर्न में बदलाव की आवश्यकता है, जिसके परिप्रेक्ष्य में स्वीकृत 30 पदों में से 6 पद समर्पित करते हुये 4 नये पद सम्मिलित किये जाने की आवश्यकता है।

उक्त के सम्बन्ध में एन०सी०आर० योजना बोर्ड, नई दिल्ली के द्वारा अपने उपरोक्त पत्र के माध्यम से चाही गयी सूचनाएं निर्धारित प्रपत्र पर अंकित कराते हुये नियमानुसार आवश्यक कार्यवाही हेतु पत्र के साथ संलग्न कर प्रेषित है।

संलग्नक:-उपरोक्तानुसार।

भवदीय

कुश वर्मा

(कुश वर्मा)

आई.ए.एस.

आयुक्त

पत्र संख्या/उक्त/2015-16 दिनांक:-उपरोक्तानुसार।

प्रतिलिपि:-प्रमुख सचिव, आवास एवं शहरी नियोजन विभाग, उ०प्र० शारान, बापू भवन, लखनऊ को एन०सी०आर० योजना बोर्ड के उक्त पत्र (छायाप्रति संलग्न) के क्रम में इस आशय से प्रेषित कि कृपया उपरोक्त संलग्न सूचनाएं शारान स्तर से भी एन०सी०आर० योजना बोर्ड, नई दिल्ली को भिजवाना चाहें।

संलग्नक:-उपरोक्तानुसार।

आयुक्त

873/15
21-10-15

क्र. सं.	एन.सी.आर. योजना बोर्ड, नई दिल्ली द्वारा 12वीं पंचवर्षीय योजना काल (2012-17) हेतु वर्तमान में स्वीकृत पद (वर्तमान सहित)	स्वीकृत पदों की संख्या	वर्तमान में भरे गये पदों का पदानुसार ब्यौरा	वर्तमान में रिक्त पदों का पदानुसार ब्यौरा	प्रस्तावित नये पदों की मांग का पदानुसार ब्यौरा	समर्पित किये जाने वाले पदों का ब्यौरा	स्वीकृत पदों में से समर्पित किये जाने वाले पदों को घटाकर तथा नये पदों को सम्मिलित करते हुये, कुल पदों का ब्यौरा	
1	2	3	4	5	6	7	8	
1	आयुक्त(सुपर टाईम स्केल) Commissioner	(67000-79000)	1	1	—	ट्रान्सपोर्ट प्लानर (Transport Planner) (1 पद)	अवर अभियन्ता (1 पद) (Junior Engineer)	1. आयुक्त (सुपर टाईम स्केल) Commissioner (1 पद)
2	मुख्य समन्वयक नियोजक Chief Co-ordinator Planner	(37400-67000)	1	—	1	एनवायरनमेंट स्पेशलिस्ट (Environment Specialist) (1 पद)	सर्वेक्षण सहायक (1 पद) (Investigator)	2. मुख्य समन्वयक नियोजक (1 पद) Chief Co-ordinator Planner
3	सहयुक्त नियोजक Associate Planner	(37400-67000)	1	1	—	ऑटोकैड एक्सपर्ट (Auto Cad Expert) (1 पद)	नियोजन सहायक (1 पद) (Planning Assistant)	3. सहयुक्त नियोजक. (1 पद) Associate Planner
4	इकोनॉमिक प्लानर Economic Planner	(37400-67000)	1	—	1	जी.आई.एस.एक्सपर्ट (GIS Expert) (1 पद)	शोध सहायक (2 पद) (Research Assistant)	4. इकोनॉमिक प्लानर (1 पद) Economic Planner
5	सहायक नगर नियोजक Assistant Town Planner	(15600-39100)	2	—	2		ब्लूप्रिन्टर (1 पद) (Ferro Printer)	5. सहायक नगर नियोजक (2 पद) Assistant Town Planner
6	सहायक वास्तुविद Asstt. Architect	(15600-39100)	1	1	—			6. सहायक वास्तुविद (1 पद) Asstt. Architect
7	नियोजन सहायक Planning Assistant	(9300-34800)	2	—	2			7. ट्रान्सपोर्ट प्लानर (1 पद) (Transport Planner)
8	अवर अभियन्ता Junior Engineer	(9300-34800)	1	—	1			8. एनवायरनमेंट स्पेशलिस्ट (1 पद) (Environment Specialist)
9	शोध सहायक Research Assistant	(9300-34800)	2	—	2			9. ऑटोकैड एक्सपर्ट (1 पद) (Auto Cad Expert)
10	प्लानिंग ड्राफ्टमैन Planning Draftsman	(5200-20200)	2	1	1			10. जी.आई.एस.एक्सपर्ट (1 पद) (GIS Expert)
11	सर्वेक्षण सहायक Investigator	(9300-34800)	2	1	1			11. नियोजन सहायक (1 पद) Planning Assistant
12	मुख्य लिपिक/लेखाकार Head Clerk-cum-Accountant	(9300-34800)	1	1	—			12. प्लानिंग ड्राफ्टमैन (2 पद) Planning Draftsman

Details of the proposed New Posts to be filled up on Contract Basis in NCR Planning Cell, Ghaziabad

Name of the Posts	Transport Planner	Environmental Specialist	AutoCAD Expert	GIS Expert
No. of Posts	1	1	1	1
Essential Qualification	Graduate in civil Engineering/ Architecture and Post Graduate Degree/ Diploma in Transport Planning from a recognised Institution. Knowledge of Hindi language in essential	Graduate in Environmental Engineering and/or Post Graduate Degree/Diploma in Environmental Planning from a recognised Institution. Knowledge of Hindi language in essential	Diploma in Architecture from recognised institute by the Government or Diploma in Architectural Assistantship (Three year full time course) of State Board of Technical Education, U.P. or any other state. Knowledge of Hindi language in essential.	Diploma/P.G. Diploma in G.I.S. and Remote Sensing from any recognised institute by the Government. Knowledge of Hindi language in essential
Area of Specialisation	Transport Planning	Environmental Impact Assessment	Auto CAD and other drafting software's	GIS and Remote Sensing
Experience	Min 2 year professional experience in the field of Transport Planning or as decided by NCRPB	Min 2 year professional experience in the field of Environmental Impact assessment or as decided by NCRPB	Min 1 year professional experience working with AutoCAD or as decided by NCRPB	Min 1 year professional experience working with GIS or as decided by NCRPB
Emoluments	To be decided by NCRPB	To be decided by NCRPB	To be decided by NCRPB	To be decided by NCRPB

(8) $\Gamma_{\text{HCO}_3^-}$ Zone-IV-B.

India Habitat Centre.

1, Delhi Road, New Delhi-110003.

Miguel,

The NCR Cell, Government of Rajasthan, Jaipur is expediting the various work going on and line-up in the NCR cell and major works such as monitoring implementation of policies and proposals of Regional Plan-2021 & Sub-Regional Plan-Alwar, review of Regional Plan-2021 and NCZ delineation etc.

As you aware that, District Bharatpur has also been added in Rajasthan Sub-Region of NCR in year 2013, in addition to District Alwar. Therefore, the jurisdiction area of Rajasthan Sub-Region of NCR has increased tremendously and presently work of preparation of Sub Regional Plan of District Bharatpur is also going on.

Kindly peruse the sanctioned strength of the staff in NCR Cell of Rajasthan as approved in 30th Board meeting dated 21.08.2007 (Annexure-1), wherein total of 21 no. of posts were sanctioned for desired functioning/monitoring for Alwar Sub Region only. It is pertinent to mention here that presently, out of sanctioned 21 posts, 07 are lying vacant, including the posts of UDC/DC/PA and this cadre staff is required for basic works like typing work, record keeping, etc. But presently these posts are not being filled by the Department as there is acute shortage in this cadre.

In view of the above mentioned facts and looking to present wide spread area of jurisdiction under NCR Rajasthan Cell, for proper functioning of the Office, there is an urgent need of hiring services (on contract basis) of supporting staff in Rajasthan NCR Cell. Therefore, kindly grant the permission for hiring services of the followings on contractual basis. -

- GIS expert (against the post of JEN)- 01 no.
- Computer Operator (against the post of UDC/LDC/PA)-03 no.

If these posts are filled on contract basis, there will be no additional financial burden on NCRPB, as rates for hiring contractual services are lesser than the salary of the regular employee.

Kindly consider the request and grant permission for the same.

Yours Sincerely,

(Indira Chaudhary)

MSM RPB
Dy. No. 15218
Date: 30/12/19

Dr. (A. H. F.)

~~2010/10/15~~



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LIST OF ABBREVIATIONS

AEPC	: Apparel Export Promotion Council
AHVV	: Ambedkar Hastshilp Vikas Yojana
ASCENT	: Asian Centre for Entrepreneurial Initiatives
ASIDE	: Assistance to States for Infrastructure Development of Exports
CFC	: Common Facilities Centre
CDE	: Cluster Development Executive
CDO	: Cluster Development Officer
CDP	: Cluster Development Programme
DC MSME	: Development Commissioner, Micro, Small and Medium Enterprises
DIC	: District Industries Centre
CFTRI	: Central Food Technological Research Institute
DST	: Department of Science and Technology
DoH	: Department of Health
DRDA	: District Rural Development Agency
EDI	: Entrepreneurship Development Institute
EM I	: Entrepreneur's Memorandum I
EM II	: Entrepreneur's Memorandum II
GDP	: Gross Domestic Product
GoI	: Government of India
ICT	: Information and Communication Technology
IIE	: Indian Institute of Entrepreneurship
IHDS	: India Human Development Survey
IPR	: Intellectual Property Rights
ITI	: Industrial Training Institute
KVIC	: Khadi and Village Industries Commission
KVIB	: Khadi and Village Industries Board
MSME-TC	: Micro, Small and Medium Enterprises - Testing Centre
M/o MSME	: Ministry of Micro, Small and Medium Enterprises
MGIRI	: Mahatma Gandhi Institute for Rural Industrialisation
MSME-DI	: Micro, Small and Medium Enterprises - Development Institute
MSME-TI	: Micro, Small and Medium Enterprises - Training Institute
MSME	: Micro, Small and Medium Enterprises
MSE	: Micro and Small Enterprises
MSMED Act	: Micro, Small and Medium Enterprises Development Act
MSE-CDP	: Micro and Small Enterprises – Cluster Development Programme
MSME-TR	: Micro, Small and Medium Enterprises -Tool Room
MSME-TS	: Micro, Small and Medium Enterprises -Testing Station
MUDRA	: Micro Units Development and Refinance Agency
NCRPB	: National Capital Region Planning Board
NCR	: National Capital Region



Draft Functional Plan for Micro and Household Enterprises in NCR

NCT	: National Capital Territory
NIC	: National Industrial Classification
NIESBUD	: National Institute for Entrepreneurship & Small Business Development
NID	: National Institute of Design
NI-MSME	: National Institute for Micro, Small and Medium Enterprises
NABARD	: National Bank for Agriculture and Rural Development
NSIC	: National Small Industries Corporation
NMCP	: National Manufacturing Competitiveness Programme
NATRiP	: National Automotive Testing and R&D Infrastructure Project
PPP	: Public Private Partnership
PMEGP	: Prime Minister's Employment Generation Programme
QMS	: Quality Management Standards
QTT	: Quality Technology Tools
R&D	: Research & Development
REGP	: Rural Employment Generation Programme
SDP	: Skill Development Programme
SHG	: Self-Help Group
SIDBI	: Small Industries Development Bank of India
SSI	: Small Scale Industries
SISI	: Small Industries Services Institute
SIDCO	: Small Industries Development Corporation
SFURTI	: Scheme of Fund for Regeneration of Traditional Industries
SME	: Small and Medium Enterprises
SICDP	: Small Industries Cluster Development Programme
SPV	: Special Purpose Vehicle
SGSY	: Swarnajayanti Gram Swarajgar Yojana
UNIDO	: United Nations Industrial Development Organisation
UPTECH	: Integrated Technology Upgradation and Management Programme
TDC	: Technology Development Centre
TIIC	: Tamil Nadu Industrial Investment Corporation
TANSTIA	: Tamilnadu Small and Tiny Industries Association
WSC	: World Standards Cooperation



1. INTRODUCTION

1.1 National Capital Region

National Capital Region (NCR) covers parts of States of Haryana, Uttar Pradesh & Rajasthan and the entire National Capital Territory of Delhi (NCT Delhi). As per the Regional Plan-2021, NCR comprises of NCT-Delhi, eight districts of State of Haryana, namely, Panipat, Sonapat, Rohtak, Jhajjar, Gurugram, Rewari, Mewat and Faridabad; five districts of State of Uttar Pradesh, namely, Meerut, Baghpat, Ghaziabad, Gautam Budh Nagar and Bulandshahr; and district Alwar of State of Rajasthan (refer Map 1-1). Later, few districts were bifurcated and reorganized by the respective NCR participating State Governments, resulting to which the NCR comprises nine districts of State of Haryana, six districts of State of Uttar Pradesh, district Alwar of State of Rajasthan and entire NCT Delhi (refer Map 1-2). Till September, 2013 the total area of NCR was 34,144 sq. km.

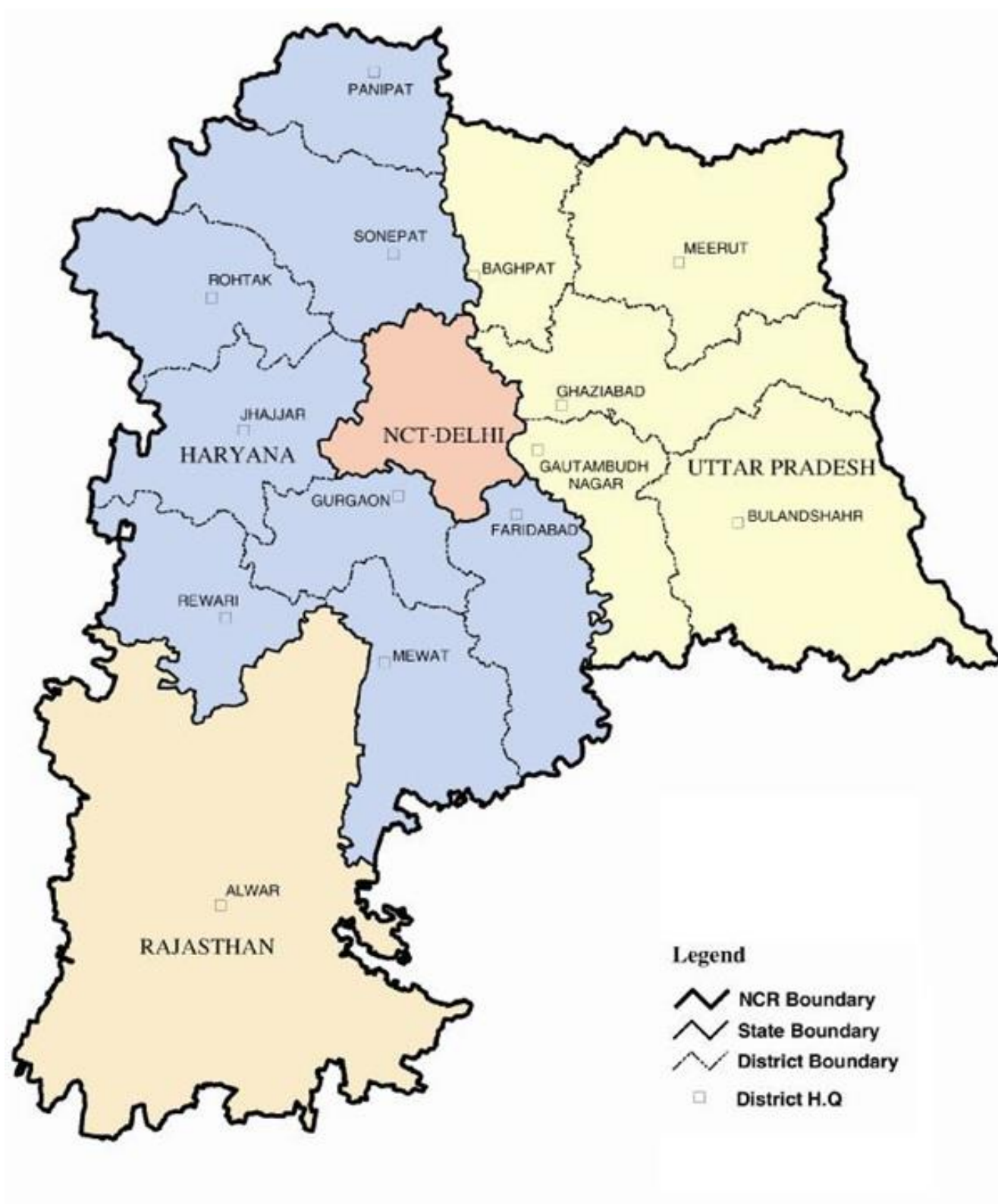
Further, Government of India vide Gazette Notification dated 01.10.2013, 26.11.2015 and 16.04.2018 added Bhiwani, Mahendragarh, Jind and Karnal districts of State of Haryana, Bharatpur district of State of Rajasthan and Muzaffarnagar and Shmal districts of State of Uttar Pradesh in NCR. Consequent to these notifications, the current area of NCR is 55083 sq. km. The administrative units of constituent areas of NCR are as follows:

- i) **Entire NCT Delhi**
- ii) **Haryana sub-region** comprising of thirteen districts, namely, Panipat, Sonapat, Rohtak, Jhajjar, Gurugram, Rewari, Mewat, Faridabad, Palwal, Bhiwani, Mahendragarh, Jind and Karnal.
- iii) **Uttar Pradesh sub-region** comprising of seven districts, namely Meerut, Ghaziabad, Gautam Budh Nagar, Bulandshahr, Baghpat, Hapur, Muzaffarnagar and Shamli.
- iv) **Rajasthan sub-region** comprising of two districts, namely, Alwar and Bharatpur.

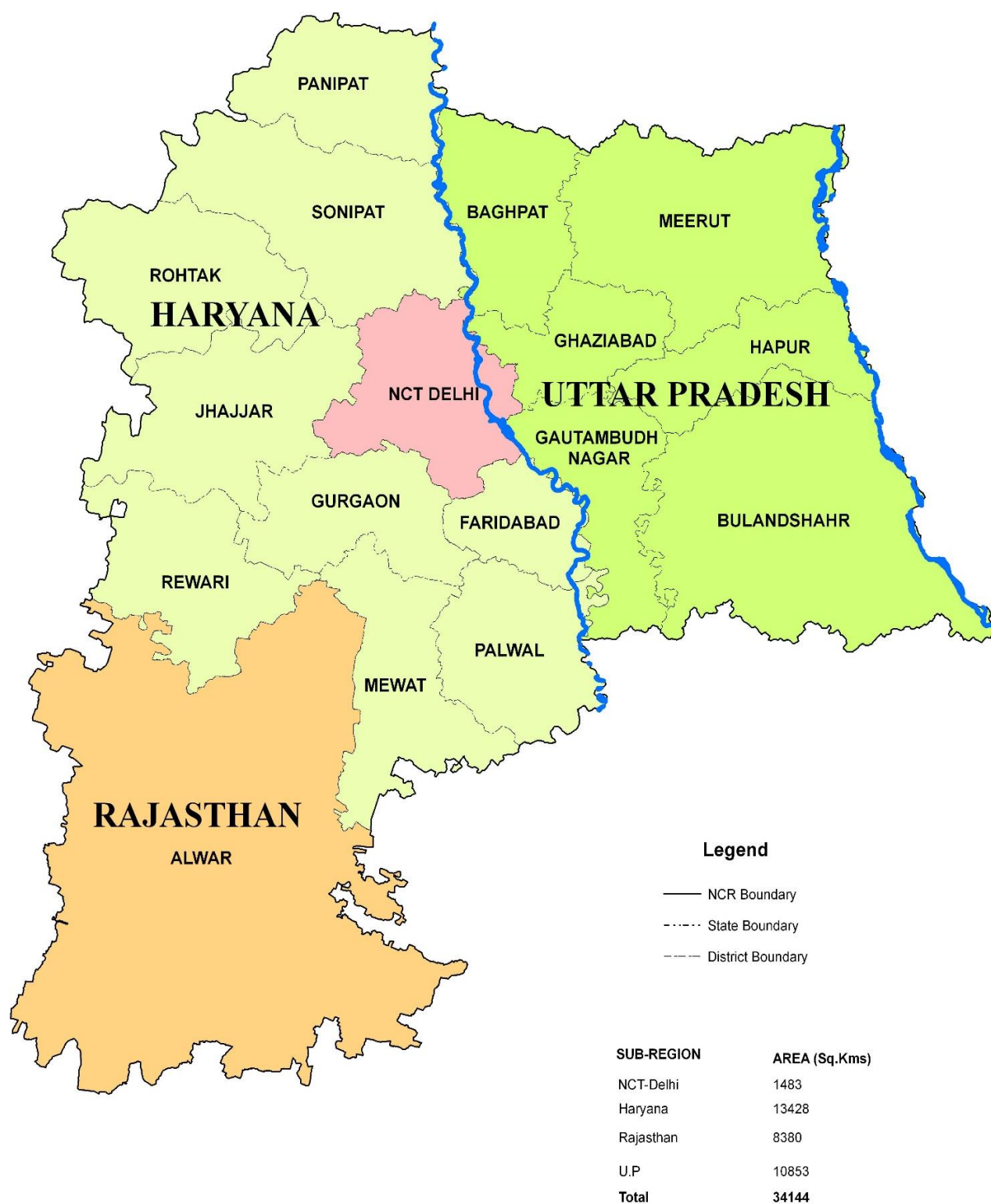
As per Census-2011, the total population of NCR is about 581 lakh of which nearly 38% population is rural. There are a total of 230 urban settlements and more than 8200 rural settlements, of varied population size in NCR.

1.2 Regional Plan-2021 for NCR

National Capital Region Planning Board (NCRPB) had prepared the Regional Plan for NCR with the perspective year 2021 (RP-2021) as per the provisions under Section 10 of the NCRPB Act, 1985, for balanced and harmonized development of the region. The RP-2021 was prepared for the then notified area of NCR (as shown in Map 1-1) and was notified on 17th September, 2005.



Map 1-1 National Capital Region- Constituent Areas (as per RP-2021)



Map 1-2 National Capital Region- Constituent Areas (after reorganization of districts)



1.2.1 Aim & Objectives of Regional Plan-2021 for NCR

The Regional Plan-2021 aims "to promote growth and balanced development of the National Capital Region". This aim is sought to be achieved through:

- i) Providing suitable economic base for future growth by identification and development of regional settlements capable of absorbing the economic development impulse of NCT Delhi.
- ii) Providing efficient and economic rail and road based transportation networks (including mass transport systems) that are well integrated with land use.
- iii) Minimizing the adverse environmental impact that may occur in the process of development of the NCR.
- iv) Developing selected urban settlements with urban infrastructural facilities such as transport, power, communication, drinking water, sewerage, drainage, etc. comparable with NCT Delhi.
- v) Providing a rational land use pattern in order to protect and preserve good agricultural land and utilize unproductive land for urban uses.
- vi) Promoting sustainable development in the region to improve the quality of life.
- vii) Improving the efficiency of existing methods of resource mobilization and adopting innovative methods of resource mobilization and facilitate, attract and guide private investment in desired direction.

RP-2021 has recognized that there is a sizable presence of informal sector activities and enterprises in various towns of the NCR, which produce comparatively inexpensive wage goods and services while providing abundant opportunities for self-employment to a large section of population. This unorganized sector has been recognized as an important segment of urban human activities which is making a positive contribution to the growth and economic development of these towns and, through them, of the entire region.

Some of these activities are being carried out since long and are also well recognized in terms of specialization and export potentials. RP-2021 identified the following informal sector activities in NCR:

- i) Engineering and metal work, leather work, *murtikari*, carpet weaving and pottery in Alwar
- ii) Handloom, sports goods and scissors & blades industry in Meerut
- iii) Pottery and ceramics in Khurja
- iv) Handloom industry in Panipat
- v) Brassware in Rewari
- vi) Potteries in Mewat.

RP-2021 advocates the necessity to address the informal sector in all its ramifications and evolve appropriate strategies to cater to the basic needs of its constituent population by way of providing



shelter, workplace, social amenities and financial support so as to facilitate their growth and, at the same time, mobilize their skills and entrepreneurship for the benefit of society at large. Under the strategy for accelerated development of NCR, the informal sector, including household industries, would be poised to claim a large share of the induced population growth and income generation. An attempt, therefore, is to be made to absorb the informal sector, as far as possible, particularly within the fabric of planned urban development and economic growth of the integrated townships which are at the core of the envisaged development strategy for NCR.

1.3 Study on Micro and Household Enterprises in NCR

Considering the importance of MSMEs in the NCR, NCRPB conducted a study on “*Micro and Households Enterprises in NCR*” through M/s Mott MacDonald Pvt. Ltd., which was initiated in 2009 and completed in 2015. The said study has covered micro and households manufacturing enterprises and it indicates that there are more than 35,000 registered micro manufacturing enterprises in NCR (as notified in RP-2021) and large number of un-registered micro manufacturing enterprises.

The Study Report was prepared after extensive consultations with concerned Ministries/ Departments of the Central Govt., NCR participating States and their Departments/Agencies. Draft findings & recommendations of the Study were also deliberated in a Stakeholder’s Workshop held on 08.05.2015. The report was finalized after incorporating the views/ comments/ suggestions received from various Stakeholders. Final Report of the Study of Micro & Household Enterprises for NCR was subsequently approved by the Consultancy Review Committee (CRC) constituted under the chairmanship of Member Secretary, NCRPB wherein Director, MSME Development Institute; Director, National Institute for Entrepreneurship and Small Business and Development (NIESBUD) and representatives of Industries Department of Governments of Haryana, U.P., Rajasthan and NCT-Delhi were the members. The Final Report was approved by the CRC in its 6th Meeting held on 14.08.2015.

Study accentuated the potential for development of micro and household manufacturing enterprises in the region which would provide gainful employment opportunities to many households in NCR.

1.4 Need for Preparation of Functional Plan on Micro and Household Enterprises in NCR

The RP-2021 for NCR proposes “*to harness the spread of the developmental impulse and agglomeration economies generated by Delhi for harmonized, balanced and environmentally sustainable spatio-economic development of the NCR with effective cooperation of the participating States*”.

It is evident that many of the urban centres such as Delhi, Gurugram, Faridabad, Noida, Ghaziabad, Meerut, etc. in NCR have emerged as hubs of industry and service sector, however, many of the small towns and villages in NCR lack in employment generation activities. There is an urgent need to create adequate economic opportunities and employment generation activities in these smaller



urban centres and villages. Micro & household enterprises in NCR comprise of various types, such as agro-based enterprises, handicraft and handloom, etc. in rural areas and smaller towns. These need to be promoted in order to support urban activities and to stabilize rural economy in NCR. In addition to high potential for employment generation, micro and household enterprise sector is economically important because of low capital investment, high ratio of value addition and high potential for export and foreign exchange earnings.

Numerous artisans are engaged in craftworks on part-time basis in the NCR. The household/cottage industries provide employment to many artisans, including a large number of women and people belonging to the weaker sections of the society. Enormous potential exists in the micro & household enterprises in NCR to provide eco-friendly way of income and employment generation in variety of sectors including agro-processing, handicraft, textile, light engineering, ceramic & pottery, etc. Moreover, the micro & household manufacturing enterprises sector in NCR needs to be explored for potential areas.

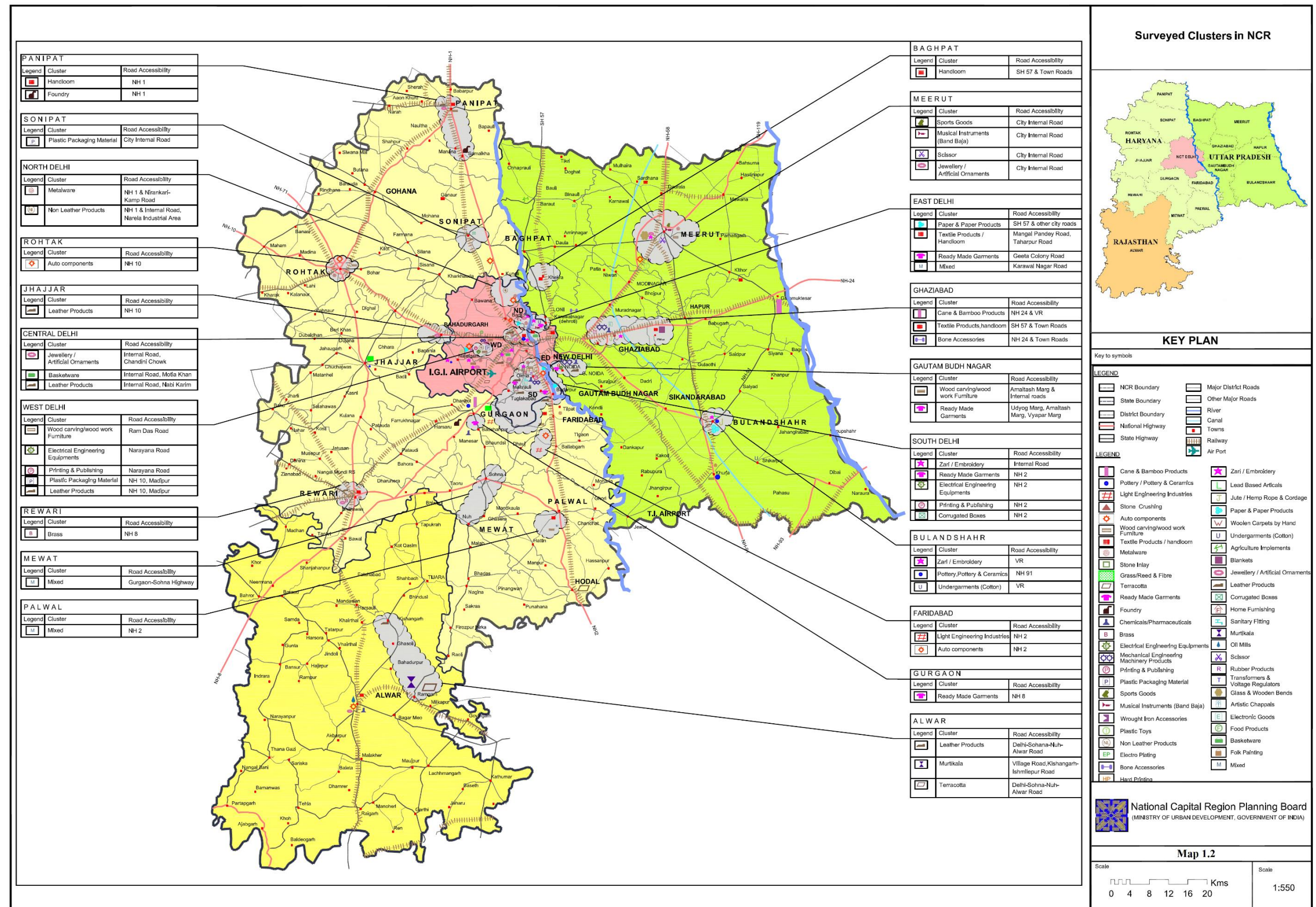
Keeping in view the constraints faced by micro & household manufacturing enterprises, as highlighted in the study on “*Micro and Households Enterprises in NCR*” and based on the enormous potential of the sector for enhancing the economic development & employment generation in NCR, the ‘*Functional Plan for Micro and Household Enterprises in NCR*’ has been prepared as per the provision under Section 16 of NCRPB Act, 1985 for the guidance of the NCR participating States. The Functional Plan provides recommendations for the development of micro & household manufacturing enterprises in NCR.

1.4.1 Methodology

Functional Plan for Micro & Household Enterprises in NCR has been prepared based on the analysis and findings of the study on Micro and Households Enterprises in NCR. The study was based on data/information published by Govt. of India & NCR participating State Govts., information provided by various industry associations and primary survey of 2500 micro & household enterprises. Details of district wise distribution of clusters, sampled clusters and clusters where primary survey was conducted is given in **Annexure-1** (Appendix 1.A, 1.B & 1.C). The spatial distribution of Surveyed Clusters is presented in **Map 1-3**.

In addition to the Study on Micro and Households Enterprises in NCR, district level data related to micro and small enterprises, published by MSME-Development Institute(s), Ministry of MSME, Government of India and various other organizations, has also been utilized to analyze the existing situation of micro, small and household manufacturing enterprises in NCR.

Micro and Household Enterprises comprises of three types i.e. manufacturing, repairing & maintenance, and services. Considering the wider base of the service based micro and household enterprises it was decided that the Functional Plan would be limited to micro, small and household manufacturing enterprises.



Map 1-3 Surveyed Clusters in NCR



2. MICRO & HOUSEHOLD ENTERPRISES: RELEVANT ACTS, POLICIES, PROGRAMMES AND SCHEMES

2.1 Background

The Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 was notified in 2006 to address policy issues affecting Micro, Small and Medium Enterprises (MSMEs) as well as the coverage and investment ceiling of the sector. In May 2007, the Ministry of Small Scale Industries and the Ministry of Agro and Rural Industries were merged to form the Ministry of Micro, Small and Medium Enterprises (MoMSME). The Ministry of MSME designs policies, programmes, projects & schemes and monitors their implementation with a view to develop MSMEs.

MSMED Act, 2006 provides a legal framework for MSMEs in India and gave recognition to the concept of “*enterprise*” (comprising both manufacturing and services). It integrates three tiers of these enterprises, namely, *micro*, *small* and *medium*. Micro, small and medium (MSM) enterprises in the service sector are also covered under the Act and a separate investment limit for plant and machinery has been prescribed for MSM enterprises of this sector.

The said Act was framed with the following objectives:

- To facilitate the promotion and development of micro, small and medium scale enterprises (MSM enterprises);
- To enhance the competitiveness of MSM enterprises;
- To concentrate on the related matters of MSM enterprises;
- To extend the scope of benefits from SSI undertaking and ancillary industries to MSM enterprises.

2.2 Concept and Definitions of relevant Terms

2.2.1 Enterprises

An institutional unit in its capacity as a producer of goods and services is known as an *enterprise*. An enterprise is an economic transact or autonomy in respect of financial and investment decision making, as well as authority and responsibility for allocating resources for production of goods and services. It may be engaged in one or more economic activities at one or more locations. An enterprise may be a sole legal unit.

2.2.2 Micro Enterprises

The earlier concept of ‘*industries*’ has been changed to ‘*enterprises*.’ Broadly, enterprises have been classified into the following two categories:

- i) Enterprises engaged in the manufacture/production of goods,
- ii) Enterprises engaged in providing/rendering of services.



MSMED Act defined enterprises in terms of micro, small and medium enterprises based on their investment in plant and machinery for manufacturing enterprises, or on equipment for enterprises providing or rendering services. The classification of enterprises based on investment ceiling is given in **Table 2.1**.

Table 2.1 Classification of MSME's based on ceiling on investment

Classification of Enterprises	Manufacturing Enterprises (Investment limit in plant & machinery)	Service Enterprises (Investment limit in equipment)
Micro	Rs. 25 lakh	Rs. 10 lakh
Small	Rs. 5 crore	Rs. 2 crore
Medium	Rs. 10 crore	Rs. 5 crore

Source: Study on Micro & Household Enterprise in NCR, NCRPB and MoMSME Report "MSME AT A GLANCE-2016"

2.2.3 Household Industries

As per Census of India, 'Household Industry' is defined as an industry conducted by one or more members of the household at home or within the village in rural areas and only within the precincts of the house, if the household lives in urban areas. The larger proportion of workers in the household industry consists of members of a household. The industry is not run on the scale of a registered factory which would qualify or has to be registered under the Indian Factories Act. Household Industry relates to production, processing, servicing, repairing or making and selling (but not merely selling) of goods.

2.2.4 Village Industries

The term 'village industries' has been defined in amended KVIC Act, 1956 as "any industry located in a rural area which produces any goods or renders any service with or without the use of power and in which the fixed capital investment per head of artisan or worker does not exceed Rs.1.0 lakh (Rs. 1.50 lakh in case of village industry located in a hilly area) or such other sum as may, by notification in the Official Gazette, be specified from time to time by the Central Government."

2.2.5 Registered Micro Enterprises

The following definitions are considered for 'registered micro enterprises':

- All enterprises engaged in the activities of manufacturing or in providing/rendering of services, registered permanently with District Industries Centres (DIC) up to 2.10.2006 (before the MSMED Act, 2006) may be referred as registered enterprises- before MSMED Act, 2006.
- All enterprises engaged in the activities of manufacturing or in providing/rendering of services that have obtained Entrepreneurs Memorandum-II (EM-II) from District Industries Centres as on 31.03.2010 referred as registered enterprises with EM-II. Data / information on enterprises registered before 2006 was not available. Thus, the enterprises



that have been registered with the DICs after 2006 and obtained EM-II were considered to arrive at the inventory of registered enterprises.

2.2.6 Unregistered Micro Enterprises

All enterprises which are engaged in the activities of manufacturing or in providing/rendering of services but not registered permanently or obtained Entrepreneurs Memorandum-II (EM-II) with District Industries Centres as on 31.03.2010 referred as '*unregistered enterprises*'.

2.2.7 Cluster

As per Micro & Small Enterprises Cluster Development Programme (MSE-CDP), a '*cluster*' is defined as a group of enterprises located within an identifiable and as far as practicable, contiguous area and producing same/similar products/services. The geographical bounds of a cluster may constitute a *mohalla*, village, block, etc. A combination of villages, towns or blocks and even a smaller district/union territory, if easily administered under the programme, may also qualify as a cluster.

The essential characteristics of enterprises in a cluster are as follows:

- i) Similarity or complementarity in the methods of production, quality control and testing, energy consumption, pollution control, etc.;
- ii) Similar level of technology and marketing strategies/practices;
- iii) Channel for communication among the members of the cluster; and
- iv) Common challenges and opportunities.

2.2.8 Common Facility Centres (CFC)

As per the Modified Guidelines of MSE-CDP, Common Facility Centres (CFCs) consist of creation of tangible '*assets*' like Common Testing Facilities, Design Centre, Production/Processing, Common Raw Material Bank/Sales Depot, Training Centre, R&D Centres, Effluent Treatment Plant, Marketing Display/Selling Centre, Common Logistics Centre, and Information Centre, any other need based facilities, etc.

2.3 Institutional Structure of MSM Enterprises

Major institutions involved in the development of MSME Clusters in India are briefly illustrated in **Figure 2.1** and their roles and responsibilities are explained in the subsequent paras:

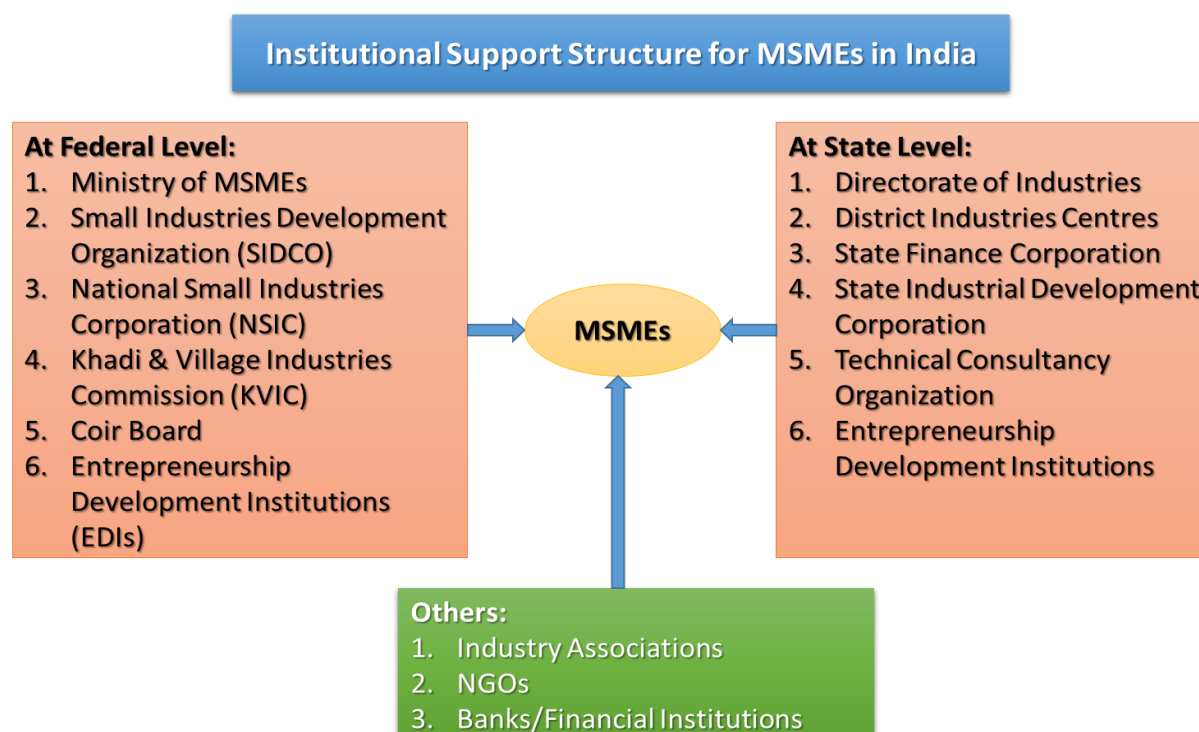


Figure 2.1 Institutional support structure for MSMEs, India

Source: NCRPB Study on Micro & Household Enterprise in NCR

2.3.1 Central Level

The implementation of policies and various programmes/ schemes for providing support services to MSMEs are undertaken through various agencies/ organizations of the Central government. Some of such important agencies/ departments agencies/ organizations and their respective roles are as follows:

i) **Office of Development Commissioner (MSME):**

The role of the Office of Development Commissioner, MSME headed by the Special Secretary & Development Commissioner (MSME) [DC-MSME], being an apex body for formulating and overseeing implementation of the policies for the development of MSMEs in the country, play a very positive and constructive role for strengthening this vital sector. It is working as an agency for advocacy, handholding and facilitation for the small industries sector. It functions through a network of MSME-DIs, Regional Testing Centres, Footwear Training Institutes, Production Centres, Field Testing Stations and specialized institutes. It has over 70 offices and 21 autonomous bodies under its management. These autonomous bodies include Tool Rooms, Training Institutions and Project-cum-Process Development Centres. Office of DC-MSME provides a wide spectrum of services to micro, small and medium industrial sector including facilities for testing, training for entrepreneurship development, preparation of project and product profiles, technical and managerial consultancy, assistance for exports, pollution and energy audits, etc. The office



of DC-MSME provides economic information services and advises government in policy formulation for the promotion and development of SSIs. The field offices also work as effective links between the Central and the State Governments.

ii) **National Board for Micro, Small and Medium Enterprises (NB MSME):**

Considering the wide range of development work in MSMEs and to facilitate coordination & inter-institutional linkages, a National Board for Micro, Small & Medium Enterprises (NB MSME) has been constituted in pursuance of the MSME Development Act, 2006. It is an apex advisory body constituted to render advice to government on all issues pertaining to MSME sector. The Minister In-charge of MSME of the Government of India is the Chairman and the Board comprises among others, State Industry Ministers, some Members of Parliament, and Secretaries of various departments of Government of India, financial institutions, public sector undertakings, industry associations and eminent experts in the field. The Board meets periodically to take stock of the issues pertaining to policy matters.

iii) **Office of Development Commissioner (Handicraft):**

The Office of Development Commissioner (Handicraft), Ministry of Textiles, GoI is implementing the following seven schemes for promotion and development of handicraft sector:

- a) Baba Saheb Hastshilp Vikas Yojana
- b) Design and Technology Up-gradation
- c) Marketing Support and Services
- d) Research and Development
- e) Human and Resource Development
- f) Handicrafts Artisans Comprehensive Welfare Scheme
- g) Infrastructure and Technology Development Scheme

While Baba Saheb Hastshilp Vikas Yojana is a cluster specific scheme, the remaining schemes cut across clusters dealing with specialized interventions.

iv) **UNIDO Cluster Development Programme (UNIDO-CDP):**

UNIDO-CDP in India is contributing to the overall performance and collective efficiency of small and medium enterprise clusters for sustainable development by assisting selected local communities of firms and associated institutions in the clusters. This entails the implementation of cluster support initiative in selected pilot clusters as well as assistance to central and local institutions in their programmes of cluster modernization and restructuring. The Partner Institutions of UNIDO CDP are:

- Development Commissioner (SSI), Ministry of SSI
- Development Commissioner (Handicrafts), Ministry of Textiles
- Department of Science & Technology, Ministry of Science & Technology
- Textiles Committee of India, Ministry of Textiles



- Small Industries Development Bank of India (SIDBI)
 - State Bank of India (SBI) - UPTECH
 - The National Small Industries Corporation Ltd. (NSIC)
 - Entrepreneurship Development Institute of India (EDI)
 - The National Institute for Small Industry Extension and Training (NISIET)
 - National Institute of Design (NID)
 - National Institute of Fashion Technology (NIFT)
- v) **Khadi & Village Industries Commission (KVIC):**
- The Khadi & Village Industries Commission (KVIC) is promoting and developing khadi and village industries for providing employment opportunities in rural areas, thereby strengthening the rural economy. KVIC has been identified as one of the major organisations in the decentralized sector for generating sustainable rural non-farm employment opportunities at low per capita investment. KVIC is a nodal agency for promotion of Cluster development for Khadi under SFURTI scheme.
- vi) **Textiles Committee:**
- Textiles Committee has initiated the Integrated Skill Development Scheme (ISDS) and Cluster Development Programme (CDP) in the textile sector. The Committee has emerged in diversified sectors such as quality inspection, commercial testing, Total Quality Management (TQM) consultancy, CDP, etc. It has Export Promotion and Quality Assurance division (EP & QA), Laboratories, Market Research division, TQM division, CDP cell and ISDS division.
- vii) **Coir Board:**
- The Coir Board is promoting overall sustainable development of coir industry and improving the living conditions of the workers engaged in this traditional industry. Activities of the Board for development of coir industries, inter-alia, include undertaking scientific, technological and economic research and development activities; developing new products & designs; and marketing of coir and coir products in India and abroad. It also promotes co-operative organizations among producers of husks, coir fibre, coir yarn and manufacturers of coir products; ensuring remunerative returns to producers and manufacturers, etc.

2.3.1.1 National Level Support Institutions

In order to inculcate the entrepreneurial culture, the MoMSME has set up three national level entrepreneurship development institutes viz; National Institute for Micro, Small and Medium Enterprises (NI-MSME) at Hyderabad, National Institute for Entrepreneurship and Small Business Development (NIESBUD) at Noida, and Indian Institute of Entrepreneurship (IIE) at Guwahati, as autonomous societies. *(NIESBUD and IIE have been transferred to Ministry of Skill*



Development and Entrepreneurship (MoSDE) in May 2015). Details of some of the important National Institutions engaged in developing and promotion of MSMEs is given as under:

i) **National Institute of Micro, Small and Medium Enterprises (ni-msme):**

National Institute of Micro, Small and Medium Enterprises (ni-msme), formerly, National Institute for Small Industry Extension Training (NISIET), takes up research and consultancy studies related to cluster development. Institute is engaged in developing training modules; undertaking research & training; and providing consultancy services for entrepreneurship development & promotion of MSMEs, including enhancement of their competitiveness. It provides handholding services to various SFURTI clusters all over India. It also provides technical service to Coir Clusters under SFURTI.

NIMSME is responsible for preparation of diagnostic study reports for a number of Clusters in Uttar Pradesh sub-region of NCR. It also provides tailor-made training programmes such as management development programmes, programme on area development, feasibility survey and analysis, programme for IAS/IES Officers, Engineers & Technocrats and programme on cluster development, etc.

ii) **National Institute for Entrepreneurship and Small Business Development (NEISBUD):**

NEISBUD under the Ministry of Skill Development and Entrepreneurship, Government of India, are engaged in training, consultancy, research and publication, in order to promote entrepreneurship. Major activities of the institute consist of training of trainers, Management Development Programmes (MDP), Entrepreneurship-cum-Skill Development Programmes (ESDP) and Entrepreneurship Development Programmes (EDP), etc.

NIESBUD is working in 24 clusters under MSME-Cluster Development Scheme and that of SFURTI for conducting Diagnostic Studies (DSRs), preparing Detailed Project Reports (DPRs), etc. It has intervened in various clusters under different schemes of Government of India to capacitate and enhance competitiveness of cluster actors (artisans/entrepreneurs) through networking and capacity building, addressing technological issues, product development & diversifications and marketing promotional assistance. In NCR, NIESBUD acts as implementing agency for five clusters namely *Scissors Cluster* in Meerut, *Boneware Cluster* in Loni, *Textile Printing Cluster* in Pilakhuwa, and *Plastic Packaging Material Cluster* in Ghaziabad and *Auto parts Clusters* in Gurugram. NIESBUD was instrumental in formation of Special Purpose Vehicle (SPV) for scissors clusters in Meerut and Boneware cluster at Loni and Textile Printing Cluster at Pilakhuwa. The artisans of the clusters were also sensitized to form Self Help Group (SHGs) to avail the benefit of credit and marketing linkages. It organizes seminars, workshops, exposure-cum-study tours and also motivated artisans to participate in exhibitions/ international trade fairs, etc.



NIESBUD facilitated the SPV members of Scissors Clusters, Meerut to arrange their share of Rs. 1.63 crore towards establishment of the Common Facility Centre (CFC) including a credit limit for Rs. one crore from Syndicate Bank. They have also procured land from the Meerut Development Authority where the basic structure of building and shed has been constructed for housing a CFC. In Textile Printing Cluster at Pilakhuwa, the Detailed Project Report for setting up a CFC with modern printing equipment is prepared and submitted by the institute.

iii) **Indian Institute of Entrepreneurship (IIE):**

Indian Institute of Entrepreneurship (IIE) was established in 1993 by the erstwhile Ministry of Industry (now the Ministry of Micro, Small and Medium Enterprises). Now, it is an autonomous organization under the Ministry of Skill Development & Entrepreneurship since 2015. The main aim of the institute is to provide training, research and consultancy activities in small and micro enterprises (SMEs), with special focus on entrepreneurship development. IIE promote & develop entrepreneurship, conduct research & provide consultancy for entrepreneurship development and coordinate & collaborate with other organizations in conducting training, research & other activities to increase outreach. It also provides monitoring service to MSMEs/ potential entrepreneurs and enhancing employability of participants.

IIE has initiated cluster development efforts to develop small and traditional industrial sector. The institute organizes various workshops on cluster activities. Currently, the main activities of the institute are related to consultancy research, extension and information services, apart from training. The institute provides technical services for Clusters under SFURTI. It also provides guidance and support to implementing agencies for preparation of action plans.

iv) **Mahatma Gandhi Institute for Rural Industrialisation (MGIRI):**

Mahatma Gandhi Institute for Rural Industrialization (MGIRI), a national level institute at Wardha, Maharashtra has been established to strengthen R&D activities in KVI sector. The main functions of the institute are to improve R&D activities under rural industrial sector through encouraging research, extension of R&D, quality control, training and dissemination of technology related information.

v) **National Small Industries Corporation Ltd. (NSIC):**

NSIC, a Public Sector Enterprise of the Ministry of MSME has been providing marketing support to micro and small enterprises by organizing international technology exhibitions in foreign countries and participation in international exhibitions/ trade fairs, organizing domestic exhibitions and participation in exhibitions/ trade fairs in India, organizing buyer-seller meets, conduct intensive campaigns and marketing promotion events, etc.

As a part of the Bank Credit Facilitation Programme, NSIC arranges credit support from banks without any cost to MSMEs. MSMEs can upgrade their competence in terms of



business and technologies by getting rated through independent, renowned and professional rating agencies like CRISIL, ICRA, etc. empaneled with NSIC.

NSIC through Raw Material Assistance Scheme, helping micro and small enterprises by way of financing the purchase of raw material (both indigenous & imported). This gives an opportunity to micro and small enterprises to focus better on manufacturing quality products. It provides financial assistance for procurement of raw material, helps to avail economics of purchases like bulk purchase, cash discount, etc. and take care of all the procedures, documentation. It also issue Letter of Credit in case of imports.

vi) **National Bank for Agriculture & Rural Development (NABARD):**

Under the National Programme for Rural Industrialization, NABARD has planned to develop 50 rural clusters. Objective is to strengthen existing clusters towards sustainable competitive advantage through technology up-gradation/transfer, raw material access, skill development, managerial inputs, credit and market support.

2.3.1.2 International Organizations

United Nations Industrial Development Organization (UNIDO) is a specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability. The mission of UNIDO is to promote and accelerate inclusive and sustainable industrial development (ISID) in developing countries.

UNIDO activities contains a number of individual programs, which are implemented in a holistic manner to achieve effective outcomes and impacts through UNIDO's four enabling functions: (i) technical cooperation; (ii) analytical & research functions and policy advisory services; (iii) normative functions, standards and quality-related activities; and (iv) convening partnerships for knowledge transfer, networking and industrial cooperation.

The core elements of UNIDO's technical cooperation services in India are to implement its activities in harmony with national policy priorities and development strategies to build strong and long-term partnerships. UNIDO Country Programme serves as a portfolio of development interventions by UNIDO, focusing on sustainable industrial development and inclusive economic growth. UNIDO has initiated a Process-cum-Product Development Centre at Sports Goods Cluster in Meerut which provides required assistance in developing new designs and up-gradation of technology in sports goods enterprises.

2.3.1.3 Schemes/ Initiatives of the Ministry of MSME for the promotion & development of Micro, Small & Medium Enterprises

i. **Micro and Small Enterprises-Cluster Development Programme (MSE-CDP)**

MSE-CDP is being implemented by the MoMSME for holistic and integrated development of micro and small enterprises in clusters through **Soft Interventions** (such as diagnostic study, capacity building, marketing development, export promotion, skill development, technology upgradation, organizing workshops, seminars, training, study visits exposure visit, etc.), **Hard**



Interventions (setting up of Common Facility Centres) and **Infrastructure Up-gradation** (create/upgrade infrastructural facilities in the new/existing industrial areas/clusters of MSEs).

Following is the detail of financial assistance provided under the Scheme:

➤ Diagnostic Study	: Maximum cost Rs. 2.50 lakhs.
➤ Soft Interventions	: Maximum cost of project Rs. 25.00 lakh, with GoI contribution of 75% (90% for Special Category States and for clusters with more than 50% women/micro/village/SC/ST units).
➤ Hard Interventions	: i.e. setting up of CFCs – maximum eligible project cost of Rs. 15.00 crore with GoI contribution of 70% (90% for Special Category States and for clusters with more than 50% women/micro/village/SC/ST units).
➤ Infrastructure Development	: In the new/ existing industrial estates/areas. Maximum eligible project cost Rs.10.00 crore, with GoI contribution of 60% (80% for Special Category States and for clusters with more than 50% women/micro/SC/ST units).

Source: www.dcmsme.gov.in/mse-cdprog.htm

The remaining amount can be arranged as a loan from SIDBI/ Banks/ Financial Institutions or equity from State/UT Government.

ii. Credit Guarantee Scheme for Micro and Small Enterprises (CGMSE)

Considering the difficulties of MSEs in obtaining bank loans, CGMSE was launched by the Government of India in 2015 to make available collateral-free credit to this sector. Both, the existing and new enterprises are eligible for this scheme. The Ministry of MSMEs and Small Industries Development Bank of India (SIDBI), established a Trust named Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) to implement the CGMSE scheme.

The credit facilities which are eligible to be covered under the scheme are both term loans and/or working capital facility up to Rs.100 lakh per borrowing unit, extended without any collateral security and / or third party guarantee, to a new or existing micro and small enterprise. For those units covered under the guarantee scheme, which may become sick owing to factors beyond the control of management, rehabilitation assistance extended by the lender could also be covered under the guarantee scheme. Any credit facility in respect of which risks are additionally covered under a scheme, operated by Government or other agencies, will not be eligible for coverage under the scheme. The Guarantee cover under the scheme is for the agreed tenure of term loan/composite credit. In case of working capital, the guarantee cover is of 5 years or block of 5 years.

The scheme covers collateral free credit facility (term loan and/ or working capital) extended by eligible lending institutions to new and existing micro and small enterprises up to Rs. 100 lakh per borrowing unit. The guarantee cover provided is up to 75% of the credit facility up to Rs.50 lakh (85% for loans up to Rs. 5 lakh provided to micro enterprises, 80% for MSEs owned/ operated by women and all loans to NER) with a uniform guarantee at 50% of the credit exposure above Rs.50 lakh and up to Rs.100 lakh. A composite all-in Annual Guarantee Fee of 1.0 % of the credit facility sanctioned (0.75% for credit facility upto Rs. 5 lakh and 0.85% for above Rs. 5 lakh and upto 100 lakh for Woman, Micro Enterprises and units in NER including Sikkim) is being charged under



this scheme. In case of default, Trust settles the claim up to 75% (or 85% / 80% / 50% wherever applicable) of the amount in default of the credit facility extended by the lending institution. For this purpose the amount in default is counted as the principal amount outstanding in the account of the borrower, in respect of term loan, and amount of outstanding working capital facilities, including interest, as on the date of the account turning Non-Performing Asset (NPA).

iii. Prime Minister's Employment Generation Programme (PMEGP)

Government of India has introduced a new credit linked subsidy scheme called *Prime Minister's Employment Generation Programme* (PMEGP) by merging the two schemes that were in operation till March, 2008 namely Prime Minister's Rojgar Yojana (PMRY) and Rural Employment Generation Programme (REGP), for generation of employment opportunities through establishment of micro enterprises in rural as well as urban areas. PMEGP is a central sector scheme to be administered by the Ministry of MSME. The Scheme is being implemented by Khadi and Village Industries Commission (KVIC), as the single nodal agency at the National level. At the State level, it is to be implemented through State KVIC Directorates, State Khadi and Village Industries Boards (KVIBs) and District Industries Centres (DICs) and Banks. The Government subsidy under the Scheme will be routed by KVIC through the identified Banks for eventual distribution to the beneficiaries / entrepreneurs in their Bank accounts. The Implementing Agencies, namely KVIC, KVIBs and DICs has to associate reputed Non-Government Organization (NGOs)/reputed autonomous institutions/Self Help Groups (SHGs)/ National Small Industries Corporation (NSIC) / Udyami Mitras empanelled under Rajiv Gandhi Udyami Mitra Yojana (RGUMY), Panchayati Raj Institutions and other relevant bodies in the implementation of the Scheme, especially in the area of identification of beneficiaries, of area specific viable projects, and providing training in entrepreneurship development.

The quantum and nature of financial assistance & levels of funding under PMEGP are as under:

Categories of beneficiaries under PMEGP Area (location of project/ unit)	Beneficiary's contribution (of project cost)	Rate of Subsidy (of project cost)	
		Urban	Rural
➤ General Category	10%	15%	25%
➤ Special (including SC / ST / OBC / Minorities/Women, Ex-servicemen, Physically handicapped, etc.	05%	25%	35%

Note: (1) The maximum cost of the project/unit admissible under manufacturing sector is Rs. 25 lakh.
(2) The maximum cost of the project/unit admissible under business/service sector is Rs. 10 lakh.
(3) The balance amount of the total project cost will be provided by Banks as term loan

Recently, in order to expand the scope of PMEGP negative list of the PMEGP Guidelines has been modified. Under the modified guidelines, the following activities have now been allowed:

- Industries such as processing of pashmina wool and other products like hand spinning and hand weaving.
- All rural and urban transport activities.
- Value added Products for tea, coffee, rubber etc. sericulture, horticulture, floriculture.



Instructions have been issued to the concerned agencies for implementation of the concept of one nodal branch of each Public Sector Bank in each State. All the nodal branches of the banks under PMEGP have been connected through Central Plan Scheme Monitoring System (CPSMS) under PFMS (Plan Financial Management System) to monitor the flow of funds. Regular updating of the database is being done directly by the nodal branches.

To bring in transparency in implementation of PMEGP scheme as well as to create data base of PMEGP beneficiaries, e-tracking of PMEGP applications has been introduced. The PMEGP and REGP units have been enabled to register online for filing Entrepreneurship Memorandum (EM-I) -Application for industrial land, application for credit, pollution clearance etc. so that the entrepreneurs can obtain the benefits under the EM-I of Ministry of MSME. KVIC has executed an MoU with National Association of Rural Self Employment Training Institutes (RSETI) to impart Entrepreneurship Development Programme (EDP) training through the training centers of RSETI/RUDSETI under PMEGP.

iv. Credit Linked Capital Subsidy Scheme (CLCSS)

To facilitate technological up-gradation, the Government of India has introduced & is implementing the Credit Linked Capital Subsidy Scheme (CLCSS). The scheme is applicable to new and existing Micro & Small Enterprises (MSEs) engaged in manufacturing. Under this scheme 15% upfront capital subsidy to a maximum limit of Rs.15 lakhs (*investment in approved plant & machinery upto Rs.1 crore*) for induction of well-established and improved technologies is being facilitated. About 51 sub-sectors/products with approved Machinery/Technologies are covered under the scheme.

Presently, the scheme is being operated through 12 Nodal Banks/Agencies and also with a large number of Co-opted PLI under the nodal banks SIDBI & NABARD. The eligible beneficiary enterprises are to avail institutional credit to purchase machineries/technologies approved under the Scheme.

v. Scheme of fund for Regeneration of Traditional Industries (SFURTI)

To make the traditional industries more productive & competitive and facilitating their sustainable development, the Govt. of India announced setting up of a fund for regeneration of traditional industries under SFURTI. The objective of the scheme is to organize the traditional industries and artisans into clusters to make them competitive and provide support for their long term sustainability and economy of scale, and provide sustained employment for traditional industry artisans and rural entrepreneurs to enhance marketability of products of such clusters by providing support for new products, design intervention and improved packaging and also the improvement of marketing infrastructure. Another objective is to equip traditional artisans of the associated clusters with the improved skills and capabilities through training and exposure visits and to make provision for common facilities and improved tools and equipments for artisans in order to strengthen the cluster governance systems with the active participation of the stakeholders, so that they are able to gauge the emerging challenges and opportunities and respond to them in a coherent manner. Funding for the cluster varies from Rs.1.5 crore to Rs.8 crore depending on size and scale of the project. The scheme has provisions for funding of **soft interventions** including skill training, capacity building, design development, etc. and **hard interventions** including Common Facility Centres, Raw Material Banks (RMB), training centres, etc. and cross cutting thematic interventions



which include brand building & promotion, news media marketing, e-commerce, innovation, R&D initiatives and developing linkages between clusters.

Other Schemes/ Initiatives

In addition to the above mentioned schemes, there are several other schemes/ initiatives which are being implemented by the Ministry of MSME. These schemes/ initiatives are listed as under:

- Performance & Credit Rating Scheme
- Marketing Assistance Scheme
- International Cooperation (IC) Scheme
- Assistance to Training Institutions Scheme
- Survey, Studies and Policy Research
- Market Promotion and Development Assistance (MPDA)
- Coir Vikas Yojana
- Coir Udyami Yojana
- Coir S & T Yojana (PLAN S & T)

There are certain schemes/ programmes/ initiatives which are being implemented by Development Commissioner MSME, the same are listed as under:

- Design Clinic Scheme (under NMCP)
- Lean Manufacturing (under NMCP)
- Information and Communication Technology (under NMCP)
- Intellectual Property Rights
- Incubation
- Bar Code Scheme (under MDA)
- Marketing Development Assistance (MDA) Scheme
- ZED Maturity Model: Quality Management Standards (QMS) And Quality Technology Tools (QTT) – under NMCP
- Trade Related Entrepreneurship Assistance and Development (TREAD) for Women
- Marketing Assistance and Technology Up-gradation (MATU)
- Technology Centre Systems Programme (TCSP)
- MSME Technology Centers (TCS)
- Technology and Quality Up Gradation Support to MSMEs

Recently, the Ministry of MSME has taken some initiatives to further facilitate the MSEs. These initiatives includes, A Scheme for Promoting Innovation and Rural Entrepreneurship (ASPIRE); Technology Centre Systems Programmes; Revamped Coir Udyami Yojana (CUY) & Coir Vikas Yojana (CVY); Udyog Aadhaar: for the ease of Registration Process through Udyog Aadhaar Memorandum (UAM); Quality Management System (ISO) in Ministry of MSME, KVIC, Coir Board and ni-msme; preparation of District Industry Profile; Skill Mapping and framework for Revival and Rehabilitation of MSME.

Apart from above mentioned schemes, various other Central Ministries/ Departments/ Agencies have initiated a number of schemes/ programmes/ initiatives for up-gradation & development of sector specific MSMEs and household enterprises. A comprehensive list of such schemes, programmes and initiatives is given at **Annexure-2**.



2.3.2 State level Institutional Mechanism

In order to effectively enforce and implement the MSMED Act, 2006, the NCR participating State Governments have formulated various policies and schemes for overall development of MSMEs including infrastructure, financial assistance, product quality improvement, skill development, marketing support etc. Departments and institutions involved & responsible for the development of MSMEs in NCR participating States includes Department of Industry/ Micro, Small and Medium Enterprises, Directorate of Industries, District Industries Centres, State Industrial Development Corporation, State Financial Corporation, Technical Consultancy Organisations and Entrepreneurship Development Institutions. Sub-region wise detail w.r.t. various initiatives taken by NCR participating States and their existing institutional mechanism is given in the following paragraphs:

I. NCT DELHI SUB-REGION

The Department of Industries, Government of NCT Delhi prepared '*Industrial Policy for Delhi (2010-2021)*'. As per the policy, Department of Industries is the nodal agency to plan, promote and develop industries in Delhi. Since Delhi's thrust is on encouraging modern hi-tech, sophisticated export-oriented small scale industries in Delhi as well as those industries which do not stretch its meagre resources such as land, water and electricity. In NCT Delhi, no prior registration is required for setting up of any small scale unit. However, the setting up of a small scale unit is subject to locational restrictions since these can only be set up in conforming areas. Household industries can be set up even in residential areas provided they conform to set norms. There is no specific policy for development of MSMEs in NCT Delhi. However, Industrial Policy for Delhi (2010-2021), Department of Industries and Government of NCT Delhi envisaged the following with regard to development of industries/ enterprises in NCT Delhi:

Handicrafts, Handloom and Khadi

- i) The Industrial Policy for Delhi (2010-2021) provides provisions for the development of handloom, handicrafts and khadi manufacturing enterprises in NCT Delhi. Keeping in view that these are the traditional industrial activities of Delhi, the policy envisaged preservation of ancient crafts and to infuse modern techniques of design and production.
- ii) Government at Central and State level, have number of programmes to support this industry which includes reservation of certain types of fabric manufactured by handlooms, award for master craftsmen and financial support through various schemes executed by cooperative banks, nationalized banks and Delhi Financial Corporation from time to time.
- iii) Delhi's existing strengths in handloom, handicrafts and khadi sector need to be leveraged for use in fashion and interior design industry. For this purpose, it is important to create linkages with the fashion design industry and devise more aggressive marketing strategies.

Skill Development

- (i) The existing units engaged in low skilled activities need to be graduated from knowledge based industries. The sectors such as ready-made garments require skilled workforce capable



of meeting the changing demands of industry due to technological advancements. It is important that specific skill development and bridge courses should be developed to enable the existing workforce to become capable to handle superior technology.

- (ii) Department of Training and Technical Education (DTTE) will be the nodal body for promoting skill development in Delhi.
- (iii) Delhi Knowledge Development Foundation (DKDF) is responsible for providing trained technical manpower for enhancing the industrial production and services.
- (iv) Delhi Skill Mission Society (DSMS) is proposed to be set up to execute the Delhi Skill Mission, focusing on upgrading the skills of youth (drop out of school), informal sector workers and other weaker sections. The mission will encourage partnerships with a range of institutions in the public and private sectors.

Cluster Development

- (i) In Delhi, cluster approach started in its industrial estates wherein land being allotted to enterprises to ensure that units from particular sector would be located together. It is envisaged to follow the '*Cluster Approach*' in the new industrial areas too. This is to be done through creating dedicated industrial parks, offering superior infrastructure and facilities for identified sectors in the industrial areas.
- (ii) The industrial policy envisages development of Electronic & Light Engineering Park/SEZ, Fashion Technology & Design Park and Gems & Jewellery SEZ.
- (iii) The industry will also have strong linkages with the Fashion Technology, and Design Park being suggested for Delhi. Moreover, this industry is clean and does not result in environmental pollution.
- (iv) Gems & Jewellery and Information Technology are export oriented sectors and DSIIDC is setting up two sectors specific SEZs at Baprola in NCT-Delhi.

Industrial Waste Management

- (i) The policy recognized that effective operation and maintenance of Common Effluent Treatment Plant (CETP) and safe waste disposal is crucial to create clean industrial areas. However, there is a shortage of areas demarcated for disposal and also issues relating to design and operation of CETPs.
- (ii) In order to save water, the option of installing dual piping system where waste water can be recycled in industrial areas (future and existing) may be explored.

Institutional Mechanism

In NCT Delhi, a majority of the planned industrial estates and flatted complexes are developed by DDA and maintained through MCD. DSIIDC manages and be held accountable for development and management of all industrial estates, regularized industrial areas, community work centres,



new industrial areas and flatted complexes. DSIIDC to be the nodal body for developing industrial infrastructure under public-private-partnerships (PPP) through operation and maintenance contracts or re-development. The departments and agencies involved in development of industrial activities and skill development in NCT Delhi are as under:

- i) Department of Industries
- ii) Delhi State Industrial Infrastructure Development Corporation (DSIIDC)
- iii) Delhi Khadi & Village Industries Board
- iv) Delhi Financial Corporation
- v) Tool Room & Training Centre
- vi) Hi-Tech Vocational Training Centre
- vii) Municipal Corporations of Delhi
- viii) Delhi Jal Board
- ix) Department of Training and Technical Education (DTTE)
- x) Delhi Knowledge Development Foundation (DKDF)
- xi) Delhi Institute of Tool Engineering
- xii) Society for Self-Employment

II. HARYANA SUB-REGION

Government of Haryana recognized that the vibrant MSME sector is critical for investment, growth and employment generation in both rural & urban areas in the State and accordingly, a number of interventions, to support the MSME, have been envisaged in the *Enterprises Promotion Policy, 2015*. The following support to manufacturing enterprises have been provided in the said policy:

Cluster Development

In Haryana, more than 20 clusters have been identified for development/ support, involving more than 6,000 MSMEs. Major clusters in the State include Gurugram (leather and readymade garments), Faridabad (light engineering), Manesar (auto components), Karnal (printing & packaging, agri-implements and pharmaceuticals), Panipat (textile machinery), Yamunanagar (engineering and plywood), Kundli (stainless steel), Jagadhri (metal), etc.

- i. **State Mini Cluster Development Scheme** – This scheme has been formulated for creating Common Facility Centre (CFC) for a group of existing units with funding pattern of 90% State contribution and 10% SPV contribution for a project cost upto Rs. 2 crore.
- ii. **Incentive led geographical dispersal**- In order to promote geographical dispersal of industry, the entire State has been divided into four categories of Development Blocks, based on level of industrialization and economic development. These four categories are - Developed (A), Intermediate (B), Backward (C), and Most Backward (D) Blocks. The category of incentives, namely, VAT remission, interest subsidy, electricity duty exemption, stamp duty refund, etc. will be provided in the B, C & D category blocks. In addition to this, special incentives have



also been provided for the thrust areas/ focus clusters i.e. textiles and food processing industry utilizing raw material produced in the State.

- iii. **Rural Functional Clusters-** Such clusters related to Apparel and Footwear manufacturing are being supported through flatted factory complexes on lease basis on panchayat land, 24X7 power supply, reduced power tariff, employment generation subsidy and last mile connectivity through Industrial Infrastructure Development Fund, permission for CLUs in Agri - zones in B, C & D category block.

Further, the District Industries Centres would be strengthened and re-positioned as Enterprise Assistance Group to provide all necessary support to MSMEs right from '*Inception to Operation*' including funding from MUDRA Bank, identifying triggers for corrective action and preparing Corrective Action Plans, etc. These Groups would be suitably strengthened by positioning professionals/ consultants specialized in Finance, Marketing, Operations, etc. The Directorate of Industries would set-up a dedicated cell for MSMEs for an effective interface with the Ministry of MSME and the MSMEs.

Government of Haryana recognized the following thrust areas and investments which will be accorded a higher priority. These areas include the following:

- i. **Agro-based, Food Processing & Allied Industry-** Haryana is predominantly an agricultural State with favourable weather conditions for both *rabi* and *kharif* crops. It has achieved self-sustainability status in food production and milk products. Haryana is the second largest food-grains producer in the country. The State enjoys locational advantage due to its proximity to one of the largest consumer market of NCR. Also, the State has a huge potential for establishment of agro-based and food processing industry.

Panipat town is famous for its handloom products, furnishing fabrics, terry-towels and blankets. There are about 125 carpet manufacturing units, 400 dyeing units, 42 open end units, 20-25 blanket manufacturing units and 250 shoddy yarn manufacturing units, 4000 shuttle-less looms and 8000 power looms units besides other textile based industries. Government of India has approved setting up of an Integrated Textile Park at Panipat which would spread over an area of 30 acres with a project cost of about Rs.140 crore to be borne by a group of private entrepreneurs.

Gurugram has emerged as hub for manufacturing of readymade garments. Some of the largest manufacturers of Readymade Garments in Asia are having their manufacturing facilities in Gurugram. There are about 300 readymade garment units, 4 weaving units having more than 50 power looms, around 15 process houses & 50 hosiery units in Gurugram. Similarly, Faridabad has also emerged as a hub for textile processing industry in the State. There are 70-80 dyeing/printing units, 10 hosiery units, 10 -15 units of readymade garments (exporting units) and around 100 denim washing and dyeing units.

A Textile Incubation Center at Panipat has already been approved by the Ministry of Textiles.



HSI IDC has filed an application under the SITP Scheme for setting up a Textile Park over an area of about 85 acres at Panipat. An International Trade and Convention Centre is also being developed at Panipat to promote handloom products.

- ii. **Footwear & Accessories-** The footwear sector is labour intensive and provides gainful employment in the State. Significantly, this sector comprises of micro and small enterprises with high concentration of non-leather footwear units in Bahadurgarh. A Common Facility Centre (CFC) is being set up under MSE-CDP scheme. All major brands/companies like Liberty, Action, Relaxo, Lancer, Today, Columbus, Aeroback, and Welcome are located in Haryana. Karnal City is the center of footwear production employing nearly 50,000 workers (direct and indirect). A footwear hub is proposed to be established at Karnal supported with footwear fashion related research & development facilities and a Footwear Technology Institute. Special incentives have been provided to this sector like power tariff subsidy @ Rs. 2 per unit, interest subsidy @ 6%, investment subsidy on VAT @ 50% - 75%, reduction in VAT on footwear above Rs. 500/-, refund of 80% -100% stamp duty and 50% exemption from External Development Charges (EDC), etc. for the categories.

The State Government is providing package of incentives to Ultra Mega Projects, Mega Projects, Thrust Sectors, Rural Functional clusters, especially related to micro, small & medium enterprises.

- iii. **Investment Subsidy in lieu of VAT/SGST-** Although, the quantum of incentive has been differentiated across different sectors of micro, small, large & mega projects, the primary principle followed by providing investment subsidy in lieu of net VAT/ SGST, paid through online mechanism to reduce the transaction cost. By following this principle, the State Government will continue to provide this facility even in GST regime by reimbursement of appropriate percentage of State GST component. It is estimated to provide this incentive to the tune of Rs.200 crore yearly, @ 50% - 75% of VAT/ SGST net paid for 8-10 years.
- iv. **Interest Subsidy-** It has been observed that a large numbers of micro and small units which provide alternative employment opportunities in rural areas are not able to setup/expand/modernize due to their unaffordability to bear high capital cost. Therefore, interest subsidy will go in a long way in fulfilling much needed fillip to these units to scalp up and grow in size and induct latest technology in the manufacturing process, primarily a tool to reduce cost of production.

The industry will also be incentivized for providing employment to local persons through the provision of employment generation subsidy. Being highly employment oriented, MSMEs will be facilitated with focused approach by providing vast range of incentives. In order to create market for the products, provisions for financial support in respect of Market Development Assistance, Brand Building Support and 20% reservation in procurement policy has been felt a necessity.

To adopt this concept of Zero Defect and Zero Effect, Govt. of Haryana will provide financial



support for quality certification, technology acquisition, patent registration, testing equipment to the extent of @ 50% maximum for each type and technology up-gradation & assistance for establishment of Effluent Treatment Plant for environment compliance @ 50%.

Institutional Mechanism

The Departments and Agencies involved in the development of industries/ enterprises in the Haryana sub-region are as under:

- i) District Industries Centre
- ii) Haryana State Industrial Infrastructure Development Corporation Ltd (HSIIDC).
- iii) Haryana State Industrial Development Corporation Ltd (HSIDC)
- iv) Haryana Financial Corporation Ltd.
- v) District Khadi & Village Industries Board
- vi) National Small Industries Corporation Ltd.
- vii) National Bank for Agriculture & Rural Development
- viii) MSME - Development Institute (MSME-DI), Karnal, Ministry of MSME

III. UTTAR PRADESH SUB-REGION

Government of U.P, in accordance with the *Infrastructure & Industrial Investment Policy -2012*, Department of Small Scale Industries has been rechristened as Micro Small and Medium Enterprises Department, to effectively enforce the MSMED Act, 2006. In view of the vital role of MSMEs in employment generation, the State Government is committed to nurture this sector in consonance with heavy industries in a balance manner and both the sectors will be developed as complementary to each other.

- i) Under the policy, holders of Memorandum-I or Memorandum-II will be provided with optimal advantages of the Central government schemes, like Cluster Development, Prime Minister Employment Generation Programme, ASIDE, Industrial Infrastructure Upgradation Scheme, Quality Improvement, Scheme for establishing Pollution Prevention Plants, registration of Intellectual Property Rights and Geographical Indicators, Credit Guarantee, Marketing Assistance, Skill Development, Management Development, Bar Coding etc. A special Cell proposed to be created in the Directorate of Industries for implementation of the Central government schemes, under which an officer in-charge will be appointed for every scheme.
- ii) Skills of handicraft artisans will be improved and new designs would be made available to them. Under the State scheme, selling price of the handicraft products would be determined after proper valuation and they would be sold on the basis of commission. Under this scheme, provision will be made for artisans to provide advance amount proportionate to their goods produced so that they do not face working capital scarcity.
- iii) Support would be extended to artisans for participation in different fairs by reimbursing the rent charges of stalls and assisting them in ferrying their exhibits to such expositions. This will enable the handicraft artisans to smoothly market their products.



- iv) A scheme will be implemented to provide loan at lower interest rate to entrepreneurs for modernisation and technological development of micro, small and medium enterprises. Arrangements will be made to provide maximum benefits to the entrepreneurs through Central government run Technology Up-gradation Scheme and other such schemes.
- v) After the receipt of Memorandum-I, the industry related recommendations and approvals of related departments will be issued on a weekly basis within the stipulated time through a single table system and all Memorandum-I will be monitored regularly. Likewise, resolution of problems, providing facilities under different schemes and regular monitoring will be ensured for units obtaining Memorandum-II.
- vi) State level financial institutions will be revived for financing MSMEs, through which implementation of the Central government and the State government schemes will be ensured.
- vii) Non-polluting micro and small enterprises, which operate without deforming or harming the form of buildings and which do not pollute land, water and atmosphere, will be allowed to run in residential areas. In this respect, Pollution Control Department in consultation with Small Industries Department will declare the list of such non-polluting enterprises.
- viii) Enterprises, which are non-polluting and which do not cause damage to buildings, will also be allowed in multi-storey apartments. As is the case for residential apartments, rules will be framed for sale and renting of industrial buildings. Necessary provisions will be made in building bye-laws/ regulations for the construction of such buildings.

Institutional Mechanism

The Departments and Agencies involved in the development of industries/ enterprises and skill development in Uttar Pradesh sub-region are as under:

- i) District Industries Centre
- ii) National Small Industries Corporation Ltd.
- iii) Uttar Pradesh State Industrial Development Corporation Ltd.
- iv) Uttar Pradesh Small Industries Corporation Ltd. (Regional Office)
- v) Uttar Pradesh Financial Corporation
- vi) District Khadi & Village Industries Board
- vii) National Bank for Agriculture & Rural Development
- viii) MSME - Development Institute (MSME-DI), Agra, Ministry of MSME

IV. RAJASTHAN SUB-REGION

In order to effectively enforce Micro, Small and Medium Enterprises Act, 2006, Department of Industries, Government of Rajasthan has formulated *Rajasthan Micro, Small and Medium Enterprises (MSME) Policy, 2015*. Industries Department, Government of Rajasthan is the nodal Department responsible for development of MSMEs in the State.



- i. The key measures included in the Rajasthan Micro, Small and Medium Enterprises (MSME) Policy-2015 are as under:
 - Streamlining procedures, rules and regulations for ease of doing business
 - Strengthening the Single Window System
 - Setting up facilitation mechanisms for guidance to new investors and support to existing ones
 - Providing competitive fiscal incentives and concessions to attract investment
 - Creation of new industrial areas
 - Time bound allotment or conversion of land for industry
 - Encouragement of private industrial parks and MSME Clusters
 - Focus on thrust sectors, including handicrafts, handlooms and khadi
 - Facilitate SMEs for raising or obtaining credit/capital
 - Assist unemployed youth for setting up micro enterprises
 - Promoting start-ups and budding entrepreneurs through setting up of plug and-play facilities and incubation centres
 - Marketing support to MSMEs
 - Encourage Quality Improvement and Research & Development
 - Promote adoption of practices for environment protection and water & energy conservation
 - Focused skill development programmes to provide adequate workforce
 - Assist sick units in revival efforts
 - Strengthening of MSME Government support agencies
 - Recognition and encouragement to MSME adopting best practices.
- ii. The policy envisage modernization of the District Industries Centre (DICs) through technology up-gradation and capacity building of staff, so as to restructure them as facilitating e-enabled centres to provide all the facilities related to the MSMEs such as land, electric/water connection, Rajasthan Pollution Control Board clearances, labour/ factory and Boiler Department/ VAT registration at a single point to ensure effective implementation of single window system and online approvals.
- iii. Setting up of a State level MSME Facilitation Centre for providing guidance and support to new investors in context of information about investment opportunities, procedure for setting up an industry, approvals required, guidance in preparation of project report, documentation, access to credit institutions and handholding support for registration and obtaining necessary clearances and approvals.
- iv. The State Government shall encourage Cluster Development approach as an effective strategy for the development of MSMEs. The basic aim of the strategy and approach would be addressing critical infrastructure gaps and optimizing local resources with the objective of creating production centres constituting the critical mass to become production or



service hubs so as to ensure economy of scales for overall benefit. Sectors namely handicrafts, handloom & khadi, gems & jewelry, agro-based/ food processing, leather & leather products, textiles & apparels, stone, ceramics & glass, pottery, light engineering & auto components, Electronics System Design & Manufacturing (ESDM), IT & Information Technology Enabled Services (ITES), etc. shall be taken up on priority for development in clusters, especially for the development of artisans, craftsmen, weavers and micro enterprises.

- v. The State Government will make concerted efforts for the development of Khadi, Handloom & Craft sectors, for employment generation and increase earning opportunities of the artisans and weavers. The interventions will include design development, innovations, product development, skill development, technological up-gradation, quality improvement, branding, marketing support and various other means for popularizing these handicrafts for contemporary use.
- vi. The Government of Rajasthan will provide credit access and support to the MSMEs from financial institutions. Rajasthan Financial Corporation will provide credit to MSMEs on easier terms and loan scheme.
- vii. With a view to create more business opportunities for MSMEs and to establish linkages between vendors & anchor units, marketing events for MSMEs like buyer-seller meets, trade fairs and expositions will be organized and assistance will be provided to the MSMEs for setting up stalls and participation in such state, national and international events.

Thrust Areas – Under the Rajasthan MSME Policy, 2015, specific benefits for following thrust sectors has been given:

- (i) **Ceramic and Glass sector:-** At a minimum investment of Rs. 5 crore - 50% investment subsidy and up to 10% Employment Generation subsidy of VAT & CST for 10 years.
- (ii) **Dairy sector:-** For minimum investment of Rs. 25 crore- 50% Investment subsidy and up to 10% Employment Generation subsidy of VAT & CST for 10 years, 50% Entry Tax Exemption on capital goods for setting up new plant or expansion of existing enterprises.
- (iii) **ESDM sector:-** For investment of Rs. 25 lakh but below Rs. 250 crore- 75% Investment subsidy for first 4 years, 60% for next 3 years & 50% for last 3 years and up to 10% Employment Generation subsidy of VAT & CST for 10 years. 50% Entry Tax exemption on capital goods, for setting up new plant or expansion of existing enterprises.
- (iv) **MSME sector:-** In addition to the benefits given to manufacturing enterprises, 75% exemption from electricity duty for micro & small enterprises in rural areas, reduced CST of 1% for 10 years, 50% exemption from payment of entry tax on raw & processing materials and packaging materials excluding fuel.
- (v) **Plastic to Oil Manufacturing sector:-** For minimum investment of Rs. 1 crore- 60% Investment subsidy & 10% Employment Generation subsidy of VAT & CST for 10 years.



50% Entry Tax exemption on capital goods, for setting up new plant or expansion of existing enterprises.

- (vi) **Textile sector:-** For minimum investment of Rs. 25 lakh - 5% interest subsidy, 1% additional interest subsidy for investment more than Rs. 25 crore; 7% interest subsidy for technical textile sector, 50% reimbursement on purchase of yarn, fibre, recycled fibre yarn, cotton and pet bottles, 50% Entry Tax Exemption on capital goods for setting up new plant or expansion of existing enterprises, capital subsidy on zero liquid discharge based ETP equivalent to 20% of amount paid to the suppliers for the plant excluding civil work (max. Rs. 1 crore).
- (vii) **Kota stone, Marble and Granite Sector:-** For minimum investment of Rs. 25 lakhs-55% Investment subsidy & 10% Employment Generation subsidy of VAT & CST for 7 years.

In accordance with the provisions of the Rajasthan MSME Policy, 2015, Government of Rajasthan has formulated *Rajasthan MSME Assistance Scheme, 2015* for providing benefits to MSMEs. The Scheme is applicable to all new and existing MSMEs either having Entrepreneurs Memorandum-I or Entrepreneurs Memorandum-II issued by Industries (MSME) Department or Udyog Aadhaar acknowledgement issued under MSME Act, 2006. Under this Scheme, assistance/ benefits are provided for the following:

- i) Credit access & support for micro and small enterprises by way of reimbursement of one time service processing fees for collateral free loan from Financial Institutions.
- ii) Support for quality improvement by reimbursing 50% charges/ fees paid by MSMEs for hallmark certification, etc.
- iii) Support for setting up of laboratories for handicraft/ handloom enterprises.
- iv) Support for environment conservation by providing 50% of the capital cost of Common Effluent Treatment Plant (CETP) establishment by Industry Associations/ SPV in industrial areas/ clusters and small & medium enterprises.

Government of Rajasthan has also formulated the *Rajasthan Sick Micro & Small Enterprises (Revival and Rehabilitation) Scheme, 2015* which is a comprehensive package for revival of viable and potentially viable sick micro and small enterprises, so that the assets created could be put to productive use as well as employment could be generated. Under this scheme, following benefits are provided:

- i) Relief in outstanding dues of government departments/agencies, in terms of commercial taxes (VAT and other taxes) & electricity dues, under rehabilitation package.
- ii) Fiscal incentives to sick and small enterprises in terms of 100% exemption of payment on stamp duty on transfer of sick enterprise to new management.

Institutional Mechanism

The Departments and Agencies involved in the development of MSME and skill development in Rajasthan sub-region are as under:

- i) Micro, Small and Medium Industries Department



- ii) District Industries Centre, Alwar
- iii) District Industries Centre, Bhiwadi
- iv) Rajasthan Industrial Infrastructure Development Corporation (RIICO)
- v) Rajasthan Financial Corporation (RFC)
- vi) Rajasthan State Industries Corporation
- vii) Rural Non-Farm Development Agency (RUDA)
- viii) National Small Industries Corporation Ltd.
- ix) MSME - Development Institute (MSME-DI), Jaipur, Ministry of MSME
- x) MSME Testing Station
- xi) National Bank for Agriculture & Rural Development



3. MICRO, SMALL AND HOUSEHOLD MANUFACTURING ENTERPRISES IN NCR

3.1 Background

The MSME sector is an important pillar of Indian economy which contributes greatly to growth of nation's economy with a vast network of about 49 million units, creating employment for nearly 111 million people, manufacturing more than 6,000 products and contributing about 37% to total manufacturing output and manufacturing sector solely accounts for 40% of the total exports of India.

As per 4th All India Census of MSME¹ (Registered Sector), there were total 15.64 lakh registered working enterprises in India, out of which the micro, small and medium enterprises were 94.94%, 4.89% and 0.17% respectively. Among these total registered working enterprises, 10.49 lakh units (66.92%) were into manufacturing, 2.62 lakh units (16.43%) were the service enterprises and rest 2.52 lakh (15.8%) belong to repairing & maintenance works. Out of the total registered MSMEs, 54.77% were operating in urban areas whereas the rest (45.23%) were functioning in rural areas.

As per the estimates of 4th All India Census of MSME (Unregistered Sector), there were total 198.74 lakh micro and small enterprises in India. The proportion of micro and small enterprises were 99.83% and 0.17% respectively. Among these total unregistered enterprises, 104.50 lakh units (52.58%) were manufacturing enterprises, 81.93 lakh (41.22%) were repairing & maintenance enterprises and 12.31 lakh (6.19%) were service enterprises. Majority of the unregistered enterprises (60.22%) were operating in rural areas and the rest from urban areas.

MSME sector plays an important role in the export of India. Analysis of MSMEs indicates that there are about 46,675 enterprises which are exporting their products. Majority (68.42%) of these exporting enterprises were located in urban areas and rest 31.58% were in rural areas.

Among the MSMEs, the share of micro enterprises was substantial (85.83%), followed by small enterprises (12.75%) and medium enterprises (1.42%). As per MSME Census analysis of top ten exporting States in the country, U.P. State topped the list with 21.12% share of exports, followed by Tamil Nadu (14.80%). Besides Uttar Pradesh, the other NCR constituent States i.e. Rajasthan and Haryana ranked 5th (7.33%) and 7th (7.12%) respectively.

The rural-urban distribution of working MSMEs in the country is given in **Table 3.1**.

Table 3.1 Sector wise distribution of working enterprises in rural and urban areas, India (in lakh)

Sector	Micro	Small	Medium	Total
Rural	6.87	0.19	0.01	7.07
Urban	7.98	0.57	0.02	8.57
Total	14.85	0.76	0.03	15.64

Source: Fourth All India Census of MSME, Ministry of MSME, Govt. of India

¹Fourth All India Census of MSME conducted with reference year 2006-2007, wherein data was collected till 2009 and results published in 2011-12.



MSME sector is dominated by proprietary enterprises as out of total 15.64 lakh working enterprises, more than 90% share is occupied by the proprietary enterprises, followed by 4.01% partnership and 2.77% private enterprises. Percentage distribution of enterprises based on type of organization is given in **Table 3.2**.

Table 3.2 Percentage distribution of enterprises by type of organization and sector in India

Sector	Proprietary	Partnership	Private Comp.	Public Ltd. Comp.	Cooperative	Others
Micro	91.77	3.47	1.78	0.37	0.28	2.33
Small	59.12	14.24	21.02	3.37	0.57	1.68
Medium	38.11	9.75	34.46	13.06	1.86	2.75
Total	90.08	4.01	2.77	0.54	0.30	2.30

Source: Fourth All India Census of MSME, Ministry of MSME, Govt. of India

At national level, the registered MSME sector provides employment to about 93.09 lakh persons. The maximum share of employment was provided by the micro enterprises 65.34 lakh (70.19%). **Figure 3.1** gives the sector wise distribution of employment.

As per the MSME Census, about 408.84 lakh persons were employed in unregistered micro and small enterprises, among these 99% (405.52 lakh) were employed in micro enterprises and only 3.32 lakh (0.81%) were engaged in small enterprise.

Further, at national level, the average employment per registered micro enterprise/unit was about 4 persons, whereas it was 30 and 160 persons in small and medium enterprises respectively.

The all India average employment per micro, small and medium enterprise was around 6 persons for the registered sector and 2 persons for the unregistered sector. Details are given in **Table 3.3** below.

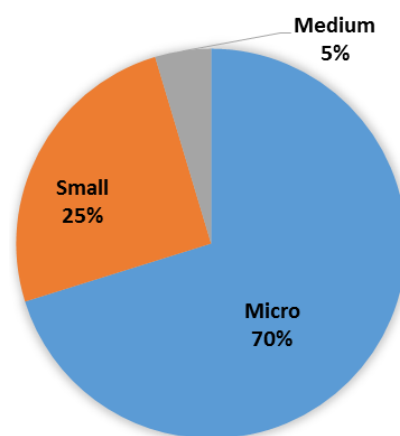


Figure 3.1 Distribution of employment by sector, India

Source: Fourth All India Census of MSME, Ministry of MSME, Govt. of India

Table 3.3 Sectoral distribution of registered & un-registered enterprises and employment per enterprise in India

Sector	No. of Working Enterprises (in lakh)		Employment (in lakh)		Average Employment per Enterprise	
	Regd.	Unregd.	Regd.	Unregd.	Regd.	Unregd.
Micro	14.85	198.39	65.34	405.52	4.40	2.04
Small	0.76	0.35	23.43	3.32	30.62	9.60
Medium	0.03	-	4.32	-	160.87	-
India	15.64	198.74	93.09	408.84	5.95	2.06

Source: Fourth All India Census of MSME, Ministry of MSME, Govt. of India



3.2 Micro & Household Manufacturing Enterprises in NCR constituent States

3.2.1 Haryana

There are 5,20,150 MSMEs in Haryana, among these majority are unregistered i.e. 93.62% (4,87,000) and only 6.38% (33,150) are registered (refer **Table 3.4**). Out of total MSMEs, nearly 54% are engaged in service sector, followed by 40% in manufacturing and 6% in repair & maintenance works (refer **Figure 3.2**).

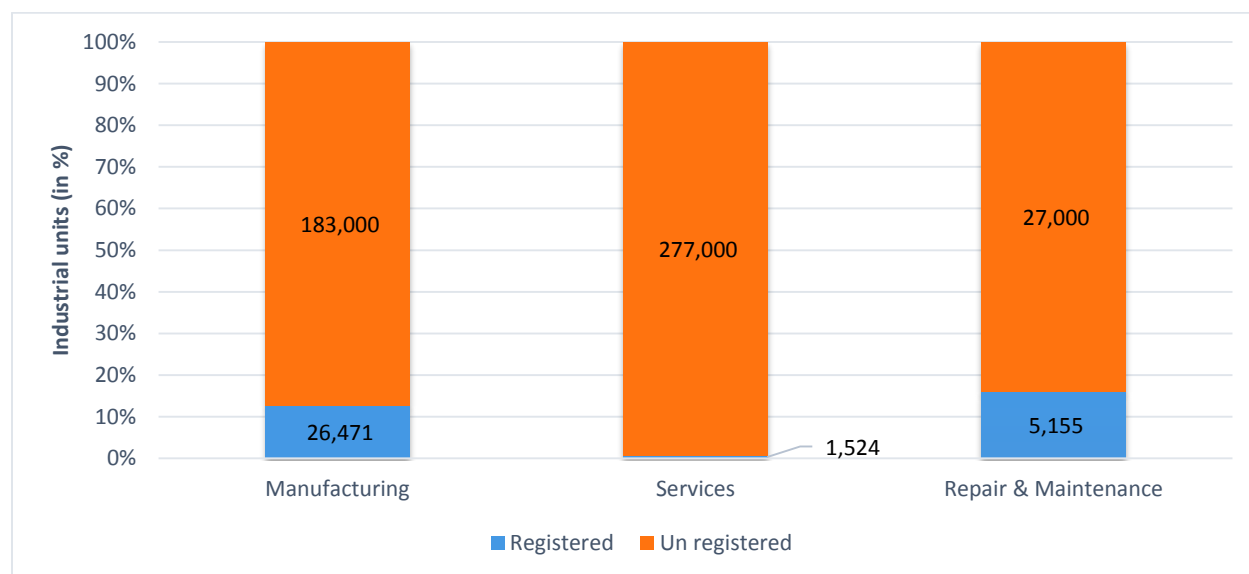


Figure 3.2 Profile of micro, small and medium enterprises based on type of activity, Haryana

Table 3.4 Sectoral profile of registered & un-registered units based on type of activity, Haryana

Type of Unit	Activities			Total
	Manufacturing	Services	Repair & Maintenance	
Registered	26,471	1,524	5,155	33,150
Un registered	1,83,000	2,77,000	27,000	4,87,000
Total	2,09,471	2,78,524	32,155	5,20,150

Source: Fourth All India Census of MSME, Ministry of MSME, Govt. of India

Table 3.4 provides that there are a total of 33,150 registered and 4,87,000 un-registered MSMEs in the State of Haryana. As per the study on *Micro and Household Enterprises in NCR*, out of the total 33,150 registered MSMEs nearly 14,788 (44.6%) registered micro enterprises fall within Haryana sub-region of NCR. These enterprises are spread over the districts of Gurugram, Jhajjar, Sonipat, Panipat, Rohtak, Rewari, Faridabad, Palwal and Mewat. Though, the micro enterprise sector is not significantly developed in this State, major activities of involvement include basic metal industries, non-metallic mineral production, machinery & parts, transport equipments &



parts, paper products, cotton textile industries and miscellaneous products manufacturing activities.

3.2.2 Uttar Pradesh

There are 24,20,742 MSMEs in Uttar Pradesh, of which 92% are unregistered and only 8% are registered (refer **Table 3.5** and **Figure 3.3**). Out of the total MSMEs, close to 63% are the manufacturing enterprises, followed by 32% in servicing and 4.7% are repair & maintenance enterprises.

As per the study on *Micro and Household Enterprises in NCR*, out of the total 1,87,742 registered MSMEs nearly 15,595 (8.3%) registered micro enterprises fall in U.P. sub-region of NCR. These enterprises are spread over the districts of Bulandshahr, Baghpat, Gautam Budh Nagar, Meerut, Ghaziabad and Hapur. These enterprises are mainly involved in food production, cotton textiles, hosiery & garments production, basic metals, machinery parts and miscellaneous product manufacturing.

Table 3.5 Sectoral profile of registered & un-registered units based on type of activity, Uttar Pradesh

Type of Unit	Activities			Total
	Manufacturing	Services	Repair & Maintenance	
Registered	1,13,840	31,350	42,552	1,87,742
Unregistered	14,10,000	7,50,000	73,000	22,33,000
Total	15,23,840	7,81,350	1,15,552	24,20,742

Source: Fourth All India Census of MSME, Ministry of MSME, Govt. of India



Figure 3.3 Profile of micro, small and medium enterprises based on type of activity, U.P.

3.2.3 Rajasthan

There are total 9,68,885 MSMEs in Rajasthan, among which majority i.e. 94% (9, 14,000) are unregistered and only 6% (54,885) are registered (refer **Table 3.6** and **Figure 3.4**). Among the total MSMEs, 58% enterprises are engaged in manufacturing, followed by 38% in servicing and



only 4% enterprises are engaged in repair & maintainance. As per the study on *Micro and Household Enterprises in NCR*, out of total 54,885 registered MSMEs nearly 2,295 (4.18%) registered micro enterprises fall in district Alwar of Rajasthan sub-region. Miscellaneous products manufacturing is the most prominent activity in these MSMEs, followed by manufacturing of leather products, transportation equipments & parts, and textile products.

Table 3.6 Sectoral profile of registered & un-registered units based on type of activity, Rajasthan

Type of Unit	Activities			Total
	Manufacturing	Services	Repair & Maintenance	
Registered	38,548	7,211	9,126	54,885
Un registered	5,26,000	3,61,000	27,000	9,14,000
Total	5,64,548	3,68,211	36,126	9,68,885

Source: Fourth All India Census of MSME, Ministry of MSME, Govt. of India



Figure 3.4 Profile of micro, small and medium enterprises based on type of activity, Rajasthan

3.2.4 NCT Delhi

There are 1,78,754 MSMEs in Delhi, out of which 97.8% (1,75,000) MSMEs are unregistered and only 2.2% (3754) are registered (refer **Table 3.7** and **Figure 3.5**). Among these, around 81% enterprises are engaged in service sector, followed by 18% in manufacturing and only 0.6% in repair & maintainance sector. As per the study on *Micro and Household Enterprises in NCR*, out of the total 3,754 registered MSMEs in NCT Delhi, about 3,203 (85.3%) units are micro enterprises. According to the statistics of *Brief Industrial Profile of NCT Delhi* prepared by MSME Development Institute, NCT Delhi has a total of 875 micro & small enterprises and artisan units (excluding repairing and servicing). Wool, silk & handmade textile manufacturing industries; and rubber & plastic manufacturing industries are the most prominent industries found in Delhi,



followed by hosiery and garments sector. Metal products and electrical machinery & parts manufacturing units are also commonly found in the Delhi.

Table 3.7 Sectoral profile of registered & un-registered units based on type of activity, NCT-Delhi

Type of Unit	Activities			Total
	Manufacturing	Services	Repair & Maintenance	
Registered	3,545	55	154	3,754
Un registered	29,000	1,45,000	1,000	1,75,000
Total	32,545	1,45,055	1,154	1,78,754

Source: Fourth All India Census of MSME, Ministry of MSME, Govt. of India



Figure 3.5 Profile of micro, small and medium enterprises based on type of activity, NCT-Delhi

3.2.5 NCR constituent State wise distribution of Working MSMEs (Registered & Unregistered)

In addition to the above illustrations of the MSMEs, a comparative distribution of Registered & Un-registered MSMEs in the NCR Constituent States is presented below:

Table 3.8 Distribution of working MSMEs (registered & unregistered) in NCR constituent states and India (in number)

NCR Constituent States	Micro			Small			Medium			Grand Total
	Regd.	Un- regd.	Total	Regd.	Un- regd.	Total	Regd	Un- regd.	Total	
Haryana	30741	486000	516741	2329	-	2329	80	-	80	519150
Delhi	3510	173000	176510	236	2000	2236	8	-	8	178754
Rajasthan	52241	912000	964241	2541	1000	3541	103	-	103	967885
Uttar Pradesh	184503	2233000	2417503	3089	-	3089	150	-	150	2420742



NCR Constituent States	Micro			Small			Medium			Grand Total
	Regd.	Un- regd.	Total	Regd.	Un- regd.	Total	Regd	Un- regd.	Total	
NCR Constituent States (Total)	270995	3804000	4074995	8195	3000	11195	341	-	341	4086531
% share to All India	18.25	19.17	19.11	10.70	8.57	10.03	12.70		12.70	19.06
All India (Total)	1484768	19839000	21323768	76523	35000	111523	2683	-	2683	21437974

Source: Fourth All India Census of MSME (Registered & Unregistered), Ministry of MSME, Govt. of India

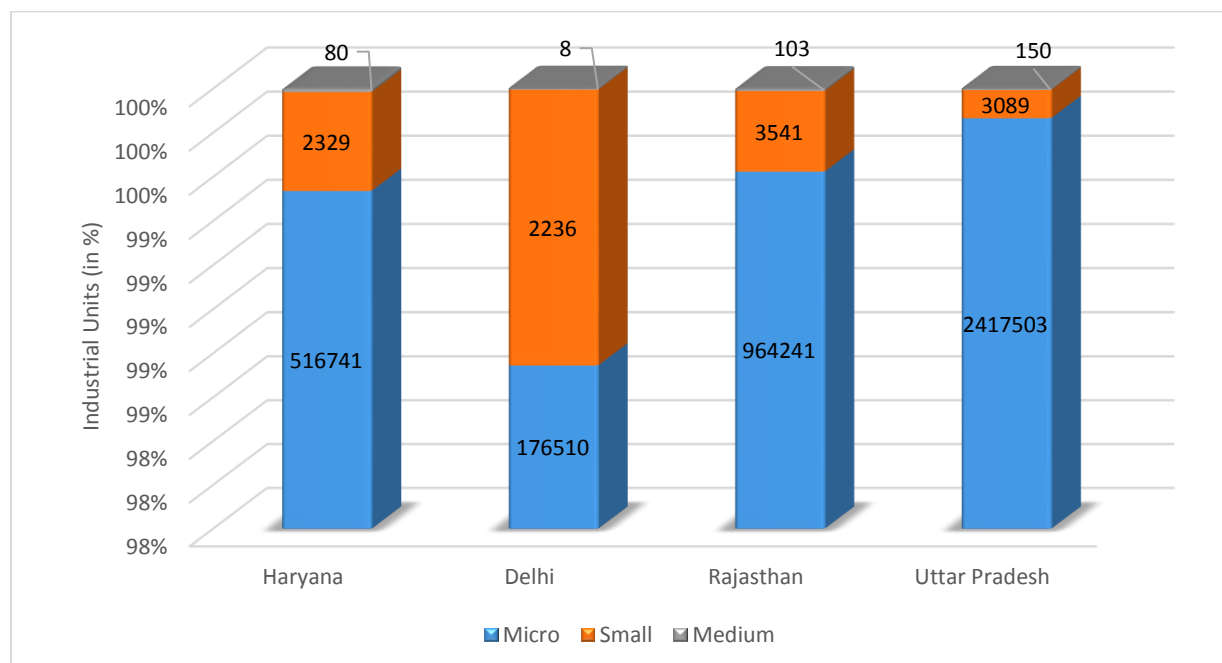


Figure 3.6 Distribution of working MSMEs in the NCR constituent States

Table 3.8 and Figure 3.6 reveals that in NCR constituent States of Haryana, Delhi, Uttar Pradesh and Rajasthan, there are a total of 2,70,995 registered micro enterprises that constitute 18.25% of the total registered micro enterprises in the country. Uttar Pradesh has the highest share of registered micro enterprises (68.08%) among the NCR constituent States, followed by Rajasthan (19.28%) and Haryana (11.34%). NCT Delhi has negligible share of registered micro enterprises i.e. 1.30 %. In the case of small enterprises, out of total 8,195 registered enterprises in NCR, Uttar Pradesh holds highest share i.e. 37.69%, followed by Rajasthan (31%) and Haryana (28.42%).

3.2.6 NCR constituent State wise distribution of Registered Working MSMEs by Nature of Activities

Analysis of State-wise distribution of registered enterprises by nature of activities within NCR reveals that the manufacturing/assembly/processing enterprises have the highest concentration in NCT-Delhi i.e. 94.34%, followed by Haryana (82.91%), Rajasthan (70.43%) and U.P. (56.74%)



as against the all India average of 66.92%. The average of services; and repairing & maintenance in NCR constituent States is 8.89 % and 15.01 % as against the all India average of 16.27% and 16.82 % respectively. Details are given in **Table 3.9** and **Figure 3.7** below:

Table 3.9 Distribution of registered working enterprises by nature of activities in NCR constituent States & India

NCR Constituent States	Activities		
	Manufacturing/ Assembly/ Processing	Services	Repairing & Maintenance
Haryana	82.91 %	3.68 %	13.42 %
Delhi	94.34 %	1.47 %	4.19 %
Rajasthan	70.43 %	12.16 %	17.41 %
Uttar Pradesh	56.74 %	18.23 %	25.03 %
Average of NCR Constituent States	76.10 %	8.89 %	15.01 %
India	66.92 %	16.27 %	16.82 %

Source: Fourth All India Census of MSME (Registered), Ministry of MSME, Govt. of India

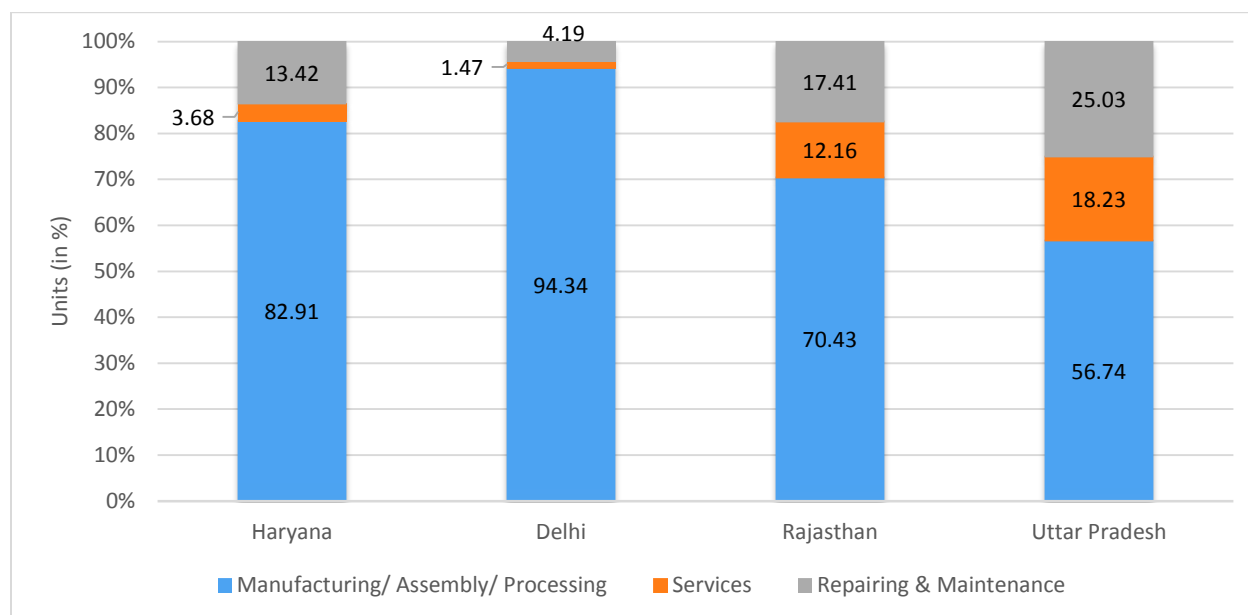


Figure 3.7 Distribution of registered working MSMEs based on type of activity in NCR constituent States

3.2.7 NCR constituent State wise distribution of MSMEs Employment (Registered)

The analysis given in **Table 3.10** indicates that out of total MSME workers in the NCR constituent States, micro enterprises employed a major share i.e. 71.85%, followed by small and medium enterprises i.e. 24.08 % and 4.07 % respectively.



Table 3.10 Distribution of employment in registered MSMEs in NCR constituent states & India

NCR Constituent States	Micro	Small	Medium	Total
Haryana	214246 (56.12%)	137399 (35.99%)	30129 (7.89%)	381774 (100 %)
Delhi	41200 (70.89%)	15818 (27.21%)	1105 (1.90%)	58123 (100%)
Rajasthan	244541 (71.57%)	84673 (24.78%)	12476 (3.65%)	341690 (100%)
Uttar Pradesh	603987 (80.00%)	132071 (17.50%)	18850 (2.50%)	754908 (100%)
NCR Constituent States	1103974 (71.85%)	369962 (24.08%)	62560 (4.07%)	1536495 (100%)
% share to India	16.90	15.79	14.47	16.50
India	6534187 (70.19%)	2343033 (25.17%)	432266 (4.64%)	9309486 (100%)

Source: Fourth All India Census of MSME (Registered), Ministry of MSME, Govt. of India

3.3 Micro & Household Manufacturing Enterprises in NCR

3.3.1 Industrial Scenario of NCR

Large and medium industries play an important role in the development of micro enterprises in NCR. Micro manufacturing enterprises serve as ancillary units and as a vendor to large and medium scale industries in NCR. *Brief Industrial Profile* of various districts in NCR prepared by MSME-Development Institute(s), Ministry of MSME indicate that NCR has 2,50,671 industrial units in total, of which 1,05,673 are registered. There are 1346 registered medium and large industrial units in NCR, which are having a turnover of about Rs.70,41,569 lakh. In NCR, Gurugram district has highest number of registered medium & large units (436) followed by Gautam Budh Nagar (359), and Faridabad district (180). Details of medium and large industries in NCR is given in **Table 3.11**.

Table 3.11 Distribution of registered medium and large industrial units in NCR

S. No.	Sub-Regions/ Districts	Industrial Unit	Registered Industrial Unit	Registered Medium & Large Unit	Turnover (Rs. lakh)
Haryana Sub-Region					
1	Panipat	5,500	4,068	43	37,94,796
2	Faridabad	17186	17186	180	5691.30
3	Rohtak	1435	4761	15	--
4	Jhajjar	2500	1849	-	34000
5	Rewari	1800	1370	141	5900000
6	Palwal	380	73	40	600000
7	Mewat	57	42	16	15360
8	Sonipat	13039	13039	06	6240
9	Gurugram	24741	22491	436	354500



S. No.	Sub-Regions/ Districts	Industrial Unit	Registered Industrial Unit	Registered Medium & Large Unit	Turnover (Rs. lakh)
	Sub-Total	66638	64879	877	474613.7
U.P. Sub-Region					
1	Bulandshahr	5565	5565	5	--
2	Ghaziabad (including Hapur)	5957	1796	--	--
3	Meerut	8197	8197	13	10325
4	Baghpat	3500	2635	05	31750
5	Gautam Budh Nagar	6349	1063	359	3703
	Sub-Total	29568	19256	382	45778
Rajasthan Sub-Region					
1	Alwar	25,465	551	87	80000
	Sub-Total	25465	552	87	80000
NCT-Delhi					
1	NCT-Delhi	129000	20986	--	--
	Sub-Total	129000	20986	--	--
Grand Total		250671	105673	1346	7041569

Source: Brief Industrial Profile of District(s), MSME Development Institute at Delhi, Karnal, Jaipur and Agra; Ministry of MSME, Govt. of India

3.3.2 Existing Micro & Small Enterprises

As per the *Brief Industrial Profile* of various districts prepared by MSME Development Institute(s), Ministry of MSME, Govt. of India, NCR constitutes 85,648 micro and small enterprises in manufacturing sector with a total investment of Rs. 9492907.32 lakh and employing nearly 8.98 lakh persons (refer **Table 3.12**). Haryana sub-region has highest number of such units i.e. 36,103 which is 42.15 % of the total units, followed by Rajasthan sub-region (28.42%), U.P. sub-region (28.41) and NCT Delhi (1.02 %).

Further, distribution of micro and small enterprises at district level indicates that Alwar constitutes highest number of these units i.e. 24344, accounting 28.42 % of the total units in NCR, followed by Gurugram (15.75 %), Gautam Budh Nagar (14.77%), Faridabad (10.77%) and Sonipat (10.09%) whereas Mewat has the lowest number of micro and small enterprises i.e. 38 units. The details are given in **Table 3.12**.

Table 3.12 Existing micro & small enterprises (manufacturing) and artisan units in NCR

Sub-region/ District	Number of Units*	Units (in %)	Employment (in no.)	Investment (Rs. lakh)
NCT-Delhi Sub-Region				
Sub-Total	875	1.02	27163	32870
Haryana Sub-Region				
Panipat	721	0.84	5708	4844
Faridabad	9221	10.77	53641	1118479



Sub-region/ District	Number of Units*	Units (in %)	Employment (in no.)	Investment (Rs. lakh)
Rohtak	1105	1.29	4660	8565.5
Gurugram	13490	15.75	325946	3655475
Sonipat	8645	10.09	58339	9338.5
Jhajjar	1799	2.10	15882	29600
Rewari	1013	1.18	7708	10187
Palwal	71	0.08	2368	10578.09
Mewat	38	0.04	1120	3167.78
<i>Sub-Total</i>	<i>36103</i>	<i>42.15</i>	<i>475372</i>	<i>4850234.87</i>
U.P. Sub-Region				
Ghaziabad (including Hapur)	836	0.98	7808	3808.7
Bulandshahr	3202	3.74	16429	1774.15
Meerut	5216	6.09	30723	42616.03
Baghpat	2419	2.83	10918	13436.16
Gautam Budh Nagar	12653	14.77	223635	4343958.16
<i>Sub-Total</i>	<i>24326</i>	<i>28.41</i>	<i>289513</i>	<i>4405593.2</i>
Rajasthan Sub-Region				
Alwar	24344		106286	204209.25
<i>Sub-Total</i>	<i>24344</i>	<i>28.42</i>	<i>106286</i>	<i>204209.25</i>
Total NCR	85648	100	898334	9492907.32

Source: Brief Industrial Profile of District(s), MSME Development Institute at Delhi, Karnal, Jaipur and Agra; Ministry of MSME, Govt. of India

*Note: Number of units doesn't include Repairing and Servicing

3.4 Sub-region wise district level analysis of MSMEs (manufacturing) in NCR

Sub-region wise district level analysis of MSMEs carried out on the basis of *Brief District Industrial Profile(s)* of NCR constituent districts is given in the following paragraphs:

3.4.1 Haryana sub-region

1. Panipat district

Panipat is situated in the heart of green revolution belt of the State of Haryana. Dominant rice-wheat cropping system is resulting in marginalization of pulses and oilseed. Apart from this, horticulture crops and agro-forestry trees like eucalyptus are also grown here. The other crops grown are sugarcane, oilseeds and pulses. Buffalo and cow are the main milch animals. Horticultural and vegetable crops are also cultivated in the district.

As per the *Brief Industrial Profile of Panipat District* report (MSME-Development Institute), out of the total 5,500 industrial units, majority i.e. 4,068 (74%) are registered. Among the registered industrial units, 43 units are of medium & large scale whereas the rest are small & micro enterprises and artisan units (refer **Annexure-3**). Around, 300-400 units are working as ancillaries to large & medium scale industries in the district.



There are various types of micro & small enterprises and artisan units existing in Panipat district, details of which is given in **Table 3.13**. Analysis of existing SMEs and artisan units reveals that cotton textile, woolen, silk & artificial thread, engineering units, metal based (steel fab), electrical machinery & transport equipment, jute & jute based industry constitutes the maximum share of micro & small enterprises in Panipat district and therefore, it is a leading sector for economic growth of the district.

Table 3.13 Details of existing micro, small & artisan units in Panipat district

NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (no.)
20	Agro based	36	380	357
23	Cotton textile	444	752	1315
24	Woolen, silk & artificial thread based clothes	52	352	754
25	Jute & jute based	17	112	185
26	Ready-made garments and embroidery	5	50	52
27	Wood/wooden based furniture	9	180	115
28	Paper & Paper products	4	320	214
29	Leather based	2	40	20
31	Chemical / Chemical based	18	415	687
30	Rubber, Plastic & petro based	7	254	84
32	Mineral based	3	84	30
33	Metal based (Steel Fab.)	47	900	845
35	Engineering units	54	725	913
36	Electrical Machinery and transport equipment	8	200	85
97	Repairing & servicing	275	478	1062
01	Others	15	80	52
	Total	996	5322	6770

Source: Brief Industrial Profile of Panipat District (MSME-Development Institute), Ministry of MSME, Govt. of India.

Report of Ministry of MSME reveals that cotton durries, made ups, bed covers, carpets, bath mats, rugs, curtains, terry towels, floorings, furnishing fabrics, etc. are the major items which are being exported from Panipat district to various parts of the world. In past few years, it has shown a growth of 10 to 15%. Ministry of MSME identified an excellent potential for micro, small and medium enterprises, particularly in the area of manufacturing textile machinery, and bathroom fitting items, etc. in the district.



At present, there are three major clusters of micro and small enterprises in the district which are as under:

- i) Home finishing (Floor coverings & Made Ups) Cluster
- ii) Textile Machinery Manufacturing Cluster
- iii) Foundry Cluster, Samalkha

Study on *Micro & Household Enterprises in NCR* analyzed two clusters in Panipat district, i.e. Foundry Cluster at Samalkha and Handloom Cluster at Panipat. The details are given in **Table 3.14**.

Table 3.14 Cluster analysis, Panipat district

S. No.	Name of Activity	Enterprises in Cluster (approx.)	Employment Generated (approx. nos.)	Source of Raw Material	Estimated Turnover (Rs.lakh)
1	Foundry Cluster	35	356	Delhi, Panipat, Jharkhand, Orissa, Rajasthan sub-region, Chhattisgarh, Karnataka, Goa	172
2	Handloom (Textile) Cluster	490	4,278	Panipat, Delhi	2558

Source: Study on Micro & Household Enterprises in NCR, NCRPB

The cluster analysis above indicates that the average employment generated in Foundry Cluster and Handloom (Textile) Cluster is about 10 and 9 employees/units respectively. The average turnover of Foundry Cluster and Handloom Cluster amounts to Rs. 4.91 and 5.22 lakh/ unit respectively.

A glimpse of MSME activities in the district is available in **Plate 3.1**



Weavers at work in a handloom unit in Panipatⁱ



Handlooms/Textiles in Panipatⁱⁱ

Foundry Unit at Samalkha, Panipatⁱⁱⁱ**Plate 3.1 MSMEs in Panipat**

2. Faridabad district

Faridabad district is contiguous to NCT-Delhi. The river Yamuna separates the district boundary on eastern side with U.P. State and Delhi-Agra National highway (NH-2) passes through center of the district. The district is well connected with metro and railway network. Major broad gauge line i.e. Delhi-Mathura triple track connects the district with major towns/cities. Minerals like silica sand, building stones, ordinary clay, brick earth, ordinary sand, debris etc. are available in the district.

As per the *Brief Industrial Profile of Faridabad District* (MSME-Development Institute), there is a presence of 17,186 industrial units in the district. Among these units, only one percent (180 units) belongs to medium & large scale and rest are either SMEs or artisan units (refer **Annexure-3**). Fabrication units, repair & maintenance units are coming up as ancillary units to meet the growing need of the large & medium scale industries. Existing public sector undertakings located in the district have potential to promote a large number of micro & small ancillary units.

While analyzing the information related to existing micro & small enterprises and artisan units in the district, it is found that engineering, metal, repairing & services and agro based industries are the prominent industries which constitute the maximum share of micro & small enterprises in Faridabad (refer **Table 3.15**).



Table 3.15 Details of existing micro, small & artisan units in Faridabad district

NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
20	Agro based	450	4400	1860
22	Soda Water	2	12	12
23	Cotton textile	10	1942	60
24	Woolen, silk & artificial thread based clothes	2	24	20
25	Jute & jute based	-	-	-
26	Ready-made garments and embroidery	170	129565	850
27	Wooden/wood based furniture	210	47487	1050
28	Paper & Paper products	125	24240	625
29	Leather based	10	1825	78
31	Chemical/Chemical based	80	9280	375
30	Rubber, Plastic & petro based	310	74356	1265
32	Mineral based	375	54160	1480
33	Metal based (Steel Fab.)	2072	8956	10410
35	Engineering units	3675	638790	24956
36	Electrical machinery and transport equipment	430	56910	2140
97	Repairing & servicing	2675	417405	16340
01	Others	1300	66532	8460
	Total	11896	1535884	69981

Source: Brief Industrial Profile of Faridabad District (MSME-Development Institute, 2012-13), Ministry of MSME, Govt. of India.

As per the report of Ministry of MSME, items such as auto parts, shoes, tractor, electric fan, etc. are the major exports from the district. The report provides that the growth potential of micro and small enterprises in the district is due to the prominent existence of large and medium scale industries. New industrial estates are also being planned for setting up of micro and small enterprises in the district. Currently, in terms of number of MSME units, the two prominent manufacturing segments in Faridabad district are engineering, and metal/steel fabrication.

Study on *Micro & Household Enterprises in NCR* analyzed two clusters in Faridabad, i.e. Light Engineering cluster at Sector 58 and Automobile Components cluster at Muzassar. The details of these clusters are given in **Table 3.16**.

Table 3.16 Cluster analysis, Faridabad district

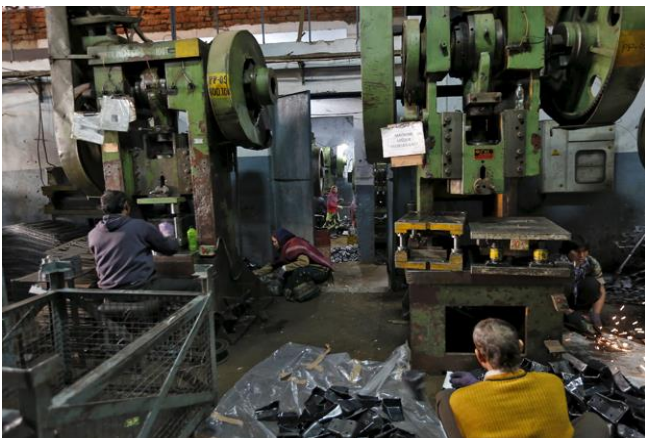
Sr. No.	Name of Activity	Enterprises in Cluster (approx.)	Employment Generated (approx. nos.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1	Light Engineering cluster	60	452	Faridabad, Delhi, Ludhiana, Gurugram, Noida	167
2	Auto Components cluster	100	315	Faridabad	672

Source: Study on Micro & Household Enterprises in NCR, NCRPB



The cluster analysis indicates that average employment generated in Light Engineering cluster and Automobile Components cluster is around 8 and 3 employees/unit with an average turnover of Rs. 2.78 and 6.72 lakh/ unit respectively.

MSME-Development Institute identified the potential for herbal beauty care products, instant fast food, nutraceuticals, specialty food, manufacturing of CD/DVD, healthcare products, toiletries, automobile spare parts, defense oriented garments, concrete furniture, etc. and therefore, these can be developed as new MSMEs in the district.



Auto-Parts manufacturing unit in Faridabad^{iv}



A Rubber Manufacturing Unit in Faridabad^v

Plate 3.2 MSMEs in Faridabad

3. Rohtak district

Rohtak is one of the agriculturally rich district in the State of Haryana. The main crops grown here are wheat, rice, gram, sugarcane & bajra. Though, there is no perennial river in the district but the underground water table is relatively high which gives good agricultural production.

Brief Industrial Profile of Rohtak District (MSME-Development Institute-Karnal) indicates that in Rohtak district, there are 4,761 registered industrial units, of which only 15 are medium & large units and rest are micro & small enterprises and artisan units (refer **Annexure-3**). Large number of micro & small scale units in the district are working as ancillary units to Laxmi Precision Tools, Rohtak. At the Industrial front, Rohtak has made remarkable growth (15 – 20%) in the last few years. An industrial town at Delhi-Rohtak Road has also been established by HSIIDC, Rohtak. Units like Amar Dairy, Nippan Carbide, Asian paints, Hi-tech Fort Wire Design Institute are coming in the district. Therefore, there is a very good scope of fastener industry in the district and the surroundings and thus, Rohtak city is also known as ‘city of fastener’.

Rohtak has good export linkages with Germany, New Zealand, England, Holland, South Africa, Italy, Sweden, Australia, Canada, Denmark, France, Ghana, Switzerland, Singapore etc. to where it export items like nuts & bolts, screws, shock absorber, tool & dies, industrial fastener, meta phoenix, dehydrated chlorophyll etc. During the year 2010-11, an export of Rs.13,500 lakh crore was recorded from the district. Details of the existing micro & small enterprises and artisan units in the district is provided in **Table 3.17**.



Table 3.17 Details of existing micro, small & artisan units in Rohtak district

NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
20	Agro based	57	1689	185
22	Soda Water	-	-	-
23	Cotton textile	23	253	21
24	Woolen, silk & artificial thread based clothes	-	-	-
25	Jute & jute based	-	-	-
26	Ready-made garments and embroidery	17	195	11
27	Wooden/wood based furniture	67	34.50	11
28	Paper & Paper products	-	-	-
29	Leather based	25	15	32
31	Chemical/Chemical based	29	209	85
30	Rubber, Plastic & petro based	-	-	-
32	Mineral based	-	-	-
33	Metal based (Steel Fab.)	-	-	-
35	Engineering units	420	5670	3800
36	Electrical Machinery and transport equipment	-	-	-
97	Repairing & servicing	350	290	560
01	Others	467	500	515
	Total	1455	8855.50	5220

Source: Brief Industrial Profile of Rohtak District (MSME-Development Institute-Karnal), Ministry of MSME, Govt. of India.

Study on *Micro & Household Enterprises in NCR* has analyzed two clusters in Rohtak district, namely, Turn Components Cluster and Auto Components Cluster (refer **Table 3.18**).

Table 3.18 Cluster analysis, Rohtak district

S. No.	Name of Activity	Enterprises in Cluster (approx.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1	Turned Components Cluster	140	770	Rohtak, Delhi	874
2	Auto Components Cluster	40	236	Rohtak, Delhi	234

Source: Study on Micro & Household Enterprises in NCR, NCRPB



The Cluster analysis indicates that average employment generated in Turned Components Cluster and Auto Components Cluster is around 6 employees/units in each of these respective cluster with an average turnover of Rs. 6.24 and 5.85 lakh/unit respectively.



Automobile manufacturing^{vi}



Manufactured Components in Rohtak

Plate 3.3 MSMEs in Rohtak

The report (MSME-Development Institute-Karnal) indicates that cluster identification has not been taken place in the State of Haryana. However, a number of units are manufacturing nut, bolts & screws, therefore a group of industry may be taken under MSE-CDP scheme of Ministry of MSME. Apart from this, there is also a good potential for new MSMEs i.e. biotech products including fastener, nut & bolts, paints & chemicals, herbal extracts for pharmaceutical products & cosmetic use, readymade garments, edible oils, auto-components, engineering products, wood based industry, basic drugs & pharmaceuticals, ready to serve food etc. In addition to this, an ample scope also exists for printing, photography, tenting, clinical and pathological laboratory, dying of fabrics, electroplating, glass designing, printing of label and stickers, wooden work, embroidery and other related units.

4. Jhajjar district

Jhajjar district is situated at a distance of about 65 km from Delhi. It is surrounded by Rohtak district in the north, Rewari district in the south and Bhiwani district in the west. In the east, it touches Tikri border of NCT-Delhi. The district falls within the classified arid and semi-arid zones. Broadly, four type of soils are available in the district viz. clay, loamy clay, and loamy sandy. Soil in the district is majorly alluvial in nature and fertile. Hot summer, cold winter and meager rainfall are the main climatic characteristics of Jhajjar district.

There are a total of 2500 industrial units in the district, out of which 1849 (73.96%) are registered. A brief industrial profile of Jhajjar district is given in **Annexure-3**.



As per the MSME Development Institute's report, small scale units in district Jhajjar are engaged in the manufacturing of fine quality products including shoes, black/galvanized steel tubes, food colors & flavors, lead pencil, petro chemicals, poly bags, auto parts, pesticides formulations, brass hardware, plywood, glass, ampoules, ultramarine blue, deep fridge, corrugated cartoons & allied packing material, plastic toys, medical disposables, mustard oils, pharmaceutical, ammunition boxes, paints & chemicals, bullet proof helmets, etc. Details of existing micro & small enterprises and artisan units in the district is given in **Table 3.19**.

There are around 250-300 ancillary units in the district showing a growth trend between 10 - 15% in the last few years. Tremendous growth in exports of pharmaceuticals, leather footwear, hollow glass wares, electronic microwave components used in aircraft, missiles & radars, ultramarine blue, ceramic glazed tiles, sanitary wares, brake lining has been observed in the district.

Table 3.19 Details of existing micro, small & artisan units in Jhajjar district

NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
20	Agro based	15	300.00	150
22	Soda Water	3	250.00	150
23	Cotton textile	5	125.00	35
24	Woolen, silk & artificial thread based clothes	-	-	-
25	Jute & jute based	3	120.00	21
26	Ready-made garments and embroidery	25	1000.00	150
27	Wooden/wood based furniture	130	1600.00	1200
28	Paper & Paper products	20	600.00	280
29	Leather based	60	1500.00	600
31	Chemical/Chemical based	70	1600.00	800
30	Rubber, Plastic & petro based	100	1800.00	800
32	Mineral based	22	400.00	220
33	Metal based (Steel Fab.)	80	2000.00	800.00
35	Engineering units	60	1000.00	600
36	Electrical Machinery and transport equipment	60	900.00	700
97	Repairing & servicing	50	500.00	200
01	Others	1146	16405.00	9376
	Total	1849	30100	16082

Source: Brief Industrial Profile of Jhajjar District (MSME-Development Institute), Ministry of MSME, Govt. of India

Study on *Micro & Household Enterprises in NCR* carried out a detailed analysis of the Footwear cluster located at Bahadurgarh of Jhajjar district (refer **Table 3.20**).

Table 3.20 Cluster analysis, Jhajjar district

S. No.	Name of Activity	Enterprises in Cluster (approx.no)	Employment Generated (approx.no.)	Source of Raw Material	Estimated Turnover (in Rs. lakh)
1	Footwear Cluster, Bahadurgarh	60	727	Delhi, Bahadurgarh	520

Source: Study on Micro & Household Enterprises in NCR, NCRPB



The Cluster analysis indicates that average employment generated in Footwear Cluster is around 12 employees/unit with an average turnover of Rs. 8.6 lakh/unit. The glimpse of certain MSME activities that are being carried out in the district is given in **Plate 3.4**.



Footwear manufacturing at Bahadurgarh, Jhajjar^{vii}

Plate 3.4 MSMEs in Jhajjar

5. Rewari district

The district comprises of varied topography including valleys, undulating lands, sand dunes and alluvial plains. Exhaustible deposits of quartzite and good quality slate occurring in shades of green, black and brown are also found in the district.

In total, there are 1800 industrial units present in the district, out of which 141 (7.8%) are registered medium & large units and the rest 92.2% are the micro & small enterprises. A brief industrial profile of Rewari district is given in **Annexure-3**.

Analysis of existing micro & small enterprises and artisan units in the district (refer **Table 3.21**), reveals that metal based (steel fab.) engineering units, wooden/wood based furniture, ready-made garments & embroidery and agro-based industries are the prominent industries, and constitutes maximum share of micro & small enterprises in Rewari district.

Table 3.21 Details of existing micro, small & artisan units in Rewari district

NIC Code No.	Type of Industry	Number of Units	Investment (Rs.lakh)	Employment (in no.)
20	Agro based	65	2190	217
22	Soda Water	05	12	44
23	Cotton textile	7	15	58
24	Woolen, silk & artificial Thread based clothes	04	116	65
25	Jute & jute based	2	20	40
26	Ready-made garments and embroidery	70	110	270



Draft Functional Plan for Micro and Household Enterprises in NCR

NIC Code No.	Type of Industry	Number of Units	Investment (Rs.lakh)	Employment (in no.)
27	Wood/wood based furniture	77	1410	317
28	Paper & Paper products	25	350	76
29	Leather based	32	44	77
31	Chemical/Chemical based	18	110	36
30	Rubber, Plastic & petro based	24	1270	59
32	Mineral based	43	640	1442
33	Metal based (Steel Fab.)	310	2510	1380
35	Engineering units	113	1210	1410
36	Electrical Machinery and transport equipment	-	-	-
97	Repairing & servicing	317	624	1605
01	Others	218	180	2217
	Total	1330	10811	9313

Source: Brief Industrial Profile of Rewari District (MSME-Development Institute), Ministry of MSME, Govt. of India

Study on *Micro & Household Enterprises in NCR* has analyzed Brass Products Cluster of Rewari town in detail (refer **Table 3.22**). The analysis indicates that average employment generated in here is around 3 employees/units with an average turnover of Rs. 1.62 lakh/unit.

Table 3.22 Cluster analysis, Rewari district

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. nos.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1	Brass Products Cluster, Rewari town	50	129	Rewari	81

Source: Study on Micro & Household Enterprises in NCR, NCRPB



Manufacturing of Brass utensil in Rewari^{viii}

Tilla Jutti making at Rewari^{ix}**Plate 3.5 MSMEs in Rewari**

6. Palwal district

Palwal is the newly created district, carved out from Faridabad and Mewat districts. As per the *Brief Industrial Profile of Palwal district*, there are about 380 industrial units in the district, out of which, 40 (10.52%) are registered medium & large units and rest (89.47%) are micro & small enterprises (refer **Annexure-3**).

As per the MSME Development Institute's report, micro & small scale units in Palwal district are majorly engineering units, chemical/chemical based, mineral based, electrical machinery & transport equipment and agro-based enterprises (refer **Table 3.23**).

Table 3.23 Details of existing micro, small & artisan units in Palwal district

Enterprises who filed EM-I (Jan.2009 to 2011-12)

NIC Code No.	Type of Industry	Units (in no.)	Investment (Rs. lakh)	Employment (in no.)
20	Agro based	6	277.00	66
22	Soda Water	-	-	-
23	Cotton textile	4	100.84	72
24	Woolen, silk & artificial thread based clothes	-	-	-
25	Jute & jute based	-	-	-
26	Ready-made garments and embroidery	3	205.00	242
27	Wood/wood based furniture	2	84.50	113
28	Paper & Paper products	3	455.90	93
29	Leather based	-	-	-
31	Chemical/Chemical based	7	238.61	63



NIC Code No.	Type of Industry	Units (in no.)	Investment (Rs. lakh)	Employment (in no.)
30	Rubber, Plastic & petro based	-	-	-
32	Mineral based	7	428.00	91
33	Metal based (Steel Fab.)	5	544.00	342
35	Engineering units	27	4126.24	902
36	Electrical Machinery and transport equipment	6	3930.00	355
97	Repairing & servicing	2	6.00	12
01	Others	1	188.00	29
	Total	73	10584.09	2380

Source: Brief Industrial Profile of Palwal District, (MSME-Development Institute), Ministry of MSME, Govt. of India

Study on *Micro & Household Enterprises in NCR* has analyzed Mixed Cluster in Palwal district. Detailed analysis of the cluster (refer **Table 3.24**) indicate that an average employment generated in the Cluster is around 3 employees/unit with an average turnover of Rs. 2.4 lakh/unit.

Table 3.24 Cluster analysis, Palwal district

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs.lakh)
1	Mixed Cluster	10	25	Palwal, Faridabad, Gujarat	24

Source: Study on Micro & Household Enterprises in NCR, NCRPB

7. Mewat district

The Mewat district was carved out from erstwhile Gurugram and Faridabad districts. The main occupation of the people of Mewat is agriculture and allied agro-based activities. The agriculture in Mewat is mostly rain fed, except in small pockets where canal irrigation is available. Animal husbandry, particularly dairy, is the secondary source of income.

As per the MSME's *Brief Industrial Profile* of the district, there are 57 industrial units in the district of which 42 units (73.68%) are registered. Among these, 16 (38%) belongs to registered medium & large industries and the rest (61.9%) are micro & small enterprises. The major exportable items of the district are food flavors, cotton crepe bandage, auto parts, plastic toys & tanks, building stone, pet food, cooling tower, rubber parts and meat, etc. A brief industrial profile of Mewat district is given at **Annexure-3**.

Mewat district has few chemical/chemical based units, engineering units, cotton textile and agro-based micro & small enterprises (refer **Table 3.25**). Detailed analysis of existing SMEs and artisan units reveal that chemical/chemical based units constitutes highest share of investment, followed by agro-based units while engineering units employed maximum persons, followed by cotton textile units in the district.



Table 3.25 Details of existing micro, small & artisan units in Mewat district

NIC Code No.	Type of Industry	Units (in no.)	Investment (Rs. lakh)	Employment (in no.)
20	Agro based	4	706.4	89
22	Soda Water	-	-	-
23	Cotton textile	5	191	239
24	Woolen, silk & artificial Thread based clothes	-	-	-
25	Jute & jute based	-	-	-
26	Ready-made garments and embroidery	2	52	94
27	Wood/wood based furniture	2	73	61
28	Paper & Paper products	-	-	-
29	Leather based	-	-	-
31	Chemical/Chemical based	8	814.65	160
30	Rubber, Plastic & petro based	-	-	-
32	Mineral based	-	-	-
33	Metal based (Steel Fab.)	3	53.5	29
35	Engineering units	7	577.4	317
36	Electrical Machinery and transport equipment	-	-	-
97	Repairing & servicing	4	25.5	36
01	Others	7	699.83	131
	Total	42	3193.28	1156

Source: Brief Industrial Profile of Mewat District, (MSME-Development Institute), Ministry of MSME, Govt. of India.

Based on the study on *Micro & Household Enterprises in NCR*, a detailed analysis of Mixed Enterprises Cluster in Mewat district indicates that average employment generated in the cluster is around 3 employees/unit with an average turnover of Rs. 4.23 lakh/unit (refer **Table 3.26**).

Table 3.26 Cluster analysis, Mewat district

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Approx. Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1	Mixed Cluster, Nuh, Mewat	13	43	Mewat	55

Source: Study on Micro & Household Enterprises in NCR, NCRPB

8. Sonipat district

District Sonipat is known for extensive farming of crops, oilseeds, horticultural plants, vegetables and flowers.



As per the MSME Industrial Profile of the district, there are 13,039 registered industrial units in the district, wherein a negligible number of units i.e. 6 (0.04%) belongs to medium & large unit and remaining units (99.95%) are micro & small enterprises (refer **Annexure-3**). Rice, stainless steel products, utensils, paper products, electrical goods & auto parts etc. are among the major exportable items of this district. There are two existing clusters of Micro & Small Enterprises in the district, namely, Stainless Steel Cluster at Kundli and Printer & Packagers Cluster at Rai.

Detailed analysis of existing micro & small enterprises and artisan units in the district reveals that engineering units, agro-based industries, chemical/chemical based units, rubber, plastic & petro based enterprises are the prominent industries which constitutes maximum share of micro & small enterprises in the district (refer **Table 3.27**). In case of employment, maximum workers are engaged in engineering enterprises, followed by agro- based and chemical/chemical based enterprises in the district.

Table 3.27 Details of existing micro, small & artisan units in Sonipat district

NIC Code No.	Type of Industry	Units (in no.)	Investment (Rs.lakh)	Employment (in no.)
20	Agro- based	62	460.00	824
22	Soda Water	02	10.00	26
23	Cotton textile	32	160.00	329
24	Woolen, silk & artificial Thread based clothes	12	120.00	156
25	Jute & jute based	-	-	-
26	Ready-made garments and embroidery	27	1725.10	484
27	Wood/wood based furniture	35	350.25	434
28	Paper & Paper products	04	200.00	54
29	Leather based	10	560.00	124
31	Chemical/Chemical based	54	1080.00	636
30	Rubber, Plastic & petro based	42	840.00	486
32	Mineral based	-	-	-
33	Metal based (Steel Fab.)	35	380.00	378
35	Engineering units	92	1472.10	1270
36	Electrical machinery and transport equipment	32	1034.00	482
97	Repairing & servicing	98	782.00	1368
01	Others	8206	947.05	52656
	Total	8743	10120.50	59707

Source: Brief Industrial Profile of Sonipat district, (MSME-Development Institute), Ministry of MSME, Govt. of India.

Study on *Micro & Household Enterprises in NCR* has analyzed the Packaging Material Cluster in Sonipat district. The analyses indicates that the average employment in the said cluster is around 8 employees/unit and the average turnover is about Rs. 4.57 lakh/unit (refer **Table 3.28**).



Table 3.28 Cluster analysis, Sonipat district

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs.lakh)
1	Packaging Material Cluster	40	210	Sonipat, Delhi	183

Source: Study on Micro & Household Enterprises in NCR, NCRPB



Packing Material Manufacturing, Rai, Sonipat^x



Wooden Work at Kharkhoda, Sonipat^{xi}

Manufacturing of Rubber parts, Sonipat^{xii}

Plate 3.6 MSMEs in Sonipat

9. Gurugram district

As per the report of MSME Institute, Gurugram district is one of the major exporters of auto parts, readymade garments, leather products, handicrafts items, etc. District has a huge potential for both manufacturing and service sector based MSMEs, particularly in the area of food processing, sheet



metal components, plastic components automobile & its parts, engineering components, leather footwear, etc.

District has 24,741 existing industrial units, out of which 436 (1.76%) are registered medium & large units and the rest (98.23%) are micro & small enterprises. A brief industrial profile of Gurugram district is given in **Annexure-3**.

In district, engineering units have the maximum number of micro & small enterprises, followed by ready-made garments & embroidery, metal based (steel fab.) and chemical/chemical based units. In terms of investment, engineering units are holding the maximum share (Rs.8,94,000 lakh), followed by chemical/chemical based units (Rs. 46,500 lakh) and agro-based units (Rs. 45,500 lakh). In case of employment, ready-made garments and embroidery units provide maximum employment i.e. 87380 workers, followed by engineering units (70,500), leather (56,400), metal (30,000) and chemical/chemical based units (11,830) in the district (refer **Table 3.29**).

Table 3.29 Details of existing micro, small & artisan units in Gurugram district

NIC Code No.	Type of Industry	Units (in no.)	Investment (Rs. lakh)	Employment (in no.)
20	Agro-based	66	45500	4500
22	Soda Water	--	--	--
23	Cotton textile	10	9000	1000
24	Woolen, silk & artificial Thread based clothes	5	60	50
25	Jute & jute based	--	--	--
26	Ready-made garments and embroidery	1255	5530	87380
27	Wood/wood based furniture	15	45	120
28	Paper & Paper products	36	3600	400
29	Leather based	145	22500	56400
31	Chemical/Chemical based	616	46500	11830
30	Rubber, Plastic & petro based	90	7000	850
32	Mineral based	85	5100	2700
33	Metal based (Steel Fab.)	1035	4200	30000
35	Engineering units	2000	894000	70500
36	Electrical machinery and transport equipment	28	6500	810
97	Repairing & servicing	760	228000	3400
01	Others	8104	554000	59400
	Total	14250	3883475	329346

Source: Brief Industrial Profile of Gurugram District, (MSME-Development Institute), Ministry of MSME, Govt. of India.

Study on *Micro & Household Enterprises in NCR* has analyzed the Readymade Garments Cluster in Gurugram district which indicates that the average employment generated in the cluster is around 14 employees/unit with an average turnover of about Rs. 36.50 lakh/unit (refer **Table 3.30**).

**Table 3.30 Cluster analysis, Gurugram district**

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1	Readymade Garments Cluster	40	540	Delhi, Faridabad, Gurugram	1460

Source: Study on Micro & Household Enterprises in NCR, NCRPB



An export-oriented Garment Factory in Gurugram^{xiii}



Piping and Fabrication Work, Surat Nagar, Gurugram^{xiv}

Plate 3.7 MSMEs in Gurugram

3.4.2 Uttar Pradesh sub-region

1. Bulandshahr district

Bulandshahr district is well known for the manufacturing of pottery & ceramic products. Khurja Pottery cluster which is one of the famous clusters in the sector is located in Bulandshahr district. As per the report of MSME-Development Institute, there are a total of 5,565 industrial units in the district wherein the share of medium and large units is negligible i.e. 5 units (0.08%) but micro and small enterprises are dominating this sector with a share of 99.91% industrial units. A brief industrial profile Bulandshahr district is given in **Annexure-3**.

In the district, agro-based units (894) has the highest share of manufacturing units, followed by wooden/wood based furniture (333), ready-made garments & embroidery (278) and metal based (184). In case of employment also, agro-based units holds the maximum share of workers, followed by wooden/wood based furniture and ready-made garments & embroidery (refer **Table 3.31**).

Table 3.31 Details of existing micro, small & artisan units in Bulandshahr district

NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
20	Agro based	894	482.3	4470



NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
22	Soda Water	-	-	-
23	Cotton textile	3	1.65	15
24	Woolen, silk & artificial thread based clothes	-	-	-
25	Jute & jute based	-	-	-
26	Ready-made garments and embroidery	278	150.1	1395
27	Wood/wood based furniture	333	179.85	1660
28	Paper & paper products	49	26.45	251
29	Leather based	44	23.78	219
31	Chemical/Chemical based	43	22.22	217
30	Rubber, plastic & petro based	49	26.48	250
32	Mineral based	-	-	-
33	Metal based (Steel Fab.)	184	99.36	915
35	Engineering units	34	18.36	173
36	Electrical machinery and transport equipment	102	55.08	512
97	Repairing & servicing	2363	1276.05	11820
01	Others	1189	688.52	6352
	Total	5565	3050.2	28249

Source: Brief Industrial Profile of Bulandshahr District, (MSME-Development Institute), Ministry of MSME, Govt. of India

In Khurja pottery cluster, about 300 units are engaged in the production of various types of ceramic products such as stoneware, bone china crockery, HT (high tension) & LT (low tension) insulators, sanitary wares, decorative wares, chemical porcelain, etc. The cluster comprises dependent and independent pottery units, however, independent pottery manufacturers have integrated production facilities ranging from raw material processing to firing. Such potters have their own associations, viz. KHPA (Kutir Avam Hasth-shilp Potters Association) and KPMA (Khurja Pottery Manufacturers Association), respectively. Majority of the units at Khurja needs advancement in the technology as they are still dependent on obsolete technology i.e. use of downdraft kilns that has higher production cost & fuel consumption but yields low profits and causing pollution.

In order to strengthen the development of pottery clusters in Uttar Pradesh, Central Glass & Ceramic Research Institute (CG&RI) at Khurja is working independently and providing necessary technical support (testing and technical facilities) to such clusters. The motive of CG&RI at Khurja is to encourage the growth of ceramic industry in the State of Uttar Pradesh.

Analysis of primary survey conducted for the study on *Micro and Household Enterprises in NCR* indicate that the clusters i.e. zari/embroidery, undergarments (cotton), pottery & ceramic, can be taken up for upliftment as these have good potential for the development and their growth could be achieved through provision of necessary hard and soft interventions.



The cluster analysis reports provide that zari/embroidery cluster, under-garments (cotton) cluster and pottery & ceramics clusters generates average employment of around 3, 3 & 6 employees/unit, respectively. It is found that among other existing clusters, the zari/embroidery cluster has highest turnover of around Rs. 3.10 lakh/unit, followed by undergarments (cotton) cluster i.e. Rs. 2.2 lakh and pottery & ceramic cluster (Rs.1.81 lakh). Details are given in **Table 3.32**.

Table 3.32 Cluster analysis, Bulandshahr district

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Approx. Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1	Pottery & Ceramic Cluster, Khurja	380	2,280	Khurja	688
2	Zari/Embroidery Cluster, Jahangirabad	100	321	Bulandshahr, Jahangirabad, Sikandrabad	310
3	Under Garments (Cotton) Cluster, Shikarpur	100	330	Shikarpur, Bulandshahr	220

Source: Study on Micro & Household Enterprises in NCR, NCRPB



Pottery Making Khurja^{xv}



Zardozi embroidery, Bulandshahr^{xvi}

Plate 3.8 MSMEs in Bulandshahr

2. Ghaziabad district (including Hapur)

As per the report of MSME-Development Institute, there were 5957 industrial units in Ghaziabad district, out of which only 1796 are registered (refer **Annexure-3**). As per this report, there were 17,221 estimated average number of daily workers employed in small scale industries in the district.

Electrical machinery and transport equipment have maximum share of units in the district, followed by ready-made garments & embroidery, and mineral based industries. In terms of investments, electrical machinery and transport equipment have the highest share of Rs. 637.40 lakh followed by soda water with 2 units (Rs.500.00 lakh), cotton textile (Rs.407.00 lakh). Electrical machinery and transport equipment enterprises provides maximum employment in the district, followed by woolen, silk & artificial thread based clothes and ready-made garments & embroidery enterprises (refer **Table 3.33**).

Table 3.33 Details of existing micro, small & artisan units in Ghaziabad district

NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
20	Agro based	24	100.90	176
22	Soda Water	2	500.00	100
23	Cotton textile	13	407.00	96
24	Woolen, silk & artificial Thread based clothes	3	110.00	1462



NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
25	Jute & jute based	-	-	-
26	Ready-made garments and embroidery	85	207.90	1262
27	Wood/wood based furniture	23	58.70	218
28	Paper & Paper products	26	141.10	171
29	Leather based	--	--	--
31	Chemical / Chemical based	--	--	--
30	Rubber, Plastic & petro based	21	50.30	155
32	Mineral based	38	153.50	505
33	Metal based (Steel Fab.)	19	46.90	139
35	Engineering units	22	55.30	135
36	Electrical Machinery and transport equipment	123	637.40	1517
97	Repairing & servicing	45	105.10	781
01	Others	437	1339.70	1872
	Total	881	3913.8	8589

Source: Brief Industrial Profile of Ghaziabad district, (MSME-Development Institute), Ministry of MSME, Govt. of India

Primary survey conducted for the study organized by NCRPB, indicate that the Modha (cane & bamboo products) cluster, Bone Accessories cluster and Textile Block Printing cluster have good potential for development, only if necessary soft and hard interventions are carried out in the area.

The cluster analysis further indicate that Modha cluster, Bone Accessories cluster and Textile Block Printing cluster, generates average employment of around 4, 3 and 5 employees/unit, respectively with an average turnover of about Rs.1.61 lakh/unit, Rs.3.54 lakh/unit and Rs.5.15 lakh/unit respectively. The detail of these clusters is given in **Table 3.34** below:

Table 3.34 Cluster analysis, Ghaziabad district

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1	Modha (Cane & Bamboo Products) Cluster, Garh Mukteshwar	100	397	Garh Mukteshwar and adjoining areas	161
2	Bone Accessories Cluster, Loni	200	648	Loni, Delhi, Mumbai	708



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S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
3	Textile Block Printing Cluster, Pilkhuwa	190	958	Pilkhuwa, Meerut, Moradabad, Delhi	979

Source: Study on Micro & Household Enterprises in NCR, NCRPB

Weaving is a traditional handicraft for large section of the rural areas of Ghaziabad district. Pilkhuwa has a large concentration of Textile Block Printing cluster. *Khes*, bed sheets, towels, *durries/ lohi*, tarpaulin, etc. are also manufactured in Pilkhuwa (refer **Plate 3.9**). There is good demand of these items in the market. Keeping this in view, MSME-Development Institute/Ministry of MSME is in the process of developing a Handloom cluster at Pilkhuwa.

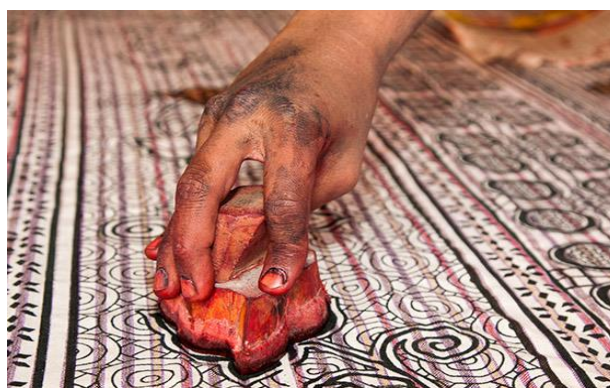
The district is famous for its exports related to home furnishing, automotive fabrics, fashion accessories, frozen meat, beer & pharmaceuticals, steel ingot, bi-cycle, ayurvedic medicines, electronics parts, polyester buttons, white crystal sugar, PU foam, automobile piston & rings, stainless steel wires & bars, high & low carbon steel wires, plastic mould furniture, steel ingots, steel blades & alloy steel, craft paper, etc.



Modha Cluster, Garh Mukteshwar^{xvii}



Bone Accessories, Loni^{xviii}



Textile Block Printing, Pilkhuwa^{xix}



Textile Block Printing, Pilkhuwa
Plate 3.9 MSMEs in Pilkhuwa, Ghaziabad

3. Meerut district

There were about 8197 registered industrial units in the district during 2010-11, out of which 13 are medium & large scale industries and rest are micro & small enterprises. Nearly, 48280 persons were employed in small scale industries in the district (refer **Annexure-3**).

Other than repairing & service industry, ready-made garments & embroidery have maximum number of units (807) in the district, followed by metal based (537) and agro-based units (304). Similarly, ready-made garments & embroidery have highest share of investment (Rs. 6593.19 lakh), followed by metal based and agro-based units (refer **Table 3.35**). In case of employment also, ready-made garments & embroidery holds maximum share of employment in the district followed by metal based and agro-based units.

Table 3.35 Details of existing micro, small & artisan units in Meerut district

NIC Code No.	Type of Industry	Number of Units	Investment (Rs. in lakh)	Employment (in no.)
20	Agro based	304	2484.95	1791
22	Soda Water	-	-	-
23	Cotton textile	76	620.92	447
24	Woolen, silk & artificial Thread based clothes	23	187.91	135
25	Jute & jute based	-	-	-
26	Ready-made garments and embroidery	807	6593.19	4753
27	Wood/wood based furniture	213	1740.21	1255
28	Paper & Paper products	63	514.71	371
29	Leather based	221	1805.57	1302
31	Chemical/Chemical based	57	465.69	336
30	Rubber, Plastic & petro based	52	424.84	306
32	Mineral based	4	32.68	24



NIC Code No.	Type of Industry	Number of Units	Investment (Rs. in lakh)	Employment (in no.)
33	Metal based (Steel Fab.)	537	4387.29	3163
35	Engineering units	103	841.51	607
36	Electrical machinery and transport equipment	67	547.39	395
97	Repairing & servicing	2981	24240.46	17557
01	Others	2689	21969.13	15838
	Total	8197	66856.49	48280

Source: Brief Industrial Profile of Meerut district, (MSME-Development Institute), Ministry of MSME, Govt. of India.

Primary survey conducted during the study organized by NCRPB, indicates that Sports Goods cluster, Artificial Ornaments cluster, Musical Instruments (band baja) cluster and Scissors cluster have good potential for development, but only after the provision of necessary soft and hard interventions (refer **Plate 3.10**).

The cluster analysis reports of Sports Goods Cluster, Artificial Ornaments Cluster, Musical Instruments (Band Baja) Cluster and Scissors Cluster provides that the average employment in respective clusters is around 7, 3, 4 and 3 employees/unit with an average turnover of Rs. 5.59, 4.28, 2.04 and 1.32 lakhs/unit, respectively. The detail of these clusters is given in **Table 3.36**.

Table 3.36 Cluster analysis, Meerut district

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1	Sports Goods Cluster	9,000	61,920	Meerut, Delhi, NCR	50310
2	Artificial Ornaments Cluster	1,600	4,144	Meerut	6848
3	Musical Instruments (Band Baja) Cluster	95	341	Meerut	194
4	Scissors Cluster	180	484	Meerut	238

Source: Study on Micro & Household Enterprises in NCR, NCRPB





Sport Goods manufacturing, Meerut^{xx} & ^{xxi}



Sport Goods manufacturing, Meerut^{xxii} & ^{xxiii}



Artificial Ornaments manufactured in Meerut^{xxiv}



Trumpets and drums manufacturing, Meerut^{xxv}



Scissors manufacturing, Meerut^{xxvi}

Plate 3.10 MSMEs in Meerut



4. Baghpat district

Baghpat district is located adjacent to NCT-Delhi. However, nearly 70% of the work force is still engaged in the agricultural & allied activities, and the district is predominantly agricultural. District also comprise small scale units dealing in textiles but it has minimum infrastructure that is required for setting up small-scale units. On the whole, the district has good potential for resource based and demand based industries.

Resource based industries can be agro, horticulture, forest and livestock based, however, the demand based industries can be categorized into mechanical & engineering, chemical, electrical, food based and miscellaneous industries.

Based on the available resources, manpower and demand obtaining for various consumer and industrial goods, with the change of taste, fashion and technology for such goods, a good number of small scale industrial units can be set up in Baghpat district. A brief industrial profile of the district is given in **Annexure-3**.

In the district, micro & small enterprises are largely agro-based comprising 908 units. Other important micro & small enterprises are ready-made garments & embroidery units and wood/wood based furniture. In terms of investments, agro-based units have highest share (Rs.4906.30 lakh), followed by wood/wood based furniture, metal based (steel fab.) and cotton textile. In case of employment too, agro-based units hold maximum share of employment (4040 workers) in the district, followed by readymade garments and embroidery, wood/wood based furniture, cotton textile and metal based units. The details of the existing micro & small enterprises and artisan units of Baghpat district is given in **Table 3.37** below.

Table 3.37 Details of existing micro, small & artisan units in Baghpat district

NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
20	Agro based	908	4906.30	4040
22	Soda Water	--	--	--
23	Cotton textile	125	1758.33	629
24	Woolen, silk & artificial Thread based clothes	--	--	--
25	Jute & jute based	-	-	-
26	Ready-made garments and embroidery	590	295.20	2902
27	Wood/wood based furniture	217	2956.46	1090
28	Paper & Paper products	4	56.26	70
29	Leather based	22	309.46	85
31	Chemical/Chemical based	8	112.53	82



NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
30	Rubber, Plastic & petro based	12	168.80	68
32	Mineral based	--	--	--
33	Metal based (Steel Fab.)	192	2698.16	576
35	Engineering units	114	1635.60	456
36	Electrical Machinery and transport equipment	106	1491.06	303
97	Repairing & servicing	210	2954.00	790
01	Others	121	1745.06	617
	Total	2629	16390.16	11708

Source: Brief Industrial Profile of Baghpat district, (MSME-Development Institute), Ministry of MSME, Govt. of India.

Primary survey conducted for the study organized by NCRPB, indicate that Handloom Cluster in Baghpat district has good potential for development, if necessary soft and hard interventions may be carried out in the district. Average employment generated in the cluster is around 3 employees/ unit with an average turnover of about 3.12 lakhs/ unit (refer **Table 3.38**).

Table 3.38 Cluster analysis, Baghpat district

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1	Handloom Cluster	285	949	Khekada	892

Source: Study on Micro & Household Enterprises in NCR, NCRPB



Handloom Floor Mats, Colored Bedspreads, Pillow Covers & Curtains etc. manufacturing, Baghpat^{xxvii}



Plate 3.11 MSMEs in Baghpat

5. Gautam Budh Nagar district

As per the report of the Ministry of MSME, in 2011 there were total 6,349 industrial units in Gautam Budh Nagar, however, out of these only 1,063 were registered (refer **Annexure-3**). In the district, micro & small enterprise constitutes a larger share of industrial units.

Hosiery & garments, paper products & printings, rubber & plastic products, electrical machinery & apparatus, metal products and leather products are some of the important enterprises in the district. In terms of investments, hosiery & garments have highest share, followed by miscellaneous manufacturing industries and machinery & parts, except electrical. Also, the hosiery & garments sector constitutes maximum share of employment, followed by miscellaneous manufacturing industries, paper products & printings and rubber & plastic products (refer **Table 3.39**).

Table 3.39 Details of existing micro, small & artisan units in Gautam Budh Nagar district

NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
20-21	Food Products	229	89079.98	3622
22	Beverages, Tobacco and Tobacco products	125	66284.36	1538
23	Cotton Textiles	183	7277.70	2149
24	Wool, Silk & Synthetic Fiber, Textile	335	25346.81	3366
25	Jute, Hemp & Mesta Textile	77	1036.54	754
26	Hosiery & Garments	3249	1315938.00	76716



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NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
27	Wood Products	404	1609.38	2923
28	Paper Products & Printings	1420	265190.80	20123
29	Leather Products	427	139884.90	7220
30	Rubber & Plastic Products	1169	587140.10	17395
31	Chemical & Chemical Products	304	47162.12	4232
32	Non-Metallic Mineral Products	140	58523.90	3056
33	Basic Metal Industries	602	103047.30	5404
34	Metal Products	619	49104.79	7440
35	Machinery & Parts except Electrical	776	282140.80	11420
36	Electrical Machinery & Apparatus	892	140538.50	12110
37.	Transport Equipment & Parts	362	135543.00	5316
38	Miscellaneous Mfg. Industries	1178	1137514.00	36432
96-97	Repairing & Servicing Industries	1395	39575.84	10925
	Total	14048	4383534.00	234560

Source: Brief Industrial Profile of Gautam Budh Nagar district, (MSME-Development Institute), Ministry of MSME, Govt. of India.

Primary survey conducted for the study organized by NCRPB, indicate that Readymade Garments Cluster and Furniture Cluster have good potential for development on provision of necessary soft and hard interventions in the area (refer **Plate 3.12**). As per the cluster analysis reports of Readymade Garments Cluster and Furniture (Woodwork) Cluster, average employment in these respective cluster is 13 and 3 employees/unit, with an average turnover of about Rs. 8.45 and Rs.2.16 lakhs/unit, respectively (refer **Table 3.40**).

Table 3.40 Clusters analysis, Gautam Budh Nagar district

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1	Readymade Garments Cluster, Noida	60	790	Delhi, Noida	507
2	Furniture (Woodwork) Cluster, Noida	50	130	Noida	108

Source: Study on Micro & Household Enterprises in NCR, NCRPB



Readymade Garments Manufacturing, Noida, Gautam Budh Nagar^{xxviii}



Branded readymade Garments Manufacturing, Noida, Gautam Budh Nagar^{xxix}



Furniture manufacturing (Woodwork), Noida^{xxx}

Plate 3.12 MSMEs in Gautam Budh Nagar



3.4.3 Rajasthan sub-region

1. Alwar district

There are about 87 medium scale industrial units in Alwar district, located in various industrial areas. These industries are exporting wide range of products like shaving blades, hand tools, aluminum extruded product, surgical blade, synthetic blended fabrics, empty hard gelatin capsules, leather shoes, subscriber carrier system, tyre-tube, picture tube, chemicals, sanitary items, crockery, suiting, slate tile, different chemicals like calcium cyanide, alkalis salt, moped, PVC cable sanitary ware, readymade garments etc. A brief industrial profile of the district is given in **Annexure-3**.

Food products units constitutes highest number of micro & small enterprises units in the district, followed by jute, hemp & mesta textile, beverages, tobacco products and wood products. In terms of investments, the share of wool, silk & synthetic fiber, textile is highest in the district, followed by jute, hemp & mesta textile and other food products. Further, with respect to employment, paper products & printings enterprises constitutes the maximum share, followed by leather products, wool, silk & synthetic fiber, textile and jute, hemp & mesta textile enterprises (refer **Table 3.41**).

Table 3.41 Details of existing micro, small & artisan units in Alwar district

NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
20	Food Products	2500	13011	7500
21	Other Food Products	1300	15015.25	6000
22	Beverages, Tobacco Products	1980	10015	5580
23	Cotton Textiles	20	9015	600
24	Wool, Silk & Synthetic Fibre, Textile	1541	20001	8000
25	Jute, Hemp & Mesta Textile	2001	18338	8000
26	Hosiery & Garments	1260	7338	6500
27	Wood Products	1910	11538	7500
28	Paper Products & Printings	1620	9538	9800
29	Leather Products	1070	8500	9300
30	Rubber & Plastic Products	1600	7500	5750
31	Chemical & Chemical Products	1700	11300	6800
32	Non Metallic Mineral Products	1480	12600	5800



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NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
33	Basic Metal Industries	1270	14800	4000
35	Machinery & Parts except Electrical	1360	13200	4256
36	Electrical Machinery & Apparatus	1360	10200	4200
97	Repair Services	570	14200	6500
01	Others	372	12300	6700
	Total	24914	218409.25	112786

Source: *Brief Industrial Profile of Alwar District*, (MSME-Development Institute), Ministry of MSME, Govt. of India.

Processed food, auto component, edible oil, cement pipe, *jalies*, leather tanning, etc. are some of the major industrial activities in the district; however, besides these manufacturing activities the service sector cluster such as engineering workshop, beauty & herbal therapy, two & four wheeler service workshops are also present in the district. There are certain clusters identified by the State Government which includes leather *juta* & leather tanning, *moorti nirman*, pottery, *galicha*, rope making, stone cutting, *bans tokri*, oil mill, iron fabrication and terracotta (refer **Plate 3.13**).

Primary survey conducted for the study organized by NCRPB, indicates that the Terracotta Cluster, Leather Cluster and Moortikala Cluster have good potential for development, on provision of necessary soft and hard interventions in the area. The cluster analysis reports of these three clusters indicate that an average employment in these respective cluster is 4, 5 and 3 employees/unit, with an average turnover of about Rs.2.34 lakh, Rs.2.91 lakh and Rs. 2.69 lakh/ unit, respectively (refer **Table 3.42**).

Table 3.42 Cluster analysis, Alwar district

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1	Terracotta Cluster, Ramgarh	35	141	Ramgarh	82
2	Murtikala Cluster, Ramgarh	200	564	Alwar, Makrana, Ramgarh	538
3	Leather cluster, Ishmailpur, Kishangarh	100	481	Delhi, Rewari, Ishmailpur, Kishangarh	291

Source: *Study on Micro & Household Enterprises in NCR*, NCRPB



Terracotta Cluster, Ramgarh^{xxx}



Leather (Shoes making) cluster, Kishangarh^{xxx}



Murtikala Cluster, Ramgarh^{xxx}

Plate 3.13 MSMEs in Alwar district

3.4.4 NCT Delhi sub-region

As per the *Brief Industrial Profile of NCT of Delhi* prepared by the MSME-Development Institute, NCT Delhi has a total of 1,29,000 industrial units, out of which only 20,986 units are registered (refer **Annexure 3**). There are nearly 875 micro & small enterprises and artisan units in NCT



Delhi. The major micro & small enterprises in NCT Delhi are related to electrical machinery, transport equipment, rubber, plastic & petro based products, metal (steel fab.), engineering goods and ready-made garments & embroidery (refer **Table 3.44**).

Table 3.43 Details of existing micro, small & artisan units in NCT-Delhi

NIC Code No.	Type of Industry	Number of Units	Investment (Rs. lakh)	Employment (in no.)
20	Agro based	19	475	608
22	Soda water	--	--	--
23	Cotton textile	2	45	45
24	Woolen, silk & artificial Thread based clothes	2	36	40
25	Jute & jute based	7	210	280
26	Ready-made garments & embroidery	60	1500	1920
27	Wood/wood based furniture	17	595	595
28	Paper & paper products	55	1925	1375
29	Leather based	22	748	660
31	Chemical/chemical based	9	315	135
30	Rubber, Plastic & petro based	142	5254	2556
32	Mineral based	1	35	24
33	Metal based (steel fab.)	83	2905	2075
35	Engineering Units	73	2701	2044
36	Electrical machinery and transport equipment	151	5436	5285
97	Repairing & servicing	85	3230	2550
01	Others	232	10690	9521
	TOTAL	960	36100	29713

Source: Brief Industrial Profile of NCT Delhi District, (MSME-Development Institute), Ministry of MSME, Govt. of India.

Primary Survey analysis, carried out in the study on *Micro and Household Enterprises of NCR* indicates that various clusters including non-leather products, metal fabrication, printing, plastic, furniture, handloom, paper products, readymade garments, mixed, textile finishing, electrical engineering equipment, zari/embroidery, printing & publishing, readymade garments,



jewellery, basketware and leather products have good potential for the development (refer **Plate 3.14**).

The non-leather products cluster (North Delhi), furniture cluster, non-leather footwear cluster (West Delhi) and readymade garments (East Delhi), provides an average employment of 9, 3, 6 and 5 employees/unit with a per unit average turnover of about Rs 6.30 lakh, 5.13 lakh, 8.38 lakh and 4.34 lakh, respectively (refer **Table 3.44**). Further, in case of printing & publishing cluster, zari/embroidery cluster (South Delhi), jewellery cluster, leather products cluster (Central Delhi), an average employment generated in these are 12, 7, 5 and 5 employees/unit with a per unit average turnover of about 7.75 lakh, 3.03 lakh, 1.61 lakh and 3.46 lakh, respectively.

Table 3.44 Cluster analysis, NCT Delhi

S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
1.	Non-Leather Products Cluster, Narela	900	8,379	Delhi	5670
2.	Metal Fabrication Cluster, Dhirpur	60	194	Delhi	157
3.	Non-Leather Footwear Cluster, Madipur	500	2,920	Delhi	4190
4.	Printing Cluster, Naraina	84	1,216	Delhi	151
5.	Plastic Cluster, Udyog Nagar	36	357	Delhi	200
6.	Furniture Cluster, Kirti Nagar	495	1,698	Delhi	2544
7.	Handloom Cluster, Sunder Nagri/Nand Nagri	50	260	Delhi	197
8.	Paper Products Cluster, Pushta	30	152	Delhi	132
9.	Readymade Garments Cluster, Gandhi Nagar	9500	50,825	Delhi	41230
10.	Mixed Cluster, Karawal Nagar	50	194	Delhi	236
11.	Textile Finishing Cluster, Seelampur	48	189	Delhi	128
12.	Electrical Engineering Equipment Cluster, Okhla	8	85	Delhi, Faridabad, Gurugram	132
13.	Zari/Embroidery Cluster, Zakir Nagar	100	716	Delhi, Surat	303
14.	Packaging Material Cluster, Okhla	18	165	Delhi	114
15.	Printing and Publishing Cluster, Okhla	40	484	Delhi	310



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S. No.	Name of Activity	Enterprises in Cluster (approx. no.)	Employment Generated (approx. no.)	Source of Raw Material	Estimated Turnover (Rs. lakh)
16.	Readymade Garments Cluster, Okhla	40	250	Delhi	244
17.	Readymade Garments Cluster, Govind Puri	40	296	Delhi	130
18.	Jewellery Cluster, Dariba Kalan	300	1,458	Delhi	483
19.	Basketware Cluster, Motia Khan	50	318	Delhi	97
20.	Leather Products Cluster, Nabi Karim, Paharganj	190	961	Delhi	657

Source: Study on Micro & Household Enterprises in NCR, NCRPB



Jewelry manufacturing, Dariba Kalan,^{xxxiv}



Decorative Handicraft manufacturing, Delhi^{xxxv}



Garment Manufacturing, Sangam Vihar^{xxxvi}



Handicraft items, Shakurpur^{xxxvii}



Packaging unit, Dariba Kalan^{xxxviii}



Textile (Hand Embroidery), Patel Nagar^{xxxix}



Leather Products Cluster, Nabi Karim, Delhi^{xl}



Furniture Manufacturing unit, Kirti Nagar, Delhi^{xli}

Pottery & Terracotta unit, Malviya Nagar, Delhi^{xlii}Mixed Products Manufacturing, Okhla, Delhi^{xliii}

Plate 3.14 MSMEs in NCT-Delhi

3.5 Comparative Analysis and Constraints in Spatial Development of Various Clusters

The NCRPB's study on *Micro and Household Enterprises in NCR* reveals that NCT Delhi has a concentration of cluster in varied sectors, though, it has the highest number of micro enterprises. In terms of growth, Haryana sub-region and Uttar Pradesh sub-region of NCR have experienced growth in certain sectors of MSMEs. Spatial distribution of MSME clusters among various sub-regions of NCR is shown in **Map 3.1**. Further, sub-region wise comparative analysis and constraints in spatial development are given in the following paragraphs.



HARYANA SUB REGION: In Haryana sub-region majority of micro & household manufacturing clusters are located in Panipat and Faridabad districts. Micro & household manufacturing enterprises that are found in this sub-region are mainly light engineering enterprises or those that are ancillary to the automobile industry; for example, the light engineering and auto component clusters in Faridabad, the nuts and bolts cluster in Rohtak and textile enterprises cluster in Panipat. Industrial growth of Haryana sub-region has bent towards automobile sector; this could be because of the setting up of Maruti Udyog plant in Gurugram district and high demand for automobile components in the Central National Capital Region (CNCR).

UTTAR PRADESH SUB REGION: Meerut district has a high concentration of clusters next to NCT Delhi. It has been observed that Meerut city has more than 18 clusters. The reason for high concentration of MSME clusters in Meerut city could be the availability of ancillary enterprises in the neighboring area within the district (Sardhana, Mawana etc.). The presence of a strong market for the products within Meerut and in the neighboring urban areas of Ghaziabad, Muzaffarnagar and Delhi etc. and the concentration of trading activities are also the major factors for the development of Meerut as a manufacturing hub in the Uttar Pradesh sub-region. In addition to Meerut, other districts of Uttar Pradesh sub-region i.e. Ghaziabad and Bulandshahr districts also have a number of MSME clusters. Ghaziabad, being an industrial city provides opportunities for development of ancillary micro & household enterprises in the district. Also, Uttar Pradesh sub-region has a large concentration of other MSMEs related to handloom, readymade garments, wood products and other miscellaneous manufacturing enterprises.

The concentration of clusters in Uttar Pradesh sub-region is high as the presence of large cities like Meerut, Ghaziabad, Noida etc., & proximity to NCT Delhi (having largest market for the products) are strongly influencing the demand-supply linkages. These large cities, mainly act as a market for the products. Besides market and government policies, source & supply of raw materials and availability of common infrastructure is playing an important role in development of micro & household enterprises and attracting more entrepreneurs.

RAJASTHAN SUB REGION: Rajasthan sub-region include Alwar district, having about 10 major clusters. During the cluster's survey, it was observed that the State Government and the DIC were actively involved in development of various clusters including micro & household enterprises in the district. Also, local raw materials like marble and clay have helped in the development of artisanal clusters in the district. These clusters have an added advantage of the large tourist market at Jaipur and NCT Delhi.

The study of *Micro & Household Enterprises in NCR* reveals that the main factors for origin and development of the micro & household manufacturing enterprises in the Rajasthan sub-region is the presence of large market for their products followed by government's support. Proximity to NCT Delhi also plays an important role in the concentration of MSME clusters in the district.

NCT DELHI SUB-REGION: NCT Delhi has high density of clusters due to better infrastructure conditions, in terms of regular supply of electricity and water, better road & rail connectivity, etc. Moreover, NCT Delhi is a stronghold of traders & trading activities for catering demand-supply, purchasing/selling raw material and marketing the products. Delhi enjoys the comparative



advantage of availability of skilled labour and training institutes. NCT Delhi, also being the seat for the Ministry of MSME has seen a number of initiatives in terms of awareness generation by various institutes, both technical and financial. Another factor for this concentration is the historical lineage of Delhi which has various cultural influences.

Complete restriction on setting up of large/heavy industries as well as hazardous, obnoxious industries (which provides opportunities for the development of micro & household enterprises) and restriction on small scale industries in terms of activity, manpower and electricity consumption are some of the major constraints for the growth of micro & household enterprises in NCT Delhi. In NCT- Delhi, there are number of regularized industrial areas, operated and managed by the DSIIDC, but there is no authority looking after the household enterprises/other clusters. It is observed that the Industries Commissionerate has no decentralized office such as District Industries Centres (DICs) to monitor the development of the enterprises at the district level.

A comparative advantage of Clusters in the Sub-regions is given in **Annexure-4**.

3.6 Potential Clusters

During the NCRPB Study on *Micro and household Enterprises in NCR*, discussions were held with various stakeholders including the entrepreneurs, artisans, associations, government officials, various technical institutions, etc. and the potential clusters which can be taken up for interventions on a priority basis have been identified. These identified Potential and Priority Clusters are recognized based on the detailed analysis of the clusters with respect to the following criteria:

1. **Growth Potential:** based on the trend in past five years and the potential for growth.
2. **Export Potential:** based on the products that are being manufactured by the respective cluster, quality of the product and scope for improvement.
3. **Congential Environment in terms of Government Policy:** based upon the various policies of the local authority and the respective State Government. It is also relevant in terms of the spatial spread of the cluster.
4. **Existing Intervention:** In case, a cluster is already selected for intervention under any scheme by Ministry of MSME/ State Government/ DIC or other technical institutes/private institutions.
5. **Exclusive in terms of product:** Clusters which are manufacturing exclusive products (products which are not available in any other cluster) are marked as priority clusters.

The Potential and Priority Clusters identified are given in **Annexure-5**.

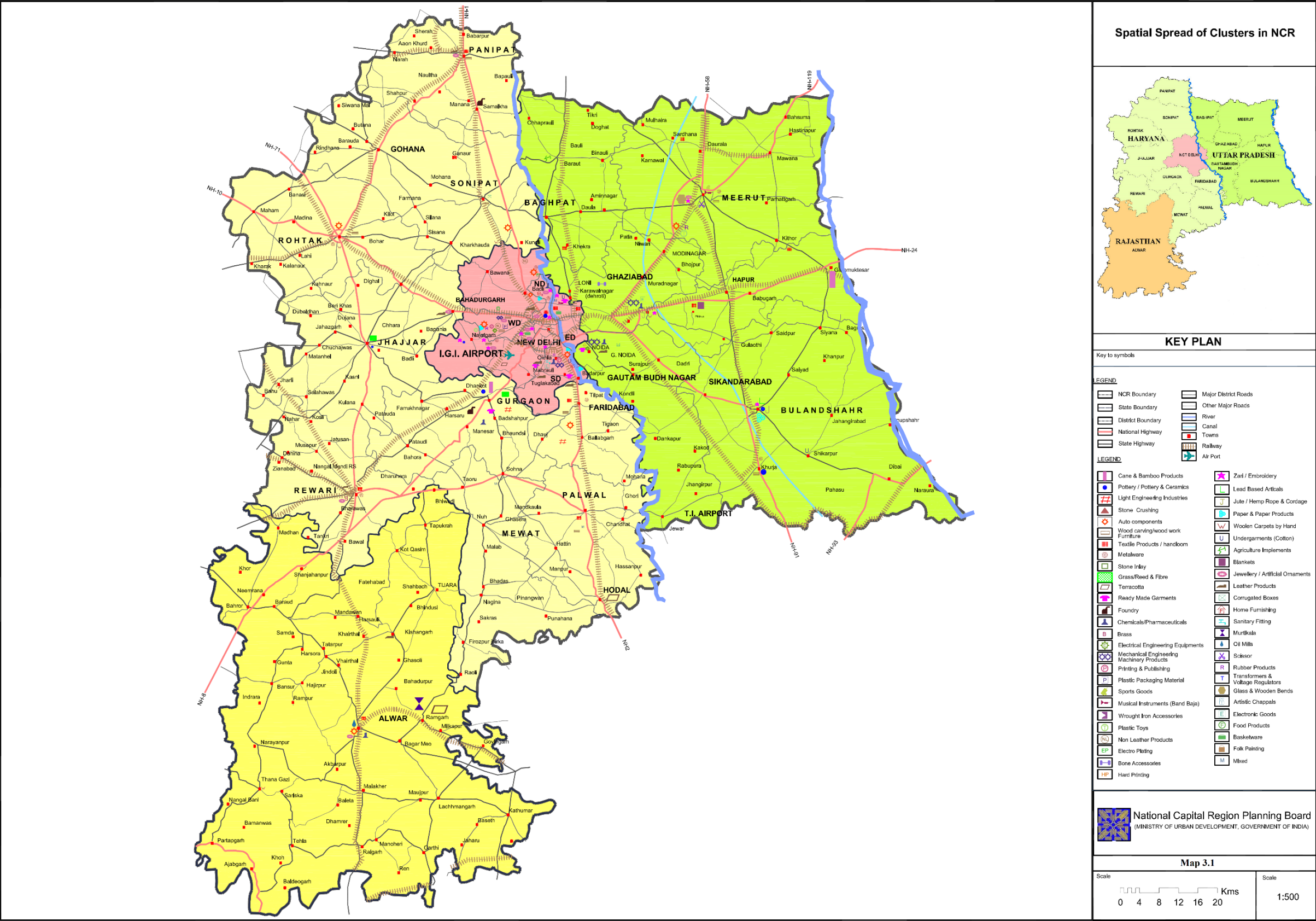
3.7 New and Potential Micro Enterprises

Based on the study on *Micro & household Enterprises in NCR* conducted by NCRPB, Brief District Profile Reports (district wise) prepared by the MSME Development Institutes, Ministry of MSME, Government of India and overall understanding of varied sectors & activity-mix, the following potential micro & household enterprises have been identified, which may be developed in NCR:



- **Food Processing Units:** Food processing units currently have negligible number of clusters in NCR, have a huge potential to be developed under MSMEs, as NCR is a part of rich agricultural belt of north India with the presence of Haryana, Uttar Pradesh and Punjab plains. In addition to this, NCT Delhi and Central NCR cities/towns are the large market for processed food items. With the help of fiscal incentives from Ministry of Food Processing Industries, a large number of such enterprises may be set up in various parts of NCR. Food items that could be manufactured/prepared includes biscuit, cakes, cookies, kulfi, confectionary items, jams, jellies, food preserves, pickles, sweets, namkeens, tomato ketchup, vermicelli, macaroni, etc. Further, it is also observed that there is a potential for dairy product (cream, ghee, paneer etc.) units in certain districts of NCR e.g. district Mewat.
- **Plastic Processing Units:** Plastic processing units currently has negligible number of clusters in NCR. The large petrochemical projects of IOC at Panipat and GAIL at Pata and large market of plastic products in NCR are some of the major factors that can boost the development of Plastic processing units in NCR. With the help of fiscal incentives from Ministry of Chemicals and Petrochemicals, a large number of such enterprises (manufacturing PVC products) may be set up in various parts of NCR.
- **Packaging Units:** Packaging units particularly paper, cloth and plastic have potential to be developed as MSMEs, as Delhi and Central NCR cities/towns provides large market for packaging materials. Wherever, there is large scale manufacturing in NCR for the retail/consumer products, packaging units/cluster could be developed to manufacture/ prepare the packaging materials for various products like hair oil, shampoos, milk, medicine, etc.

NCRPB's study on *Micro & Household Enterprises in NCR*, the district-wise *Brief Industrial Profile(s)* prepared by the MSME Development Institutes, Ministry of MSME, and Government of India have identified certain potential new MSMEs in various districts of NCR. The district-wise list of these potential new MSMEs is given in **Annexure-6**.



Map 3-1 Spatial spread of Clusters in NCR



4. CASE STUDIES

4.1 Background

Considering the importance of cluster development approach for overall growth and development of micro & small manufacturing enterprises, Ministry of MSME, other Central Ministries/Department, State Government Departments/Agencies, Local Authorities, SPVs/ Industry Associations, Export Promotion Council and various other organizations have made considerable efforts for development of MSME clusters in the country. Various Clusters have been developed through **Soft Interventions** i.e. technical assistance, capacity building, exposure visit, market development, trust building, etc. and **Hard Interventions** i.e. setting up of Common Facility Centre (CFC) like common processing centre/ production centre, design centre, testing facilities, training centre, common raw material bank and development of **Physical Infrastructure** like effluent treatment plants, roads, etc. The cluster development benefitted individual enterprises in terms of procurement of raw materials at cheap rates, skill development, design & technology up-gradation, processing of products, marketing of finished products & exports. It also improved the financial health of SMEs in the clusters. Some successful clusters/ case studies are highlighted in the following paragraphs.

4.2 Case Studies

4.2.1 Handloom Cluster, Varanasi, Uttar Pradesh

Varanasi has one of the highest weavers' concentrations in the country. In Varanasi weaving is like a local tradition since 1500 to 2000 B.C. with specialization in brocade weaving. Brocade is a textile in which pattern is created in weaving by transfixing or thrusting the pattern thread between the warp. Zari brocade entails use of gold (meaning silver thread with gold polish) and silver threads-real or imitation-thrust either as special weft or warp to create glittering raised ornamentation. The weave- rich varieties of sarees in Varanasi are *jangla*, *tanchoi*, *vaskat*, *cutwork*, *tissue* and *butidar*. Apart from the sarees, other products which were later introduced in the cluster are dress material, stoles, scarves, mufflers and home furnishing items. The Varanasi cluster comprises of around 2,00,000 weavers, of which only 40 percent are active^{xliv}.

Lessons Learned

- i) The cluster development program for Varanasi under IHCDP of DCHL was initiated in the year 2006. To start with, diagnostic study of the Handloom Cluster was conducted and cluster mapping was done. After selection of cluster pocket, baseline data was collected. The purpose of the data collection was to understand the set of interventions required for Cluster Development. Based on this survey, a report was prepared and required benchmarks were established.
- ii) Year wise action plan was prepared and various elements of the action plan were implemented in different phases. Awareness programmes and focus group discussions



with stakeholders were conducted in different parts of the Cluster to understand the real situation and to validate the action plan.

- iii) In order to organize the weavers, about 108 self-help groups (SHG), with weavers from all the sections, were formed with an average of eleven members in each. Each member of the group has to save a particular amount on monthly basis, which is to be deposited with the group. A number of capacity building programs were organized for the Groups.
- iv) Based on the initial assessment of these small SHGs, it was decided to form a bigger group which was named as “*Banaras Hathkargha Bunakar Vikas Samiti Producer Company Limited*” Altogether, there are 1,554 weavers/ master weavers associated with this company.
- v) To cater to the demand of different segments of market, need for new design development was realized. Services of NIFT designers were hired to develop new designs with the help of local designers. In the process, 96 new designs were developed on the fabric and tested in different markets like retail stores, exhibitions, buyer-seller-meet (BSM), etc. This process also helped local weavers to build their capacities in terms of creating new designs and colour combinations.
- vi) Colour fastness is one of the concern areas and to address this, two dye houses have been up-graded with required machines, under PPP, on user charge basis. To train the human resource for good dyeing practices and various types of dyeing, around 13 workshops/ trainings were organized under technical guidance of weaver service centers and other agencies. Good quality colours were also made available through National Handloom Development Corporation Ltd. (NHDC). Currently, these dye houses are catering to the requirement of the whole cluster.
- vii) To facilitate the weavers of the cluster, a Common Facility Centre (CFC) is being developed in association with the weavers’ organization i.e. “*Banaras Hathkargha Bunkar Vikas Samiti*” to cater to the requirement of the weavers on user charge basis. This CFC will be equipped with showroom-cum-display centre, meeting room, weaving shed, testing laboratory and yarn bank. This CFC will be instrumental in development of new designs, display of new/diversified products to the buyers & visitors and availability of good quality yarns received under Mill Gate Scheme of NHDC.
- viii) The weavers were given the opportunity to take part in the exhibitions organized across the country to understand the need and taste of the customers, to develop them as good marketing persons and to sell their products. As a result, they have participated in around 70 exhibitions and sold weaves worth around Rs.100.37/- lakhs so far. Organizations’ linkages with institutional buyers is one of the important requirements to sustain in the market. To achieve this, a number of Buyer-Seller Meets were organized. As a result, linkages with the reputed buyers like Lifestyles, CCIC, UP Handlooms, Fabindia, Sri Design Studio, etc. were established which have been worth of Rs. 2.58 crore so far. Also for marketing, catalogue in fabric, printed and digital



forms were developed with all the technical details. Handloom Mark was also promoted and weavers were encouraged to register for the same.

4.2.2 Knitwear Cluster, Tirupur, Tamil Nadu

Tirupur, a small town in Coimbatore district in Tamil Nadu is the hallmark of the success stories of Indian clusters and is popularly known as '*Baniam City/ Knit City*'. Tirupur is famous for the cluster activities and mostly, each activity of garment making is being carried out in the town. The clusters consists of units dealing with knitting, dyeing & bleaching, fabric printing, garmenting & embroidery, compacting & calendaring and other ancillary activities. There are more than 6200 such units in the town.

Tirupur has been the centre of textile business since 1870, which catered to the mills set up by the colonial rulers to counter the high cost of labor in the European mills, especially that of Manchester. This township started with the production of low valued cotton hosiery items, mainly, the undergarments, during 1920's and exports during year 1974. Tirupur, mainly exports to European Union, the United States of America, Canada, Japan and Middle East.

Lessons Learned

- (i) Continuous business growth, outstanding performance and self-initiatives to address issues affecting growth of business, without waiting for the government support, are some of the key factors responsible for present condition of Tirupur knitwear cluster.
- (ii) Number of yarn spinners have integrated forward to set up knitting plant, textile process house and become makers of garments. Such forward integrated exporters who have grown from yarn spinners are Eastman, Centwin, Poppy's, Tube Knits Fashions, KPR, etc. and those who have grown forward from leading process houses are Victus Dyeing (Geena Garments), Reliance Dyeing, SCM, PKP, etc. These have also integrated forward to establish garment making units. Examples of backward integration are very few like Dhanam International, Kaytee Corporation, Network Clothing Company etc.
- (iii) In Tirupur, if the integration is not wholly owned by the exporter to become a vertical unit, then the exporters buy stakes or invest into a process house to become partners to ensure preference to their orders for the textile process and maintain standard quality, as desired by their buyers. The owners of the process house are regulated by stringent legislations for the environment controls. In Tirupur, the process houses must have Reverse Osmosis or Zero Effluent Discharge plant or else the existing plants (units) have to close and application of new plants will not be approved.
- (iv) The amount of investments in terms of plant & machinery and overheads in the integrated garment industry is quite high as compared to other knitwear clusters and thus requires efficient management for timely return on investment. This factor motivates them to continuously upgrade existing technology to the acceptable international levels. In spite of the fact that Tirupur town is reeling under acute infrastructural shortage, Tirupur knitwear exporters are able to make a mark in the international sourcing map of textile industry because they work as a group and help each other for a common cause.



- (v) The exporters willingly finance (fully or partly) projects related to repair or new construction of roads, culverts, drinking water supply, etc., carried out by the municipality and or panchayat.
- (vi) Tirupur Exporters' Association (TEA) was set up in 1990 with a vision to make Tirupur a vibrant knitwear cluster under global outsourcing for everything in knitwear. Currently, TEA has 668 knitwear exporters as members and performing yeoman service to the exporters.
- (vii) Tirupur Exports from a meager Rs. 10 crore in 1985 to Rs.5000 crore in 2003, and Rs.11,000 crore in 2006-07 is a performance that has no parallel anywhere in the world. As far as the export is concerned, all leading brands Nike, Cutter & Buck, Adidas, GAP, Tommy Hilfiger, Katzenberg, Van Heusen, Fila, Arrow, etc., and leading chain stores like C&A, WalMart, Target, Sears, C&A and Mothers Care, H&M are sourcing from Tirupur.
- (viii) TEA visualized the directions and dimensions of growth of knitwear sector sufficiently in advance. It also conceived, planned and executed large projects to sustain the growth and retain dominance in knitwear exports. Its major achievements are setting up of /construction of Tirupur Export Knitwear Industrial Complex, Inland Container Depot (ICD), TEAKTEX, New Tirupur Area Development Corporation Limited (NTADCL), NIFT-TEA Knitwear Fashion Institute, Trade Fair Complex of international standards, Netaji Apparel Park, JV for warehousing and distribution of garments in Europe and E-Readiness Centre. The projects details are given below:
 - a. An exclusive industrial complex for manufacturing of knitwear for export, namely, *Tirupur Export Knitwear Industrial Complex* (about 8 km from Tirupur), is a 100 acres site to relieve congestion within the city and facilitate expansion of production capacities. This is the first Industrial Complex promoted by private enterprise, consisting 189 industrial sheds with full-fledged infrastructure facilities such as power, water, roads, rain water drainage, sewerage, security post and telecommunication. The investment in this complex has crossed Rs.200 crore and value of production is estimated at Rs.800 crore per annum.
 - b. *TEA LEMUIR Container Terminals Private Limited* (about 10 km from Tirupur), arranges for loading and unloading of export and import cargo in Tirupur itself. Exporters in Tirupur are now completing the custom formalities in Tirupur itself and sending the goods in containers directly for shipment through all southern ports and Mumbai.
 - c. The processing and production complex located in Kanjikode near Palakkad is considered as one of the most modern process house which is functioning for enhancing the quality of knitwear cloth and garments to international standards. A few knitwear production units are also working in the complex. This is a joint venture project of Government of Kerala and knitwear exporters in Tirupur.



- d. A Public Limited Company promoted by TEA jointly with the Government of Tamil Nadu, Government of India and Infrastructure Leasing & Financial Services Limited (IL&FS), Mumbai supply water from Cauvery river (which is about 55 km from Tirupur) for industrial and domestic use not only by the people of Tirupur but also those in more than 30 villages, en-route the pipeline. The massive project estimated to cost Rs. 1100 crore, also envisages underground sewerage system for Tirupur, collection, treatment & disposal of sewerage and solid waste. The water project is already completed.
- e. TEA has teamed up with the Tirupur Dyers Association, collected Rs. 10.00 crore towards equity contribution of the project. This project is an outstanding example of PPP of massive scale, funded by leading international financial institutions like USAID. This is the first of its kind in the whole of Asia.
- f. NIFT – TEA Knitwear Fashion Institute has been setup to cater the manpower needs of knitwear industry and export business in all areas of designing, manufacturing, marketing and administration. Promoted at an investment of Rs. 2.5 crore with support from the Government of India (Ministry of Industry) and ICICI, the Institute has state-of-art machinery and equipment, including CAD and offered testing, training and designing services to the industry. At this institute, Bachelor Degree programs are offered in Apparel Fashion Design, Fashion Apparel Management, Garment Production and Chemical Processing, Apparel Manufacturing and Merchandising. The Institute also offers Master Degree in Apparel Business and Apparel Production.
- g. To attract buyers from all parts of the world to Tirupur knitwear industry, TEA and Apparel Export Promotion Council (AEPC) constructed a Trade Fair Complex of international standards, about 12 km from Tirupur, providing easy and fast access from Coimbatore airport to buyers, visiting the Fair. In the Trade Fair Complex, about 27 knitwear fairs have been conducted so far, which led to the substantial increase in export of autumn/winter wear from Tirupur. Indian Knit Fairs (IKF)-summer and autumn/winter- are well known globally, buyers from world over look forward to these fairs. A Convention Centre has been constructed in the IKF Complex for conducting programs, meetings etc.
- h. The Netaji Apparel Park, first of its kind in the country has been developed in a 166 acres site at a strategic location alongside the national highway in 2005. The park has 52 knitwear manufacturing facilities, with state-of-art machinery and world class infrastructure, created with an investment of Rs.300/-crore. It provides direct employment to more than 15,000 persons. The park's contribution for knitwear export turnover of Tirupur is about Rs.1500.00 crore per annum.
- i. TEA and St. John Freight Systems Ltd., have formed a JV Company (JVC) in India of 50:50 ratio, in the name of TEA – St. John Logistics Private Limited. The new JVC would float a subsidiary company in Antwerp, Belgium shortly for



warehousing and distribution of garments in Europe. The JVC will give one stop solution for end to end service with focus on Supply chain for garment distribution at Antwerp, Belgium and will also employ sales team in Antwerp. The JVC is committed to provide seamless supply chain solutions in Europe for Tirupur sellers and European buyers. This JVC is also planning to act as a trading house with exceptional logistics back-up advantages, which will add tremendous value to the relationships with existing buyers and also help to forge new partnerships. The JVC has plans to have own retail shops/showroom in major cities in Europe and own warehouse in Antwerp. Further, for the success of Venture, similar joint venture subsidiary company could be started in UK and USA also.

- j. TEA has entered into a Memorandum of Understanding with Microsoft Corporation (India) Private Ltd., to set up e-readiness centers which offer e-readiness programme, e-learning modules and enhance solution delivery capability for local system integrators, resellers and independent solution vendors. Microsoft will also develop a Tirupur cluster portal which will have a public interface and a certain person, accessible to SME community in Tirupur. Microsoft will help and provide online platform to facilitate collaborative exchange for addressing issues like regulatory compliances, environmental issues, quality and certification procedures, project management and textile design development.

4.2.3 Raisin Cluster, Sangli, Maharashtra

Raisin production is one of the important activities under taken in Sangli district. Sangli is one of the largest raisin producer districts in the country. Raisins are basically dry grapes and also known as *kishmish*, *manuka*, *bedana* or dry fruits. In the earlier days, grapes were dried on plants only, which was a very crude method for making raisin, therefore, result in wastage. The project of converting of grapes to raisin began around 40 to 45 years ago but since last 3 to 5 years, the production has been virtually strengthening. The farmers (growers-cum-processors) undertake raisin production activity themselves and sell raisin in open market. For production of quality raisin, grapes harvested, graded, washed and dipped in solutions containing ephylote, potassium carbonate and water for 2 to 5 minutes. These grapes then brought to drying shed and spread on shed. Drying process gets completed within 15 to 21 days depending upon weather conditions. The raisins are collected, sorted and graded before packing for marketing or sale.

Lessons Learned

- (i) Raisin Cluster at Sangli district in Maharashtra is one of the clusters in India, where MSE-CDP intervention were taken up. Diagnostic Study for raisin making cluster was conducted and the Diagnostic Study Report was approved in 2008 at the project cost of Rs.2 lakh. Govt. of India grant of Rs. 1.8 lakh was sanctioned for the same.
- (ii) Under MSE-CDP, soft intervention programme activities which leads to creation of general awareness, counseling, motivation and trust building, exposure visits, market development including exports, participation in seminars, workshops and training



- programmes on technology upgradation etc. were taken up in 2009 with a project cost of Rs.3.3 lakh wherein Govt. of India grant of Rs.2.97 lakh was provided.
- (iii) SPV was formed as M/S. Sangli Grape Processing, Marketing & Research Industries Ltd. and its website & brochures were launched/published.
 - (iv) Enquiries were received for supply of hygienic raisins from local and international market.
 - (v) Cluster enterprises participate in B2B meeting on local and national level through various exhibitions. The participants interact with national and international level buyers to know the needs of customers.
 - (vi) Workshop and seminar conducted on technology upgradation & quality aspects at various institutions like Central Food Technology Institute (CFTRI), Mysore and Development & Technical Consultancy National Research Center, Pune, etc. Information/guidance received on different varieties of grapes used for raisin making in the world and their yields, nutrient & water requirement in grapes/raisin, different types of diseases & their control, weather forecasting, method of drying of grapes, different types of chemical used for quality raisin, etc.
 - (vii) Cluster enterprises also attend seminars on management practices and interact with bankers. Through such seminars/interaction meetings, the bankers get clarity regarding the needs and scale of finance for cluster & MSME enterprises.
 - (viii) National Research Centre for Grapes, Pune and the CFTRI, Mysore were involved as Expert Technical Agencies (ETA) for development of the Raisin Cluster.
 - (ix) The Common Facility Centres (CFCs) were jointly constructed by means of finance of Govt. of India (70%), Govt. of Maharashtra (10%), SPV contribution (15%) and bank loan (5%), with the facilities like common production/ processing centre (for balancing/correcting/improving production line, which cannot be undertaken by individual units), design centre, testing centre, common packaging centre, etc. with the components given in **Table 4.1**.

Table 4.1 Components of CFC project and their cost, Raisin cluster, Sangli

S.No.	Components of CFC project	Amount (Rs. In lakh)
1.	Land	18.00
2.	Building	96.60
3.	Plant & Machinery	454.01
4.	Furniture & Fixtures	3.00
5.	Accessories & Miscellaneous Fixed Assets	74.51
6.	Total Fixed Assets (TFA)	646.12
7.	Add:-Margin Money for WC	1.78
8.	Add: - Preelli & Pre-op. exp. & 5% of TFA	32.44



S.No.	Components of CFC project	Amount (Rs. In lakh)
9.	Add: - Contingencies & 2% of Building	1.93
10.	Add: - Contingencies & 5% of Plant & Machinery and other F.A.	26.58
	Total cost of the project	708.85



A view of the Common Facility Center at Raisin Cluster, Sangli

Plate 4.1 Common Facility Center, Sangli

The benefits of the Common Facility Center at Raisin Cluster are summarized in **Table 4.2**:

Table 4.2 Benefits received after establishment of Common Facility Center at Raisin cluster

Before setting up of CFC	After setting up of CFC
Grading and Sorting was manually carried out by labour, chances of mixing of stones, impurities were more in manual sorting. Opportunities for export of manually sorted raisins were less.	Common processing Sorting and processing is done by atomized machinery, it produces hygienic and export quality raisins. MSME units are directly and indirectly exported. CFC processed raisins exported to various countries i.e. Dubai, Kuwait, Russia.
No testing and inspection facility was available in cluster area.	Common Testing Laboratory Chemical and biological testing facility for finished goods and raw material is available in CFC. Water testing, colour testing, moisture testing, soil and leaf testing facilities are also available in CFC
Packaging facility is not available in cluster area.	Common Packaging Centre Packaging facility for export quality raisins are available in CFC. Packaging facility of raisins into small pouches for domestic market is available in CFC.
Others	<ul style="list-style-type: none"> ○ Increase the efficiency and productivity of the MSMEs. ○ Reduced cost of products ○ Mfg. of the internationally competitive raisins is possible.



Before setting up of CFC	After setting up of CFC
	<ul style="list-style-type: none"> ○ Improved the quality of raisins which fulfill the need of global market. ○ Value addition increased by 10 to 20 %

4.2.4 The Footwear Cluster at Athani, Belgaum, Karnataka

A very different perspective for cluster development, named “*Group Enterprise*” and involving a private business services provider, was experimented in Athani, Karnataka. Athani is a small town of about 35,000 population wherein about 800 families are actively involved in producing handmade leather *chappals*. The entire family participates in the production process and a clear division prevails between men and women. While men cut the raw material, prepare the bottom soles and market the *chappals*, women craft the inner soles and decorative uppers and grade.

Lesson Learned

- (i) Khadi and Village Industries Commission (KVIC) initiated governmental interventions in Athani in 1968, with the opening of a training-cum-production centre, which imparted technical know-how, working capital and marketing facilities to the artisans. The initiative was a success with a sensible increase in new designs and products.
- (ii) Karnataka State government actively started to support the industry by promoting the Karnataka Leather Industries Development Corporation Ltd. (LIDKAR), which focused on increasing the demand for *chappals* through marketing. The Corporation opened a large number of outlets in the state and entered into cooperation with a governmental marketing agency of Assam, in order to also cover the northern region. It succeeded in providing employment to more than 10,000 leather artisans in the district Belgaum alone.
- (iii) The State government facilitated the process by providing house-cum-work sheds to workers at subsidized rates and interest free loans.
- (iv) The Central Leather Research Institute (CLRI) and the District Industries Centre (DIC) extended support to improve the quality of products to meet the export requirements. The CLRI observed that the provision of technical inputs alone would not suffice to enhance the artisans’ performance, training in marketing and changes in their mindsets, notably in their depreciative perception regarding work and of themselves, were other prerequisites for success. In the light of this assessment, the organisation set up training programmes in entrepreneurship aiming at transforming the artisans into entrepreneurs in 1999, this in collaboration with the Asian Centre for Entrepreneurial Initiatives (ASCENT), a Bangalore based NGO, and the National Leather Development Programme. The initiative was named ‘*Project EnterPrice*’, it involved 600 artisans and put a specific emphasis on women empowerment. Its volunteers conducted a baseline survey and interacted with artisans, governmental and developmental agencies, and also with community leaders through the Rotary Club.



- (v) Before initiating workshops, ASCENT conducted entrepreneurship awareness camps for women while interacting regularly with their families in order to build up trust.
- (vi) SHGs were created by regrouping 15 to 20 women, who started to save a certain amount regularly in order to benefit from their savings in the form of loans at a later stage.
- (vii) Various training programs were organized in the cluster for building up awareness about costing, pricing, standardization of products and timely delivery.
- (viii) A Common Facility Centre (CFC) was set-up to ensure that market requirements were met and a few women were also trained in design and for imparting training.
- (ix) Brand building became a priority and the groups promptly understood the implications of the concept, which led to creation of the Toehold brand. The Toehold Artisans Cooperative (TAC) was registered as a Trust in 1998, regrouping SHGs, ASCENT representatives and members of the Rotary Club with the aim to act as an apex marketing agency and develop sales in foreign markets. Once a buyer places an order with TAC, the order is submitted to the eleven SHGs that are registered with the Corporation, and these SHGs, bid competitively for it. On acceptance of the quotation, the SHGs members execute the order individually or together as agreed. The *chappals* are then submitted to a two-level quality control and delivered to TAC, which remunerates the artisans through the SHGs. At the end of the financial year, 40% of the net profits are redistributed to the artisans, 20% to the SHGs and 40% remain with TAC to finance productive and social investments, considered as necessary for enhancing the cluster's competitiveness and the artisans' well-being.
- (x) In the Footwear Cluster, over 60% of the artisans obtained electricity and about 10% accessed telephone during 1998 - 2003 due to the improvement in financial health of the artisans. Cooperation with the Rotary Club resulted in improved sanitation by way of organizing health camps, educational facilities, vocational training for shoe making and promotion of computer literacy.

4.2.5 Pottery & Ceramic Cluster, Khurja, Uttar Pradesh

The Khurja pottery cluster is one of the oldest pottery clusters in the country. It came into existence during the Mughal rule in the northern India when there was a demand for earthenware. Khurja cluster is located at a distance of about 100 km. from Delhi. A majority of the units are located in and around Khurja town.

There are about 750 pottery units in Khurja engaged in production of various types of ceramic products. Pottery manufacturing business has generated employment for about 25,000 persons in manufacturing sector and more than one lakh persons in trading sector. Khurja pottery cluster is engaged in the production of various types of ceramic products such as stoneware and bone china crockery, HT (high tension) and LT (low tension) insulators, electrical items, sanitary wares, decorative wares and chemical porcelain. The cluster comprises dependent and independent pottery units.



Ceramic manufacturing process broadly consists of mould preparation, body material preparation, shaping, drying and firing. Details of manufacturing process of ceramic products is as under:

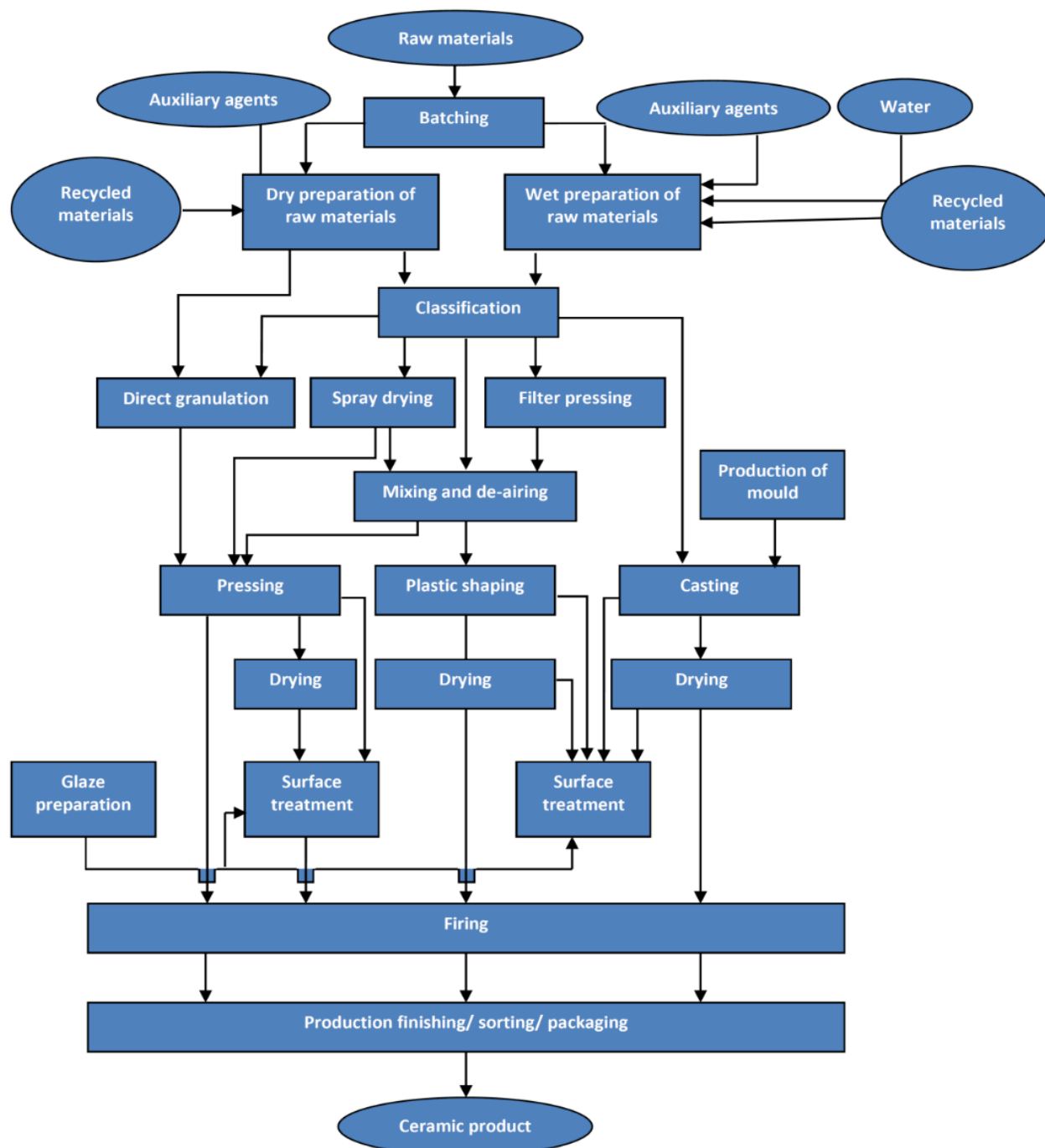


Figure 4.1 Process involved in manufacturing of ceramic products

Source: Cluster Profile Report- Khurja Potteries, TERI, 2015

Lesson learned

- (i) The independent pottery manufacturers have integrated production facilities ranging from raw material processing to firing. Both dependent and independent potters have



their own associations, viz. KHPA (*Kutir Avam Hasth-shilp Potters Association*) and KPMA (*Khurja Pottery Manufacturers Association*), respectively.

- (ii) Traditionally, Khurja pottery cluster was using downdraft kilns which were mainly using coal as fuel. However, there were number of issues related to operation of downdraft kilns which includes higher Specific Energy Consumption (SEC), lower yield and poor environmental performance. Over the years, majority of downdraft kilns have been replaced with tunnel kilns and shuttle kilns.
- (iii) The pottery units in Khurja use Light Diesel Oil (LDO), Rubber Process Oil (RPO), natural gas and electricity. Thermal energy accounts for about 80-85% share and electrical energy 15-20% share of total energy consumption in a pottery unit. Energy costs are estimated to be 25-40% in overall production costs. RPO is being increasingly used by pottery units in the cluster, which may be mainly attributed to lower costs as compared to LDO. However, the issues related to use of RPO in existing burner setup include higher un-burnt in flue gases and frequent maintenance of burner.
- (iv) The major stakeholders in Khurja pottery cluster include the following:
 - a) **Industry Associations:** The important industry association at cluster level is Khurja Pottery Manufacturers Association (KPMA). It is well represented by a large number of potteries using tunnel and shuttle kilns. Other industry associations include Khurja Pottery Raw Materials Association (KPRMA) and Khurja Kutir Udyog Associations (KKUA).
 - b) **Central Glass and Ceramics Research Institute (CGCRI):** The CGCRI, a unit of CSIR, Government of India is located within the cluster. CGCRI is equipped with a laboratory for raw material preparation and kiln firing. It conducts regular training programs on skill up-gradation.
 - c) **Indian Ceramic Society (Western Uttar Pradesh Chapter):** The Indian Ceramic Society (Western Uttar Pradesh Chapter) is located in CGCRI and is involved in conducting workshops and conferences relevant for ceramic industries in the region.

Khurja pottery cluster is one of the focus clusters in a UNIDO supported study on “*Promoting energy efficiency and renewable energy in selected MSME clusters in India*”. UNIDO is working closely with CGCRI in implementation of the project in the cluster.

- (v) The Office of the DC, SSI (Development Commissioner, Small Scale Industries) has undertaken a diagnostic study for the modernization of the pottery industry in Khurja. By conducting a review of past studies w.r.t. modernization aspects of the cluster, an assessment of problem areas at each stage of production, remedial measures to overcome the problems and formulation of detailed strategy for implementation was undertaken.



4.2.6 Auto Component Cluster, Chennai, Tamil Nadu

The Indian automotive industry has been growing at an appreciable pace with expanding domestic and export markets during the last decade. The industry has attained a turnover of Rs.1,65,000 crore with an investment of Rs.50,000 crore. Tamil Nadu State has the largest auto components industry base which alone accounts for 35% of India's auto components production. The industry, over the years, developed the capability of manufacturing all the components required for manufacturing vehicles.

As per the statistics of Automotive Component Manufacturers Association (ACMA) of India, there are about 40 medium and large enterprises in Chennai, alongwith 6 major car manufacturing industries located in and around Chennai including Ford, Hyundai, Renault, Nissan, Mitsubishi and BMW. The total capacity of these 6 car projects is 13.80 lakhs units per year. Besides this Ashok Leyland, Ashok Leyland Nissan, Wright bus manufacturing buses, trucks special application vehicle, engines, etc. During 2007-09, India's total export of automobile was about Rs.8,861 crore, of which, Chennai alone exported Rs.4,733 crore (53.41%). Chennai has over 350 tier I to III suppliers apart from more than 4000 small and medium enterprises under tier IV segment. All mother vehicle projects also have dedicated vendor's parks next to them. Chennai is now emerging as one of the top 10 Global automobile manufacturing centres. The following figure illustrates various actors in the Auto Component Cluster in Chennai.

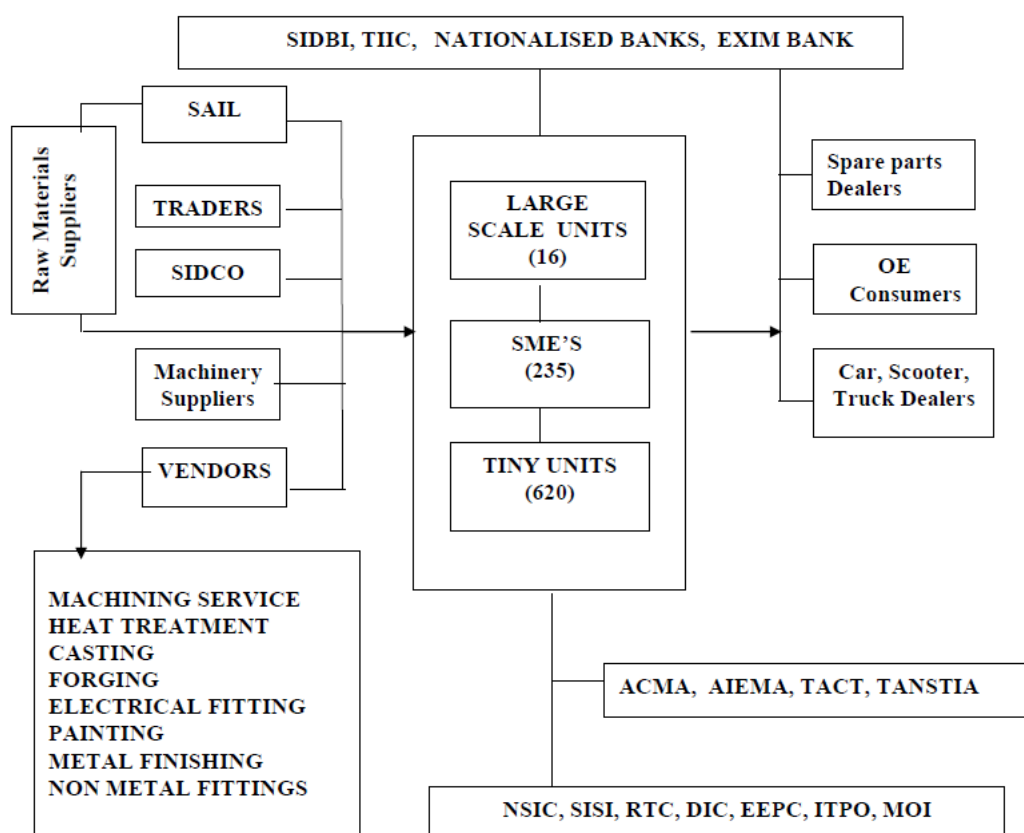


Figure 4.2 Stakeholders of Auto Component Cluster

Source: Diagnostic Study Report of Auto Component Cluster Chennai, Cluster Development Executive, Small Industries Services Institute, Govt. of India



Lessons Learned

- (i) **Raw Material:** Most of the units buy materials through dealers of large manufacturers. Raw materials like steel and Fe-alloys are principally sourced from SAIL and its suppliers. For non-ferrous alloys like aluminum, there are local re-melting units & foundries that manufacture the alloys & ranges with different composition based on the requirements of the manufacturers. The vendors of Ashok Leyland, Original Equipment Manufacturers (OEM) has a tie-up with SAIL and practices an informal consortium approach wherein the steel requirements of all its vendors are clubbed together and a price is negotiated with SAIL based on the bulk purchase. This has gone a long way in helping Ashok Leyland's vendors to reduce the raw material costs. This can be a role model for other cluster including NCR.
- (ii) In this cluster NSIC is involved in Hire Purchase and Leasing Schemes. The Hire Purchase & Leasing Scheme has a provision for supply of indigenous and imported machinery and equipment on easy financial terms and it mainly targets first generation entrepreneurs. The main aim of the leasing scheme is to facilitate SMEs to expand their capacities or diversify and/or upgrade their technology according to the needs of market. Under this scheme, the enterprises are entitled to 100% finance under a single window for indigenous/ imported machinery and tax rebates on full-year rental. This scheme is utilized by the enterprises in the cluster for technology upgradation.
- (iii) **Small Industries Development Corporation (SIDCO)** plays an important role in supplying raw material to the needy industries. SIDCO has few depots in the industrial estates to cater the needs of industries. The units get the credit for the purchases for a period ranging from one to two months. Generally minimum order quantities are not too high for the components.
- (iv) **Institutional Support:** Tamil Nadu Small and Tiny Industries Association (TANSTIA) is an apex body recognized by both State and Central Governments. Trade Associations and many small & tiny industries are its members. This association plays a promotional role, participates in the committees of State & Central Government and promote interest of the small and tiny industries. It is trying to bring cluster development activities in major industrial estates of the State.
- (v) **Auto Components Manufacturers Association (ACMA):** It is an all India Association and has an extensive database on the auto components manufacturers and their production. It organizes buyer-seller meets, trade fairs, seminars and lectures. This body produces a comprehensive statistical report on the automobile and auto components sectors and have a number of publications.
- (vi) **Small Industries Services Institute (SISI):** This is a Central Government Organization coming under the control of the Development Commissioner, Small Scale Industries. This body disseminates information about the Central Government's policies & schemes and also conduct training programmes in various disciplines. Under the aegis of UNIDO, this organization also has a subcontracting exchange for vendors. This organization has



- been mandated to play a role as a cluster development agency in the auto component cluster at Chennai.
- (vii) NSIC is involved in Hire Purchase & Leasing Schemes and Raw Material Assistance Scheme and it operates Consortia Marketing Assistance Program. Whereas, the Raw Material Assistance Scheme is to supplement the availability of raw materials to a large number of units, the Hire Purchase & Leasing Scheme can be utilized in the cluster for technology up-gradation. The institution is keen to play an active role in the cluster development programme.
 - (viii) **Central Institute of Plastic Engineering & Technology (CIPET)** is in the forefront for imparting training, consultancy services and testing facilities. It has good linkages with the other industries and many auto component industries & automobile manufacturers avail its services. It also arranges manpower for the industries by conducting various placement programmes for the trainees.
 - (ix) **Engineering Exports Promotional Council (EEPC):** This is a Central Government organization under the Ministry of Commerce, Govt. of India, which keeps track of the exports engineering goods including auto components. This body helps the industry by organizing buyer-seller meets, exhibitions, foreign exposure trips, etc. It operates Marketing Development Assistance Scheme and provides financial assistance for preparation of publicity material and market survey on specific products.
 - (x) **Tamil Nadu Industrial Investment Corporation Ltd. (TIIC)** is the premier financial institution in the State and does project financing for medium and small scale units in the State. Apart from the conventional term loan lending, this institution also has a scheme for modernization which is being availed by the units in auto component cluster for upgrading their technology. Many industries in the cluster are availing fund for working capital.
 - (xi) **Industrial Department, Government of Tamil Nadu** has formulated '*Tamil Nadu Automobile and Auto Component Policy*', 2014 for an integrated and comprehensive development of automobile and auto component manufacturing units. The policy aims at promoting new auto clusters and facilitates backward and forward linkages to maximize value-addition in the State and to encourage small and medium enterprise vendors. It also aims to augment the talent pool to meet the long term skilled manpower requirements of this industry and to encourage PPP initiatives and Industry-Institution partnerships in skill development.
 - (xii) **National Automotive Testing and R&D Infrastructure Project (NATRiP)**, a Govt. of India project, established in Oragadam near Chennai with a test track to facilitate introduction of world-class automotive safety, emission and performance standards. It also ensures seamless integration of Indian automotive components industry with the global industry.
 - (xiii) A "**Research Valley**" in Maraimalai Nagar near Chennai has undertaken design, prototype development and testing of new vehicle models.



- (xiv) **The Tamil Nadu Skill Development Mission**, initially implemented through a society and later it has been reorganized as a Special Purpose Vehicle (SPV) with participation from private sectors under the Companies Act, 1956 as Tamil Nadu Skill Development Corporation.



5. ISSUES & RECOMMENDATIONS

5.1 Background

Micro, Small and Medium Enterprises play a pivotal role in the economic and social development of the country. As per the fourth Census of MSMEs of India, there are a total of 3.6 crore MSMEs in the country, employing over 8.0 crore persons making it the second largest employer sector after agriculture. MSMEs contribute significantly to the GDP (37.54%) accounting for 45% of total industrial production and 40% of total exports of the country. The manufacturing segment within MSMEs contributes to 7.09% of the GDP.

NCR is one of the fast growing industrial and urban region in the country. Its resource base, industrial base (about 2.5 lakh large & medium industrial units), large urban population and huge consumer market led to the mushrooming growth of the micro and small enterprises in region. There are 85,648 micro and small scale enterprises in NCR with the total investment of Rs. 94,929 crore, employing about 9 lakh persons. The micro and small scale enterprises not only provide employment to lakh of workers including artisans and rural people in the region but also create a sound entrepreneurial base in the economy by developing and nurturing talents and skills of micro, household and small entrepreneurs.

It is observed that despite of enormous importance and potential of micro, household and small enterprises in NCR, most of these clusters/ enterprises in NCR are facing several problems relating to availability of physical infrastructure like electricity, water supply, road, shelter, storage, etc., procurement of raw material, purchase of machinery & equipment, design & technology, access to credit, marketing of their products and institutional support, etc. In this Chapter, various issues and challenges related to the micro, household & small enterprises in NCR have been discussed and recommendations are formulated to overcome these issues & challenges for fostering the growth and development of this sector in the NCR.

5.2 Micro, Household and Small Manufacturing Enterprise's Clusters in NCR

Various micro, household & small manufacturing enterprise's clusters exist in NCR. A compendium of such clusters (*as identified by the Development Commissioner, MSME Ministry of MSME, Govt. of India; the MSME-Development Institutes report(s) on Brief Industrial Profile of the districts (2012-2015); the Cluster Observatory; the Foundation for MSME Cluster and the NCRPB's Study on Micro and Households Enterprises in NCR*), has been prepared and given at **Annexure-7**. Further, based on the MSME-Development Institutes report(s) on 'Brief Industrial Profile' of each NCR district and the inventory of Clusters as available on 'Cluster Observatory web portal', in total 81 micro, household & small enterprise's clusters, engaged in manufacturing variety of products, has been identified and proposed for priority development in NCR. The sub-region wise list of these identified clusters is given in **Table 5.1** below:

**Table 5.1 Sub-region wise MSME clusters proposed for priority development in NCR**

S.No.	Name & Location of the Cluster	Approx. No. of Enterprises
NCT Delhi sub-region		
1.	Pottery Cluster - Uttam Nagar	7000
2.	Readymade Garments Cluster - Okhla	2039
3.	Printing and Packaging Cluster – Naraina & Mayapuri	450
4.	Embroidery Cluster – Palam and Patel Nagar	15
5.	Hand Embroidery Cluster – Khichdipur, Nand Nagri & Darya Ganj	41
6.	Folk Painting Cluster - Hastsal	9
7.	Textile Handloom Cluster - Sarai-Kale-Khan	15
8.	Leather Craft Cluster - Okhla	10
9.	Furniture Cluster – Kirti Nagar	500
10.	Cosmetic & Packaging Cluster – North West Delhi	240
11.	Dal and Besan Cluster – Central and North West Delhi	50
Haryana sub-region		
12.	Auto Parts Manufacturing Cluster- Gurugram	1478
13.	Auto Rubber Parts Cluster- Gurugram	135
14.	Readymade Garments Manufacturing Cluster- Gurugram	1310
15.	Leather goods and Garments Cluster - Manesar	205
16.	Auto Components Cluster- Gurugram	5000
17.	Chemical Cluster- Faridabad	275
18.	Fabrication and General Engineering Cluster- Faridabad	40
19.	Auto Components Cluster- Faridabad	2500
20.	Light Engineering Cluster- Faridabad	203
21.	Terracotta Handicraft Cluster - Badkhal	10
22.	Hodal Terracotta Cluster- Palwal	15
23.	Embroidery Cluster - Firozpur Zhirka, Mewat	N/A
24.	Aluminium Utensils Cluster- Rewari	35
25.	Perforated Sheets Cluster- Rewari	50
26.	Footwear Cluster- Rewari	N/A
27.	Footwear Cluster- Bahadurgarh	125
28.	Jewellery Handicraft Cluster- Bahadurgarh	15



S.No.	Name & Location of the Cluster	Approx. No. of Enterprises
29.	Cane and Bamboo Handicraft Cluster- Jhajjar	8
30.	Terracotta Cluster –Farookh Nagar	15
31.	Nut Bolts Cluster– Rohtak	N/A
32.	Embroidery Cluster– Rohtak	N/A
33.	Leather Product Cluster – Kalanaur	N/A
34.	Stainless Steel Cluster - Kundli	72
35.	Printing and Packaging Cluster - Rai, Sonipat	110
36.	Soft Toys and Embroidery Artisans Cluster- Sonipat	12
37.	Leather Products Cluster – Kharkhoda	N/A
38.	Handloom Cluster– Sonipat	N/A
39.	Home Furnishing Cluster- Panipat	3200
40.	Textile Machinery Development Cluster- Panipat	28
41.	Foundry Cluster - Samalkha	30
42.	Floor Covering Cluster– Panipat	331
43.	Made Ups (Textile Products) Cluster– Panipat	7475
44.	Handloom Cluster – Panipat	N/A
Uttar Pradesh sub-region		
45.	Scissors Clusters - Meerut	225
46.	Glass and Wooden Beads Cluster - Meerut	328
47.	Embroidery Cluster, Meerut	25025
48.	Artificial Ornament Cluster - Meerut	4447
49.	Transformers & Voltage Regulators Cluster - Meerut	100
50.	Auto Components –Meerut	4700
51.	Musical Instruments - Meerut	433
52.	Powerloom Textile Cluster – Meerut	27500
53.	Sport Goods – Meerut	3500
54.	Carpets and Durries – Meerut	N/A
55.	Handloom Cluster – Sardhana, Meerut	N/A
56.	Textile Hand Printing Cluster – Hasanpur, Meerut	N/A
57.	Footwear Cluster– Baghpat	N/A
58.	Handloom Cluster- Khekada, Baghpat	300



S.No.	Name & Location of the Cluster	Approx. No. of Enterprises
59.	Textile Printing Cluster – Pilakhua	400
60.	Bone Cluster – Loni, Ghaziabad	N/A
61.	Mechanical Engineering Cluster – Sahibabad, Ghaziabad	750
62.	Plastic Packaging- Ghaziabad	150
63.	Chemicals Cluster - Ghaziabad	N/A
64.	Earthen and Plaster Statues Cluster - Ghaziabad	N/A
65.	Grass Mats Cluster, Garhmuketshwar,	N/A
66.	Modha Cluster - Garhmuketshwar	100
67.	Wood Craft Cluster - Pilakhwa	N/A
68.	Readymade Garments and Home Furnishing Cluster -Noida	6014
69.	Engineering Cluster – Noida	12000
70.	Plastics Cluster – Noida	350
71.	Rugs and Durries Cluster – Greater Noida	10
72.	Toys Cluster – Noida	N/A
Rajasthan sub-region		
73.	Auto Component Cluster – Alwar	200
74.	Murti Kala Cluster - Gola ka bas	52
75.	Murti Kala Cluster - Ramgarh	200
76.	Leather Cluster - Bansoor & Reni	N/A
77.	Chemicals Cluster – Alwar	N/A
78.	Stone Carving Cluster – Khatumas, Alwar	20
79.	Terracotta Cluster, Ramgarh	35
80.	Carpet and Durries Cluster – Neemrana	N/A
81.	Wood Craft Cluster – Khatumar, Alwar	N/A

Note: N/A – information not available

5.3 Issues and Recommendations

The Ministry of MSMEs, other Central Government Ministries/ Agencies and the NCR participating State Governments have taken various actions towards development of micro, small & household enterprises in NCR under various programmes and schemes. However, the NCRPB ‘Study on Micro and Household Enterprises in NCR’ and the district wise ‘Brief Industrial Profile of MSMEs’ have revealed that despite various efforts/ actions of the Central Government Ministries/ Agencies and the NCR participating State Governments, the micro,



small & household enterprises/ clusters in NCR are still facing several issues/ challenges for their growth and development.

The issues/ challenges related to these enterprises in NCR have been categorized into three parts i.e. (i) *general issues* (ii) *sub-region specific issues* & (iii) *cluster specific issues*, and accordingly recommendations have been formulated which are as under:

I. General Issues & Recommendations

Most of the issues related to the micro, small & household enterprises/ clusters are common and general in nature. The issues related to MSMEs at unit level, cluster level, national level and global are illustrated in the following **Figure 5.1** below. Further, issues pertaining to functioning, manpower requirements, raw material, land/space & physical infrastructure availability, etc. are discussed in detail in the ensuing sections.



Figure 5.1 Issues associated with the development of MSMEs

Source: Retrieved from <<http://clusterconference.in/ppt/bindoo%20ranjan.pptx>>

1. Need for creation of a Special Purpose Vehicle

Considering the importance of micro, small & household enterprises and their development constrains, at the outset it is imperative that Special Purpose Vehicles (SPV) should be created at the level of each cluster or group of clusters and Common Facility



Centres (CFCs) should be established on priority by the NCR participating State Governments in their respective sub-region.

2. Availability of Skilled Manpower

It is observed that micro, small & household enterprises, engaged in manufacturing of various types of goods are facing difficulties in securing skilled manpower in the NCR. Further, there is a need to introduce latest technical knowledge and advanced computerised machines for product designing and development in engineering clusters alongwith skill up-gradation of labour. Some of the enterprises/ clusters such as foundry, face problem of skilled manpower due to non-availability of required courses/ training as well as further skill up-gradation opportunities. It is also seen that micro enterprises are not able to up-grade the skills of their existing manpower due to shortage of funds. The primary survey reveals that some of the micro, small & household manufacturing enterprises are not even aware of the training institutes and training programs available for skill up-gradation and practical training.

It is recommended that short-term training programs/ courses should be organised/ started by the Ministry of MSMEs/ other concerned Ministries/ Departments/ Agencies/ NCR participating State Governments/DICs, etc. in collaboration with SPVs/ Industrial associations/ ITIs, etc. as per the specifications and requirement of clusters /local workers & entrepreneurs. Various National or State level technical and design research institutes should be involved in such training programmes. Further, awareness programme should be conducted to educate entrepreneurs and workers. A stipend should be given to attract entrepreneurs and workers for attending awareness & training programmes. Entrepreneurship Development Programmer may be organized with Technical inputs from NIESBUD and by the Institute to train the youth to take up entrepreneurship as a career.

Livelihood Business Incubators at NIESBUD can serve a source and point of skill based entrepreneurship. The incubator will assist in the conception and development of household and micro enterprise in various sector such food processing and preservation, beauty and wellness, Information Technology related services and other area/resource specific through entrepreneurship development interventions.

Mentoring and Post Training support- Stand alone training programs do not serve the purpose in the long run. It is therefore suggested that a mentoring and post-training cell may be set up. The primary objective of the cell will be to assist individual in setting up micro and house hold industries. The cell will help the beneficiaries to develop viable business plans, meet with banks, to avail loan facilities from the bank and setup micro business units.

3. Procurement of Raw Material

Procurement of raw material is one of the major constraints that micro, small & household manufacturing enterprises are facing in the NCR. Most of the clusters/ enterprises depends on Delhi for procuring their respective raw material. The study conducted by NCRPB has also revealed that enterprises do not have direct access to raw material producers/producing areas. Large proportion of the required raw material for micro, small & household enterprises is being



procured through traders and dealers, resulting in higher cost of raw material and affecting the potential performance of the clusters/ enterprises.

In view of this, the followings are recommended:

- (a) **Raw material banks** should be set up at district level to cater to the raw material demand of various types of enterprises or clusters. A concept of *common markets* should be introduced where the enterprises can procure raw material in bulk at lower cost.
- (b) The enterprises should be encouraged & facilitated to procure raw material directly from the first hand producers. A *common data bank* of various raw material producers should be created in this regard at each district or cluster level. One of such successful examples is the Wet Grinder Cluster in Coimbatore, Tamil Nadu wherein the copper wire are being procured by the individual units directly from manufacturers rather than depending on local traders.
- (c) As most of micro, small & household enterprises lack in terms of storage space, a *common shed/ storage area* should be built at cluster level where enterprises can store their raw material.
- (d) In case of natural resource based manufacturing clusters, research and development should be initiated and funded in order to come up with new material with similar properties so that the dependency on natural resources could be substituted and reduced.
- (e) A cluster depends on other clusters for the supply of raw materials, machinery & equipment, technology, human resources, market etc. For example, the Wearing Apparel Clusters are dependent on the Handloom Clusters for raw materials, while the Wearing Apparel Clusters act as the main market for the Handloom Clusters. Considering the fact that there is an interdependency among the clusters/enterprises in terms of the raw materials and finished goods/products, **it is suggested that interdependency of clusters should be recognized/ established in terms of supply chain linkage, by certain interventions of the Ministry of MSME or the State Governments. Further, it is also recommended that frequent buyer-seller meets should be organized so that they can establish direct contacts for the raw materials.**

4. Land /Space for Micro and Small Enterprises

Land/space is a major problem for the growth and development of micro, small & household enterprises, particularly in the natural clusters which are located in old and congested parts of urban areas of NCR. There is an acute shortage of space for work, storage of raw materials, circulation, loading & unloading of goods, parking, etc. in the clusters. Thus, the availability of land for setting up of micro and small enterprises becomes crucial.

It is recommended that Development Authorities/ ULBs/ State Governments should identify and earmark land/space for micro, small & household enterprises and *work-shed* or *work shed-cum-housing clusters* should be developed at such land parcels with all



necessary infrastructure, in collaboration with concerned Central Ministries/ Departments and SPVs, etc.

5. Physical Infrastructure

Growth of MSME sector at a healthy rate is crucial for the overall growth of local and national economy. However, lack of proper infrastructural facilities can cause serious damages to an enterprise's value chain process like production, consumption and distribution of the products. Besides this, lack of finance, inadequate marketing facilities, technological obsolescence, etc. are also being faced by MSMEs. Poor road connectivity and wrecked roads discourage traders/exporters from visiting most of the clusters. It also affects the transportation of finished products as the instances of breakage are higher. Clusters that produce chemical effluents as a residue need to have a Common Effluent Treatment Plant (CETP) to prevent polluting the land or water bodies. Most of the enterprises are also facing problems due to inadequate physical infrastructure like water supply, power supply, sanitation, storage and packaging & product display areas, etc. Hence, there is a need of infrastructural development for the industries in general and MSMEs in particular which should include all types of infrastructural facilities like roadways, adequate supply of power, water, CETP, common storage & packaging-cum-product display areas, etc. and other supporting facilities like tool rooms, testing labs, design centers, etc. Some glimpse of inadequate physical infrastructure is given in **Plate 5.1**.



Pottery Cluster, Khurja: Poor road condition and water logging^{xlv}



Pottery Cluster, Khurja: Road side dumping of MSME solid waste^{xlvi}



Band-Baaja (Musical Instruments) Cluster, Meerut: Congested road^{xlvi}

Plate 5.1 Status of physical infrastructure



To improve the infrastructural facilities in and around the clusters, following are recommended:

- i) Infrastructure development initiatives like development of land, provision of water supply, drainage, power distribution, non-conventional sources of energy for common captive use, construction of roads, *Common Facility Centres (CFCs)* like *Common Production/Processing Centre* (for balancing/correcting/ improving production line that cannot be undertaken by individual units), *Design Centres*, *Testing Facilities*, *Training Centre*, *R&D Centres*, *Effluent Treatment Plant*, *Marketing Display/Selling Centre*, *Common Logistics Centre*, *Common Raw Material Bank/Sales Depot*, etc. along with the *First Aid Centre*, *Canteen* and other need based infrastructural facilities should be taken by the local authorities and other concerned departments/ agencies in collaboration with the SPVs/industry associations in and around the Clusters.
- ii) Infrastructure development schemes for the cluster(s) should be prepared by the SPVs/ local authorities/concerned departments/agencies/ industry associations under the cluster development programme or any other prevailing policy or programme of the Central Government or the respective State Government.
- iii) Options for *alternate clean energy sources* including solar and biomass should be explored for meeting the power demand of various Clusters. SPVs/Industry Associations should take initiative in power generation for their own clusters.
- iv) State Governments/Authorities/SPVs/Industry associations should construct *CETPs* in the respective clusters based on the requirement of the area to avoid and control the environmental pollution. Respective State Governments can provide incentives to the private developers to construct the CETP and the other required infrastructure on PPP mode in the clusters.

6. Harmonize Master Plans with Micro, Small & Household Manufacturing Activities

It has been recognized that much of the manufacturing units in unorganized sector operates from the non-conforming zones (for example, plastic toy manufacturing in NCT-Delhi) of the Master Plans. Master Plan for Delhi-2021 (MPD-2021) has provided a detailed list of household industries.

It is suggested that the NCR participating State Governments, Local Authorities and concerned Departments/ Agencies should evolve a mechanisms for according priority to economic development activities, including micro, small & household manufacturing in urban areas while planning the growth of cities/towns. *Land /space for micro, small & household enterprises should be earmarked in the respective Master Plan/ Development Plan of the towns. Wherever the MSMEs are located/ concentrated in the old city areas, efforts should be made for redevelopment/rejuvenation and infrastructure development of such area/clusters.*



The ULBs and Development Authorities should be incentivized by the Central or State Governments, to accord priority to designate areas for micro, small & household manufacturing in the urban centres or emerging urban areas. Such initiatives may be advocated by the concerned Central Ministries/State Governments and should be backed by sufficient resources.

7. Finance and Credit

The Inter-Ministerial Committee for Accelerating Manufacturing in MSME sector, Ministry of MSME observed that the issues connected with credit availability-adequacy, timely availability, cost and mortgages remain a continuing concern. Further, the Working Group on MSMEs Growth for 12th Five Year Plan (2012-2017), Ministry of MSME observed that there is a huge credit gap in the MSME sector which is adversely affecting the growth of the sector. The gap is normally met through informal channels, which are often at higher cost than the institutional finance.

Further, the NCRPB's *Study on Micro and Household Enterprises in NCR* reveals that majority of micro, small & household enterprises in the region are facing problem of shortage of funds. These enterprises are also facing problem in obtaining loans from banks/ financial institutions which is affecting enterprises performance and potential. It is observed that due to high risk perception the banks/ financial institutions demand collateral arrangements from the entrepreneurs. Besides this, enterprises need to engage agents for obtaining loan from the banks/financial institutions and a substantial amount of the loan is being paid as agent's commission.

To overcome the issues of finance and credit among micro, small & household enterprises in NCR, the following are recommended:

- i) Enterprises should be made aware of various schemes related to credit which they can avail. This would reduce the menace of middlemen and agents. SPVs/ Industry Associations should set-up an effective institutional mechanism for facilitating credit flow to MSMEs.**

For example, Faridabad Small Industries Association has tied up with SIDBI which provides loan to enterprises on the basis of recommendation from this Association. Such a model could be encouraged to be adopted in other parts of NCR. The DICs need to take an initiative and encourage the entrepreneurs to form the SPVs / Industrial Associations which can take up similar initiatives.

- ii) Capacity of the MSE loan officers should be developed by the banks to provide various advisory services to MSMEs.**
- iii) Collateral free loan should be made available up to an amount of Rs.25 lakh for MSMEs in NCR. Lead bank of the district or SIDBI in collaboration with DICs may prepare project profiles of viable clusters in the district and provide support to these clusters for their development. Banks in collaboration with Industry/Enterprise Associations may adopt various clusters as per the Reserve Bank of India (RBI) instructions. *Lead bank/***



SIDBI should adopt such MSME clusters. In the first phase, one such Cluster of MSMEs in each sub-region should be taken up for development.

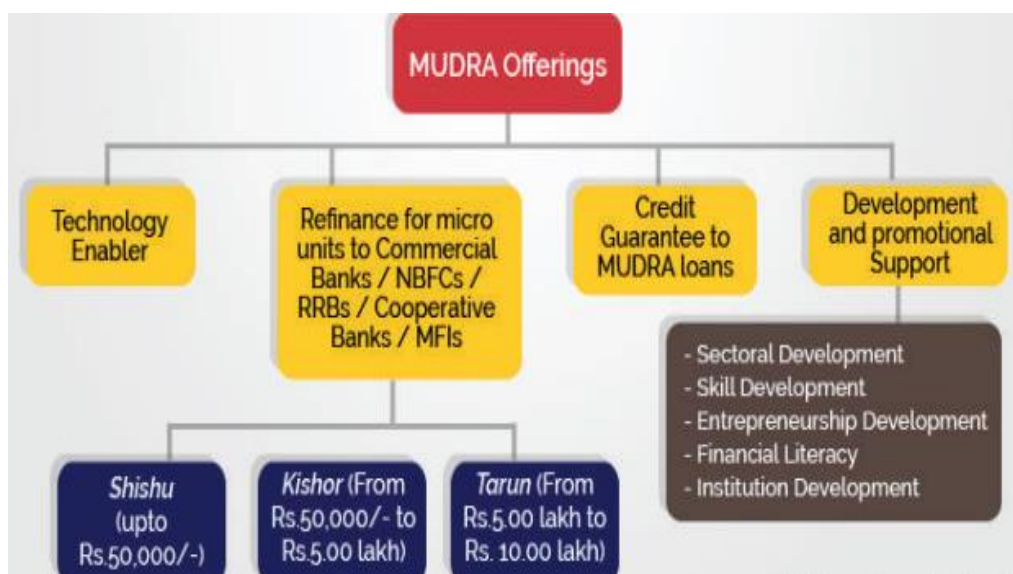


Figure 5.2 Financing pattern of MUDRA

Source: MyGov India, Weekly Newsletter, Volume 1 Issue 2, published on 14th September, 2016 retrieved from <http://jan-sampark.nic.in/jansampark/images/campaign/2016/15-Sep/pdf/english-sample-2.2.compress.compressed.pdf>

- iv) Micro Units Development and Refinance Agency Bank (MUDRA Bank), a public sector financial institution launched in 2015 provide loans at low rates to micro-finance institutions and non-banking financial institutions which then provide credit to micro & small enterprises engaged in manufacturing, trading and service activities. Micro and small enterprises have been classified into three categories i.e. *Shishu* (Start-ups), *Kishore* (who have started but business yet to be established) and *Tarun* (all small business) and the maximum allowed loan amount is up to Rs.50,000 for Shishu and all micro enterprises, from Rs.50,000 to Rs.5 lakh for Kishore and form Rs.5 lakh to Rs.10 lakh for Tarun category. **Micro and household enterprises should be encouraged to avail loan facilities at cheaper interest rates from MUDRA Bank. The financing pattern of MUDRA is illustrated in the above Figure-5.2.**

8. Technology, Design and Packaging

It is observed that most of the MSME clusters in NCR are lacking in terms of their respective technological and designs aspects. Especially, micro, small & household enterprises are not able to keep pace with the latest technology and design. These enterprises are also not much aware of the schemes to subsidise technology up-gradation and skill development.

For example, design and technology in handloom sector are of utmost importance which keeps changing with the market trends. To capture the market, quality of garments need to be tested and ensured. Hence, the need to set up a Design and R&D centre at each cluster or group of clusters becomes essential.



It is also found that machinery/ technology being used by most of the micro, small & household enterprises are generally obsolete. To keep pace with the changing market scenarios, there is an utmost need for technological advancement of these enterprises.

To overcome the technological and design hurdles the following are recommended:

- i) The Central Government has launched a number of programmes and schemes like the *National Manufacturing Competitiveness Programme (NMCP)* with the objective of enhancing the competitiveness of MSMEs and for assisting MSMEs in adoption of best international practices to enhance their competitiveness. Under the NMCP, *Design Clinic Scheme* (refer **Figure 5.3**) has been formulated with the purpose to increase awareness about value of design and establish design learning in MSM manufacturing enterprises and increase competitiveness of local products through continuous learning and skill development. **Awareness generation regarding these programmes and schemes need to be initiated Ministry of MSMEs/ other concerned Ministries/ Departments/ Agencies/ NCR participating State Governments/DICs/ SPVs, etc.**
- ii) **Different trainings programmes for entrepreneurs and workers should be organised by the Ministry of MSMEs/ other concerned Ministries/ Departments/ Agencies/ NCR participating State Governments/DICs etc. in collaboration with the SPVs/ Industrial association as per the specifications and requirement of the clusters.**

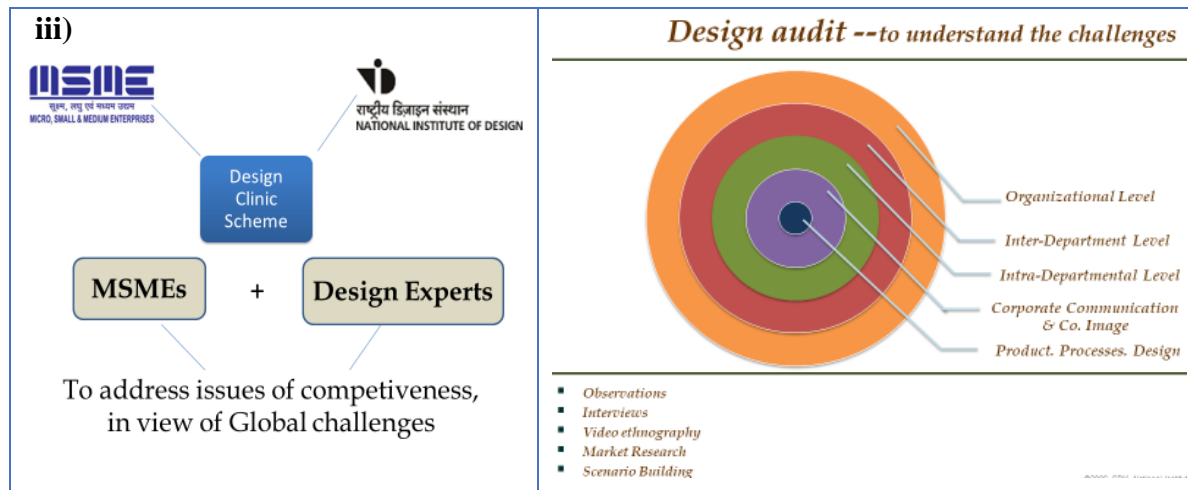


Figure 5.3 Design Clinic Scheme and the concept of Design Audit

Source: Retrieved from <<http://clusterconference.in/ppt/bindoo%20ranjan.pptx>>

Such training programmes should include practical demonstration of latest technologies and designs related to the enterprises. The entrepreneurs need to be given the know-how of required equipment/tools. A few entrepreneurs/skilled workers within cluster may also be involved/ trained in the delivery of training.

Various National or State level technical and design research institutes should be involved in such training programmes.

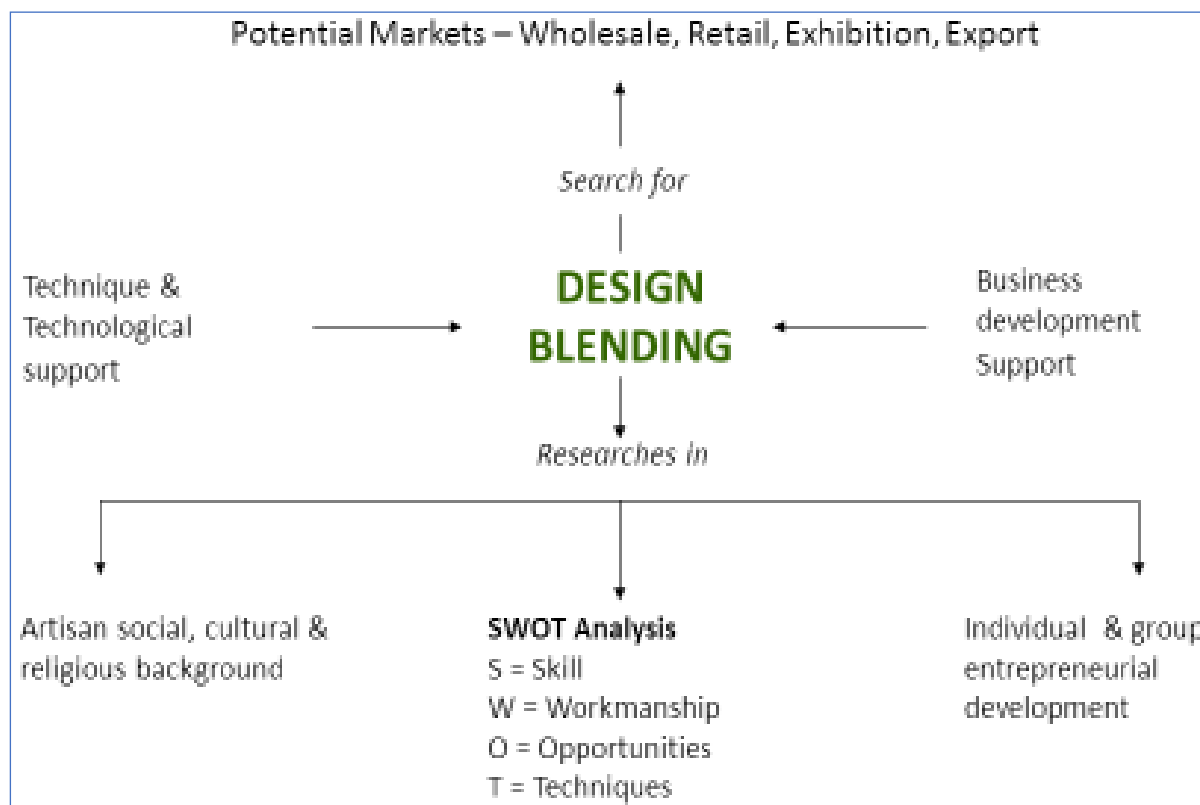


Figure 5.4 Process of design blending

Source: Retrieved from <<http://clusterconference.in/ppt/bindoo%20ranjan.pptx>>

- iv) **Design Centre** should be set up by the Ministry of MSMEs/ other concerned Ministries/Departments/Agencies/ NCR participating State Governments/DICs at cluster or district headquarter level in collaboration with the SPVs/ SHGs/ Industrial Associations. While setting up Design Centre, various design institutions such as National Institute of Design, Central Footwear Technology Institutes, etc. should be involved. *Design Audits* as illustrated in Figure 5.3 should also be conducted.
- v) In order to ensure the quality of various products, *testing centres* as per the specifications and requirement of clusters should be set up at cluster or district level.
- vi) **Common Facility Centres** should be set up by the NCR participating State Governments/DICs and/or the SPVs which can provide technology/ machinery to enterprises for use on rental basis. Schemes like ‘*hire purchase and leasing*’ by NSIC should be initiated at cluster level.
- vii) **New Tool Rooms and Technology Development Centres/Institutes** should be set up to provide specialised training to the existing and prospective workers of the micro, small & households manufacturing sector. These institutions may be set up in Industrial Districts/ Clusters with state-of-art machines to provide training to



the youth to make them readily employable in high growth sectors like auto components, engineering, leather, garments, etc.

- viii) There is one specialized institution i.e. Indian Institute of Packaging (IIP) in the country which imparts training in packaging and designing. In order to meet the increasing demand of MSMEs for packaging and designing, **it is recommended that more numbers of specialized institutions in packaging and designing should be set up. In addition, the awareness about these institutions should also be spread among MSMEs to avail benefits.**

9. Marketing of Products

The NCRPB's *Study on Micro and Household Enterprises in NCR* revealed that knowledge of marketing among micro, small & household entrepreneurs in the region is extremely low and most of the enterprises and clusters are dependent on the *word-of-mouth* mode of marketing. Enterprises go through a number of agents or traders due to which products are being sold at very high cost to the consumer but this yields negligible profits to enterprises/ artisans. It is further observed that only a few enterprises display their products in exhibitions at national, state or district levels. There is a need to provide assistance to MSMEs for enabling them to showcase their products and capabilities to produce high quality products and also to sell them at spot.

There is also a lack of linkage among various micro, small & household enterprises clusters. Further, such clusters are also not well connected/ linked with various tourist places/ circuits in and outside NCR. There is a need for branding and advertisement/ publicity of the indigenous products to foster marketing.

The following are recommended to improve the marketing of MSME products:

- (i) **Information dissemination centres, display halls, exhibition centres, etc. should be set up in major industrial centres having concentration of MSMEs. This can be done by the Central/State Organisations, Industry Associations, Export Promotion Councils, SPVs, etc. If needed, such facilities can be developed in PPP mode. DICs/ SPVs having adequate vacant land can also support this activity.**
- (ii) **Inter-cluster and intra-cluster linkages should be identified to improve the supply chain within NCR.**
- (iii) NCT Delhi is the nodal point for tourist places of northern India as it falls on various tourist circuits/ corridors like Delhi-Agra-Jaipur-Delhi; Delhi-Dehradun; Delhi-Chandigarh-Shimla, etc. **The potential of such tourist circuits/corridors should be tapped by establishing sales depots, display centres, etc. in integration with government guest houses/motels or restaurants on these routes. Such centre should be set up by the respective NCR participating State Governments, in collaboration with the concerned Central Ministries/Agencies like Ministry of Tourism, NHAI, etc., at strategic locations and exhibitions need to be organised periodically, especially during tourist season. The artisans should be encouraged to display their**



products in these centres and the local & national media should cover/advertise such exhibitions.

- (iv) Each NCR participating State should take up *branding* of their indigenous products and advertise them on a State level web-portal, major magazines, national television, etc. It is observed that most of the clusters are unaware of branding techniques and do not produce quality products. Efforts should be made by the NCR participating State towards increasing awareness regarding production of better quality products through various testing centres with the support of DICs and help branding their products or tie up with bigger brands. The Digital India programme, a flagship programme of the Government of India, having a vision to transform India into a digitally empowered society and knowledge economy, should be widely adopted and advertised.
- (v) NCR participating State should facilitate MSMEs by creating *e-commerce platforms* on *Business to Customer (B2C)* and *Business to Business (B2B)* basis to significantly upscale e-commerce and enable buyer & sellers to access the virtual market for both the niche products as well as products of mass consumption in varied quantities. This can be encouraged through programme intervention and advocacy by promotional departments of the respective NCR participating States.
- (vi) The Public Procurement Policy (2012) envisaged that Central Government Ministries, Departments, PSUs are mandatorily required to procure minimum 20% of total annual purchases of products and services rendered by micro and small enterprises. This policy is under implementation by various Ministries/ Departments. *Inter-Ministerial Committee for Accelerating Manufacturing in MSME Sector* under the Ministry of MSME in its recommendations report, 2013, observed that the various Ministries/ Departments annually procure goods worth of about Rs.80,000/- crore of which 10% is being procured from micro and small enterprises.

It is recommended that the NCR participating State Governments should formulate ‘Public Procurement Policy’ on the lines of Central Government. The effective implementation and pursuance of these policies would enhance the demand for production, strengthen vendor development mechanism and will facilitate technology development in micro and small enterprises.

- (vii) An *NCR web-portal* should be setup by the NCR participating States, containing details of their clusters. The profile of cluster, products manufactured, material used and their target market should be mentioned on the web-portal. Also, a detailed catalogue of the products should be available on this portal along with information on locations where they are being sold. Online purchase of certain products could also be initiated/ facilitated through this portal.



10. Enterprise/ Cluster linkages and partnerships

Study on Micro & Household Enterprises in NCR reveals that each Cluster of enterprises is linked to other clusters. The clusters would function more efficiently if a stronger inter-dependence and inter-linkages/partnership is formed between them. The Clusters may be dependent on other clusters for various purposes like supply of raw materials, and machinery & equipment, technology, human resources, market, etc. The inter-relationship matrix of various Clusters is given in **Figure 5.5**.

The analysis indicates that while all the clusters are dependent on the machinery & equipment clusters and electrical machinery clusters in some way or other, however, certain Clusters also have specific dependency on other Clusters. For example, the Wearing Apparel Clusters which are dependent on the Handloom Clusters for raw materials, while the Wearing Apparel Clusters acts as the main market for the Handloom Clusters.

It is recommended that similar exercise can be carried out by the Ministry of MSME and the concerned NCR participating State Governments for establishing interdependency among various Clusters, in terms of a supply chain linkage and locational interdependency. It would benefit the Clusters and would enhance the growth and development of MSMEs. Such Enterprise/ Cluster linkages and partnerships should be managed/uploaded through the web-portal, for wider coverage and publicity.

Inter-relationship Matrix of Various Clusters																	
Enterprise/ Cluster	Food Products	Textiles	Wearing Apparel	Leather	Wood & Wood Products	Paper & Paper Products	Publishing, Printing	Chemicals & Chemical Products	Rubber & Plastic Products	Other Non-Metallic Products	Basic Metals	Fabricated Metal Products	Machinery and Equipment	Electrical Machinery	Electronic Goods	Auto Components	Furniture and other miscellaneous
Food Products																	
Textiles																	
Wearing Apparel																	
Leather																	
Wood & Wood Products																	
Paper & Paper Products																	
Publishing, Printing																	
Chemicals & Chemical Products																	
Rubber & Plastic Products																	
Other Non-Metallic Products																	
Basic Metals																	



Inter-relationship Matrix of Various Clusters																	
Enterprise/ Cluster	Food Products	Textiles	Wearing Apparel	Leather	Wood & Wood Products	Paper & Paper Products	Publishing, Printing	Chemicals & Chemical Products	Rubber & Plastic Products	Other Non-Metallic Products	Basic Metals	Fabricated Metal Products	Machinery and Equipment	Electrical Machinery	Electronic Goods	Auto Components	Furniture and other miscellaneous
	Fabricated Metal Products																
	Machinery and Equipment																
	Electrical Machinery																
	Electronic Goods																
	Auto Components																
	Furniture																

Figure 5.5 Inter-relationship matrix of various clusters

Source: NCRPB Study on Micro and Household Enterprise in NCR

	Sectoral relationship present
	Sectoral relationship absent

Aggregation of cluster and marketing services - Since cluster form an important part of the NCR, aggregation of cluster can further help in the development on micro industries. Once the micro industries start production, specialized online and offline marketing services can be provided for such industries to bring the product of such clusters to the rest of the country.

11. Registration/ Filing of Entrepreneurs Memorandum (EM)

As per the MSME Act, 2006, a micro or small enterprise is required to file Entrepreneurs Memorandum (EM) with the authorities specified by the State Government. As filing of EM-II is voluntary in nature and not mandatory, entrepreneurs are not filing EM-II/ registration due to lack of awareness and fear. There are numerous government schemes which have been initiated to support and assist MSME sector like the *Mill Gate Price Scheme* (MGPS) for cotton at subsidized rates for handloom weavers; the *Integrated Handloom Cluster Development Scheme* (IHDS); the *Micro and Small Enterprise Cluster Development Programme* (MSE-CDP), etc. Entrepreneurs who have not filed EM-II are not covered under any such government scheme/benefits.

Since filling of EM-II is a prerequisite for availing benefits from various government programmes and schemes for overall development of micro and small enterprises the following recommendations are made for encouraging enterprises in filling EM-II/registration:

- NCR participating States should make aggressive intervention to increase awareness among entrepreneurs regarding various Central and State Government programmes and schemes along with the benefits of filing EM-II/registration with State Government/DICs. Efforts should be made by the concerned department(s) of NCR participating State Government to register all micro, small & household enterprises in a phased manner.**



- ii) **The Ministry of MSME/ State Governments/DICs, in collaboration with SPVs/Industrial Associations, should prepare action plan and time bound programme for registering micro, small & household enterprises/filing EM-II.**

12. Institutional/ Governance Structure

It is observed that there are multiple Government agencies and schemes which aims at overall development of MSMEs in the country. Different Ministries have their own policies and programmes for the MSMEs in their respective sectors or functional areas. There is lack of coordinated and comprehensive institutional framework for maximizing results of the various initiatives taken by the government.

The overall development of clusters depend on continuous handholding support from concerned Central Ministries/ Departments, the concerned State Government and its line department/agencies, the regional offices, etc. However, it is more essential that the functionaries who are dealing with the government programmes are specially trained and equipped to manage the programmes effectively.

Various developmental agencies at Central and State level are working for promotion of MSMEs and are adopting cluster development approach. The main thrust of the Office of Development Commissioner (MSME) is to promote MSMEs through cluster development. Development Commissioner (Handicrafts) is also working for the development of handicraft units through cluster development approach. Broadly, the following Ministries/Departments and Agencies are involved in the development of MSMEs in NCR:

- (i) Ministry of MSME
- (ii) Development Commissioner (MSME)
- (iii) The Khadi and Village Industries Commission (KVIC)
- (iv) Development Commissioner (Handicrafts), Ministry of Textiles
- (v) Development Commissioner (Handlooms), Ministry of Textiles
- (vi) Textiles Committee, Ministry of Textiles
- (vii) Department of Industrial Policy and Promotion, Ministry of Commerce and Industry
- (viii) Department of Science and Technology, Ministry of Science and Technology
- (ix) United Nations Industrial Development Organization (UNIDO)
- (x) National Bank for Agriculture and Rural Development (NABARD)
- (xi) Small Industries Development Bank of India (SIDBI)
- (xii) State Bank of India (SBI) and other Lead Banks
- (xiii) National Manufacturing Competitiveness Council (NMCC)
- (xiv) National Small Industries Corporation (NSIC)
- (xv) Respective Governments of the NCR participating States i.e. NCT Delhi, Haryana, U.P. and Rajasthan
- (xvi) Rajasthan Chamber of Commerce and Industry (RCCI)

Considering the involvement of multiple government agencies for the development of MSMEs, an institutional or governance structure is proposed, as given under at Figure 5.6.

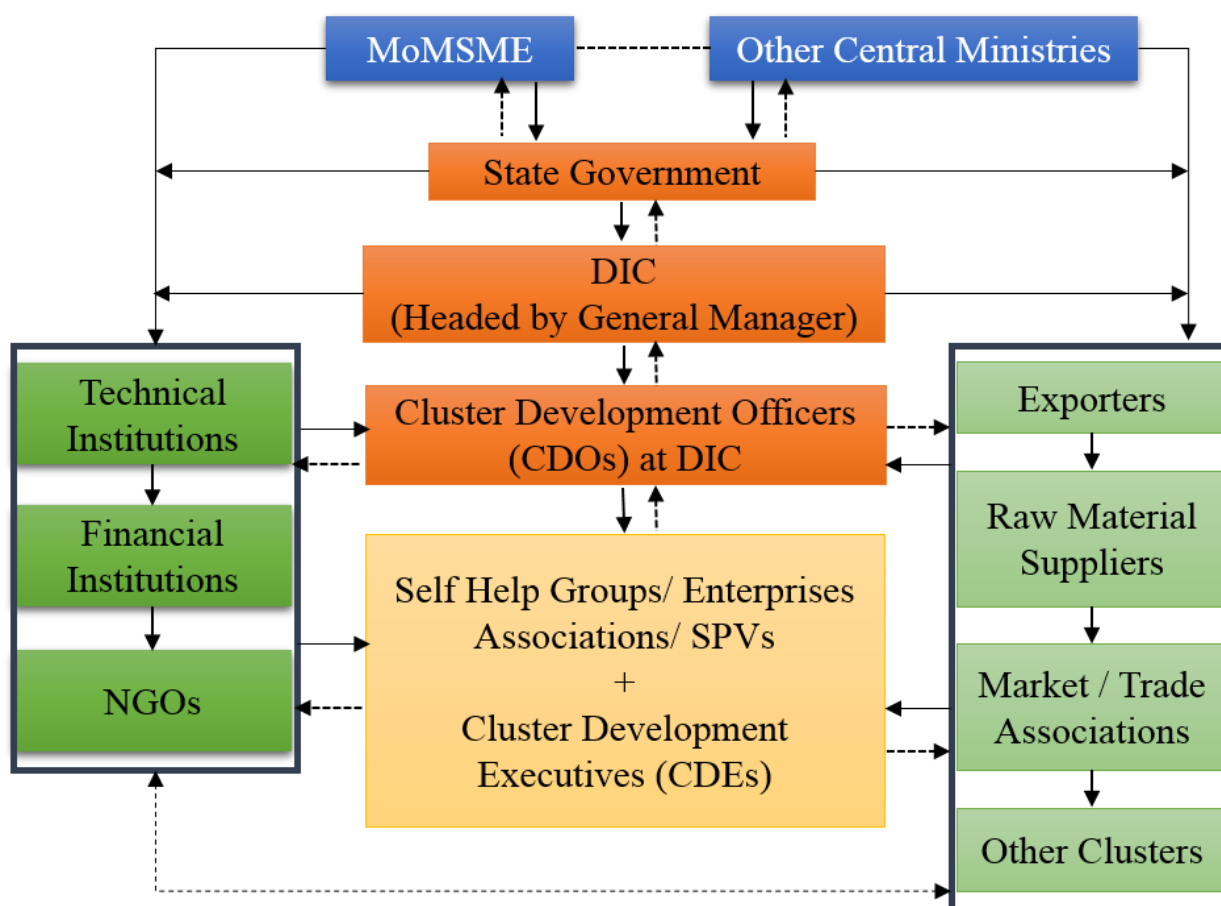


Figure 5.6 Proposed Institutional/ Governance structure

A. District Industries Centres (DIC) as Facilitating Institutions

DICs play a crucial role in the development of MSMEs particularly micro, small & household manufacturing enterprises in the districts. Most of the districts in NCR have good infrastructure in the DICs which are presently in a state of neglect and decay, need renovation and up-gradation to act as facilitating institutions for development of micro, small and household enterprises and cluster development.

Further, it is observed that the Cluster Development Officers (CDOs) positioned at DICs have no key performance indicators. Most of the CDOs are drawn from different departments and are inadequately trained and familiarized with cluster development to carry out the specialized functions related to cluster development. There is a need to provide a comprehensive long-term foundation course to freshly appointed CDOs. There is also a need to strengthen their skills and abilities through regular refresher courses specially designed on subjects such as financial management, project management, organizational behaviour, team work, and cooperation. In addition to this, facilities and support as presently being provided to CDOs are also inadequate.

- i) **It is recommended that DICs should be designated as facilitating institutions for micro, small and household enterprises. The manpower of DICs should be re-oriented and trained towards development of these enterprises including**



entrepreneurship development, advocacy, mentoring and handholding of start-ups (with emphasis on manufacturing). They should be encouraged to provide such services by building partnership with professional bodies. Necessary MIS may also be developed in the DICs.

- ii) **CDOs are the key functionaries for development of MSME clusters. For the development and continuous monitoring of various clusters in the district, the role of CDO should be as follows:**
 - a) Identification of various Clusters in the jurisdiction and analyse their Strengths, Weakness, Opportunity & Threats.
 - b) Bring out issues/constraints quarterly.
 - c) Look forward to the avenues to support clusters development.
 - d) Maintain close contact with the Cluster Development Executives (CDEs) positioned at Cluster level under MSE-CDP and extend handholding support to them as and when required.
 - e) Performance monitoring and reporting
 - f) Preparation of Action Plans for development of enterprises with special thrust on micro and household industry, and
 - g) Taking up the necessary steps for the implementation.
 - h) The CDO should directly report to the General Manager, DIC.
- iii) **CDOs of the districts falling in NCR, should meet quarterly to learn from each other's experiences which would enable building up partnership amongst clusters and industries/enterprises for supply chain.**

B. Cluster Development Executives (CDEs)

CDE is a pivotal functionary who is placed in the Cluster identified for development interventions. CDEs are generally drawn from State Government Industries Department, MSME, SIDO, IIE, etc. The main responsibilities of CDE are preparation of diagnostic study, trust building among enterprises, awareness generation, introduction of new technology & technology up-gradation, organising training programmes & financial assistance/credit facilities, development of new products & market tie-ups, creation of raw material banks, formulation of SPV/Consortia, preparation of DPR for development of CFC & setting up of CFC, testing & commissioning, etc.

It is recommended that all existing and potential clusters in NCR should be taken up under Micro and Small Enterprises Cluster Development Programme (MSE-CDP) and CDEs may be placed in the respective clusters. CDEs should effectively work as a local Network Agent with active support of mentor institution, regional offices of MSME, technical consultants and R&D Institutions. It is also recommended that CDEs should be drawn from reputed NGOs, scientific and research institutions, industry support organisations, etc.



C. Special Purpose Vehicles (SPV)

The revised Guidelines of the Small Industries Cluster Development Programme (SICDP) formulated in March 2006, emphasizes the need for creating SPV to enable the delegation of specific responsibilities and transfer of funds for the creation of a Common Facility Centre, catering to the needs of the individual units, etc. in the cluster. The '*Evaluation Study of Micro and Small Enterprises- Cluster Development Programme*', Ministry of MSME conducted by Indian Institute of Public Administration in 2009 indicates that SPVs can be established in the form of Cooperative Societies or Private Ltd. Companies.

The SPVs can directly access suppliers and customers without interacting individually with their clients through distributors and other intermediaries. The margins that they surrender to intermediaries, who are often large, and affecting their own margins are thus, effectively controlled and internalized. For example, the Foundry Cluster units in Hyderabad have directly approached the Steel Mills as against their suppliers who were basically steel distributors and traders. Common components procured from outside the cluster can be manufactured in a common facility. A common process can also be collectively organized and the necessary investments mobilized to effectively exploit the economy. For example, the Wet Grinder Cluster in Coimbatore has planned a common facility to produce certain common components that were being outsourced from firms outside the cluster, this would not only reduce costs but also help in controlling quality and standards of the products. The export clusters producing home furnishings and textiles in Kannur, Kerala, and Tirupur, Tamil Nadu respectively, have established their own spinning mills to reduce unit cost. SPV also plays important role in improving the bargaining power of the Clusters. For example, the Terry Towel Cluster in Solapur, Maharashtra, directly negotiated with spinning mills & traders for bulk purchases and common procurement of yarn.

It is recommended that SPV should be created in all clusters within NCR for overall development of the clusters. These SPVs will carry out the work of developing, operating and maintaining infrastructure facility created in the Clusters. It will also carry out the business of procurement of raw materials, arranging credit, production process and marketing of finished products. Central/State government, concerned department/DIC/CDO and CDE should take necessary initiative for creation of SPVs in their respective areas. In case of dense clusters with a large number of individual units, the formation of a registered Cooperative Society is more suitable. However, in case of clusters with a limited number of individual units, the formation of SPV as a Private Ltd. Company seems more suitable.

D. Self Help Groups (SHGs)

SHGs can cover all aspects of self-employment i.e. capacity building, planning of activity clusters, infrastructure, technology, credit and marketing. It has been observed that SHGs have been formed in a number of Clusters. For example, Jewellery Handicraft Cluster-Bahadurgarh; Soft toys & Embroidery Artisan Cluster- Sonipat; and Rugs & Durries Clusters- Greater Noida, a number of SHGs have been formed and are functioning.



It is recommended that SHGs should be formed in the Clusters where SHGs are not formed yet, especially in rural and small urban centres in NCR.

E. For efficient functioning of the proposed institutional/ governance structure following should also be considered:

- (i) Programme specific training should be imparted to the functionaries.
- (ii) Strengthening of regional offices & development institutions related to MSME, proper deployment of staff therein and optimum utilization of their existing facilities should be ensured.
- (iii) Frequently involve relevant scientific institutions through specially funded programmes.
- (iv) Earmarking of additional funds for studies, training and other institutional needs, as well as for the specific initiatives mentioned above, should be done.

13. Database for Micro, Small & Household Manufacturing Enterprises of NCR

It is observed that there is a lack of data/information on the micro, small & household enterprises sector at Cluster level and District level. Creation and maintenance of comprehensive database for these enterprises, including unorganized sector, is a pre-requisite for sound policy formulation, implementation and for monitoring their development. There is also a need for sectoral data research and compilation of data on government/public sector procurement from these enterprises.

It is recommended that a comprehensive database or web-portal for micro, small & household manufacturing enterprises of NCR should be created at each sub-region level wherein basic information about the clusters/ enterprises along with their requirements and products, etc. can be updated periodically.

14. Formulation of Projects for Financial Assistance

There are several programmes/ schemes of Central and State Governments, Financial Institutions and Technical Organization (e.g. MSME-CDP, IHCDS, NSIC, NPRI, SFURTI, Design Clinic Scheme, IIUS, TUFS, etc.) for infrastructure development, skill & technology up-gradation, machinery & equipment, common facility centers, etc.

Considering the variety of the programmes/ schemes, the following is recommended:

- i) Clusters should formulate projects/ proposals to avail financial assistance available through various programmes/ schemes of Central and State Governments. SPVs/ Industrial Associations and/or DICs can play a lead role in preparation/ formulation of such projects/ proposals for their respective clusters.**
- ii) Further, NCR participating States can also avail financial assistance, in terms of soft loans from NCRPB for infrastructure development in micro, small & household enterprises clusters in NCR, as per the prevailing guidelines of NCRPB.**

15. Formulation of policies/ schemes for revival and rehabilitation of the sick MSMEs

The revised guidelines for rehabilitation of sick MSEs issued on 1st November, 2012 by RBI, inter alia, provide for:



- (i) Early detection of sickness;
- (ii) A viability study to form the basis of rehabilitation package to potentially viable sick MSEs; and
- (iii) A non-discretionary *One Time Settlement* (OTS) scheme for the MSE sector.

Further, Ministry of MSME has issued a '*Framework for Revival and Rehabilitation of MSMEs*' vide a Gazette Notification dated 29.05.2015 for the purpose of facilitating the promotion and development of MSMEs.

Also, SIDBI has introduced "*Management/Restructuring of Stressed Assets and Rehabilitation Scheme for MSMEs*". The Scheme provides for relief and concessions (in the form of re-schedulement, reduction in rate of interest, funding of overdue/ future interest and waiver etc.) as well as need based additional financial assistance for revival of MSME sick units.

In view of the above, it is recommended that all the NCR participating State Governments should prepare policies/ schemes for revival and rehabilitation of sick MSMEs in their respective sub-regions, in accordance with the guidelines/ framework/ schemes of the Central Government.

II. Sub-region wise Issues and Recommendations

1. NCT Delhi sub-region

MSME Development Institute (at Okhla), Ministry of MSME, Government of India, after interaction with the Industrial Associations has listed various issues related to MSMEs in NCT Delhi which are as under:

- a) Majority of MSMEs are facing difficulties in obtaining Entrepreneur Memorandum (EM-II) due to cumbersome procedure for issue of MCD Licenses and NOC from Delhi Pollution Control Committee (DPCC). MSMEs are able to get the benefits under the various Government Schemes for non- obtaining the EM-II.
- b) There is lack of availability of timely credit. Entrepreneurs are facing difficulties in getting bank loan. Banks avoid accepting the cases under *Credit Guarantee Fund Scheme* especially for the new entrepreneurs.
- c) The availability of land for industrial use is a major bottleneck for entrepreneurs of Delhi. More Flatted Factory Complexes are needed to overcome this problem.
- d) Delhi has excellent overall infrastructure, but the state of infrastructure and facilities available within industrial estates is poor. The industrial areas suffer from poor quality roads & drainage, encroachments and lack of parking facilities.
- e) There is a lack of trained operators and service providers for manufacturing units.

Further, certain issues have also emerged from the '*Study on Micro and Household Enterprises in NCR*' conducted by NCRPB, which are as follow:

- a) Government of NCT Delhi (GNCT Delhi) do not have MSME Policy for development of micro, small and medium enterprises. The *Industrial Policy for Delhi* (2010-2021)



formulated by Department of Industries, GNCT Delhi envisaged cluster development approach for the new industrial areas which are in organised sector. The Ministry of MSMEs and the MSME Development Institute have undertaken cluster development initiatives in a few clusters; however these are limited to the clusters in industrial estates/areas.

- b) Clusters located outside the planned areas are facing various problems of infrastructure, finance & credit, technology, design and marketing etc. as they are unable to register themselves or avail the benefits of various schemes related to development of MSMEs.
- c) There is a multiplicity of organisation for development, operation and maintenance of industrial areas like Delhi State Industrial Infrastructure Development Corporation (DSIIDC), Delhi Development Authority, Municipal Corporation of Delhi, etc. with overlapping jurisdictions in terms of both area and functions. Industrial Policy for Delhi 2010-2021 proposed that DSIIDC should manage and to be held accountable for the development and management of all industrial areas and new industrial areas in NCT Delhi.

To address various issues of MSMEs in NCT Delhi, the followings are recommended:

- i) **Detailed MSME Policy for NCT Delhi may be formulated by GNCT Delhi, on the lines of Rajasthan MSME Policy, 2015 of Government of Rajasthan and Enterprises Promotion Policy, 2015 of Government of Haryana. The policy should address all issues and provide a way-forward for overall planned and sustainable development of MSMEs in NCT Delhi.**

Various schemes for providing Assistance (including incentives, like the Rajasthan MSME Assistance Scheme-2015) and Revival & Rehabilitation of Micro and Small Enterprises [like the Rajasthan Sick Micro and Small Enterprises (Revival and Rehabilitation) Scheme-2015] need to be formulated by GNCT Delhi and Ministry of MSME for integrated development of micro, small and household enterprises in NCT Delhi.

- ii) **Department of Industries, GNCT Delhi should actively take up the work of development of various clusters of MSMEs in Delhi and CDEs should be engaged/positioned in each cluster for overall development of the clusters.**
- iii) **GNCT Delhi/ DSIIDC, MCD, DDA and Ministry of MSME jointly prepare Plan of Action for identification of various micro, small & household enterprises having potential to be declared as a Cluster, formation of Associations/SPVs, conduct studies & prepare Diagnostic Study Reports/DPRs and set up CFCs & other necessary infrastructure for integrated and overall planned/cohesive development of the clusters.**

2. Haryana sub-region

MSME Development Institute (at Karnal & Okhla), Ministry of MSME, Government of India, after interaction with the Industrial Associations of different districts of Haryana sub-region of



NCR has identified certain issues related to MSMEs at district level which are summarized as under:

- a) Availability of finance for micro enterprise is limited and there are hurdles with the bankers because of policy of banks. Cases under the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) are not addressed properly by the bankers. It is also observed that the rate of interest for micro enterprise is also very high.
- b) Non-availability of infrastructure and industrial estates/ areas. Especially, the shortage of power and water has become a major concern for the existing units as well as for entrepreneurs who intend to set up their own enterprises.
- c) Land has not been earmarked by the State Govt./Local Authorities for SMEs functioning in the non-conforming area.
- d) There is a lack of raw material banks and common testing facilities in the clusters.
- e) Stiff competition for marketing the product in the international market.
- f) Non-availability of skilled labour is also a common problem for almost all the labour intensive enterprise in the sub-region. Labour-force, especially in case of dye casting units, comes mainly from Bihar, however, in last few years there has been a decrease in their numbers, which is not an encouraging situation for SMEs.

In addition to the above issues, '*Study on Micro and Household Enterprises in NCR*', has also identified certain issues specific to Haryana sub-region, which are listed below:

- a) Government of Haryana has laid more emphasis on the development of large and medium scale industries/enterprises which give higher returns than the micro, small & household enterprises.
- b) SHGs/ Associations/ SPVs have not been formed in majority of the clusters of micro, small & household enterprises in the sub-region. MSMEs are facing constraints in availing benefits of various schemes floated by the Government due to non-formation of SHGs/ Associations/ SPVs and lack of awareness/ knowledge of schemes/ programs of the Government.
- c) There is a lack of training institutes and skill development centres in the sub-region.

The following are recommended to address the issues of MSMEs in Haryana sub-region of NCR:

- i) Recently, the Government of Haryana prepared various policies e.g. Enterprises Promotion Policy-2015, which includes policies & schemes to support MSME sector. **Department of Industries/ DICs and other concerned departments of the Government should implement such policies & schemes in letter and spirit to achieve the overall growth and promote development of MSMEs in the sub-region.**
- ii) **Government of Haryana/Department of Industries/DICs should give more emphasis on the development of micro, small & household enterprises in the sub-region. The works/projects essential for inclusive planned development of MSMEs**



should be taken up on priority, to address the issues related to land, infrastructure facilities, etc. Also, CDEs should be engaged/ positioned in the clusters for overall development of clusters.

Also, MSME Development Institute, Ministry of MSME has identified various potential areas/ sectors for MSMEs at each district level. The Govt. of Haryana /Department of Industries/DICs in association with Ministry of MSME should explore these potential areas and necessary action should be taken for promotion and development of these areas/ sectors.

- iii) Schemes for providing assistance for revival & rehabilitation of micro and small enterprises need to be formulated by the Govt. of Haryana [*like the Rajasthan Sick Micro and Small Enterprises (Revival and Rehabilitation) Scheme-2015*] for cohesive development of micro, small & household enterprises in the sub-region.
- iv) Government of Haryana/ HSIIDC/ DICs, ULBs and Ministry of MSME should jointly prepare a Plan of Action for identification of various micro, small & household enterprises having potential to be declared as a Cluster, formation of Associations/SPVs, conduct studies & prepare Diagnostic Study Reports/DPRs and set up CFC & other necessary infrastructure for integrated and overall planned/cohesive development of Clusters in the sub-region.
- v) An initiative should be taken by the Govt. of Haryana/Department of Industries/ DICs for creation of database for micro, small & household enterprises. Further, training and capacity building framework & facilities should be created for the sub-region. The sector expert institutions, NGOs, etc. should be engaged for training and capacity building of the entrepreneurs and workers.

3. Uttar Pradesh sub-region

Based on the ‘*Study of Micro and Household Enterprises in NCR*’ and MSME Development Institute (Okhla & Agra), Ministry of MSME, interaction with the Industrial Associations of different districts of U.P. sub-region, the issues related to MSMEs are listed as under:

- a) Lack of availability of infrastructure, in terms of uninterrupted power and water supply at cheaper rates, non-availability of piped gas, better road connectivity, etc.
- b) Various Central/ State departments are operating similar nature of activities/ schemes with varying subsidy. The jurisdiction and functions of multiple Central/ State departments need to be consolidated.
- c) Implementation of online submission of Entrepreneurship Memorandum.
- d) Non-recognition of EM-II by some of the State Government Agencies.
- e) There is lack of availability of timely finance/credit. Entrepreneurs are facing difficulties in getting bank loans. Bankers avoid to accept the cases under *Credit Link Capital Subsidy Scheme* (CLCSS), especially for the new entrepreneurs, due to lack of awareness among branch level bankers. There should be some mechanism for tracking of application status, so that the entrepreneurs can get latest status of their application.



- f) Bankers avoid accepting the cases under *Credit Guarantee Fund Trust for Micro and Small Enterprises* (CGTMSE), especially for in case of new entrepreneurs. Most of the banks insists/ demand for collateral security from the entrepreneurs.
- g) There is a lack of Export Marketing Hub and Display Centre for MSME Products.
- h) Marketing Development Assistance (MDA) is not much attractive.
- i) Lack of manpower, deficiency of trained operators and service providers for MSME manufacturing units.
- j) There is no detailed policy for development of MSMEs in U.P.

The following are recommended to address the issues of MSMEs in U.P. sub-region:

- i) **Govt. of U.P. has prepared certain policies e.g. *Infrastructure and Industrial Investment Policy U.P.-2012*, which includes policies & guidelines for MSMEs. Department of Industries/ DICs and other concerned departments of Govt. of U.P. should implement such policies & schemes to achieve the overall growth and promote the development of MSMEs in the sub-region.**
- ii) **Detailed MSME Policy for U.P. sub-region should be formulated by Govt. of U.P., on the lines of Rajasthan MSME Policy, 2015 and Enterprises Promotion Policy - 2015 of Haryana. The policy should address all issues and provide a way-forward for overall, planned and sustainable development of MSMEs in U.P. sub-region.**
Various schemes for providing assistance including incentives (*like the Rajasthan MSME Assistance Scheme-2015*) and Revival & Rehabilitation of Micro and Small Enterprises [*like the Rajasthan Sick Micro and Small Enterprises (Revival and Rehabilitation) Scheme-2015*] need to be formulated by the Govt. of U.P. for cohesive development of micro, small and household enterprises in U.P. sub-region.
- iii) **Works/projects which are essential for inclusive planned development of MSMEs should be taken up on priority by the Govt. of U.P. /Department of Industries/DICs, to address the issues related to land and infrastructure facilities. Availability of infrastructure such as uninterrupted power & water supply at cheaper rate, piped gas supply, better road connectivity, etc. should be ensured on priority to the existing MSME clusters.**
- iv) **CDEs should be engaged/ positioned in the clusters for overall development of clusters.**
- v) **MSME, Development Institute, Ministry of MSME has identified various potential areas/ sectors for MSMEs at each district level. The Govt. of U.P./ Department of Industries/DICs in association with Ministry of MSME should explore these potential areas for MSMEs and necessary action should be taken for promotion and development of these areas/ sectors.**
- vi) **Govt. of U.P/ UPSIDC/ DICs, ULBs and Ministry of MSME should jointly prepare a Plan of Action for identification of various micro, small & household enterprises**



having potential to be declared as a Cluster, formation of Associations/SPVs, conduct studies & prepare Diagnostic Study Reports/DPRs and CFC and other necessary infrastructure for integrated and overall planned/cohesive development of Clusters in the sub-region.

- vii) Initiative should be taken by the Govt. of U.P. /Department of Industries/ DICs for creation of database for micro, small & household enterprises. Further, training and capacity building framework & facilities should be created for the sub-region. Sector expert institutions, NGOs, etc. should be engaged for training and capacity building of the entrepreneurs and workers.
- viii) State Govt. should direct/ request the financial institutions to ensure availability of collateral-free finance & credit to micro, small & household units without any hurdle and at low rate of interest. State Government should formulate policy/ guidelines for State owned banks/ financial institutions in this regard. Also, implementation of various financing initiatives/ schemes/ programs like CGTMSE, CLCSS, etc. should be strictly ensured.
- ix) Govt. of U.P. should undertake branding of their indigenous products and advertise them on national television, radio and major magazines which would increase the market value of the clusters within and outside the region. This would also attract the major players and bigger brands.

4. Rajasthan sub-region

Government of Rajasthan has identified related Clusters of leather *juta* & leather tanning, stone cutting & *murti nirman*, pottery, *galicha*, rope making, bamboo baskets, oil mill, iron fabrication & agricultural implements, terracotta, etc. in district Alwar.

NCRPB's *Study of Micro and Household Enterprises in NCR* and MSME Development Institute (Jaipur), Ministry of MSME, Government of India, after interaction with Industrial Associations in district Alwar, revealed certain issues related to MSMEs which are listed as under:

- a) Most of the Clusters are facing problems of non-availability of good quality of raw materials, non-availability of advanced tool kit and skill up-gradation of artisans.
- b) There is a lack of latest tool room testing facilities in Alwar.
- c) The latest machine/technology is not incorporated in the CLCSS for benefiting automobile industries.

The following are recommended to address the issues of MSMEs in Rajasthan sub-region of NCR:

- i) Government of Rajasthan has prepared detailed MSMEs policies and scheme e.g. the MSME Policy, 2015; the Rajasthan MSME Assistance Scheme, 2015 and the Rajasthan Sick Micro and Small Enterprises (Revival and Rehabilitation) Scheme, 2015. The Department of Industries/ DICs and other concerned



- departments of Government of Rajasthan should implement such policies & schemes in letter and spirit to achieve the growth and promote development of MSMEs in Rajasthan sub-region.
- ii) District Alwar lies on Delhi-Mumbai Industrial Corridor (DMIC) which upturns the potential for further industrialisation. Considering the advantages of transportation and logistics facilities, emphasis should be given for the development of engineering based micro, small & household manufacturing clusters in the area.
 - iii) Infrastructure, especially power supply need to be immediately attended by the State Government. Development of CFCs and formulation of SHGs in various Clusters would help in faster growth and development of micro, small and household enterprises in the sub-region. Also, Tool Room Testing facilities should be set-up at Alwar.
 - iv) MSME, Development Institute (Jaipur), Ministry of MSME has identified more than 50 potential areas/sectors for MSMEs in the sub-region. Government of Rajasthan/Department of Industries/DICs in association with Ministry of MSME should explore these potential areas for MSMEs and necessary action should be taken for promotion and development of these areas/ sectors.
 - v) The Government of Rajasthan/ Department of Industries/ DICs, ULBs and Ministry of MSME should jointly prepare a Plan of Action for identification of various micro, small & household enterprises having potential to be declared as a Cluster, formation of Associations/SPVs, conduct studies & prepare Diagnostic Study Reports/DPR and set-up CFC & other necessary infrastructure for integrated and overall planned/cohesive development of the Clusters in the sub-region.
 - vi) Initiative should be taken by the Government of Rajasthan /Department of Industries/ DICs for creation of database for micro and small enterprises. Further, training and capacity building framework & facilities should be created for the sub-region. Sector expert institutions, NGOs, etc. should be engaged for training and capacity building of entrepreneurs and workers.
 - vii) Government should direct/ request the financial institutions to ensure availability of collateral-free finance & credit to micro, small & household units without any hurdle and at low rate of interest. The State Government should formulate policy/ guidelines for State owned banks/ financial institutions in this regard. Also, the implementation of the various financing initiatives/ schemes/ programs like CGTMSE, CLCSS, etc. should be strictly ensured and benefit of these schemes should be enhanced for the engineering and automobile industries.
 - viii) Rajasthan sub-region is located within the 'Golden Tourism Triangle' of Delhi-Agra-Jaipur tourist circuit which receives a large number of foreign and domestic tourists throughout the year. This could provide a good market for selling the



products of micro, small and household enterprises/ clusters in the sub-region. These clusters need to be linked with the Golden Tourism Triangle and other tourist circuits for their development.

- ix) Government of Rajasthan should undertake branding of their indigenous products, mainly leather items, marble *murti*, pottery and terracotta. The products should be advertised on national television, radio and major magazines which would increase the market coverage as well as value.

III. Sector/Cluster-wise Issues and Recommendations

1. Handloom Clusters

Issues:

- a) Handloom enterprises, during the process of dyeing and finishing, discharge hazardous chemical effluents. It is observed that most of the handloom clusters in NCR do not have Common Effluent Treatment Plant (CETP) and effluents are being discharged into storm water drains directly without any treatment which cause high level of pollution.
- b) Study of NCRPB reveals that most of the clusters in this sector face a major problem in procuring raw material at reasonable rates. It is observed that main raw material for most of the handloom enterprises is the raw cotton which they spin/ weave to produce textiles. However, price of raw cotton has increased rapidly along with the transportation cost.
- c) Garment manufacturing enterprises are the main market for handloom enterprises. However, it is observed that the garment industry is not much aware about the potential source of their raw materials and they procure most of the raw materials through dealers.
- d) Most of handloom enterprises/clusters in NCR such as Panipat, Pilakhuwa, etc. lack in terms of the necessary infrastructure i.e. space, connectivity, power, waste disposal facilities, etc., which is creating hindrance in smooth functioning of enterprises.
- e) Machinery/ technology being used by the handloom enterprises are mostly obsolete. Most of these enterprises cannot afford new technology/ machinery individually.
- f) Also, there is a lack of innovation in terms of design and technological aspects among the handloom enterprises. This aspect reduce saleability of handloom products in the competitive market.

Recommendations:

- i) The NCR participating State Governments/ Local Authorities should construct CETPs in their respective handloom clusters. Alternatively, State Governments should provide incentives to private developers for constructing and operating CETP on a PPP mode in these Clusters.



- ii) It is suggested that sizeable Raw Material Banks (RMBs) should be set up at district or cluster level which can be easily accessible to handloom enterprises.
- iii) Purview of schemes like *Mill Gate Price Schemes* (MGPS) should be extended to cover these handloom clusters as well, which will enable the handloom entrepreneurs to obtain raw material at subsidised rates.
- iv) To facilitate handloom enterprises, efforts should be made by the Ministry of MSME, Ministry of Textiles, NCR participating State Governments and other concerned Ministries, Departments, Agencies, etc. to create awareness amongst handloom enterprises to market their products to the garment industry or the other stakeholders. Advantages of this should also be brought out amongst handloom enterprises. Regular buyer-seller meet should be organised so that handloom enterprises (producers) and garment industry (buyers) may understand each other's need in a better way and establish direct contact.
- v) Special courses and workshops for design and technological aspects, specific for handloom enterprises, needs to be designed and arranged by the Ministry of Textiles and Ministry of MSME. These special courses and workshops should be conducted periodically at district/ cluster level, in order to improve the product designs and technology.

Khadi & Village Industries Commission (KVIC), is engaged in promoting and developing khadi and village industries for providing employment opportunities in rural areas, thereby strengthening the rural economy. KVIC undertake activities like skill improvement; transfer of technology; research & development; marketing etc. and helps in generating employment/self-employment opportunities. It also implements cluster development activities in traditional industries of khadi and village industries under *Scheme of Fund for Regeneration of Traditional Industries* (SFURTI) as a Nodal Agency. KVIC also built/ maintain raw material reserves and creates common facilities for processing of raw material & marketing of KVI products.

KVIC may establish linkages with reputed marketing agencies to promote the sale and marketing of khadi and/or products of village industries or handicrafts. NCR participating State Governments and SPVs should jointly work with KVIC for the purpose of skill improvement; transfer of technology; research & development; marketing, building up of raw materials reserve, etc.

- vi) Major growth centres/areas for development of handloom enterprises could be identified and developed with necessary infrastructure in NCR. Enterprises/ artisans, facing issues relating to space, congestion, pollution etc. at their present location, may be encouraged to shift into these growth centres/areas.
- vii) CFCs should be set up at cluster level which could provide technology/ machinery for use to micro, small & household enterprises on rental basis. At Cluster level, SPV/ Industrial Association can play a vital role in this regard. Schemes like *Hire Purchase and Leasing Scheme* by NSIC should be initiated at cluster level.



2. Wearing Apparel/ Garment Clusters

Issues:

- a) The garment market has a huge potential for development, both nationally and internationally. The industry is fed by the handloom sector, however, it generally procure raw material from dealers in the vicinity, instead of procuring from the source i.e. handloom enterprises, which also exists in the vicinity.
- b) Design and technology in handloom sector are of utmost importance which keeps changing with the market trends. To capture market, quality of garments need to be tested and ensured. Further, markets need to be identified for selling the end products.
- c) It is observed that machinery/ technology being used by the handloom enterprises are mostly obsolete. Most of these enterprises cannot afford new technology/ machinery individually.

Followings are the recommendations:

- i) Efforts should be made by the Ministry of MSMEs, Ministry of Textiles, NCR participating State Governments and other concerned Ministries/ Departments/ Agencies, etc. to *create awareness amongst the garment manufacturers to procure raw material directly from handloom enterprises*. This would help in reducing the cost of raw material. Regular buyer-seller meet should be organised so that handloom weavers (producers) and garment manufacturers (buyers) can establish direct contact.
- ii) *Design Centre* alongwith garments *Testing Centre* should be set up by the Ministry of MSMEs/ Ministry of Textiles and other concerned Ministries/Departments/Agencies, etc. in collaboration with the NCR participating State Governments/ DICs/ SPVs at district or cluster level, in order to improve designs and ensure quality of garments.
- iii) Ministry of MSMEs/ Ministry of Textiles and other concerned Ministries, Departments/ Agencies, etc. in collaboration with the NCR participating State Governments/DICs/SPVs should identify/earmark the *major markets* where enterprises can sell their products. Enterprises should be made aware of such markets for selling their products.
- iv) It is proposed that CFCs should be set up by the NCR participating State Governments/DICs and/or SPVs which can provide *technology/ machinery* to the micro, small & household enterprises for use on a rental basis. Schemes like ‘*Hire Purchase and Leasing*’ scheme by NSIC should be initiated at cluster level.

3. Wood and Wood Products Clusters

Wood and wood based industry play a vital role in the growth of Indian economy. This industry has potential to grow manifolds from existing levels and is poised for a sustainable growth.



Wood, plywood and allied products industry is one of the key sectors having immense potential in NCR.

Issues:

- a) Making wood products more customer-focused and responsive to changing needs is one of the biggest challenges. This industry remains very conservative in comparison with many other consumer products. It is essential that manufacturers and merchants become more dynamic and attuned to market trends and customer requirements. For technology up-gradation & modernization, huge capital & resources are required, the arrangement of which is difficult for micro, small & household enterprises. Also, there is a lack in developing proper marketing strategies to penetrate in the international market.
- b) Wood, cane, bamboo, etc. is the main raw material for this sector, however, it is observed that the availability of this raw material has decreased considerably and the prices have also increased accordingly. In order to fulfill customer's demand for high quality products, enterprises need to procure best quality of raw material to ensure quality specification and to meet customers' expectation. There has been acute shortage of good raw material as wood is the natural commodity.

To address various issues related to wood and wood products enterprises, following are recommended:

- i) **DICs or SPVs should tie-up with Forest Department of the respective States and farmers/ planters to *procure raw material* (forest products/ wood). Wood/ timber depots/ raw material bank should be established at a cluster level by DICs or SPVs.**
- ii) ***Timber planation drives* should be organized by the respective State Governments for densification of timber tree cover. State Governments should promote timber tree planation including quality cane and bamboo by providing incentive for such plantation and commercial production.**
- iii) **Enterprises should be made aware of new technologies, product designing and innovative product marketing skills such as websites, product stalls, exhibitions/ trade fairs, etc. in order to increase the business potential. DICs/ SPVs as a nodal agency should take such initiatives with the assistance of NSIC, NMCP, etc. Further, design workshops, technological demonstrations/ trainings etc. should be imparted by the State Government departments to wood and wood product entrepreneurs and workers through NGOs, CBOs and/or other technical institutions.**

4. Light Engineering and Auto-Component Clusters

NCR is one of the most industrialised and urbanised region with very high demand for the products related to light engineering and auto-components. Light engineering and auto component MSMEs basically work as ancillaries/vendors of large and medium scale industries.



Various challenges faced by micro, small & household enterprises of this sector in NCR are summarised as under:

Issues:

- a) Enterprises are lacking to produce quality products, to match the quality measures of large & medium scale industries and export markets.
- b) Raw material costs are by far the largest cost portions. Steel is the most important raw material for auto component manufacturers. Micro, small & household enterprises engaged in light engineering and auto component manufacturing sector in NCR are currently grappling with high raw material prices, price rise and monopoly of suppliers.
- c) A large number of enterprises does not have capabilities to design the products end-to-end. These enterprises do not have necessary infrastructure for doing R&D to match with requirements of the market. Their financial strength and size do not permit them to have a dedicated in-house designing and R&D labs and testing & product design facilities.
- d) Micro, small & household enterprises related to light engineering and auto-components sector are facing challenges in getting credit and credit at a low rate of interest. Many enterprises are finding it difficult to get necessary financial resources from banks or venture capitalists.
- e) The enterprises need to upgrade their technology in order to remain competitive in global market, however, inability of these enterprises in getting credit has restricted them from adopting/ acquiring latest machinery.
- f) A large proportion of available manpower from light engineering and auto components enterprises are going either to service industry or to new manufacturing units, due to rising wage cost. Retention of skilled manpower is proving to be a challenge.
- g) There is a need for skill development and attitudinal training of workforce for improving productivity.
- h) Availability of basic infrastructure like uninterrupted power supply, transport/ logistics facilities, etc. is also one of the major problems for the enterprises of this sector located in NCR. Poor infrastructure has led to the higher manufacturing cost and loss of market.

To overcome issues/ problems of light engineering and auto-components related clusters in NCR, the following are recommended:

- i) **Ministry of MSME/ other concerned Central Ministries and/or the NCR participating States/ DIC should plan activities for key light engineering and auto-components cluster, to create awareness about prowess of this sector and product's quality standards. SPVs/ Industry associations may be roped-in to provide necessary inputs for the same.**
- ii) **Government should take necessary steps to *control prices of steel* which is the main raw material for light engineering and auto-component enterprises.**



- iii) Government should facilitate and/or incentivize light engineering and auto component manufacturing enterprises/ clusters for creation & use of shared infrastructure and capacity development for R&D, testing labs, design centres, etc.

Schemes run by institutions like National Manufacturing Competitiveness Council (NMCC) and Ministry of MSME can be tapped to meet financial requirements of setting up such facilities. There is a lack of awareness about such schemes among the enterprises. Government institutions interested in encouraging light engineering & auto component sector should not only take initiatives to create awareness about various schemes but also facilitate the stakeholders' to avail benefits of such schemes.

- iv) Government of India has taken major initiatives under *National Automotive Testing and R&D Infrastructure Project* (NATRiP) and have plans to provide expensive infrastructure for developing capabilities of automotive industry. NCR participating States/ DICs/SPVs/ Industrial associations should get maximum benefits from such schemes.
- v) Government should *create awareness* among micro, small & household enterprises about the need for getting creditworthiness rating. There is also a need for creating awareness among these enterprises about availability of low cost institutional equity capital and risk capital funds for their expansion plans. Some schemes of this category includes SME Growth Fund of SIDBI Venture Capital Limited (SVCL). This can be tapped to meet the financial requirements in the auto-components clusters. EXIM bank also has several schemes for financing SMEs, firms, product export and overseas investments. *Extensive awareness programmes* should be designed and organised for micro, small & household enterprises of this sector about such schemes.
- vi) *Training* for specific skills, suiting for specific work, need to be imparted among workers and entrepreneurs to increase their productivity. Government should encourage and support institutions to collaborate with light engineering and auto-components clusters/ SPV/ associations and to come up with short term industry relevant courses. This will help the industry to meet requirements of technically qualified and trained manpower which is essential for its growth.
- vii) In order to support light engineering and auto-component enterprises, the NCR participating State Governments should ensure regular supply of quality power at a reasonable rate, efficient transportation and logistics services alongwith other required infrastructural facilities at cluster level.

5. Pottery, Terracotta & Ceramics Clusters

Pottery is the ceramic act of making pottery wares, includes earthenware, stoneware and porcelain. Pottery also refers to the art or craft of a potter or the manufacturer of pottery,



terracotta, ceramics, and black pottery. Variety of pottery, terracotta, ceramics products includes cut-work lamps, pitchers money banks, flower vases, pots, kitchen wares, musical instruments, clay toys, goblets and many more items.

In NCR, several micro, small & household enterprises are engaged in various types of pottery/terracotta/ ceramics works. Some of the clusters are at Ramgarh in district Alwar of Rajasthan sub-region; Faridabad, Bhatkal, Palwal, Farukhnagar, Bahadurgarh, Panipat, Gurugram districts in Haryana sub-region and Meerut, Khurja and Bulandshahr in U.P. sub-region and Uttam Nagar in Delhi. The Khurja pottery cluster is one of the oldest pottery clusters in the country. The issues related to enterprises/clusters engaged in pottery, terracotta and ceramic activities in NCR are summarised below.

Issues:

- a) Main product related constraint pertains to the production process itself. Artisans in clusters still resort to the traditional methods, as inherited from their forefathers, for preparing and designing the craft. Such production process warrants a high time and labour consumption per unit of an item produced and thus, affects the efficiency in production. Also, it limits the variety in product lines and product designs. There is a lack of skills and technique up-gradation.
- b) Artisans don't have proper work place, most of them are either using open shed or a place within their homes. Insufficient lighting and improper ventilation deteriorate working condition to the worst. Working inside the house, besides reducing productivity of the artisans, creates a lot of health issues, especially for children, which is a major concern for craftsmen.
- c) Many of the artisans don't have any storage place for their produces, hence, most of the time finished products are left out in nearby open space. Many of them keep their finished goods outside houses or road side due to lack of suitable space for storage. Shortage of space, as a consequence, leads to high amount of wastage by way of breakage, destruction by rain water and thunderstorm, etc.
- d) There is lack of proper place to display the finished products and their effective promotion.

To address the above issues, following are recommended:

- i) **NCR participating State Government/ SPVs/ Industrial associations and NGOs should organize *training programmes* focused on modern methods of production, use of improved tools & latest technology for fast production of goods, product designs, quality control, etc. Governments should involve premier institutions like Indian Institute of Crafts & Design (IICD, Jaipur), Central Glass and Ceramic Research Institute (CGCRI, Khurja), etc., for imparting such trainings and refinement of product designs, etc. in their respective sub-regions.**



- ii) Government authorities should take steps for aggressive *market promotion* of the crafts which would enable better publicity and thus, revive traditional craft which has reached the edge of extinction.
- iii) *Proper infrastructure* facilities like good roads, transportation facilities, communication, uninterrupted power supply, water, etc. should be provided to the artisans/ clusters.
- iv) The *financial assistance* provided by banks should be increased so that the artisans of terracotta and pottery craft are relieved from chronic problem of insufficiency of capital.
- v) Government should take steps to *increase the number of showrooms/ display centres* within and outside the craft village i.e. in nearby towns for better exposure of the products.
- vi) Government should *promote export* to provide access to this extraordinary art and culture to international market. These enterprises /artisans clusters should be linked with *tourist circuits and international market* (through websites, fairs etc.). *Quality Control* measures should also be evolved to ensure the durability of the product.
- vii) Government authorities/ SPVs/ NGOs should take steps to ensure that artisans get *proper price* for their products and protect them from exploitation of traders/ middlemen.

6. Leather & Footwear Clusters

Issues:

The gaps and issues related to leather and footwear manufacturing clusters are summarized as following:

- (a) Unorganized industry structure, being a major hindrance for low-price mass production and hence, leather & footwear manufacturers lose out the business.
- (b) Lack of linkages with limited availability of key components and machinery impacting scales of production.
- (c) Increase in cost of raw-material and dependency on imports for critical non-leather components like PU sole, insole board, steel toe caps, metal fittings, etc.
- (d) Cost pressures on tanneries due to mandatory effluent treatment plant also results in increased cost of finished leather.
- (e) Inadequate testing and certifying agencies.
- (f) Lack of skilled workers related to dyeing, tailoring, cutting and decline in unskilled or semi-skilled workforce.
- (g) Lack of investments in research & design development and lack of awareness of quality norms and standards.



To address the issues related to leather & footwear enterprises, following are recommended:

- (i) *Support programs* for R&D in emerging technologies should be initiated by the Ministry of MSME and/or the NCR participating State Governments. The industry and academia linkages for conducting joint R&D should also be strengthened and a research cell with equal participation of all the industry segments (tanning, leather footwear, leather apparel & goods, etc.) & academia should be established at cluster level.
- (ii) Support for *establishing common facilities*, to enrich collaboration among micro, small & household enterprises, should be provided by the NCR participating State Governments and scheme/ programs should be introduced to support common facilities in key clusters. The cost for creation of common facilities can be shared between government and SPVs/ industrial associations. Some of the facilities that need to be provided are:
 - Marketing & Business Development Centre.
 - Shared Testing & Certification Centre.
 - R&D Centre at sub-region level.
- (iii) *Technology development & demonstration scheme/ program* should be undertaken/ initiated by the respective NCR participating State.
- (iv) *Database of industry experts*, who can be contacted by enterprises for any kind of technical support, should be created by the DICs/SPVs. For the same, profiles of experts need to be invited and kept in a repository.
- (v) Entrepreneurs need to be trained through short term or long term courses on traditional footwear (e.g. *mojari*) and other leather accessories especially on *new designs & techniques*.
- (vi) *Awareness programme* should be conducted to educate entrepreneurs and workers. A stipend should be given to attract entrepreneurs and workers for attending awareness & training programmes.
- (vii) *Raw material bank* should be set-up by SPVs/ Industrial associations/ DICs. Further, research should be initiated on new and similar material to substitute leather.
- (viii) *Linkages should be established with designers* of leather accessories and footwear who would be able to brief the entrepreneurs about market demand in terms of styles, designs, etc.

7. Packaging Cluster

Packaging is a technology that encloses and protects a product in its journey from factory to its end use by the consumer including transportation, warehousing, logistics and sale. The purpose of packaging basically includes containment, protections & preservation, communication, convenience, reduction of pilferage and marketing trends. Packaging can take various shapes,



sizes, materials (used for packaging), etc. and can be broadly categorized in four groups i.e. food, material, cosmetic & pharmaceutical. The packaging industry in India is a heterogeneous mix of both organized and unorganized sectors with a large number of MSMEs and a few large integrated players. There are more than 22,000 registered packaging companies in India, more than 85 percent of which are MSMEs.

Flexible packaging is the fastest-growing sector of India's packaging industry. The shift from traditional rigid packaging to flexible packaging on an account of its attractiveness, cost-effectiveness and strength is largely aided by increasing consumer demand for processed food. The increasing awareness regarding clean water, safe food and pharmaceuticals will drive this growth.



Figure 5.7 Types of packaging

The industry is facing challenges due to lack of regulatory clarity in packaging, consumer awareness towards sustainable packaging and stress towards green packaging materials. Some of the major problems of packaging enterprises are as under:

- (a) Quality of packaging material used in India by MSMEs is not matching the world standards.
- (b) R&D facilities available with MSMEs are inadequate for development of material/ systems or for carrying test on new material in order to gauge their performance. There has been a lack of R&D effort and application engineering for introducing new packaging material/concepts/systems and processing formulation for different products.
- (c) The enterprises/ clusters are facing various other challenges such as:
 - rapid changes in technology,
 - shortage and rising cost of raw material and input costs
 - highly-inadequate credit flow/ loans
 - lack of market access, marketing, distribution and branding
 - lack of exposure to best management and manufacturing practices



- lack of training facility
- lack of space for storage of products & packaging materials
- lack of end-to-end solutions, automation & integration of primary and secondary packaging machines.

(d) Non-availability of skilled manpower is also another challenge.

To address the above issues, following are recommended:

- (i) **NCR participating State Governments/ DICs and/or the SPVs/ Industrial associations in collaboration with the Packaging Industry Association of India (PIAI) should seize the opportunity to offer eco-friendly and innovative packaging solutions.** Efforts should be made to offer packaging solutions with WTO/ world standards compliance, eco-friendly materials, high lifecycle cost and waste management, cost effectiveness, innovation and consumer convenience.
- (ii) **Capital investment subsidy** should be designed for the development of infrastructure, latest machineries, technology upgrade, R&D activities, etc. for the growth of packaging enterprises/ clusters in NCR. Subsidy should cover machineries for production, process control, quality assurance, research, innovation, automation, raw material import, etc. Special subsidy should be given for developing Information Technology (IT) systems and Statistical Process Control (SPC) system for enhancement of system and capacity building. This to be done because most of global companies in retail sector are outsourcing packaging to domestic MSME packagers.
- (iii) **NCR participating State Governments should encourage the PPP in establishing Packaging Parks** at places where such clusters are active in the respective sub-region.
- (iv) **NCR participating State Governments/ DICs/ SPVs should facilitate the manufacturing & packaging enterprises by providing exposure and opportunities to establish tie-ups with each other and also with the international players**, so as to get access to contemporary technologies for producing good & high-end packaging material in a reasonable price. Participation in delegations, industry specific fairs and events at national & international level needs to be stepped up substantially.
- (v) **Ministry of MSME, Government of India has a scheme whereby it reimburses the ISO 9001/14001/HACCP certification expenses to the tune of 75% or Rs. 75,000/- whichever is less, through the respective Directorate of MSME/DICs.** NCR participating State Governments should **conduct campaigns/ workshops/ awareness programmes, etc. to ensure ISO certification of all packaging related enterprises.**
- (vi) **Training for various types of packaging works need to be imparted to the workers and entrepreneurs to enhance their skills and also to increase the productivity.** Government should encourage and support institutions to collaborate with packaging clusters/ SPV/ association to come up with short and industry relevant



- courses. This will help industry to meet the requirements of technically qualified and trained manpower, needed for its growth and realizing potential of the sector. *Training Centres* should be established by the NCR participating States and the Ministry of MSME for skill up-gradation in this sector.
- (vii) MSMEs does not have adequate resources and they need *institutional support* for providing inputs especially in the area of marketing. NCR participating States in association with the Ministry of MSME and NSIC should give special attention to the packaging enterprises/ clusters through marketing assistance scheme. The State Governments may take initiative to *create a database* of each and every industry (Directory of MSME Packaging Industries) category wise as well as sector wise to efficiently monitor the growth of MSMEs related to packaging. This will result in business growth and market expansion as it will provide them exposure to organized sector, other industries, market as well as customers.
 - (viii) NCR participating State Governments must give a fillip for organizing *exposure visits* of MSME Packaging manufacturers to different countries and market so that they may get an opportunity to understand the latest technology and trends in the international market. The national/international level fairs should be organized to enable manufacturers to understand R&D capabilities of key players, stimulate their own innovation aspirations and think in a modern & creative way.
 - (ix) *World-class centers of excellence* should be created by the Ministry of MSME and/or the NCR participating States. Existing premium institutes in the country such as the Indian Institute of Packaging (IIP), School of Packaging-Packaging Technology Centre, etc. should be given more thrust and to be developed into centers with world-class facilities. Such institutions should be involved to complement the shortcomings of packaging related MSME clusters in NCR as far as qualitative requirements, knowledge base, inputs on issues like production, improvement in supplies and developing new lines are concerned.
 - (x) NCR participating State Governments should prepare a long-term roadmap with commitment on milestones for overall development of packaging enterprises/ clusters in NCR.

8. Sports Goods Clusters

Meerut is one of the largest sports goods manufacturing centre, next to Jalandhar, in the country by producing about 20% of the total sports goods. Sports goods related enterprises came into existence mainly after partition, when number some families belonging to Sialkot (presently in West Pakistan) migrated & settled in Meerut & Jalandhar. These families had sufficient knowledge of manufacturing of sports items and therefore they started units to meet the local requirement. Some of these units, by virtue of their long experience in the field, have built up a good brand name of their products, thereby getting orders from domestic market as well as from other countries.



Hockey stick, wickets, football, volley ball, carom board, tennis racket/racquet, tennis ball, nets, athletic equipment, protection accessories, kit bags, sports wears, all type of indoor games, boxing gloves, health equipment, toys, etc. are the major goods which are manufactured at Meerut.

In addition to Meerut, sports goods are also being manufactured in other parts of the NCR such as district Gurugram in Haryana sub-region, however, the scale of sports goods manufacturing is very small. It is observed that sports goods manufacturing enterprises/ cluster in NCR are facing various problems which are summarised below:

- a) Sports goods manufacturers are facing problems of non-availability and high cost of raw material such as wood, rubber, cane, threads, steel, etc. for manufacturing of various sports equipment. For example, raw material required (willow wood) for bat manufacturing is procured from Jammu & Kashmir and the sale of willow as a raw material is not permissible but it can be purchased in semi-finished form. Similarly, the cane is available only in Andaman & Nicobar Islands and North-Eastern States. All such issues increase the cost of raw material and finished product.
- b) The enterprises use manual as well as old indigenous machinery thereby, restricting the quality as well as production of the products.
- c) The sports goods manufacturing enterprises/ clusters do not have adequate infrastructure facilities mainly, power supply, good road, drainage, storage, display centres etc. which is affecting the business mainly in rainy season.
- d) There is a lack of skilled and semi-skilled workers for manufacturing sports goods.
- e) Lack of branding and marketing strategies.
- f) Lack of latest technology & tools, training and R&D facilities.
- g) Lack of synergy and coordination amongst various sports goods manufacturers.
- h) Comparatively higher interest rates for loans
- i) Insensitivity to customer needs/ poor channels of customer feedback and customer complaint redressal system.

The sports goods industry is a sector with vast potential to grow in the near future. Some recommendations to turn NCR into a world-class sports goods manufacturing hub are as under:

- i) **Ministry of Youth Affairs and Sports; Ministry of Commerce and Industries, Ministry of MSME or any other concerned Central Ministry/ Department should take necessary actions towards *removal of restrictions* in the movement of raw materials. The Central Ministries/ Departments in association with State Governments should *set-up raw material banks* to facilitate the sports goods manufacturing enterprises by way of providing regular raw material supply at reasonable rates.**



- ii) NCR participating State Governments and/or the Ministry of MSME should facilitate or provide *financial assistance for technological up gradation* of MSMEs engaged in the sports goods production in NCR.
- iii) *Capacity building and training programmes* should be organised by the NCR participating State Governments for the entrepreneurs and works, in association with the Sports Goods Export Promotion Council (SGEPC), Process and Product Development Centre, Sports Goods Associations, Sports Good Foundation of India, etc. Special capacity building and training programmes should be designed for technology & design, branding and marketing strategies, etc.
- iv) It is important to *popularize Brand India* domestically. International events which are held in India could be compulsorily required to use sports goods manufactured in India with international specifications and standards. The national sports channel, DD Sports, All India Radio, etc. should *advertise the local sports brands* at concessional rates.
- v) Participation of small and medium manufacturers at international sports fairs and exhibitions should be encouraged by the Central/State Government by subsidizing the cost of participation. Local brand should be promoted at these international fairs with publicity support from the Government.
- vi) The existing sports goods manufacturing enterprises/ clusters should be provided with *adequate infrastructure facilities* like power supply, good road, drainage, storage, display centres, etc.
- vii) The State Governments should take initiative *to create a database/ directory of sports goods enterprises* and efforts should be made to establish synergy and coordination amongst various sports goods manufacturers by organising workshops, seminars and interaction meets, etc. The database/ directory should cover all aspects such as raw material suppliers, products, buyers, etc.
- viii) *Availability of loans on cheaper rates* should be ensured by the Central/State Government and banks. Further, *special incentives*, for example, tax holiday, could be given to sport goods manufacturing enterprises who adopt automated and modern methods for manufacturing.
- ix) Only limited product groups of sports goods are being manufactured in India. There is an urgent need for *product diversification* which can be met by establishing R&D centre to conduct research on new products. NCR participating State Governments in collaboration with the Ministry of Youth Affairs and Sports; Ministry of MSME or any other concerned Central Ministry/ Department/ Institution should set-up R&D centre to conduct research on variety of sports goods.
- x) NCR participating State Governments should *conduct diagnostic studies* for their respective sub-region to identify the potential for manufacturing of various kinds of sports goods.



- xi) ***Sports goods manufacturing complex/ parks*** for MSMEs should be set-up by each of the NCR participating State Governments within their respective sub-regions. Such complex/ parks should be equipped with facilities like information centre where latest information on raw materials, technology, specifications, etc. can be provided and **skill development centre** for the purpose of workforce training.

9. Miscellaneous Manufacturing Clusters

The *Brief Industrial Profile Reports* of various districts of the NCR, prepared by MSME Development Institutes, Ministry of MSME, Govt. of India, the NCRPB's *Study on Micro and Household Enterprises in NCR* and the *Cluster Observatory* of MSMEs reveals that a larger share of NCR workers is engaged in various types of micro, small & household enterprises which contributes substantially to the regional economy. The issues and recommendations of major MSME activities/ clusters is given above, however, there are several other activities/ clusters which are location specific with a high growth potential in NCR wherein Government interventions are required to solve their various issues like raw material, infrastructure & space, skill development, credit, marketing & promotion, manpower, etc.

Some of such MSME clusters are summarised as under:

- i. **Scissor Manufacturing Cluster:** Scissors cluster in Meerut is about 360 years old. Main types of products manufactured at this Cluster are barber scissors, tailor scissors, general scissors, paper scissors, etc. NIESBUD, Ministry of MSME, Government of India has already established a Common Facility Centre for this cluster.
- ii. **Musical Instruments Cluster:** The Musical Instruments Cluster in Meerut is a unique cluster in the NCR. Also, there are a few musical instruments manufacturing enterprises scattered in other parts of NCR.
- iii. **Artificial Ornaments Cluster:** Meerut and Loni in U.P. sub-region, Pataudi in Harayna sub-region and NCT Delhi are famous for manufacturing of artificial jewellery in NCR.
- iv. **Handloom, Zari and Embroidery Cluster:** Enterprises engaged in handloom, zari and embroidery related activities are spread across the NCR, especially in NCT Delhi, Haryana and U.P. sub-regions. The sector has a high growth potential.
- v. **Brassware Manufacturing Cluster:** At Rewari, there are a large number of manufacturing units of brassware. The greater bulk consists, of course, of cooking utensils; but fancy articles involving- chasing, engraving and parcel tinning are also produced and exported.
- vi. **Modha making Cluster:** Garhmukteshwar in Hapur district of U.P. sub-region is famous for modha making or manufacturing cane furniture. This activity also exists in certain parts of Haryana sub-region on a substantial scale.
- vii. **Marble Murti Kala Cluster:** Gola ka Bass and Ramgarh in Rajasthan sub-region of NCR has emerged as hub of Marble Murti Kala.



Scissor Manufacturing Cluster at Meerut



Musical Instruments Cluster at Meerut



Handloom Zari & Embroidery Cluster in NCR



Brassware Manufacturing Cluster at Rewari



Marble Murti Kala Cluster in Rajasthan

Plate 5.2 MSMEs in NCR

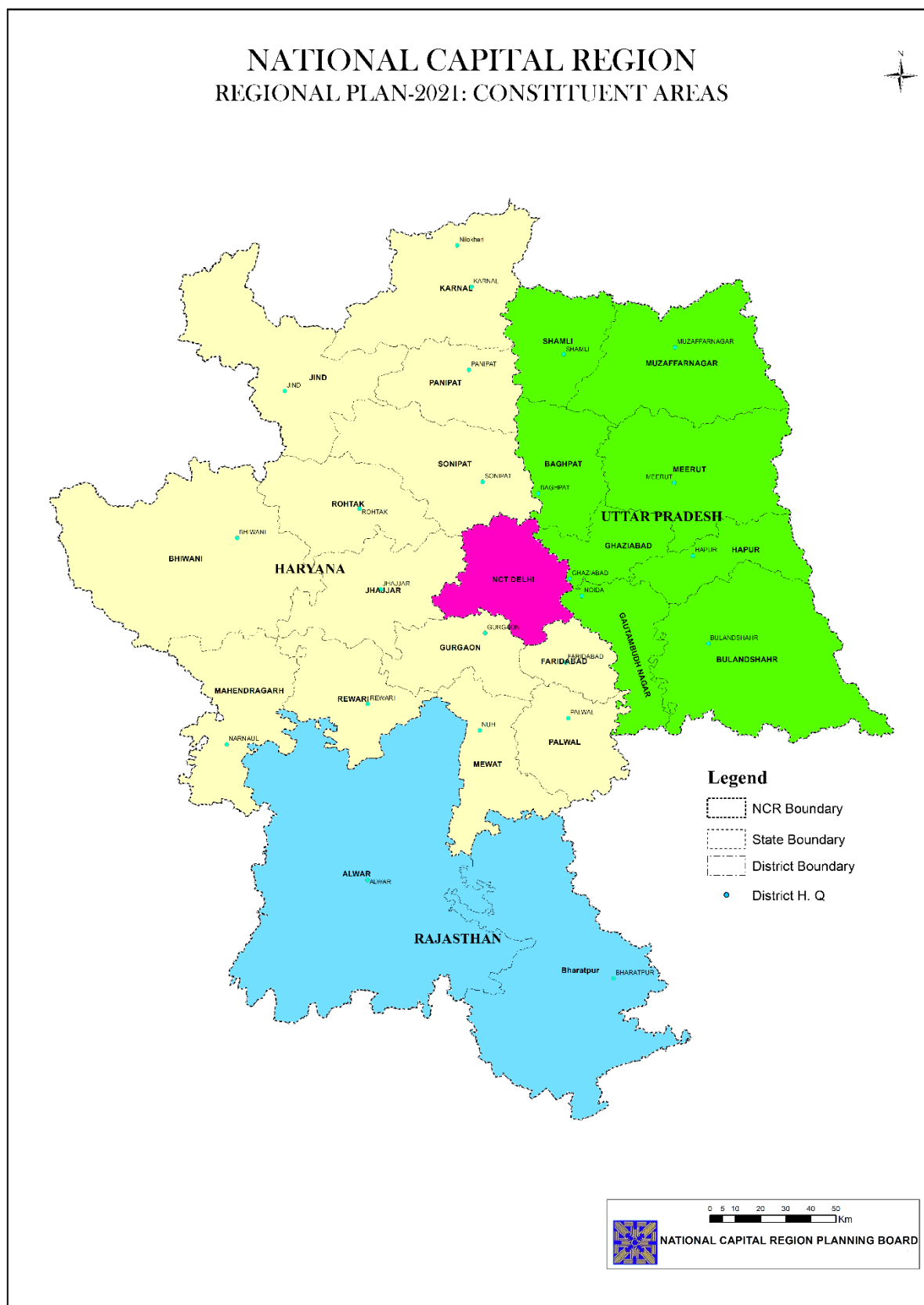
It is observed that these clusters (except Panipat Handloom) are highly unorganised and fragmented, located in small towns/villages and/or alongside the National/State



Highways. It is recommended that the concerned NCR participating State Government should conduct a comprehensive analysis of their respective sub-regions and should prepare a road-map/detailed plan for the overall planned development and growth of such clusters, considering the general recommendations made in this chapter.

IV. Recommendations for the newly added areas/ districts in NCR

The newly added districts in NCR, namely, Bhiwani, Mahendragarh, Jind and Karnal districts of State of Haryana, Bharatpur district of State of Rajasthan and Muzaffarnagar & Shmali districts of State of Uttar Pradesh were not covered under the '*Study on Micro and Household Enterprises in NCR*', however, it is recognized that various types of MSME activities, as discussed above, exists or are being carried out in these districts too. Therefore, it is recommended that the above recommendations may also be extended to the aforesaid newly added six districts, to ensure the growth and planned development of MSMEs in all the districts of NCR as shown in the **Map 5.1**.



Map 5-1 National Capital Region (including newly added districts)



ANNEXURE-1

Appendix 1.A

DISTRICT WISE DISTRIBUTION OF CLUSTERS																			Appendix 1.A
	Food Products	Textiles	Wearing Apparel	Leather	Wood & Wood Products	Paper & Paper Products	Publishing & Printing	Chemicals & Chemical Products	Rubber & Plastic Products	Other Non-Metallic Products	Basic Metals	Fabricated Metal Products	Machinery and Equipment	Electrical Machinery	Electronic Goods	Auto Components	Furniture	Total No. of clusters	Sample Clusters as per Proportionate Sampling Method
NIC Code 04	15	17	18	19	20	21	22	24	25	26	27	28	29	31	32 & 33	34	36		
Mewat	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	
Baghpat	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	
Jhajjar	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	1	4	
Palwal	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	4	
Sonipat	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	5	
Rewari	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	1	5	
Rohtak	0	0	0	0	1	0	0	0	0	1	0	1	1	0	0	1	1	6	2
Faridabad	0	0	1	0	1	0	0	0	0	2	0	1	0	0	1	1	0	7	2
North Delhi	1	2	0	1	0	0	0	0	0	2	0	2	0	0	0	1	1	10	2
Panipat	0	3	0	1	1	0	0	0	0	0	0	1	0	0	0	0	2	8	2
Gurugram	0	0	1	0	1	0	0	1	0	1	0	1	1	1	1	1	0	9	2
Alwar	1	2	0	2	0	0	0	1	0	2	0	0	0	0	0	1	1	10	2
Gautam Budh Nagar	0	0	1	1	0	1	0	1	2	0	0	0	1	1	1	0	1	10	2



Draft Functional Plan for Micro and Household Enterprises in NCR

Appendix I.A

DISTRICT WISE DISTRIBUTION OF CLUSTERS

	Food Products	Textiles	Wearing Apparel	Leather	Wood & Wood Products	Paper & Paper Products	Publishing & Printing	Chemicals & Chemical Products	Rubber & Plastic Products	Other Non-Metallic Products	Basic Metals	Fabricated Metal Products	Machinery and Equipment	Electrical Machinery	Electronic Goods	Auto Components	Furniture	Total No. of clusters	Sample Clusters as per Proportionate Sampling Method
NIC Code 04	15	17	18	19	20	21	22	24	25	26	27	28	29	31	32 & 33	34	36		
Walled City & Walled City Extension	0	3	0	1	2	0	0	0	0	0	0	1	1	0	0	0	3	11	3
Bulandshahr	0	6	1	0	1	1	0	0	0	2	1	1	0	0	0	0	0	13	3
Ghaziabad	0	5	0	0	2	1	0	1	1	1	0	0	1	0	0	0	1	13	3
Meerut	0	4	0	1	0	0	0	0	1	1	1	2	0	1	0	1	6	18	4
East Delhi	0	9	1	1	4	1	0	0		0	1	1	0	0	0	0	4	22	5
West Delhi	0	4	0	1	1	1	2	0	4	3	0	1	1	1	1	1	3	24	5
South Delhi	0	4	2	3	2	3	1	1	2	1	0	1	1	1	1	1	2	26	6
Total																		209	49

Source: Study on Micro & Household Enterprise in NCR



Appendix 1.B

SAMPLED CLUSTERS

	17				18	19	20	21	22	25	26			27	28		31	33	34	36					Total		
	Zari/ Embroidery	Hand-printed textiles	Mfg of blankets/shwals/ carpets etc. by hand	Powerloom	Wearing Apparel, Garments	Footwear	Leather Products- Handbags, luggage etc.	Grass, Leaf, Fibre and Reed	Packaging Material	Printing	Mfg. of Plastic Products	Pottery & Ceramics	Stone Crushing	Terracotta	Casting of Iron and Steel	Fabrication of Metal Products	Stainless Steel Utensils	Electrical Engg. Equipment	Electronic goods	Auto Components	Bone Accessories	Sports Goods	Jewellery	Band- Baja		Furniture & Fixtures	
	1724	1714	1725	1711	1810	1920		2029	2102	2201	2520	2691	2696	2693	2731	2899	2893	3110	3311	3430	3699	3693	3699	3692	3610		
Mewat																										1	
Baghpat			1																							1	
Jhajjar						1																				1	
Palwal																										1	
Sonepat									1																	1	
Rewari																1										1	
Rohtak																				2						2	
Faridabad																				2						2	
North Delhi						1													1							2	
Panipat			1												1											2	
Gurgaon					1															1						2	
Alwar						1						1	1													3	
Gautambudh Nagar					1																			1		2	
Central Delhi							1	1															1			3	
Bulandshahr	1				1							1														3	
Ghaziabad		1						1													1					3	
Meerut																1						1	1	1		4	
East Delhi		1		1	1				1																1	4	
West Delhi						1				1	1							1								5	
South Delhi	1				2				1	1								1								6	
TOTAL																											49

Source: Study on Micro & Household Enterprise in NCR



Appendix 1.C

LIST OF CLUSTERS WHERE PRIMARY SURVEY WAS CONDUCTED

Sl. No	Name of cluster	Location
1	Handloom Cluster	Khekada Town, Baghpat
2	Footwear	Footwear Park, Sector 16 & 17, Industrial Area, Bahadurgarh, Jhajjar
3	Corrugated Packaging	Rai Industrial Area, Sonipat
4	Brass	Choudhariwada, Rewari city, Rewari
5	Nuts & Bolts Cluster	Near Industrial Area, Rohtak Town
6	Auto Components	Near Industrial Area, Rohtak Town
7	Light Engg. Industries	Muzassar Village, Faridabad
8	Auto Components	Sector 58, Industrial Area, Faridabad
9	Non- Leather Footwear	Narela Industrial Estate, North Delhi
10	Metal Fabrication	Dhirpur Village, Kingsway Camp, North Delhi
11	Foundry	Samalkha, Panipat, Panipat
12	Handloom	Desiraj Colony, Noorwala, Jatav Road, Kabri Road, Kachcha Kavdi Pathak, Kishanpura, Ubra Khedi, Ujha Road, Panipat
13	Readymade Garments	Udyog Vihar, Gurugram
14	Terracotta	Krishna Colony, Ramgarh, Alwar
15	Leather Cluster	Bansoor (Ismailpur, Ghasoli, Karana and Bandhaka, Chaturpura), Alwar
16	Murti Kala	Ramgarh, Alwar
17	Readymade Garments & Home Furnishings	Sector 2,4,6,7,8,9 10,11 Noida, Gautam Budh Nagar
18	Furniture (Wood Work)	Sector 5, 8, 9, 10. Noida, Gautam Budh Nagar
19	Jewelry	Chel Puri, Dariban Kalan, Chandni Chowk; Walled City and Walled City Extension, Delhi
20	Basketware	Motia Khan to Sadar Bazar, Walled City & Walled City Extension, Delhi
21	Leather Products	Nabi Karim, Walled City & Walled City Extension, Delhi
22	Zari/ Embroidery Cluster	Jahangirabad , Bulandshahr
23	Under Garments Cluster (Cotton)	Shikarpur, Bulandshahr
24	Pottery and Ceramic Cluster,	Khurja , Bulandshahr
25	Modha (Cane and Bamboo products cluster)	Gadh Mukteshwar , Ghaziabad
26	Bone Accessories	Loni, Ghaziabad
27	Handloom Cluster	Pilakhuwa, Ghaziabad
28	Sports Goods products	SK Road, Phoolbagh Colony, Victoria Park, Lal Kurti, Meerut
29	Artificial Ornaments Cluster	Neel Goli, Sarafa Bazar, Kagzi Bazar, Ghanta ghar, Kabaoli Bazar, Meerut
30	Band Baja Cluster	Jolly Kothi, Patel Nagar, Kesar Gunj, Khair Nagar, Ahmed Nagar, Meerut
31	Scissors Cluster	Peeramal Bazar, Kanch ka pool, Khair Nagar, Karim Nagar, Kotla, Karimwala, Meerut
32	Handloom Cluster	Sundarnagari, Nandnagari, East Delhi
33	Paper Products Cluster	Karawal Nagar, East Delhi
34	Readymade Garments	Gandhinagar, Kailash Nagar, East Delhi
35	Mixed Cluster	Karawal Nagar , East Delhi
36	Readymade Garments	Seelampur, East Delhi
37	Non Leather Footwear Cluster	Madipur Village & JJ Colony; West Delhi
38	Printing Cluster	Naraina Phase I & II , West Delhi
39	Electrical Eng. Equipment Cluster	Naraina Industrial Area Phase I & II, West Delhi
40	Plastic Products	Udyog Nagar , West Delhi
41	Furniture	Block A & B, Kirti Nagar, West Delhi
42	Electrical Engineering Equipment	Okhla Phase I & II, South Delhi
43	Zari/ Embroidery Cluster	Zakirnagar, Okhla, South Delhi
44	Packaging Material	Okhla Phase I & II, South Delhi
45	Printing and Publishing	Okhla Phase I & II, South Delhi
46	Readymade Garments	Okhla Phase I, II, III, South Delhi
47	Readymade Garments	Govindpuri, South Delhi

Source: NCRPB's Study on Micro & Household Enterprise in NCR, 2015

Note: There is no formation of clusters in the districts of Mewat and Palwal, however, micro enterprises in these districts have also been surveyed.



ANNEXURE-2

SCHEMES, INITIATIVES AND PROGRAMMES FOR MSME DEVELOPMENT

S.No.	Name of the Ministry & Scheme
I.	Ministry of Micro, Small and Medium Enterprises <ol style="list-style-type: none"> 1. Scheme for Surveys, Studies, Policy Research and International Cooperation Scheme 2. Market Development Assistance(MDA))Scheme for MSME 3. Quality Management Standard (QMS) and Quality Technology Tools(QIT) 4. Lean Manufacturing Competitiveness Scheme under NMCP 5. Marketing Assistance and Technology Upgradation in MSMEs 6. Scheme for capacity building, strengthening of database and advocacy and for holding seminars/ symposiums/ workshops by industry/ associations 7. Support for entrepreneurial and managerial development of SMEs through Incubators 8. Design Clinic Scheme under (NMCP) 9. Technology and Quality Upgradation Support to MSMEs 10. Design Clinic for Design Expertise to MSMEs Manufacturing Sector (DESIGN) 11. Enabling Manufacturing Sector to be Competitive through Quality Management Standards and Quality Technology Tools 12. National Manufacturing Competitiveness Programme (NMCP) 13. Entrepreneurial and Managerial Development of SMEs through Incubators 14. Credit Linked Capital Subsidy (CLCS) for Technology Upgradation 15. Technology and Quality Upgradation Support to MSMEs 16. Raw Material Assistance 17. Aspire (Scheme for promotion of Innovation, Entrepreneurship and Agro- Industry) 18. Rejuvenation, modernisation and technology upgradation of coir industry 19. Building awareness on IPRs and Setting up of new mini tool rooms under PPP mode
II.	Ministry of Commerce & Industry <ol style="list-style-type: none"> 1. Assistance to States for Developing Export Infrastructure and Allied Activities 2. Indian Leather Development Programme <ol style="list-style-type: none"> a. Mega Leather Cluster b. Market Access Initiatives
III.	Ministry of Labour and Employment <ol style="list-style-type: none"> 1. Upgradation of Government ITIs through PPP 2. Apprenticeship Training 3. Craftsmen Training (ITIs) 4. Skill Development Initiative (SDI)
IV.	Ministry of AYUSH <ol style="list-style-type: none"> 1. Assistance for Exchange Programme/ Seminar/ Conference/ Workshop on AYUSH
V.	Ministry of Rural Development <ol style="list-style-type: none"> 1. Special Projects under Swanajayanti Gram Swarojgar Yojana (SGSY) 2. Aajeevika Skills Development Programme
VI.	Ministry of Textiles <ol style="list-style-type: none"> 1. Special Handicraft training Project 2. Additional Grant for Apparel Manufacturing Units for Integrated Textile Park (SITP) 3. Comprehensive Handlooms Development (CHD) 4. Yarn Supply 5. Design and Technology Upgradation 6. Human Resource Development (HRD)
VII.	Ministry of Skill Development and Entrepreneurship <ol style="list-style-type: none"> 1. Pradhan Mantri Kaushal Vikas Yojana
VIII.	Ministry of Finance <ol style="list-style-type: none"> 1. Pradhan Mantri Mudra Yojana 2. Credit Linked Capital Subsidy (CLCS) 3. Swarozgar Credit Card 4. Growth Capital and Equity Assistance scheme 5. General Refinance scheme 6. Acquisition of ISO Series Certification by MSE Units 7. Composite Loan scheme 8. Rehabilitation of Sick Industrial Units for (MSE,s) 9. Scheme for Development of Industrial Infrastructure for MSME Sector 10. Integrated Infrastructural Development (IID)



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S.No.	Name of the Ministry & Scheme
	11. Stand-Up India
IX.	Ministry of Youth Affairs and Sports 1. National Programme for Youth and Adolescent Development (NPYAD)
X.	Ministry of Environment, Forest and Climate Change 1. Scheme for enabling the MSEs to setup Common Effluent Treatment Plants (CETPs) 2. Grant-in-Aid for Voluntary Agencies
XI.	Ministry of Food Processing Industries 1. Mega Food Park Scheme
XII.	Ministry of Housing & Urban Poverty Alleviation 1. National Urban Livelihoods Mission
XIII.	Ministry of Science & Technology 1. Innovation and Entrepreneurship Development Centre (IEDC) 2. Entrepreneurship Development Cell (EDC) 3. Entrepreneurship Development Programme 4. Science & Technology Entrepreneurship Development (STED) 5. Science & Technology Entrepreneurs/Entrepreneurship Park (STEP) 6. Technology Business Incubators (TBI)
XIV.	Ministry of Human Resource Development 1. National scheme of Apprenticeship Training



ANNEXURE-3

DISTRICT-WISE INDUSTRIAL PROFILE OF NATIONAL CAPITAL REGION

Sub-region/ District	Total industrial unit	Registered industrial unit	Registered Medium & Large unit	Estimated avg. No. of Daily worker employed in SSI	Employment in large and medium industries	No. of industrial area	Turnover of SSI (Rs. in lakh)	Turnover of Medium & Large scale units (Rs. in lakh)
NCT-Delhi Sub-Region								
<i>Sub-Total</i>	129000	20986	-	975194	-	32	-	-
Haryana Sub-Region								
Panipat	5500	4068	43	80667	14192	4	2500000	3794796
Faridabad	17186	17186	180	4500	1600	22	3924.75	5691.30
Rohtak	1435	4761	15	-	2820	03	-	-
Gurugram	24741	22491	436	186040	143300	7	868504	354500
Sonipat	13039	13039	06	59707	17031	-	726530	6240
Jhajjar	2500	1849	-	16082	1000	3	13800	34000
Rewari	1800	1370	141	9313	21000	3	1431100	5900000
Palwal	380	73	40	7200	8000	2	350000	600000
Mewat	57	42	16	800	1200	1	12403.53	15360
<i>Sub-Total</i>	66638	64879	877	364309	210143	45	5906262	10710587.3
U.P. Sub-Region								
Ghaziabad (including Hapur)	5957	1796	-	17221	72749	12	-	-
Bulandshahr	5565	5565	5	80000	87	5	-	-
Meerut	8197	8197	13	48280	3325	04	66856.49	10325
Baghpat	3500	2635	05	13000	3900	01	30520	31750
Gautam Budh Nagar	6349	1063	359	77260	187572	4	1247	3703
<i>Sub-Total</i>	29568	19256	382	235761	267633	26	98623.49	45778
Rajasthan Sub-Region								
Alwar	25465	551	87	112554	8100	21	60000	80000
<i>Sub-Total</i>	25465	551	87	112554	8100	21	60000	80000
Total NCR	250671	105672	1346	1687818	485876	124	6064885.49	10836365.3

Source: Brief Industrial Profile of various districts (falling in NCR), prepared by MSME Development Institutes (Okhla, Karnal, Agra & Jaipur), Ministry of MSME, Govt. of India



ANNEXURE-4

COMPARATIVE ADVANTAGE OF CLUSTERS

Delhi	Haryana sub region	Uttar Pradesh sub region	Rajasthan sub region
NIC Code 17			
Textile Dyeing Cluster, East Delhi	Handloom Cluster, Panipat	Textile Block Printing Cluster, Ghaziabad	
Handloom Cluster, East Delhi		Zari/Embroidery Cluster, Bulandshahr	
Zari/Embroidery Cluster, South Delhi		Handloom Cluster, Baghpat	
COMPARATIVE ADVANTAGES			
Nearness to Market is the main attraction, even though there are restrictions in the activities that may be taken up within Delhi. Availability of power and good connectivity is also an advantage.	The genesis of this cluster is historical in nature when migrant artisans from Sind were allotted land here during Independence. Several interventions have since then been taken by Ministry of Textiles, SIDBI. The cluster is export driven and has an international reputation.	The State Government has made efforts to provide planned infrastructure to such enterprises, especially noticed in the Textile Block Printing Cluster of Pilakhuwa brought up by HPDA. The Central Government has also provided support wherever necessary.	
NIC Code 18			
Readymade Garments Cluster, East Delhi	Readymade Garments Cluster, Gurugram	Under Garments (Cotton) Cluster, Bulandshahr	
Readymade Garments Cluster, Okhla, South Delhi		Readymade Garments and Home Furnishings Cluster, Gautam Budh Nagar	
Readymade Garments Cluster, Govindpuri, South Delhi			
COMPARATIVE ADVANTAGES			
Nearness to market of both raw material and finished products and is the main driver. Moreover, planned infrastructure has been provided by DSIIDC to enterprises in Okhla. The readymade garments clusters in Delhi are well known nationally and internationally. Availability of power and good connectivity is also an advantage.	Planned infrastructure by HSIIDC for this sector, along with nearness to market, has been the key advantages for growth of this cluster. Exporters are also present within the cluster.	Planned infrastructure by UPSIDC for this sector, along with nearness to market, has been the key advantages for growth of this cluster. Exporters are also present within the cluster.	
NIC Code 19			
Leather Products Cluster, Delhi Walled City & Walled City Extension	Footwear Cluster, Jhajjar		Leather & Non Leather Shoes, Alwar



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Delhi	Haryana sub region	Uttar Pradesh sub region	Rajasthan sub region
Non-leather Footwear Cluster, Narela, North Delhi			
Non-leather Footwear Cluster, Madipur, West Delhi			
COMPARATIVE ADVANTAGES			
Nearness to market of both raw material and finished products is the main driver. Moreover planned infrastructure has been provided by DSIIDC to enterprises in Okhla. The readymade garments clusters in Delhi are well known nationally and internationally. Availability of power and good connectivity is also an advantage.	Planned infrastructure by HSIIDC for this sector, along with nearness to market, has been the key advantages for growth of this cluster.		Traditional craft, availability of local skill and tourist market are the key advantages of this cluster
NIC Code 20			
Basketware Cluster, Delhi Walled City & Walled City Extension		Modha (Cane & Bamboo Products) Cluster, Garh Mukteshwar, Ghaziabad	
COMPARATIVE ADVANTAGES			
Traditional craft, availability of local skill and nearness to market are the key advantages of this cluster		Availability of raw material, availability of local skills and nearness to market are the key advantages.	
NIC Code 21			
Paper & Paper Products Cluster, East Delhi	Corrugated Sheet Cluster, Rai, Sonipat		
Packaging Cluster, Okhla, South Delhi			
ADVANTAGES			
Nearness to market is the main attraction, also initiatives have been taken up by DSIIDC to provide planned infrastructure. Availability of power and good connectivity is also an advantage.	Planned infrastructure by HSIIDC for this sector, along with nearness to market has been the key advantages for growth of this cluster.		
NIC Code 26			
		Pottery and Ceramic Cluster, Bulandshahr	Terracotta Cluster, Alwar
			Murti Kala Cluster, Alwar
COMPARATIVE ADVANTAGES			
		Availability of local raw material, traditional craft, availability of local skills and tourist market are the key advantages of this cluster. Many initiatives have also been taken up by the Ministry and State Government for the development of this cluster.	Availability of local raw material, traditional craft, local skills and tourist market are the key advantages of this cluster.



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Delhi	Haryana sub region	Uttar Pradesh sub region	Rajasthan sub region
NIC Code 34			
	Light Engineering Cluster, Faridabad		
	Auto Components Cluster, Faridabad & Rohtak		
	Turning Components Cluster, Rohtak		
COMPARATIVE ADVANTAGES			
	These are basically ancillary manufacturing enterprises of the large automobile and engineering hubs established in Faridabad, Gurugram and Rewari		
NIC Code 36			
Furniture Cluster, Kirtinagar, West Delhi		Furniture Cluster, Gautam Budh Nagar	
COMPARATIVE ADVANTAGES			
Nearness to raw material and consumer market are the main attraction. Availability of power and good connectivity is also an advantage.		Planned infrastructure by Noida for this sector, along with nearness to market, has been the key advantages for growth of this cluster.	

Source: NCRPB's Study on Micro & Household Enterprise in NCR, 2015



ANNEXURE- 5

POTENTIAL AND PRIORITY CLUSTERS IN NCR

S. No.	Parameters	Growth Potential	Export Potential	Congenial Environment in terms of Govt. Policy	Existing Interventions /Support	Exclusive in terms of product	Potential (Priority Clusters)
1.	Textile finishing cluster, East Delhi	N	Y	N	N	N	N (To be relocated)
2.	Textile Block Printing Cluster, Ghaziabad	Y	Y	Y	Y	N	Y (Medium Priority)
3.	Handloom Cluster, East Delhi	Y	Y	Y	Y	N	Y (Low Priority)
4.	Zari/Embroidery Cluster, Bulandshahr	Y	N	Y	N	N	Y (High Priority)
5.	Handloom Cluster, Panipat	Y	Y	Y	Y	N	Y (Low Priority)
6.	Handloom Cluster, Baghpat	Y	Y	Y	Y	N	Y (Medium Priority)
7.	Zari/Embroidery Cluster, South Delhi	N	N	N	N	N	N (To be relocated)
8.	Readymade Garments Cluster, East Delhi	M	Y	N	N	N	N
9.	Readymade Garments Cluster, Okhla, South Delhi	Y	Y	Y	Y	N	Y (Low Priority)
10.	Readymade Garments Cluster, Govindpuri, South Delhi	N	N	N	N	N	N (To be relocated)
11.	Readymade Garments Cluster, Gurugram	Y	Y	Y	N	N	Y (High Priority)
12.	Under Garments (Cotton) Cluster, Bulandshahr	Y	Y	Y	N	Y	Y (High Priority)
13.	Readymade Garments and Home Furnishings Cluster, Gautam Budh Nagar	Y	Y	Y	P	N	Y (Medium Priority)
14.	Basketware Cluster, Motia Khan	N	N	N	N		N (To be relocated)
15.	Modha (Cane & Bamboo Products) Cluster, Garh Mukteshwar	Y	Y	Y	P	Y	Y (Medium Priority)
16.	Furniture Cluster, Kirti Nagar	Y	Y	Y	N	N	Y (High Priority)
17.	Furniture Cluster, Gautam Budh Nagar	Y	N	N	N	N	Y



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S. No.	Parameters	Growth Potential	Export Potential	Congenial Environment in terms of Govt. Policy	Existing Interventions /Support	Exclusive in terms of product	Potential (Priority Clusters)
							(High Priority, to be relocated)
18.	Musical Instruments Cluster, Meerut	Y	Y	Y	Y	Y	Y (Medium Priority)
19.	Sports Goods Cluster, Meerut	Y	Y	Y	Y	Y	Y (Low Priority)
20.	Jewellery Cluster, Delhi Walled City & Walled City Extension	N	Y	Y	N	Y	Y (High Priority)
21.	Bone Accessories Cluster, Loni, Ghaziabad	Y	Y	Y	Y	Y	Y (Low Priority)
22.	Artificial Ornaments Cluster, Meerut	Y	Y	Y	P	Y	Y (Medium Priority)
23.	Mixed Cluster, East Delhi	Y	N	Y	N	N	Y (Medium Priority)
24.	Mixed Cluster, Palwal	Y	N	N	N	N	Y (High Priority)
25.	Mixed Cluster, Mewat	Y	N	N	N	N	Y (High Priority)
26.	Leather Products Cluster, Walled City, Delhi	N	N	N	N	N	N
27.	Non-leather Footwear Cluster, Narela, North Delhi	Y	Y	Y	N	N	Y (High Priority)
28.	Non-leather Footwear Cluster, Madipur, West Delhi	Y	N	Y	N	N	Y (High Priority)
29.	Footwear Cluster, Jhajjar	Y	Y	Y	P	N	Y (Medium Priority)
30.	Leather & Non Leather Shoes, Alwar	Y	Y	Y	Y	Y	Y (Medium Priority)
31.	Paper & Paper Products Cluster, East Delhi	Y	N	Y	Y	N	Y (Medium Priority)
32.	Packaging Cluster, Okhla, South Delhi	Y	N	Y	Y	N	Y (Medium Priority)
33.	Corrugated Sheet Cluster, Rai, Sonipat	Y	N	Y	Y	N	Y (Medium Priority)
34.	Printing and Publishing Cluster, South Delhi	Y	N	Y	P	N	Y (Medium Priority)



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S. No.	Parameters	Growth Potential	Export Potential	Congenial Environment in terms of Govt. Policy	Existing Interventions /Support	Exclusive in terms of product	Potential (Priority Clusters)
35.	Printing Cluster, Naraina, West Delhi	Y	N	Y	P	N	Y (Medium Priority)
36.	Plastic Cluster, West Delhi	Y	Y	Y	P	Y	Y (High Priority)
37.	Terracotta Cluster, Alwar	Y	Y	Y	Y	Y	Y (Low Priority)
38.	Murti Kala Cluster, Alwar	Y	Y	Y	Y	Y	Y (Low Priority)
39.	Pottery and Ceramic Cluster, Bulandshahr	Y	Y	Y	Y	Y	Y (Low Priority)
40.	Foundry Cluster, Samalkha, Panipat	Y	N	Y	Y	Y	Y (Low Priority)
41.	Brass Cluster, Rewari	Y	Y	Y	P	Y	Y (Medium Priority)
42.	Scissor Cluster, Meerut	Y	Y	Y	Y	Y	Y (Low Priority)
43.	Electrical Engineering Equipment Cluster, South Delhi	Y	Y	Y	Y	N	Y (Low Priority)
44.	Electrical Engineering Equipment Cluster, Naraina	Y	Y	Y	P	N	Y (Medium Priority)
45.	Metal Fabrication Cluster, North Delhi	Y	N	N	N	Y	N (To be relocated)
46.	Light Engineering Cluster, Faridabad	Y	Y	Y	Y	N	Y (Low Priority)
47.	Auto Components Cluster, Faridabad	Y	Y	Y	Y	N	Y (Low Priority)
48.	Auto Components Cluster, Rohtak	Y	Y	Y	Y	N	Y (Low Priority)
49.	Turning Components Cluster, Rohtak	Y	Y	Y	Y	N	Y (Low Priority)

Y = Yes, N = No, P = Partly, M = Medium

Source: Study on Micro & Household Enterprise in NCR, 2015



ANNEXURE-6

LIST OF IDENTIFIED POTENTIAL FOR NEW MSMES IN NCR

Sr. No.	Sub-Region / District	Potential For New MSMES
Haryana sub-region		
I.	Panipat District	1. Manufacturing of Textile machinery 2. Manufacturing of Bathroom fitting items etc.
II.	Faridabad District	1. Herbal beauty care products 2. Instant fast food 3. Nutraceuticals 4. Specialty food 5. Manufacturing of CD/DVD 6. Healthcare products 7. Toiletries 8. Automobile spare parts 9. Defence oriented garments 10. Concrete furniture
III.	Rohtak District	1. Biotech products e.g. fastener 2. Nut, Bolts, Paints & Chemicals 3. Herbal extract for pharmaceutical and cosmetic use 4. Readymade garments 5. Edible oils 6. Auto components 7. Engineering products 8. Wooden based industry 9. Basic drug & pharmaceutical 10. Ready to serve food stuff etc.
IV.	Jhajjar District	1. Footwear 2. Plastic molding 3. Paints and chemicals 4. Auto components 5. Engineering products 6. Edible oils 7. Wooden based industry 8. Basic drugs and pharmaceutical industry 9. Ready to serve food stuffs etc.
V.	Rewari District	1. Auto Components 2. Fabrication works etc.
VI.	Palwal District	1. Bakery products 2. Achar manufacturing 3. Khoya paneer 4. Furniture Industry 5. Interlock tiles 6. Papad manufacturing 7. Knitted fabric 8. Cold storage etc.
VII.	Mewat District	1. Auto Ancillary units 2. Plastic 3. Chemical based units



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Sr. No.	Sub-Region / District	Potential For New MSMEs
		4. Engineering units 5. Metal based (Steel Fabrication) 6. Apparel Industry 7. Building Stone 8. Fabric Dyeing 9. Electroplating 10. Agro based 11. Cotton textile 12. Sewing threads 13. Wood based furniture etc.
VIII.	Sonipat District	1. Biotech products e.g. Biofuel, bio fertilizer, bio-pesticides 2. Herbal extract for pharmaceutical and cosmetic use 3. Readymade garments 4. Edible oils 5. Perfumery 6. Auto components 7. Engineering products 8. Wood based industry 9. Basic drug & pharmaceutical 10. Ready to serve food stuff etc.
IX.	Gurugram District	1. Food processing 2. Sheet metal components 3. Plastic components automobile & its parts 4. Engineering components 5. Leather footwear etc.
U.P. sub-region		
I.	Bulandshahr District	1. Transformer Insulators 2. Milk & allied Products 3. Ceramic Handicraft Items 4. Crockery 5. Ceramic Tiles 6. Bathroom/Toilet items 7. Wash Basin 8. Pots/Seats/Commodos
II.	Ghaziabad District (including Hapur)	1. Plastic containers –HDPE, LDPE & PP 2. HDPE Bags 3. Bleaching Earth (RM unit) for de-colorization in the oil sector 4. General engineering & precision component manufacturing for defence 5. Aviation and other sectors 6. Oxygen plant 7. GI pipe units 8. Forging Unit 9. Induction furnace based casting products 10. Paper Industry 11. Railways Coach and wagon parts



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Sr. No.	Sub-Region / District	Potential For New MSMEs
		12. Pharma Unit
		13. Dying & Printing Units
		14. Aluminum Extrusions
		15. Packaging materials –Plastic Straps, Corrugated Boxes etc.
		16. Heat Shrinking Polythene
		17. Wooden crafts
		18. Solvent Extraction
		19. Dal Mill
		20. Electrical & Telecom cables
		21. Ground & Processed Spices
		22. Fly Ash Bricks
III.	Meerut District	1. Fruit preservation
		2. Jam & jelly
		3. Pickles
		4. Namkeen
		5. Squash & syrup
		6. Bakery & confectionery
		7. Dehydration of vegetable
		8. Soft drinks
		9. Ice Cream & Ice Candy
		10. Rice mill
		11. Dal mill
		12. Cattle feed
		13. Poultry feed
		14. Phenyl
		15. Polythene Bags
		16. Disposable syringe
		17. Distillery Industries
		18. Pesticides & Insecticides
		19. Mosquito repellent coil
		20. Electroplating, chromium and nickel Plating
		21. Naphthalene Balls
		22. Tyre retreating & vulcanizing
		23. Injection moulded plastic products
		24. Polythene File
		25. Paper Bags, Envelops including officials
		26. Bicycle, Scooter, Rickshaw seat cover
		27. Mineral Water
		28. Absorbent cotton
		29. Surgical gloves
		30. Bio fertilizer
		31. Battery container & Battery plates
		32. Card board
		33. Wooden electrical accessories
		34. Wooden musical instruments
		35. Wooden pencils
		36. Ayurvedic and herbal medicines
		37. Inverter
		38. Voltage stabilizer
		39. Assembling of Computers
		40. General engineering workshop
		41. Steel Amirah & furniture
		42. Sophisticated engineering workshop
		43. File Cover, File Board & Letter Pads.



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Sr. No.	Sub-Region / District	Potential For New MSMEs
		44. Cold Storage
		45. Readymade Garments
		46. Wooden packing cases
		47. Meat Plant
		48. Sports Goods Industry
IV.	Baghpat District	1. Agro based
		2. Horticulture based
		3. Forest based
		4. Mechanical and Engineering based enterprises
		5. Chemical based
		6. Electrical based
		7. Food & Miscellaneous enterprises
V.	Gautam Budh Nagar District	1. Cattle Food
		2. By products of Milk-Cream, Butter, Paneer
		3. Spice Processing
		4. Mushroom Processing
		5. Canned Fruits & vegetables.
		6. Manufacturing of Jam, Jelly
		7. Fruit Preservation
		8. Pickles & Chutney
		9. Tomato Ketchup
		10. School Bags
		11. Scooter/Cycle Seat Cover
		12. Sports Shoes, Industrial Shoe
		13. Cooler, Fans
		14. Soaps
		15. Drugs Pharmaceuticals
		16. Surgical Bandages
		17. Cold Storage
		18. Hosiery Goods
		19. Handmade paper
		20. Hard Paper Boxes
		21. Toys making
		22. Tailoring
		23. Rakhee making
		24. Button making
		25. Candles
		26. Putty
		27. Card Board Boxes
		28. Agarbatti
		29. Naphthalene balls
		30. Phenyl
		31. Paint Brush
		32. Low cost PVC shoes and Chappals
		33. Nylon Rope
		34. Detergent
		35. Assembly & Repair of electrical goods
		36. Hand pump
		37. Steel Furniture
		38. Medical Diagnostic Centre
		39. Laundry & Dry Cleaning
		40. Voltage Stabilizer
		41. Steel Furniture
		42. Electric Motor
		43. Auto Repair, Services & Garages Gem Cutting and Polishing
		44. Beauty Parlors
		45. Photographic Lab



Sr. No.	Sub-Region / District	Potential For New MSMEs
		46. Installation & Operation of Cable T.V. Network
		47. Tyre Retreating
		48. Welded Wire Netting etc.
Rajasthan sub-region		
I.	Alwar District	1. Mustard split
		2. Pulses
		3. Spice powder
		4. Flour
		5. Veg. Processing
		6. Mosaic tiles
		7. Cement pipe
		8. Cement jallies etc.
		9. Marble gang saw
		10. Leather tanning
		11. Bone mill
		12. Mineral powder
		13. Granite tiles
		14. Cotton ginning
		15. Fuel form Agri-waste
		16. Stone grit
		17. Slate stone tiles
		18. Mechanized bricks
		19. Refectory item
		20. Ayurvedic medicines
		21. Dairy product
		22. Bread & biscuits
		23. Exercise book
		24. Rubber sheets
		25. Leather shoes
		26. Leather products
		27. Disposables
		28. Engineering
		29. Rolling mill
		30. Steel furniture
		31. Girls & women bags
		32. Tin containers
		33. Plastic moulded items
		34. Plastic bottles
		35. Agri. equipment
		36. Fluorescent tube
		37. Paints
		38. Electronic item
		39. Forging
		40. C.I casting
		41. Auto lamp
		42. Auto spares
		43. Electro plating
		44. Tyre re-trading servicing
		45. Auto gear & work
		46. Engineering job work
		47. Automotive components
		48. Cement plant parts repairing
		49. Packing boxes
		50. Corrugated boxes
		51. Card board boxes
		52. Pharmaceuticals
		53. Wire & cable
		54. Granular plastic



Sr. No.	Sub-Region / District	Potential For New MSMEs
I.	NCT-Delhi	1. Gems & Jewelry
		2. Handloom
		3. Handicrafts & Decorative Items
		4. Artificial jewelry making
		5. Khadi and Village industries
		6. Bakery Products
		7. Electrical Home Appliances
		8. Packaged Food Products
		9. Plastic Products
		10. Water purifiers
		11. Flavors, Perfumes, Fragrance & Deodorants
		12. Garments
		13. Steel Furniture & Office Furniture
		14. CFL Lamps
		15. Invertors & Batteries
		16. Hosiery & allied Products
		17. Detergent & cosmetic products
		18. Leather goods
		19. Leather Garments
		20. Packaging Units
		21. Printing
		22. Optical lenses
		23. Board & paper corrugation
		24. Non PVC Footwear
		25. Leather footwear
		26. Corrugated Boxes
		27. Leather Bags and accessories
		28. Plastic Containers
		29. Plastic films and bags
		30. Steel Fabrication

Source: Brief Industrial Profile of various districts (falling in NCR), prepared by MSME Development Institutes (Okhla, Karnal, Agra & Jaipur), Ministry of MSME, Govt. of India



ANNEXURE-7

COMPENDIUM OF MSME CLUSTERS IN NCR

S.No.	Name & Location	No. of Enterprise	Major Products	SPV/ Association	Remarks/ Interventions
NCT Delhi					
1.	Readymade Garments Industry Cluster, Okhla Delhi	2039	Readymade Garments	Association	Implementing Agency MSME-DI, New Delhi
2.	Printing and Packaging Clusters, Naraina Mayapuri, Kirti Nagar	450	Printing and Packaging	Association	Implementing Agency MSME-DI, New Delhi
3.	Pottery Cluster, Uttam Nagar	700	Platters Pot, water pitcher, decorative items and various items	NA	Implementing Agency, Govt of Delhi
4.	Handloom Cluster, Suder Nagri & Nand Nagri	50	Manufacturing textile	No Association, SPV	Industrial Department Govt of NCT Delhi
5.	Zari and Embroidery Cluster, Zakir Nagar, Delhi	100	Zari and Embroidery on sari and Kurta	NA	Govt. organization support not available.
6.	Readymade garments Cluster, Gandhi Nagar & Kailash Nagar, East, Delhi	10,000	Mfg, of garments	Association	NA
7.	Readymade garments Cluster, Govindpuri, Delhi	50	Mfg, of garments	Association/ SPV	Govt. organization support not available.
8.	Textile Finishing Cluster, Seelampur, East Delhi	50	Mfg, of Textile, and Finishing	Association/ SPV	Govt. organization support not available.
9.	Leather Products Cluster, Nabi Karim, Walled City Delhi	200	Mfg, of Leather Products	Association/ SPV	NA
10.	Non - Leather Footwear Cluster, Narela, Delhi	1500	Footwear	Association	DSI IDC
11.	Non-Leather Footwear Cluster, Madipur, Delhi	500	Ladies footwear	Association/ SPV	NA
12.	Furniture Cluster, Kirti Nagar, Tilak Nagar, Delhi	NA	Tables Chairs, beds sofas, Cupboards etc.	NA	DDA, Govt. Agencies
13.	Basketware Cluster, Motia Khan, Delhi	50	Furniture	NA	NA
14.	Paper & paper products Cluster, Pusta, East Delhi	30	Packaging material, cardboard boxes handmade products, paper envelopes etc.	NA	NA
15.	Packaging Cluster, Okhla	20	Packaging Materials	NA	NA
16.	Printing Cluster, Naraina, Phase I and II West Delhi	120	Printing	NA	NA
17.	Printing & Publishing Cluster, Okhla, South Delhi	80	Printing Publishing	NA	NA
18.	Plastic Cluster, Udyog Vihar West Delhi	40	Plastic Products	NA	DSI IDC
19.	Metal Fabrication Cluster, Dhirpur, Mayapuri, Wazirpur, Delhi	NA	Metal fabrication and manufacturing of surgical item	NA	Govt, Organization support not available.



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S.No.	Name & Location	No. of Enterprise	Major Products	SPV/ Association	Remarks/ Interventions
20.	Electrical Engineering Cluster, Okhla Phase I,II and III, Okhla Flatted factory complex	20	Manufacturing of electrical and engineering equipment and machinery	NA	Govt, organization support not available.
21.	Electrical Engineering Naraina, Phase I and II, Delhi.	60	Electrical and Engg. equipment	NA	Govt, organization support not available
22.	Jewelry Cluster, Dariba Kalan, Delhi	300	Mfg. of jewelry items	NA	
23.	Mixed Cluster, East Delhi	50	Mfg. of plastic products, electrical engg. Equipment, mechanical engg. equipment etc.	NA	
24.	Cosmetic & Packaging Cluster Delhi	240	Cosmetic items	Association	MSEs CDP
25.	Dal & Besan Cluster	50	NA	Association	MSEs CDP
26.	Embroidery Cluster Palam and Patel Nagar, Delhi	15	Bed sheet, pillow cover table cover,	NA	NA
27.	Hand Embroidery Cluster Khichdipur,	10	Hand Embroidery, bag, cushion cover kurti	NA	NA
28.	Hand Embroidery, Nand Nagari	11	Hand Embroidery	NA	NA
29.	Hand Embroidery, Darya Ganj, Sadar Paharganj, Jama Masjid	NA	Hand Embroidery	NA	NA
30.	Folk Painting Cluster, Hastal, Delhi	9	Folk Painting, chess board etc.	NA	NA
31.	Textile Handloom Cluster, Sarai-Kalen-Khan, Delhi	15	Textile Handloom	NA	NA
32.	Leather Cluster- Kirti Nagar	10	-		
33.	Leather Craft Cluster, Okhla Delhi	10	Purse, Bag, sandal, necklace	NA	NA
34.	Home Furnishing Cluster Khajoori Cluster	NA	NA	NA	NA
Haryana Sub-region					
Gurugram district					
35.	Auto Parts manufacturing cluster, Gurugram	1478	Piston, Crank, rocker arm, sleeve etc,	Association	Implementing Agency, NIESBUD, Noida
36.	Auto Components Cluster, Gurugram	5000	Auto Parts including rubber and plastic molded parts and sheet metal parts	Association	MSME-DI Okhla Delhi
37.	Readymade Garments Cluster, Village Mohammadpur, Gurugram				Implementing Agency Investment Promotion Centre, Chandigarh
38.	Leather and Leather Products Cluster, Manesar, Gurugram	205	Leather jackets, trousers, shirts and vest and saddlery	SPV	Implementing Agency Investment Promotion Centre, Chandigarh, MSME-DI, Okhla, DIC,



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S.No.	Name & Location	No. of Enterprise	Major Products	SPV/ Association	Remarks/ Interventions
					Council for Leather Exports and National Institute of Fashion Technology
39.	Readymade Garments Cluster, Gurugram	1255-1310	Trousers, lowers, track suits, T-shirts etc,	No	Implementing Agency Investment Promotion Centre, Chandigarh.
40.	Faruknagar Terracotta handicraft Cluster, Gurugram	15	Gara, Flower vase, Lamp, Container, Fish, etc		NA
41.	Auto Rubber Parts cluster, Gurugram	135	Gasket, Seals, washers & V-belts etc,	NA	
Faridabad district					
42.	Light Engg. Industries cluster. Faridabad	203	Metal bar, Rod Square Channel Sheet Casting Forging pressing Sheet pressing Ingot processing	Association	Implementing Agency, MSME-DI, Delhi
43.	Auto Compounds Cluster, Faridabad Muzessar,	2500	Sheet metal, Rubber & Plastic components	Association	Implementing Agency Investment Promotion Centre, Chandigarh, DIC MSME-DI, Okhla, MSME TC, Okhla, Government Industrial Institute, Faridabad
44.	Light Engineering Cluster, Faridabad:-	100	Manufacture of Light Engineering Equipment Automobile Industry		
45.	Packaging Cluster, Sector- 58 Faridabad	NA	NA	NA	Implementing Agency Investment Promotion Centre, Chandigarh
46.	Bright Steel and Wire Drawing Cluster, Faridabad	NA	NA	NA	Implementing Agency Investment Promotion Centre, Department of Industries and Commerce, Govt of Haryana
47.	Terracotta Handicraft Cluster, Badkhal, Faridabad	10	Mudha Table Chair Shows	NA	NA
48.	Fabrication and General Engg. Cluster, Faridabad	40	Light Engg. Components	Association	NA
49.	Chemical Cluster, Faridabad	275	Surface Treatment	Co-operative Society	NA
Panipat district					
50.	Home Furnishing, Panipat (Textile design and testing Centre)	85	Textile designing and testing laboratory, yarn testing	Association	Implementing Agency Investment Promotion Centre, Chandigarh
51.	Made Ups (Textile Products Panipat)	7475	Throws Durries Rags Rag rugs Wash linen Table linen etc	NA	NA



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S.No.	Name & Location	No. of Enterprise	Major Products	SPV/ Association	Remarks/ Interventions
52.	Quit and Allied Products Cluster, Panipat	NA	NA	NA	Implementing Agency Investment Promotion Centre, Department of Industries and Commerce, Govt of Haryana
53.	Textile Machinery Development Centre Panipat	28	Textile Machinery	SPV	Implementing Agency Investment Promotion Centre, Department of Industries and Commerce, DIC Govt of Haryana SIDBI, MSME/DI NSIC, HSPCB
54.	Floor Covering Cluster, Panipat	331	Tufted Carpets, Shaggy Carpets and Durries	Association	- National Institute of Fashion Technology - Panipat Institute of Engineering and Technology
55.	Home Furnishing Cluster, Panipat	3200	Home Furnishing products (Cushions Curtains, Table Linen, Floor Coverings, Shaggy, Rugs Bathmats and Cushions covers etc.,)	SPV	- DIC - MSME-DI, Karnal - MSME TC, Okhla, Delhi SIDBI
56.	Textile Cluster, Panipat (700 units)	NA	NA	NA	- DIC - Northern India Textile Research Association (NITRA)
57.	Foundry Cluster, Samalkha, Panipat	30	Casting of fodder cutting machines Cane Crushers	SPV	Implementing Agency Investment Promotion Centre, Chandigarh, SIDBI MSME/DI NSIC, HSPCB, BIS
Palwal & Mewat district					
58.	Hodal Terracotta Handicraft Cluster, Palwal Hodal	15	Showpiece, pot, hanging etc,	SHGs	NA
59.	Mixed Cluster, Palwal	NA	Furniture & others woodcrafts	No SPV/ Association, SHG	NA
60.	Mixed Cluster, Mewat	NA	Machinery & Parts	No SPV/ Association, SHG	NA
61.	Embroidery Cluster, Ferozpur-Zhirk, Mewat	NA	NA	NA	NA
Rewari district					
62.	Fabrication Cluster, Rewari	NA	NA	NA	Implementing Agency Investment Promotion Centre, Department of Industries and Commerce, Govt of Haryana



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S.No.	Name & Location	No. of Enterprise	Major Products	SPV/ Association	Remarks/ Interventions
63.	Brass Cluster, Rewari	100	Manufacturing of brass utensils		Govt. organization support not available.
64.	Aluminum Utensils, Rewari	35	Aluminum utensils	No	NA
65.	Perforated Sheets Cluster, Rewari	50	Perforated Sheets	No	NA
66.	Footwear Cluster Rewari	NA	NA	NA	NA
Jhajjar district					
67.	Footwear Cluster, Bahadurgarh, Jhajjar	125	Non-leather open and closed footwear products	Association	Implementing Agency Investment Promotion Centre, Chandigarh, DIC - MSME-DI, Karnal - MSME TC, Okhla ,Delhi - FDDI, Noida
68.	Cane and Bamboo handicraft Cluster, Jhajjar	8	Door Mat, Wall Hanging, Mudha, etc.	NA	NA
69.	Jewelry Handicraft Cluster, Bahadurgarh, Jhajjar	15	Ear Ring Necklaces Napking Women Pot Painting	NA	NA
70.	Terracotta Cluster Farookh Nagar, Jhajjar	15	Gara, Flower vase, Lamp, Container, Fish etc,	NA	NA
Rohtak district					
71.	Auto mobile Components, Cluster Rohtak,	200	Mfg. of Automobile components	Association	NA
72.	Turned Components, Nut Bolts Cluster Rohtak	200	Mfg. of Automobile components	Association	NA
73.	General Engg. Cluster, Rohtak	NA	NA	NA	Implementing Agency Investment Promotion Centre, Department of Industries and Commerce, Govt of Haryana
74.	Embroidery Cluster Rohtak	NA	Embroidery	NA	NA
75.	Leather Product Cluster Kalanaur, Rohtak	NA	Leather Products	NA	NA
Sonipat district					
76.	Printing and Packaging Clusters, Rai Sonipat	110	Printing and Packaging Publishing	SPV	Implementing Agency Investment Promotion Centre, Department of Industries and Commerce, Govt of Haryana
77.	Stainless Steel Cluster-Kundil, Sonipat	72	Utensils, Cutlery and Kitchen Tool etc,	SPV	DIC Bankers HSSIDC, NABARD, NSIC,EEPIC, Industry Association, DGFT, SIDBI, etc,
78.	Soft toys & Embroidery Artisans Cluster, Sonipat	12	Teddy bear, Doggy, Teddy pillow, etc,	NA	NA



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S.No.	Name & Location	No. of Enterprise	Major Products	SPV/ Association	Remarks/ Interventions
79.	Corrugated Sheet Cluster, Rai Industrial Area, Rai, Sonipat,	50	Corrugated boxes for Packing of Products Medicines, Processed food products Fruits & vegetables, electronic equipment's ,etc	NA	NA
Uttar Pradesh Sub-region					
Meerut district					
80.	Scissors Clusters, Meerut	225	Manufacture of Scissors.	SPV	Implementing Agency NIESBUD, Noida - DIC
81.	Glass and Wooden Beads Cluster, Meerut	328	Brass plated items, Lamp shade, etc.	SPV	Implementing Agency- Govt of UP
82.	Embroidery Cluster, Meerut	25,025	Sari, Lehnga, Chunri, Suit, etc.	Association	Implementing Agency -Govt of UP
83.	Artificial Ornament Cluster, Meerut,	4,488	Manufacture of furniture and others n.e.c (NIC Code 46) Manufacture of Jewelry.	Association	Implementing Agency Govt of UP -DIC
84.	Sports Goods Cluster, Meerut	3500	Hockey Stick, Wickets , Football, Volly ball, carom, Tennis racquet, ball & Net, athletic equipment etc.,	Association	Implementing Agency - Govt of UP - DIC - PPDC, Meerut
85.	Musical Instruments (Band Baja) Cluster, Meerut	433	Manufacture of Sehni, Bigul Narshimbhj, Surajmukhi Carnet,,etc	Association	Implementing Agency, Govt of UP - DIC - PPDC, Meerut - KVIC, Meerut
86.	Auto Component Cluster, Meerut	4700	Rubbers parts Breaks Engine Spare parts Nuts and Bolts Spring pills etc	NA	NA
87.	Gas Cylinders Cluster, Meerut	160	Mini Cylinders	Association	NA
88.	Powerloom Textile cluster, Meerut	27500	Shirting Home Funning, Canvass	Association	NA
89.	Rubber Cluster, Meerut	130	Tyres and tubes	NA	NA
90.	Transformers & Voltage Regulators Cluster, Meerut	100	Voltage, Transformers.	NA	NA
91.	Footwear Cluster, Meerut	NA	Footwear	NA	NA
92.	Stabilizer & Inverter Cluster, Meerut	NA	Stabilizer& Inverter	NA	NA
93.	Jute, Hemp, rope and cordage Cluster, Meerut	NA	Jute, Hemp, rope and cordage	NA	NA
94.	Leather Products Cluster, Meerut	NA	Leather Products	NA	NA
95.	Carpets & Durries Cluster, Meerut	NA	Carpets & Durries	NA	NA
96.	Furniture & Fixtures Cluster, Meerut	NA	Furniture & Fixtures	NA	NA
97.	Horn & Bone Cluster, Meerut	NA	Horn & Bone	NA	NA



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S.No.	Name & Location	No. of Enterprise	Major Products	SPV/ Association	Remarks/ Interventions
98.	Pottery & Clay Cluster, Meerut	NA	Pottery & Clay	NA	NA
99.	Wrought iron accessories Cluster, Meerut	NA	Wrought iron accessories	NA	NA
100.	Paper Mache Cluster, Meerut	NA	Paper Mache	NA	NA
101.	Rajpura Grass, Leaf, Read and fiber Cluster, Meerut	NA	Grass, Leaf, Read and fiber	NA	NA
102.	Handloom Cluster Sardhana, Meerut	NA	Dhoti, dress, material, saree, towel furnishing, blanket, bandage, long	NA	NA
Ghaziabad district (including Hapur)					
103.	Packaging Material (Plastic), Ghaziabad	NA	Packaging Material (Plastic)	NA	Implementing Agency- NIESBUD, Noida
104.	Bone-Horn Cluster, Loni Ghaziabad	200	Manufacture of Artificial beaded Jewelry.)	NA	Implementing Agency- NIESBUD, Noida
105.	Textile Printing Clusters, Pilakhuwa, Ghaziabad	400	Textile Printing	NA	Implementing Agency -Govt of UP. Pilakhuwa Textile Centre is being developed by HPDA
106.	Chemicals Cluster, Ghaziabad	NA	Chemicals	NA	NA
107.	Mechanical Engineering Cluster, Ghaziabad	650	Engineering Equipment	Association	Implementing Agency, Govt of UP
108.	Carpets & Durries Cluster, Ghaziabad	NA	Carpets & Durries	NA	NA
109.	Furniture & Fixtures Cluster, Ghaziabad	NA	Furniture & Fixtures	NA	NA
110.	Hand Embroidery, Cluster, Ghaziabad	NA	Hand Embroidery	NA	NA
111.	Plastic Packing Cluster, Ghaziabad	150	Rigid and flexible packaging products	Association	NA
112.	Earthen & Plaster statues Cluster, Ghaziabad	NA	Earthen & Plaster	NA	NA
113.	Garh Mukteshwar Grass Mats Cluster, Ghaziabad	NA	Garh Mukteshwar Grass Mats	NA	NA
114.	Handloom Cluster, Ghaziabad	NA	Durries dhoti, lungi dress, material, saree, towel furnishing, bed sheet gamcha.	NA	NA
115.	Modha Cluster, Garh Mukteshwar, Hapur	100	Modha, cane Furniture	NA	DIC
Gautam Budh Nagar district					
116.	Readymade Garments & Home Furnishing Cluster , Noida	6014	Readymade Garments and Home Furnishing Cluster.	SPV	Implementing Agency MSME-DI, Delhi (SI)
117.	Plastic Clusters, Noida	350	Automobile components, Household goods Electrical good, Packing Materials, PVC/HDPE, Plastic Toys, water Storage Tanks etc	Association	Implementing Agency (SI) + (DSR) CIPET, Lucknow
118.	Furnishers, Hosiery complex, Ph.- II Noida	NA	NA	NA	Implementing Agency MSME-DI, Delhi



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S.No.	Name & Location	No. of Enterprise	Major Products	SPV/ Association	Remarks/ Interventions
119.	Engineering Cluster Noida	12000	Stabilizers Motor parts, Gas Stoves Generators Home Appliance Bright bars Air Conditions watches Refrigerators Sanitary Fliting	Association	- Central Machines Tools Institute - National Metallurgical laboratory - Central Electro Chemical Research Institute - Indian Institute of foundry
120.	Furniture Cluster, Sector 8,9,10, Noida	50	Furniture	NA	NA
121.	Chemicals Cluster, Noida	NA	Chemicals	NA	NA
122.	Electronics Cluster, Noida	NA	Electronics	NA	NA
123.	Packaging Cluster, Noida	NA	packaging	NA	NA
124.	Toys Cluster, Noida	NA	Toys		
125.	Punja Durry Cluster Surajpur, Noida	NA	Punja Durry	NA	NA
126.	Rugs and Durries Cluster, Greater Noida	10	Rugs and Durries	NA	NA
Bulandshahr district					
127.	White ware/pottery Industry Cluster, Khurja, Bulandshahr	492	Hand painted flower vases and others artistic wares, low & high tension simulators, kit kat, figurines planters, knobs stoneware Crockery etc,	Association	Implementing Agency -DIC - Central Glass & Ceramic Research Institute (CGCRI) Khurja.
128.	Undergarments Cluster, Shikarpur, Bulandshahr	NA	Undergarments	NA	DIC No other support organisation
129.	Jute, Hemp, rope and cordage Cluster	NA	Jute, Hemp, rope and cordage	NA	NA
130.	Metalware Cluster, Bulandshahr	NA	Metalware, products	NA	NA
131.	Carpets & Durries Cluster, Bulandshahr	NA	Carpets & Durries	NA	NA
132.	Wooden accessories Cluster, Bulandshahr	NA	Wooden accessories	NA	NA
133.	Woodwork & Lacquerware Cluster, Bulandshahr	NA	Woodwork & Lacquerware	NA	NA
134.	Pottery & Clay Cluster, Bulandshahr	NA	Pottery & Clay	NA	NA
135.	Paper Mache Cluster, Bulandshahr	NA	Paper Mache	NA	NA
136.	Hand & Zari Embroidery Cluster, Bulandshahr	NA	Hand & Zari Embroidery	NA	NA
137.	Handloom Cluster, Bulandshahr	NA	Durries dhoti, lungi dress, material, saree, towel furnishing, bed sheet gamcha.	NA	NA
138.	Zari/Embroidery Cluster, Jahangirabad, Bulandshahr	100	Zari/Embroidery work	NA	DIC, No other supporting organization
Baghpat district					



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139.	Handloom Cluster, Khedada, Baghpat	300	Mfg of Textiles	Association	NABARD under Integrated Handloom Cluster Development Scheme (IHCDS) ASEED
Rajasthan Sub-region					
Alwar district					
140.	Leather Cluster, Bansoor/Alwar	NA	NA	NA	Implementing Agency, Govt of Rajasthan
141.	Murti Kala Cluster, Gola ka bas, Alwar	52	Making of marble status and handicrafts	Association	Implementing Agency, Govt of Rajasthan
142.	Automobile Component Cluster Alwar	200	Automobile Components	Association	Implementing Agency , Govt of Rajasthan
143.	Leather Cluster, Alwar	NA	Tanned Leather Embroidered Jutties Gents Jutties Shoes, Leather accessories	NA	Govt of Rajasthan Rural Non-Farm development Agency.
144.	Leather & Non Leather Footwear, Ismailpur, Kishangarh, Alwar	100	Leather and Non- Leather shoes and belts	NA	DIC Rural Non-Farm Development Agency (RUDA)
145.	Terracotta Cluster, Ramgarh, Alwar	35	Making of Carpers and pots	NA	DIC
146.	Murti Kala Cluster, Ramgarh, Alwar	200	Making of marble status and handicrafts	NA	NA
147.	Stone Carving Cluster Khatumas, Alwar	20	Shai Maharaj, Mandir, Gangama, Head Figure, etc	NA	NA
148.	Chemicals Cluster, Alwar	NA	NA	NA	NA
149.	Carpet and Durries Cluster- Neemrana, Alwar	NA	NA	NA	NA
150.	Leather Cluster- Bansoor & Reny, Alwar	NA	NA	NA	NA

Source: (i) Development Commissioner, MSME, Ministry of MSME, Govt. of India www.dcmsme.gov.in

(ii) Reports on Brief Industrial Profile of Districts, MSME-Development Institutes - Delhi, Agra, Karnal and Jaipur.

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ENDNOTES

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- ^{xviii} Source: NCRPB Study on Micro and Household Enterprises in NCR
- ^{xix} Source: <https://www.behance.net/gallery/18308559/Pilkhuwa-Textile>
- ^{xx} Source: <http://www.emirates247.com/behind-the-stumps-cricket-action-2011-02-22-1.359323>; <http://www.livemint.com/Leisure/P0VTzcEu25Ua7WfAjzyCMN/1931-Sanspareils-Greenlands--A-historic-innings.html>; <http://www.indiamart.com/marshall-sports-meerut/sports-goods.html>; <http://www.meerutsports.in/> and <http://www.gettyimages.in/detail/news-photo/view-of-a-sports-goods-manufacturing-unit-in-meerut-three-news-photo/149335036#view-of-a-sports-goods-manufacturing-unit-in-meerut-three-companies-picture-id149335036>
- ^{xxi} Source: <http://www.emirates247.com/behind-the-stumps-cricket-action-2011-02-22-1.359323>; <http://www.livemint.com/Leisure/P0VTzcEu25Ua7WfAjzyCMN/1931-Sanspareils-Greenlands--A-historic-innings.html>; <http://www.indiamart.com/marshall-sports-meerut/sports-goods.html>; <http://www.meerutsports.in/> and <http://www.gettyimages.in/detail/news-photo/view-of-a-sports-goods-manufacturing-unit-in-meerut-three-news-photo/149335036#view-of-a-sports-goods-manufacturing-unit-in-meerut-three-companies-picture-id149335036>
- ^{xxii} Source: <http://www.emirates247.com/behind-the-stumps-cricket-action-2011-02-22-1.359323>; <http://www.livemint.com/Leisure/P0VTzcEu25Ua7WfAjzyCMN/1931-Sanspareils-Greenlands--A-historic-innings.html>; <http://www.indiamart.com/marshall-sports-meerut/sports-goods.html>; <http://www.meerutsports.in/> and <http://www.gettyimages.in/detail/news-photo/view-of-a-sports-goods-manufacturing-unit-in-meerut-three-news-photo/149335036#view-of-a-sports-goods-manufacturing-unit-in-meerut-three-companies-picture-id149335036>
- ^{xxiii} Source: <http://www.emirates247.com/behind-the-stumps-cricket-action-2011-02-22-1.359323>; <http://www.livemint.com/Leisure/P0VTzcEu25Ua7WfAjzyCMN/1931-Sanspareils-Greenlands--A-historic-innings.html>; <http://www.indiamart.com/marshall-sports-meerut/sports-goods.html>; <http://www.meerutsports.in/> and <http://www.gettyimages.in/detail/news-photo/view-of-a-sports-goods-manufacturing-unit-in-meerut-three-news-photo/149335036#view-of-a-sports-goods-manufacturing-unit-in-meerut-three-companies-picture-id149335036>
- ^{xxiv} Source: <http://www.dafatajewels.com/artificial-jewellery.htm> and <http://www.indiamart.com/swaticreations/artificial-jewellery.html#kundan-jewellery>



Draft Functional Plan for Micro and Household Enterprises in NCR

^{xxv}Source: <http://www.gettyimages.co.uk/event/inside-the-nadir-ali-co-musical-instruments-factory-ahead-of-industrial-production-figures-183921916#employees-work-on-various-brass-instruments-in-the-assembly-of-the-picture-id183626783> and <http://media.gettyimages.com/videos/an-employee-works-on-a-drum-in-the-drum-department-of-the-nadir-ali-video-id185341628?s=640x640>

^{xxvi}Source: <http://www.meerutonline.in/city-guide/business-in-meerut> and <http://www.bindalscissors.com/>

^{xxvii}Source: <http://www.tradeindia.com/fp101134/Handloom-Floor-Mats.html>

^{xxviii}Source: <http://www.priyaglobal.com/?portfolio=scarves-and-bandanas>, http://intagartek.com/photo_gallery.html# and <http://www.monicagarments.com/index.html>

^{xxix}Source: <http://www.priyaglobal.com/?portfolio=scarves-and-bandanas>, http://intagartek.com/photo_gallery.html# and <http://www.monicagarments.com/index.html>

^{xxx}Source: <http://www.indiamart.com/hindianenterprises/hotel-furniture.html#antique-iron-fitted-furniture>

^{xxxi}Source: NCRPB Study on Micro and Household Enterprises in NCR

^{xxxii}Source: NCRPB Study on Micro and Household Enterprises in NCR

^{xxxiii}Source: NCRPB's Officers site visit

^{xxxiv}Source: <http://www.sodelhi.com/city-blog/pop-art-workers-of-delhi-blood-sweat-tears>

^{xxxv}Source: <http://www.newtechexim.com/decorative-handicraft-items-3045004.html>

^{xxxvi}Source: http://www.justdial.com/Delhi/Tannu-Garments-Near-Mehbube-Ilahi-Masjid-Sangam-Vihar/011PXX11-XX11-110322120108-P4X8_BZDET?xid=RGVsaGkgUmVhZHIYWRlIEdhcm1lbnQgTWVudWZhY3RlcmVycyBHb3ZpbmQgUHVyaSBLYWxrYWpp

^{xxxvii}Source: <http://mybcard.in/Tarawat-Handicrafts-handicraft-items-manufacturers-in-delhi>

^{xxxviii}Source: <http://kunuzum.com/2012/24/delhi-101-31-dariba-kalan-pearls-gold-silver-and-all-that-is-precious/>

^{xxxix}Source: http://www.craftclustersofindia.in/site/Craft_Gallery.aspx?mu_id=4&Nnid=881

^{xl}Source: <http://nazleatherexport.com/#>, NCRPB Study on Micro and Household Enterprises in NCR and http://www.craftclustersofindia.in/site/Craft_Gallery.aspx?mu_id=4&Nnid=881

^{xli}Source: <http://www.supdelhi.com/new-delhi-setting-new-home-weve-got-back/>

^{xlii}Source: NCRPB's Officers site visit

^{xliii}Source: <http://iws.net.in/spartaindia.com/index.htm>

^{xliv}Source: <http://www.fibre2fashion.com/indianhandsnlooms/varanasi.asp>

^{xlvi}Source: NCRPB Study on Micro and Household Enterprises in NCR

^{xlvi}Source: NCRPB Study on Micro and Household Enterprises in NCR

^{xlvi}Source: NCRPB Study on Micro and Household Enterprises in NCR

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^{xlvi}Source: NCRPB Study on Micro and Household Enterprises in NCR

^{xlvi}Source: NCRPB Study on Micro and Household Enterprises in NCR

Inputs received form MSME Development Institute-Okhla, NIESBUD and the NCR participating States on 'draft Functional Plan for Micro & Household Enterprises in NCR'

Inputs received from	Inputs/ Comments/ Observations	Status of Compliance
A. MSME Development Institute, Okhla, M/oMSME, Govt. of India (letter dated 18.01.2018)	<ul style="list-style-type: none"> Supported the draft and no specific comments offered on it. 	---
B. The National Institute for Entrepreneurship and Small Business Development (NIESBUD), Noida M/oMSME, Govt. of India (letter dated 27.03.2018)	<p>1.Awareness and Breaking the social stigma The initial step is to ensure self-employment is accepted as a viable career option rather than the last resort. Entrepreneurship Awareness Programs focusing on becoming self-employed and setting up micro industries will help in building for the remaining intervention.</p> <p>2.Training Entrepreneurship Development Programmer may be organized with Technical inputs from NIESBUD and by the Institute to train the youth to take up entrepreneurship as a career.</p> <p>3.Establishment of Livelihood Business Incubators LBI or Livelihood Business Incubators at NIESBUD can serve a source and point of skill based entrepreneurship. The incubator will assist in the conception and development of household and micro enterprise in various sector such food processing and preservation, beauty and wellness, Information Technology related services and other area/resource specific through entrepreneurship development interventions.</p> <p>4.Mentoring and Post – Training support Stand – alone training programs do not serve the purpose in the long run. It is therefore suggested that a mentoring and post-training cell may be set up. The primary objective of the cell will be to assist individual in</p>	<p>The aspect related to awareness is already addressed in Chapter 5 of the draft Functional Plan [e.g. Para 5.3(I) sub-para 2, 8 (i & viii), 9(iv), 11(i) and Para 5.3(III) sub-para 1(iv), 2(i), 4(i, iii, & v) & 6(vi)].</p> <p>Recommendations regarding various types of training and Technical inputs from NIESBUD are already made in Chapter 5 under Para 5.3(I), (II) & (III) of the draft Functional Plan.</p> <p><u>However, the suggestions of NIESBUD have also been suitably incorporated in the draft Functional Plan at Para 5.3(I) sub-para 2 and 10.</u></p>

Inputs received from	Inputs/ Comments/ Observations	Status of Compliance
	<p>setting up micro and house hold industries. The cell will help the beneficiaries to develop viable business plans, meet with banks, to avail loan facilities from the bank and setup micro business units.</p> <p>5. Aggregation of cluster and marketing services Since cluster form an important part of the NCR, aggregation of cluster can further help in the development on micro industries. Once the micro industries start production, specialized online and offline marketing services can be provided for such industries to bring the product of such clusters to the rest of the country.</p>	
<p>C. NCT Delhi (UD Department, GNCTD letter dated 07.05.2018)</p>	<p>• Subject does not pertain to the department, hence, the report of the department may be treated as NIL.</p>	<p>---</p>
<p>D. Rajasthan sub-region (CTP, NCR Cell letter dated 21.05.2018)</p>	<ol style="list-style-type: none"> 1. Need to be made more efficient, and adapted according to the needs of different districts. 2. Needs to make technological interventions in small scale and traditional household business to increase efficiency, production, advertisement and adequate use of man-power. 3. There should be an establishment of research and training centers to enhance the quality of Micro & Household Enterprises and build their capacity. 4. Access of Household Enterprises to formal financial institutions needs to be essential and simplified. 5. While assisting the entrepreneurs with the growth process, Attention to microfinance linkages also needs to be strengthened. 6. Selection of enterprise be based on skilled manpower, local raw materials and markets, this makes demands based on expertise. 	<p>The needs of different NCR constituent Districts is analyzed in Chapter 3 of the draft Functional Plan and accordingly issues have been identified.</p> <p>The concerns raised by the Govt. of Rajasthan regarding <i>technological interventions, research & training centers, financial institutions & microfinance, skilled manpower, local raw materials, markets & other resources, etc.</i>, are already analyzed/ addressed sector & sub-region wise in Chapter 5 of the draft Functional Plan.</p>

Inputs received from	Inputs/ Comments/ Observations	Status of Compliance
	7.Rural enterprises have limited resources such as labor, skills, and capital, which make it difficult for them to meet the standards required for local, regional, or global markets. So, it is necessary to provide demand oriented business development and financial services to Micro and Household Enterprises.	
E. Uttar Pradesh sub-region (NCR Cell letter dated 03.04.2018 and 20.06.2018) (i) Meerut Development Authority (letter dated 09.01.2018) (ii) Bulandshahar Development Authority (letter dated 12.06.2018)	<ul style="list-style-type: none"> • List of service & non-polluting small scale industries (up to 10HP), permitted under Meerut Master Plan-2021 provided stating that the decision of the NCR Planning Board regarding small and household industries will be incorporated in the new Master Plan. • The draft Functional Plan for NCR is well prepared and infinite possibilities of development are reflecting from its implementation in NCR. Bulandshahar Development Authority has given its consent for the draft Functional Plan. 	---
F. Haryana sub-region	<ul style="list-style-type: none"> • No inputs/ observations received. 	---

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Item No.	Agenda	Page Nos.
	Supplementary Agenda	
1.	Action taken w.r.t works regarding Regional Plan 2041 preparation	
2.	Decisions taken in Empowered Committee and Board meetings	

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Supplementary Agenda 1: Action taken w.r.t works regarding Regional Plan 2041 preparation

1. Action taken and Proposed approach for the preparation of next Regional Plan for perspective year 2041.

1.1 The Regional Plan-2021, notified in 2005, was prepared for the then notified 33,578 sq. km. area of NCR consisting of NCT-Delhi, Haryana sub-region (8 districts of State of Haryana), UP sub-region (5 districts of State of Uttar Pradesh) and Rajasthan sub-region (one district of State of Rajasthan). Subsequent to the notification of RP-2021 in 2005, a few districts were bifurcated and reorganized by the NCR participating State Governments. Accordingly, the area of NCR has increased from 33,578 sq. km. to 34,144 sq. km. consisting of NCT-Delhi, Haryana sub-region (9 districts of State of Haryana), UP sub-region (6 districts of State of Uttar Pradesh) and Rajasthan sub-region (one district of State of Rajasthan). The area of 34,144 sq. km. of NCR was covered under the revised Regional Plan-2021. Thereafter, Government of India vide Gazette Notification dated 1.10.2013 has included Bhiwani and Mahendragarh districts of the State of Haryana and Bharatpur district of the State of Rajasthan in NCR. Further, Government of India vide Gazette Notification dated 24.11.2015 has also included Jind and Karnal districts of the State of Haryana and Muzzaffarnagar district of the State of Uttar Pradesh in NCR. Accordingly, now Haryana sub-region has thirteen districts with total area of 25,327 sq. km., Rajasthan sub-region has two districts with total area of 13,447 sq. km. and Uttar Pradesh sub-region has seven districts with total area of 13,560 sq. km. in NCR. Consequent to these notification, the total area of NCR has increased from 34,144 sq.km. to about 53,817 sq. km. Shamli was also added later and NCR today covers an area of 55083 sqkm.

1.2 A Review of review of RP-2021 was initiated after the approval of the Board in themeeting, and accordingly discussed at Agenda 8 , Steering Committee was constituted for the Review of the Regional Plan 2021. Fourteen sub-groups have been constituted to undertake the said review of each sector/ chapter of the RP-2021. The representatives from NCR participating States, concerned Central Ministries/ Departments, academicians and subject experts are part of the said Study Groups.

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The Review Reports of various study groups were received and the recommendations of the Study Groups are proposed to be considered during the preparation of RP 2041.

1.3 To prepare the Regional Plan for next perspective year of 2041, it is essential to analyse the existing land use data through satellite imageries. The work related to landuse analysis and preparation of maps (landuse and various other maps) was accordingly assigned to the National Remote Sensing Centre (NRSC), Department of Space, Government of India, who has been working with NCR Planning Board from the past for landuse analysis and preparation of maps. NRSC is being requested to prepare landuse maps for entire NCR (55083 sqkm) i.e, 23 districts and entire Delhi at scale of 1: 10,000 to capture maximum details on ground, as well as 1:50,000 as taken up for RP 2021.

1.3 Advance action on Population Projections, which are a key input to any plan preparation, had also been taken (refer Agenda 9) and broad idea of population of NCR subregions, towns etc. are now available.

1.4 NCRPB has already initiated the process of Data collection from NCR States and detailed data formats have been prepared and circulated to States for providing the necessary data covering Transport, Water, Groundwater Recharge, Power, Drainage, Economic Profile, Micro and Household Enterprises, Health & Education Infrastructure etc. in NCR.

1.5 Organisations/Departments like National Informatics Centre and MeITY are also being approached for assisting NCRPB in preparation of a Geo portal for Regional Plan 2041 and creation of various layers of infrastructure facilities and services, utilities, landuse etc. to make it more interactive and user friendly.

Initiative are also being made to upgrade the NCR Planning & Monitoring Cells and NCRPB to handle the major tasks involved in RP 2041 preparation.

1.6 Since, seven new districts has been added in NCR, hence, a comprehensive approach shall be required now, and it will be appropriate to conduct studies related to relevant sector of the Regional Plan, so that gaps, issues and challenges related to each sector can be identified at NCR and sub-regional level. Further, the studies can also provide suggestive policies and proposals which can be utilized for the revision of the Regional Plan for the perspective year 2041.

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1.7 Considering the changes that have come up in the field of Urban/Regional Planning and Development in terms concepts, technologies and policy interventions, it would be appropriate to take cognizance of all such new/innovative planning & development concepts (e.g. *Transit Oriented Development (TOD)*, *Compact Development*, *Green Building/Development*, *Smart Cities*, etc.), technologies (e.g. *Digital mapping/Planning*, *On-line monitoring of the land & development using Regional/City Observatories*, etc.) and policy interventions (e.g. *Affordable Housing*, *Transferable Development Rights (TDR)*, etc.) while preparing the Regional Plan for the perspective year 2041 for NCR, which is one of the most urbanized and fast growing region in the country. For the better understanding and hands on experience of such new/innovative planning & development concepts, technologies and policy interventions, the best practices at local and global level could be studied thoroughly, so that Regional Plan-2041 for NCR can address all the future issues/challenges smartly/innovatively. Series of brainstorming sessions, seminars, workshops, etc. are also proposed to be undertaken which may cover stakeholders, developers, etc. The Regional Plan-2041 for NCR is to be prepared with the strong spirit of comprehensiveness, so that it can be implemented in the entire NCR easily.

Action Point

- In view of above, Committee may like to deliberate for future course of action

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Supplementary Agenda 2: Decisions taken in Empowered Committee and Board meetings required to be carried forward.

The Empowered Committee, in its 3rd meeting held under the chairmanship of Secretary, Urban Development, Govt. of India on 25.02.2009, had deliberated upon the sectors of **Water Management, Sanitation and Development of Tourism** within NCR, and suggested that initiatives should be taken for Preparation of Action Plan for Groundwater Recharge, Integrated Water Management Plan, Sanitation Development Plans for all towns, Functional Plan on Tourism for NCR. (Refer Annexure I)

Further, in the 32nd meeting of the Board held on 22.03.2012, Hon'ble Urban Development Minister, Govt. of NCT Delhi had highlighted an important aspect regarding Health Sector. It was noted that neighbouring States of Delhi should develop hospitals in Government as well as private sector because about 40% patients in Delhi Hospitals were coming from neighbouring States. He had suggested and requested that States should take initiatives and provide land for private hospitals in Delhi and NCR at institutional rates. (Refer Annexure II)

NCRPB would like to carry forward these decisions of the Empowered Group and Board meeting for further action for better Development of NCR area.

Action Point:

- The proposal is placed for consideration of the Committee.

Decisions taken in Empowered Committee and Board meetings

The Empowered Committee held under the chairmanship of Secretary, Urban Development, Govt. of India in its 3rd meeting on 25.02.2009 decided following with regard to water management:

- (i) All the constituent States of NCR would implement the policies of rainwater harvesting more effectively in their respective sub-regions and for that would consider changes in building bye-laws or a new legislation as needed. An Action Plan for Groundwater Recharge be prepared for rural and urban areas by the constituent States of NCR.
- (ii) The scheme of construction of check-dams for ground water recharging and deepening of village ponds and lakes would be taken up by the constituent States under the existing employment schemes.
- (iii) Integrated Water Management Plans would be prepared by the constituent States including recycling of waste water for their respective district and sub-regions. Steps will be taken to conserve water, reduce losses and promote use of water saving flushing cisterns, etc. suitable public education campaigns as felt necessary would be launched.
- (iv) Each participating State would prepare a unified ground water policy in NCR and would ban ground water exploitation in dark areas identified by Central Ground Water Board. In this regard, the constituent States would adopt the Model Bill, which was issued by Ministry of Water Resources, Govt. of India in January, 2005 to regulate and control the Development and Management of Ground Water in their respective Sub-regions.

Regarding Sanitation following were decided:

- (i) Sanitation Development Plans including Solid Waste Management Plans would be prepared for all the towns in NCR.
- (ii) State would prepare DPRs for the schemes of sewerage system, sewage treatment plants, solid waste management and drainage for all the towns in NCR.
- (iii) In case, financial assistance is required for implementation of these projects, these could be submitted to the Board or any other agency felt appropriate by the State Govt.

With regard to development of Tourism within NCR, following were decided:

- (i) Functional Plan on Tourism for NCR would be prepared by the NCRPB through Consultant with active participation of the Ministry of Tourism, Govt. of India, ASI and constituent State Govt. of NCR.
- (ii) Ministry of Tourism would create a forum consisting of Secretaries of Tourism, Department of the constituent States, representative from ASI for identification and selection of tourist circuits in NCR and preparation of conservation and development plans including investment plan and funding pattern for development which could be implemented by the States.
- (iii) A Committee would be constituted in the NCRPB with the Secretaries/ Commissioners of the Tourism Department of the constituent State of NCR and representatives from Ministry of

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Tourism, ASI (Central and State both), etc, to discuss and resolve various issues related to development of tourism sector in NCR on the pattern of Committee of Transport Secretaries/Commissioners.

Further, in the 32nd meeting of the Board held on 22.03.2012, Hon'ble Urban Development Minister, Govt. of NCT Delhi suggested that neighbouring States should develop hospitals in Government and private sector because Delhi Hospitals are received about 40% patients from neighbouring States. He requested to provide land for private hospitals in Delhi at institutional rates.

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(202) Annexure I

MINUTES OF THE 3rd MEETING OF THE EMPOWERED COMMITTEE OF THE NCR PLANNING BOARD HELD UNDER THE CHAIRMANSHIP OF SECRETARY, MINISTRY OF URBAN DEVELOPMENT, GOVT. OF INDIA ON 25.02.09 AT 2.00 P.M. IN THE MAGNOLIA HALL, IHC, N.DELHI.

Third Meeting of the Empowered Committee of the NCR Planning Board was held under the Chairmanship of Dr. M. Ramachandran, Secretary, Ministry of Urban Development, Government of India on 25.02.09 in the Magnolia Hall, IHC, Lodhi Road, New Delhi. The list of participants is annexed.

Chairman welcomed the Chief Secretaries from Govt. of NCT Delhi, Haryana and UP and other officers from the Central and State Governments Departments. He further stated that the Empowered Committee was constituted to deliberate and resolve various inter-state issues. He desired to hold meetings more frequently. He added that the Reciprocal Common Transport Agreement for "Contract Carriage" was signed in October, 2008 and the States are required to implement it expeditiously. He further added that the draft agreement for "Stage and Goods Carriage" was also notified for public objections and suggestions. States are requested to expedite the signing of this agreement also. He observed that several actions had been taken since last meeting and emphasized the need for coordinated effort and provision of proper infrastructure for the balanced development of the National Capital Region. The Chairman informed that huge funds would be required to take up infrastructure projects in NCR. NCRPB is trying to get funding from international agencies like World Bank and ADB. ADB has agreed for loan for 300 million dollars and Board would be able to take up good projects for the development of infrastructure in the region. Board also raised Rs. 265 crores from the market. He added that Government of Haryana had been quiet active in obtaining the loan from the Board for development projects. He hoped that Government of UP and Rajasthan would also be proactive in this regard. He conveyed his thanks to Government of Delhi for participating in the funding process for the NCR Planning Board. He requested the other constituent states of NCR to participate in the funding process to expedite the development of the region. Thereafter, the Chairman requested the Member Secretary, NCR Planning Board to take up agenda items for discussions and deliberations.

1. Agenda Item No. 1: Confirmation of the Minutes of the meeting held on 24.10.07

Member Secretary, NCR Planning Board informed that the minutes of the Empowered Committee meeting held on 24.10.07 were circulated and no comments were received. He proposed confirmation of the minutes. The Committee confirmed the minutes of the meeting.

2. Agenda Item No. 2: ATR on the Minutes of the Second Meeting of the Empowered Committee of the NCR Planning Board held on 24th October, 07.

i) 2.1 Common license permits to facilitate free flow of traffic within the NCR

Representatives of the Government of Haryana, UP and Delhi informed that the draft Bi-lateral Agreements between them had been signed and notified for public objections/ suggestions under Motor Vehicle Act, 1988. The agreements would be signed soon after addressing to the suggestions/objections which is in final stage. Member Secretary, NCRPB stated that Government of UP have some reservations as they are moving towards PPP mode in rolling stock and these issues would be discussed in the Transport Secretaries/Commissioners meeting to be held on 03.03.2009.

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6.2 Water

Chairman stated that there is an urgent need to provide efficient water management. He added that the issues are work on the dams to be expedited, action plan for ground water recharge in NCR to be prepared, ground water recharge, legislation on the pattern of Tamil Nadu, adoption of model bill on ground water and reduction in wastage of water.

Member Secretary, NCRPB stated that projects like DMIC, Eastern and Western Peripheral Expressways Corridors, Orbital Rail Corridors would push the demand of water further upwards. He stated that water sources available at present would reach their limits very soon and therefore immediate steps would be required to meet the challenge. In urban areas, all buildings may be required to necessarily provide for water harvesting system. While the new building can be covered by a provision in the bye-laws, for old buildings, legislation on the pattern of Chennai could be proposed by the NCR constituent States. The Model Bill and TN legislation on ground water were circulated with the agenda notes. The notes also contained description of various ground water recharge and water conserving practices.

CEO, DJB informed that water level in the barrage has gone down and is creating shortage of water in Delhi.

Representative of Government of Haryana stated that pollution of river water from Delhi is adversely affecting health downstream in Haryana and UP.

Representative of Government of UP informed that their Government has made rainwater harvesting mandatory for buildings for plot site 200 sq m and above.

After discussions and deliberations following decisions were taken:

- i) All the constituent States of NCR would implement the policies of rainwater harvesting more effectively in their respective sub-regions and for that would consider changes in building bye-laws or a new legislation as needed. An Action Plan for Groundwater Recharge be prepared for rural and urban areas by the constituent States of NCR.
- ii) The schemes of construction of check-dams for ground water recharging and deepening of village ponds and lakes would be taken up by the constituent States under the existing-employment schemes.
- iii) Integrated Water Management Plans would be prepared by the constituent States including recycling of waste water for their respective district and sub-regions. Steps will be taken to conserve water, reduce losses and promote use of water saving flushing cisterns, etc. suitable public education campaigns as felt necessary would be launched.
- iv) Each participating State would prepare a unified ground water policy in NCR and would ban ground water exploitation in dark areas identified by Central Ground Water Board. In this regard, the constituent States would adopt the Model Bill, which was issued by Ministry of Water Resources, Government of India in January, 2005 to Regulate and Control the Development and Management of Ground Water in their respective Sub-regions.

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- b. Logistic Hubs at Rewari (along western Dedicated Freight Corridor), Khurja (along eastern Dedicated Freight Corridor), Rohtak (along Orbital Rail Corridor), Panipat (along Orbital Rail Corridor), Meerut (along Orbital Rail Corridor) and Hapur (along Orbital Rail Corridor).
 - c. Integrated Freight Complexes at all the regional urban nodes at the intersection of Peripheral Expressways, Radial National Highways and Radial Rail Lines and Orbital Rail.
- ii) Consider creating or engaging SPVs to implement the transport projects and accordingly, funding arrangements need to be worked out.
 - iii) The Ministry of Shipping, Road Transport and Highways, Ministry of Railways and participating State Governments should prioritize the projects suggested in the Study and implement the transport projects to enhance the quality of life in NCR.
 - iv) The State Governments should prepare Mobility Plans for the towns in NCR, which have projected population of more than 5 lacs in the year 2021 as per Regional Plan 2021. They are Gurgaon-Manesar complex, Sonapat-Kundli complex, Panipat, Rohtak, Ghaziabad-Loni complex, NOIDA and Greater NOIDA. The constituent States would submit their proposals to the Ministry of Urban Development through the Board or directly for funding of the study in this regard. In case, Mobility Plans of Meerut and Faridabad are not prepared under JNNURM till date, the same should be prepared and submitted to the Ministry of Urban Development, GOI for funding.
 - v) The Committee of Transport Secretaries/Commissioners of NCR States to facilitate the implementation of the projects recommended in the Study.

6.4 Sanitation

Chairman stated that the sanitation is one of the important basic services which include sewerage, solid waste management and storm water drainage in urban areas. He added that Ministry has brought out a "Handbook on Service Level Benchmarks" and a copy of the same has been provided to all the Chief Secretaries today. He suggested that all the State Governments should ensure that these performance parameters are achieved to give better quality of life to the citizens.

Member Secretary, NCRPB stated that large number of towns in NCR have poor coverage with sewerage system. They also lack solid waste management and sewage treatment facilities apart from poor drainage facilities. Many of the drains are choked due to various reasons and in certain cases untreated sewage also out falls in these drains. This creates poor sanitation conditions. In addition, rural areas also lack sanitation. There has to be an integrated approach for both rural and urban areas to provide adequate sanitation facilities. He suggested that there is need address to all these problems as per the provisions of the Regional Plan 2021.

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After deliberations and discussion following decisions were taken:

- a) Sanitation Development Plans including Solid Waste Management Plans would be prepared for all the towns in NCR.
- b) States would prepare DPRs for the schemes of sewerage system, sewage treatment plants, solid waste management and drainage for all the towns in NCR.
- c) In case, financial assistance is required for implementation of these projects, these could be submitted to the Board or any other agency felt appropriate by the State Government.

7. **Agenda Item No. 7: Other important issues for immediate attention**

(a) Development of Tourism within NCR and identifications of tourist circuits

Chief Secretary, Haryana informed that in Haryana sub-region of NCR there are several archeological sites related to Indus Valley civilization and no experts are available for development of these heritage sites. He stated that Govt. of Haryana is taking active interest in conservation of the heritage sites and development of tourism in the State. He further added that their Government is keen to develop 4 to 5 important archeological sites within the Haryana Sub-region and Ministry of Tourism may take up these sites for development.

Chief Secretary, UP mentioned that many heritage sites in UP were not developed and they were preparing Master Plans for development of Heritage and Tourism sites through Consultant.

Member Secretary, NCRPB stated that there is a need to prepare detailed inventory of Heritage and Tourism sites and develop tourist circuits within NCR to attract domestic and foreign tourist as tourism is an employment generating activity. This would help in providing employment to local people to boost the economy of the area. In view of this, it is proposed to prepare a Functional Plan for Tourism for NCR through outsourcing.

Additional Secretary, Ministry of Tourism, Govt. of India suggested that the proposed Study may be conducted by the NCRPB and also informed that Ministry of Tourism would examine the possibility of providing funds for development of these sites.

Chairman observed that the constituent states were keen and had already initiated process of developing some of the heritage sites and suggested that the Functional Plan on Tourism for NCR 2021 would provide detailed guidelines and should be prepared with active participation of the Ministry of Tourism, ASI and constituent states.

After detailed discussions and deliberation following decisions were taken by the Committee:

- i) Functional Plan on Tourism for NCR would be prepared by the NCRPB through Consultant with active participation of the Ministry of Tourism, Government of India, ASI and constituent State Governments of NCR.

- (187)
- (763)
- ii) Ministry of Tourism would create a forum consisting of Secretaries of Tourism Department of the constituent states, representative from ASI for identification and selection of tourist circuits in NCR and preparation of conservation and development plans including investment plan and funding pattern for development which could be implemented by the States.
 - iii) A Committee would be constituted in the NCRPB with the Secretaries/Commissioners of the Tourism Department of the constituent States of NCR and representatives from the Ministry of Tourism, ASI (Central and State both), etc. to discuss and resolve various issues related to development of tourism sector in NCR on the pattern of Committee of Transport Secretaries/Commissioners.

(b) Declaration of development/ regulated/controlled area along Highways as Highway Corridor Zone

The Empowered Committee observed that large scale unplanned and ribbon development was taking place along the important highways in the NCR and felt the need for planned development as envisaged in the Regional Plan-2021.

After deliberations and discussion, it was decided that the actual boundaries of the Highway Corridor Zone along all Expressways, National Highways and State Highways would be delineated by the constituent State Governments based on the revenue village boundaries, and would be declared/notified as controlled/development/regulated areas and prepare Development/Master Plans in a time bound manner.

(c) Earmarking of land for construction of the proposed Orbital Rail

Empowered Committee observed that Regional Plan-2021 proposed Orbital Rail parallel to the Peripheral Expressway. Regional Integrated Freight Complexes (RIFC) could be developed on the intersections of radial roads/rails and peripheral expressway/orbital rail. In view of the rapid development in the CNCR, land for such facilities may not be available if not acquired/earmarked now in the Master/Development Plans as well as in the Sub-Regional Plans. It was also observed that Government of Haryana had already earmarked land for orbital rail and peripheral expressways in the Master Plan.

After discussions and deliberations it was decided by the Empowered Committee that Government of UP would also take initiatives for earmarking land for construction of Orbital Rail and peripheral expressways in their sub-region. It was also decided that all the constituent State Governments of NCR (Haryana and UP) would also earmark land for Regional Integrated Freight Complexes (RIFC) to be developed on the intersections of radial roads/rails and peripheral expressway/orbital rail in the respective Master/Development Plans as well as in the Sub-Regional Plans. In case Master/Development Plans have been prepared, necessary amendments would be carried out in the same to make the necessary provision.

(d) Development of New Townships

The Empowered Committee noted the status of development of new townships by the Government of Haryana. It was observed that the Study on Formulation of

g) **Provision of hospital facilities in NCR:** Hon'ble Urban Development Minister, GNCT-Delhi suggested that neighbouring States should develop hospitals in Government and private sector because Delhi Hospitals are receiving about 40% patients from neighbouring States. He requested to provide land for private hospitals in Delhi at institutional rates. Member Secretary, NCRPB informed that Board has financed the construction of 500 bedded hospital with medical college in Mewat District to promote medical facilities in the region.

Minister from Government of Uttar Pradesh suggested that the best projects in NCR should be documented and should be uploaded on the website of the Board. He also requested for the capacity building (up-skilling) of officers and staff. Board would put all the information on its website for the benefit of the participating States. Secretary, Urban Development stated that the Ministry is also conducting several capacity building programmes where officers from all over India participate.

(Action: NCRPB)

The meeting ended with a vote of thanks to the Chair as well as participating members by the Member Secretary, NCR Planning Board.



राष्ट्रीय राजधानी क्षेत्र योजना बोर्ड

NATIONAL CAPITAL REGION PLANNING BOARD

प्रथम तल, कोर-IV बी, / 1st Floor, Core-IV B,

भारत पर्यावास केन्द्र, / India Habitat Centre,

लोधी रोड, नई दिल्ली-110003 / Lodhi Road, New Delhi-110003

आवासान और शहरी कार्य मंत्रालय / Ministry of Housing and Urban Affairs

दूरभाष/Phone: 011-24642284, 24642287 फैक्स/Fax: 011-24642163

No.K-14011/9/2018-NCRPB

Dated: 22.07.2019

Sub: Minutes of the 67th Meeting of the Planning Committee of the NCR Planning Board held on 15.07.2019 at 11:00 AM at NCR Planning Board, New Delhi

The 67th Meeting of the Planning Committee of the NCR Planning Board under the Chairpersonship of Member Secretary, NCR Planning Board was held on 15.07.2019 at 11:00 AM in the Conference Room of NCR Planning Board, Core-4B, 1st Floor, India Habitat Centre, Lodhi Road, New Delhi-110003.

2. The Minutes of the meeting are enclosed for information and necessary action.


(Jagdish Parwani)
Director (A&F)

Encl: As above.

To:

Members

1. Additional Secretary (D), Ministry of Housing & Urban Affairs, Govt. of India, Nirman Bhawan, New Delhi.
2. Additional Chief Secretary, Department of Urban Development & Housing, Govt. of Rajasthan, Rajasthan Secretariat, Jaipur-302005, Rajasthan.
3. Principal Secretary, Town & Country Planning Department, Govt. of Haryana, Haryana Mini Secretariat, Sector -17, Chandigarh, Haryana-160017.
4. Principal Secretary, Housing & Urban Planning Department, Govt. of Uttar Pradesh, 3rd Floor, Bapu Bhawan, Uttar Pradesh Secretariat, Lucknow-226001, Uttar Pradesh.
5. Vice-Chairman, Delhi Development Authority, Vikas Sadan, New Delhi-110023.
6. Director General, Town & Country Planning Department, Government of Haryana, SCO 71-75, Sec.17C, Chandigarh-160017.
7. Principal Secretary (PWD), Govt. of NCT-Delhi, 5th Level, Delhi Secretariat, I.P. Estate, New Delhi-110002.
8. Chief Planner, Town & Country Planning Organisation, Govt. of India, E-Block, Vikas Bhawan, I.P. Estate, New Delhi-110002.
9. Chief Town & Country Planner, Uttar Pradesh, Town & Country Planning Department, Govt. of Uttar Pradesh, 7 Bandaria Bagh, Lucknow-226001, Uttar Pradesh.
10. Chief Town Planner (NCR), Town & Country Planning Department, Govt. of Rajasthan, Nagar Niyojan Bhawan, Jawaharlal Nehru Marg, Jaipur-302004, Rajasthan.

जारी / Issued..... 22/7/19
दिनांक / Date.....
हस्ताक्षर / Signature.....

Co-opted Members

11. Joint Secretary (UT), Ministry of Housing & Urban Affairs, Govt. of India, Nirman Bhawan, New Delhi.
12. Joint Secretary (IA), Deptt. of Environment, Ministry of Environment, Forest & Climate Change, Govt. of India, Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi-110003.
13. Senior Advisor (HUD), NITI Aayog, Sansad Marg, New Delhi-110001.
14. Chairman & Managing Director, Housing & Urban Development Corporation, HUDCO House, Lodhi Road, New Delhi-110003.

CMA

1. Secretary, Housing, Govt. of Uttarakhand, 4, Subash Road, **Dehradun-248001**, Uttarakhand
2. Chief Executive Officer, NCR Special Area Development Authority (Counter Magnet), Sheetla Sahai Administration Bhawan, Sojna Tighra, **Gwalior-474001** (M.P.)
3. The Chief Administrator, Patiala Urban Planning & Development Authority, PUDA Complex, Urban Estate, Phase-II, **Patiala-147002**.

Special Invitee:

1. Prof. Dilip Kumar Dey, Professor & Head, Faculty Member of Department of Statistics, Indira Gandhi National Tribal University, Amarkantak, Village- Lalpur, Dist. Anuppur (MP), Pim 484887-

Copy to:

1. Consultant Planning, NCRPB
2. FAO, NCRPB
3. All officers from Planning Wing
4. PS to MS, NCRPB
5. PA to Director (A&F)


(Jagdish Parwani)
Director (A&F)

MINUTES OF THE MEETING

67TH MEETING OF THE PLANNING COMMITTEE HELD ON 15.07.2019 AT 11.00 A.M. IN THE OFFICE OF N C R PLANNING BOARD, NEW DELHI.

1. Chairman welcomed the members of the Planning Committee and mentioned that Principal Secretary, T&CP, Haryana vide its letter dated 13.7.2019 had requested for rescheduling the meeting citing reasons that the addendum to RP 2021 for extended subregions, covering about 64 page agenda notes with 20 agenda points and 400 pages of annexures, was circulated late on 11.7.2019, and needed more time for detailed examination.
2. Members including participants from Delhi, Uttar Pradesh & Rajasthan, however observed that 64 page agenda items covered 20 agenda items out of which 14 items i.e 70% of the items, were for information of Committee only. The agenda item no. 3 covering Addendum to RP 2021 for extended sub regions, contained 2.5 page agenda note with 29 page Addendum as annexure, was only being taken up for consent of the Committee for inviting objections and suggestions, and Haryana can also give its objections/suggestions in 30 days of publishing of related notice. However, the Committee authorized the Chairperson, to discuss the matter related to "Regional Plan 2021 for additional areas as Addendum/Modifications to Regional Plan 2021" with Govt. of Haryana and take decision, accordingly. Thereafter, Members decided to continue the meeting and the Agenda Items were taken up for discussion. List of participants is at **Annexure-I**.
3. Accordingly, meeting was held in NCRPB on 18.07.19 by Chairperson wherein Sh. A.K Singh, Principal Secretary, T&CTD, Haryana and Sh. V.K Goel, CCP, Haryana, participated. The discussions and decisions taken in the meeting have also been accordingly reflected hereafter.

AGENDA ITEM NO.1: CONFIRMATION OF THE MINUTES OF THE 66th MEETING OF THE PLANNING COMMITTEE HELD ON 28.04.2016

Planning Committee noted that no comments have been received on the Minutes of its 66th meeting held on 17.11.2017 circulated vide letter No. K-14011/100/2016-NCRPB dated 22.11.2017. *Minutes of the 66th Meeting of the Planning Committee were confirmed.*

AGENDA ITEM NO. 2: REVIEW OF ACTION TAKEN ON THE DECISIONS OF THE 66th MEETING OF THE PLANNING COMMITTEE HELD ON 1.11.2017

1. It was informed that most of the agenda items discussed in the last meeting were being dealt as separate agenda, status of others were noted by the Committee.
2. With regards to the agenda item 3.2 Matter raised by Govt. of U.P. w.r.t. YEIDA, it was noted that during deliberations in the 37th meeting of the Board held on 04.12.2017, Secretary (HUA), suggested that since the current population of YEIDA is falling in the range of a Regional Centre (i.e. 3 lakh to 10 lakh) as per RP-2021, view may be taken w.r.t considering YEIDA as a Regional Centre instead of a Metro Centre. However, Govt. of U.P in its meeting held on 28.09.2018, decided that request for consideration of YEIDA as Metro Centre may be

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sent to NCRPB. It was noted that the above request had been received in NCRPB office on 5.7.19. Subsequently, Another request with status of Jewar Airport has also been received on 12.7.19. It was decided that matter will be examined and will be placed before the Board.

(Action: NCRPB)

3. Regarding Agenda Item on Study on 'Affordability and Accessibility of Housing in NCR', it was noted that as EoIs were received in January 2018, their relevance after more than a year could be an issue and starting afresh would take even more time. Hence, it was agreed that as the matter was much delayed and action regarding Regional Plan preparation of next horizon year, has already been initiated, carrying out such a vast study at this stage, may not provide quick results and the study would further take a lot of time, hence, matter may be closed.

AGENDA ITEM NO. 3: STATUS OF REGIONAL PLAN 2021 FOR NEWLY ADDED AREAS OF NCR

- 1 Planning Committee was apprised that this was the most important agenda for the meeting as, NCRPB had made efforts to put in place the Regional Plan for newly added areas and planned to place it before the next Board meeting for approvals.
- 2 It was apprised that the earlier Board meeting was informed that Regional Plan for newly added districts was getting delayed due to persistent data gaps. However, the plan was required to be in prepared on urgent basis. Hence an addendum covering the newly added seven districts to RP 2021 (enforce) was decided to be prepared based on the manner, the old districts of NCR had been looked into in the Regional Plan 2021, notified in 2005. The document has been prepared and NRSC maps been included for additional districts in the same. The terminology of 'Forest' has been maintained as in case of RP 2021. Further, updation of CMAs have also been covered in the addendum.
- 3 Committee was apprised that the notified RP-2021 provides policies and proposals for whole NCR area, would also be applicable to the additional area of the NCR. As per Section 14(1) of NCRPB Act, 1985 is reproduced below:

"The Board may, subject to the provisions of sub-section (2), make such modifications in the Regional Plan as finally prepared by it, as it may think fit, being modifications which, in its opinion, do not effect important alterations in the character of the Regional Plan and which do not relate to the extent of land-uses or the standards of population density."

- 4 It was informed that as per procedure, the Draft Regional plan which in current case is the Addendum to RP2021, is to be placed before the Planning Committee and along with the recommendations of the Committee, the same is to be placed before the Board for approval to invite objections and suggestions. The time to be given for inviting objection and suggestion, u/s 12 of NCRPB Act, 1985 and Chapter 5 of NCRPB Rules, is 30 days. However, in order to expedite the process, it is proposed that the addendum may be made open for objections and

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suggestions after consideration in the Planning Committee and thereafter addendum incorporating the received 'objections and suggestion' be placed before the Board, in anticipation of post facto concurrence of the Board for inviting 'objections and suggestion'. The Board shall be requested to provide post facto concurrence regarding inviting 'objections and suggestion' on draft Addendum and also for concurrence on the Final Addendum to RP 2021 for publication and notification under Section 13, of NCRPB Act 1985.

During discussions with officers from Govt. of Haryana, it was pointed out by them that as already indicated in footnotes of Proposed Landuse Map of RP 2021, the boundaries of conservation zones are tentative and shall be in accordance with the Sub Regional Plans/ Master/ Development Plans/ Notifications of MoE&F thereof. It was also suggested that Addendum be updated w.r.t maps received from NRSC.

- 5 After deliberations, the Committee agreed that covering the RP 2021 for newly added districts through an addendum shall also help in expediting approvals of the SRPs for the newly added areas and inturn open possibilities for NCRPB to consider and provide financial assistance for areas in the new districts and accordingly decided the following:**

➤ ***Addendum to RP 2021 covering the newly added districts to NCR, is considered and approval for inviting objections and suggestions, in anticipation of post – facto approval of the Board with following additions to addendum:***

Location in Addendum/ Modification	Addition/Correction
2.2	Map 2.2A presents the Physiography and Slope in National Capital Region (including additional areas)
3.2.3	The policies regarding HCZ and Green Buffer provided in para 3.2.3 of Regional Plan-2021 is applicable for additional areas of NCR, provided that these will not be applicable to existing duly approved Development/Master Plans notified before finalization of this Addendum to modification to RP-2021 for additional areas.
As applicable	"Bhiwani" district be replaced as "Bhiwani (including Charkhi Dadri) district" and necessary footnote in Maps
8.4 (a)	Map 8.2 A related text be deleted
14.2 (a)	Notwithstanding anything in above paras, all conservation area boundaries are tentative and subject to verification and detailing by respective State Governments in their Sub-Regional Plans /Development/Master Plans.
Footnote below Table 17.2 (a)	* States to verify.
17.4 A	; Provided however that population densities in the additional areas will conform to the URDPFI Guidelines, 2015 notified by MoHUA as amended from time to time.
17.6	Notwithstanding anything in above paras, all conservation area boundaries are tentative and subject to verification and detailing by respective State Governments in their Sub-Regional Plans /Development/Master Plans.
18.3 A	Map 18.1A shows the Counter Magnet Areas identified to NCR.

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(Action: NCRPB)

AGENDA ITEM NO. 4: STATUS OF SUB-REGIONAL PLAN-2021 FOR HARYANA SUB REGION - NEWLY ADDED AREAS

Committee was informed that the revised draft SRP-2021, observations of NCRPB, and compliance received were again discussed in the Review meeting with Govt. Haryana officers held under chairpersonship of Member Secretary NCRPB on 17.06.2019 in the office of NCR Planning Board wherein the matter was discussed and differences were narrowed down considerably. Govt. of Haryana was to submit the revised Report incorporating the decisions and observations, which was to be considered in the Planning Committee meeting so that same could be placed before the Board. Govt. of Haryana will submit the SRP Haryana will be submitted by 26.07.19.

(Action: Govt. of Haryana)

AGENDA ITEM NO. 5: STATUS OF SUB-REGIONAL PLAN-2021 FOR HARYANA SUB REGION - Draft Sub-Regional Plan-2021 for Haryana Sub-Region: Compliance of directions from PMO

Principal Secretary, T&CP Department, Govt. of Haryana requested that the matter may be discussed in the meeting scheduled for 26 or 29 July 2019, with NCRPB.

(Action: Govt. of Haryana)

AGENDA ITEM NO. 6: STATUS OF SUB-REGIONAL PLAN-2021 FOR DELHI

Representative from GNCT of Delhi informed that DDA has indicated that they will engage an expert to carry out the work of preparation SRP. Committee felt that it would further delay the work. Secretary, UD, Delhi suggested that a meeting can be held in Urban Development Department, Govt. of NCT Delhi to expedite the process.

(Action: DDA / Govt. of NCT of Delhi)

AGENDA ITEM NO. 7: STATUS OF SUB-REGIONAL PLAN-2021 FOR RAJASTHAN & UTTAR PRADESH SUB REGIONS

Rajasthan

- 1 CTP, NCR, Rajasthan informed that the work was underway and they intended to complete the work before 30 August 2019. Committee observed that incase of Rajasthan, there was only one district, it should not take much time. Further as requested by NCR Cell during the meeting via Video Conference, on 10.7.19, 25 days were requested and the work should accordingly be



completed within the requested time. Committee directed that work needs to be completed early as the SRPs are to be placed before the next Board meeting.

Uttar Pradesh

- 2 CCP, NCR Cell, Uttar Pradesh informed that the bid for the works is opening on 20th July 2019 and work was expected to be awarded by the end of July, 2019.

(Action: Govt. of Rajasthan & Uttar Pradesh (respective NCR Cells))

AGENDA ITEM 8: STATUS OF REVIEW OF NCR REGIONAL PLAN-2021

Chairperson shared with the members that under preparations for 2041 Regional Plan, various Study Groups were formed to look into each of the chapters and sectors covered under the RP 2021 and Review Reports of the study Groups were taken up in the related Steering Committee meeting on 4.6.2019, which included representatives from all the NCR participating State Governments. The Review Reports were accepted with suggestions given in the meeting. Accordingly, the Revised/Final Review Reports are placed for information.

Planning Committee noted the status.

AGENDA ITEM 9: POPULATION PROJECTIONS FOR NATIONAL CAPITAL REGION FOR REGIONAL PLAN 2041

1. The Committee was apprised that in continuation of its efforts under preparations for 2041, the work on Population projections for NCR for year 2041, which are key inputs for any plan preparation was assigned to Dr. D.K. Dey, Former Additional Director, Census of India and Professor & Head, Dept. of Statistics, Indira Gandhi National Tribal University, Amarkantak, M.P.
2. The report was shared with the NCR Participating States. A presentation was made by Dr. D.K. Dey before the Committee. Comments received from UP and Rajasthan had been incorporated in the Revised Reports. However, comments from NCR Cell Haryana have not incorporated. Representative from Delhi Government was requested to go through the report for comments if any. However, DDA representative stated that their comments have been addressed in the revised report. Representative from Haryana stated that the comments and the suggestions of Govt. of Haryana for incorporation of the proposed population figures of duly notified Master Plans/Development Plans may be incorporated and based on which further population projection be made for 2041. It was decided that all the NCR Cells will have the option to send the list of notified Master Plans/Development Plans along with perspective year and proposed population for 2021, 2031 and 2041, if available within a week, so that the same can be considered for incorporation in the report.



3. After detailed discussions, Planning Committee considered the draft "Report on Population Projects for NCR for Year 2041" and approved the same. The report as amended above will be placed before the Board for information.

(Action: NCRPB/ NCR Participating States)

AGENDA ITEM 10: DELINEATION STUDY FOR NATIONAL CAPITAL REGION

Planning Committee was apprised that the 4th Meeting of the Committee on Delineation of NCR was held on 15.7.2019 at 10:00 A.M. and noted the following recommendations of the Committee:

- (i) The delineated NCR can be upto 100 km from the centre of Delhi as contiguous areas. In case 25% area or more area falls within 100 km range, entire Tehsil may be considered for inclusion in NCR.
- (ii) In the case of Transport Corridor, minimum 1 km width on either side of NHs, Expressways, railways, RRTS radiating from Delhi upto maximum 200 km or closest large town. In case 25% area of a Tehsil is covered in the Transport Corridor, the entire Tehsil may be considered for inclusion in NCR.
- (iii) In case most of the Tehsils i.e. 75% falls in a district, whole districts may be considered for inclusion.
- (iv) In case majority of the Tehsils (i.e. 75%) of a district falls within a notified controlled/development areas/regulatory areas of a town, the entire district may be considered for inclusion while 25% of area of a Tehsil falls within notified controlled/development areas/regulatory areas of town, entire tehsil may be considered for inclusion in NCR.
- (v) Parameters such as contiguity, proximity to CNCR, population density and rate of urbanization etc. may be considered for delineation.
- (vi) Dr. D.S. Meshram, Former Chief Planner, TCPO & Expert Member and Prof. Mahabir, SPA, Expert Member, based on above mentioned parameters will delineate the NCR and prepare a Report with the resulting delineated area and submit the same within two weeks. The Experts may take necessary assistance from the Chief Town Planner/ Chief Coordinator Planner of NCR participating States. The delineation report will be placed before the Board for consideration.

Planning Committee agreed with the above and recommended that the Report with the resulting delineated area may be placed before the Board for consideration.

(Action: NCRPB and NCR participating States)



AGENDA ITEM NO. 11: DRAFT REVISED REGIONAL PLAN-2021: COMPLIANCE OF DIRECTIONS FROM PMO

Planning Committee noted the status given in the agenda.

AGENDA ITEM NO. 12: OPERATIONAL EFFECTIVENESS OF NCR PLANNING & MONITORING CELLS IN NCR PARTICIPATING STATES & NCT DELHI.

Committee was apprised that Board in its 37th meeting held on 04.12.2017 while approving the continuation of NCR Planning & Monitoring (NCR P&M) Cells for further period from 01.04.2017 to 31.03.2021, Member Secretary, NCRPB has been authorized to work out Action Plan for the Cells from time to time, as per requirement including sanction of posts and take any administrative/financial decision for smooth functioning of the NCR P&M Cells.

2. Committee was apprised that a proposal has been prepared considering the technological advancements and current requirements of the NCR P&M Cells which includes re-designation of some of the sanctioned posts such as Knowledge Professional, GIS Expert, Multi-Purpose Informatics Assistant and Multi-Tasking Staff with qualifications. The proposal was deliberated by the Planning Committee and it was agreed that the posts of Assistant Architect, Planning Assistant, Town Planning Assistant and Planning Draftsman may also be converted as GIS Expert. In the case of qualification of Knowledge Professional it was agreed that proposed qualification be supplemented with preference to Law Graduate. For the post of GIS Expert it was agreed to add additional qualification of Bachelor of Planning or Diploma in Architecture or Diploma in Civil Engineering.

3. With regard to Para 12.6 (C) of agenda be read as “All vacant posts may be filled up through **outsourcing/service provider** except the posts of Commissioner, Chief Town Planner, Associate/District Town Planner.”

4. In case the current filled posts proposed for conversion, fall vacant and are not filled by promotion/deputation within 15 days, the same will be filled up through outsourcing/service provider.

5. Number of post proposed for conversion for ‘Driver’ be read as ‘Nil’ for NCR Planning & Monitoring Cell, Uttar Pradesh.



6. Committee approved the proposal at Para 12.6 of the Agenda note with the modifications mentioned in Para 2 to 5 above.

(Action: NCRPB and NCR participating States)

AGENDA ITEM NO. 13: DELINEATION AND GROUND TRUTHING OF NATURAL CONSERVATION ZONE (NCZ) AND NOTICES ISSUED UNDER SECTION 29(2) OF NCRPB ACT, 1985 REGARDING NCZ

1 Chairperson requested all the NCR Participating States to update the Committee about the status of delineation of NCZ on which following were the submissions:

- i. **NCT-Delhi/DDA:** Director (Planning), DDA apprised the Committee that the DDA has done a desktop exercise in the matter. Subsequently a report has been prepared and submitted to GNCT-Delhi. Chairperson suggested that the matter be covered during the meeting proposed by Secretary, UD, for SRP issue as they are related

(Action: GNCT of Delhi & DDA)

- ii. **Rajasthan:** CTP, NCR Cell, Rajasthan apprised the Committee that as mentioned in the DO letter dtd. 29.04.19, from their Chief Secretary to MoEF&CC, GoI, checking was carried out and no shrinkage in NCZ areas was found and variations seemed largely due to interpretation of satellite images, so State is of the view that carrying out the task of ground truthing at this stage does not appear to be required.

(Action: Govt. of Rajasthan)

- iii. **Uttar Pradesh:** Additional Commissioner, NCR Cell, UP apprised the Committee that Govt. of UP had done the delineation of NCZ earlier and incorporated in the SRP which has been published in 2013. He also mentioned that there is no Aravali in UP Sub-region. However, factual analysis & report prepared after ground truthing based on NCRPB provided NRSC maps of 2005 and 2012 has been prepared and submitted to State Government.

- iv. **Haryana:** While there was no representation from Haryana, Shri. J N Barman, Ex-Director (Tech), Consultant informed that the Reports had been received in NCRPB office on the same day (15.7.2019) and will be examined, expeditiously. During the discussions thereafter with officers from Haryana on 18.07.19, it was agreed that the matter will be discussed in detail with the Haryana officials on 26.07.19 and in any case not later than 29.07.19.

AGENDA ITEM NO.14: POPULATION DENSITY OF MASTER PLANS/ DEVELOPMENT PLANS & DENSITY NORMS OF RP-2021 AND NOTICES ISSUED UNDER SECTION 29(2) OF NCRPB ACT, 1985 IN THE MATTER

The matter was deferred.

AGENDA ITEM NO.15: MATTER RELATED TO COUNTER MAGNET AREAS OF NATIONAL CAPITAL REGION



1 Committee was apprised of the status of the various CMA s of NCR. States were requested to prepare Development Plan/ Master Plan and Plan of Action for its implementation in the identified CMAs.

2 Chief Administrator, Patiala gave a presentation requesting addition of Rajpura to Patiala and considering the whole area as Counter Magnet Area of NCR, as the whole area has a great development potential to capture any population movement from the direction towards NCR. It was informed that Rajpura had a number of industries and as per notified Master Plan of Rajpura 2100 acres of area has been ear marked for industrial growth. The grain market of Rajpura is the second largest grain market of Asia after Khanna, it has about 150 acres of area and comprises more than 290 shops. Further, Rajpura is located between Patiala and Ambala both of which are CMAs , hence Rajpura is a good case. Rajpura is at the junction of NH 44 (GT Road) and NH 7. This area is also considered as the gateway to Punjab. It was informed that Rajpura also falls on Eastern Dedicated Freight Corridor, Amritsar Delhi Kolkata Industrial Corridor, Rajpura also comes under GMADA and for ease state government intends to bring it under Patiala Development Authority.

3 *After brief deliberations, the matter was proposed to be recommended to the Board for consideration for inclusion CMA.*

(Action: NCRPB)

AGENDA ITEM NO. 16: ACTION TAKEN BY NCRPB ON DIRECTIONS OF HON'BLE HIGH COURT OF DELHI IN MATTER OF RAGHURAJ SINGH VS. UNION OF INDIA & ORS. [WP (C) 5559 OF 2013]

And

AGENDA ITEM NO. 17: ACTION TAKEN ON THE DIRECTIONS OF THE HON'BLE HIGH COURT OF ALLAHABAD IN THE MATTER OF RAGHURAJ SINGH VS. STATE OF U.P. & 10 ORS. (CIVIL MISC. PIL. NO.-29004 OF 2016)

1 Chairperson requested all the NCR Participating States needs to submit status in the matter of both the contempt petitions pending before the Hon'ble High Courts of Delhi and Allahabad.

2 Additional Commissioner, NCR Cell, UP apprised that the Chairperson that NCRPB is no more a party in the contempt petitions. There is no matter pending against NCRPB and the matter is now only against the State Government of Uttar Pradesh. Even in case of UP the matter had been heard and reserved for judgement.

3 Chairperson directed Dir (A&F) & DD (GIS) to look into the matter. Incase NCRPB is not a party, then NCRPB should not pursue the matter. However, NCR Cell, UP was requested for written update in the matter.

(Action: NCRPB / NCR Cell, Uttar Pradesh)



AGENDA ITEM NO.18 : DRAFT FUNCTIONAL PLAN ON “MICRO AND HOUSEHOLD ENTERPRISES IN NCR”

1 The Committee was apprised that Draft Functional Plan on “Micro and Household Enterprises in NCR” was prepared and circulated to States While MSME Development Institute, Okhla vide letter had intimated that they support the draft and have no specific comments to offer on it.

2 Inputs/ observations from NIESBUD (related to awareness; training; establishment of livelihood business incubators; mentoring & post training support; and marketing services), were received and incorporated. Inputs from Govt. of Rajasthan, Uttar Pradesh were received and incorporated. Govts. of NCT Delhi and Haryana had no inputs/ observations/ comments. Sh. JN Barman, Ex. Director (Tech) /Consultant (Planning), NCRPB gave a short presentation on the recommendations of the draft functional plan.

3 Committee noted that as per decision of 35th Board meeting, held on 9.06.15, the power to to finalise and approve the Functional Plans, has been delegated to Member Secretary, NCRPB. Committee Members further deliberated on the recommendations and the after the Functional Plan was approved subject to following suggestions:

- Sub region specific recommendations appear to be repetition of recommendations for clusters in general and can be avoided/ deleted
- Provision of exemption from collateral security in Mudra loans from Banks may be added and its Implementation has to be enforced
- The proposed structure may be left to the states, concept can kept as suggestive. DIC and its officers may be used to mobilise the Clusters
- Mill Gate Supply Scheme recommendation may be reworded as the cost proposed to be waived needs to be subsidized. Hence, it may be replaced with existing schemes. A scheme to get subsidized yarn is there and in case it is applicable in NCR, it can be mentioned
- Wood cluster may be omitted
- Recommendation on diagnostic study for Sports Goods Cluster wise, may be avoided/deleted
- Must include Agro based processing and food processing MSMEs, even if they are not identified as clusters.

Planning Committee approved the Draft Functional Plan for Micro & Household Enterprises in NCR modified as per the suggestions given above.

(Action: NCRPB)

AGENDA ITEM NO.19: STATUS OF FINANCING OF PROJECTS BY NCR PLANNING BOARD



Planning Committee noted the status and requested the participants to expedite submission of the new projects and Utilisation certificates for the reported expenditures for the ongoing projects.

(Action: NCR participating States)

AGENDA ITEM NO. 20: STATUS OF RECIPROCAL COMMON TRANSPORT AGREEMENT

1 The Committee was apprised about the status of two RCTA agreements i.e Contract Carriage and Stage Carriage signed amongst the NCR participation States. It was informed that while the RCTA on Contract Carriage was signed in October 2008, as the validity was upto 10 years, the same stands extended after decision of meeting of Commissioner of Transport Secretaries/Commissions, (CoTs) and is currently valid till October 2019. Participants were requested to communicate to their Transport Commissioners that a meeting shall be held on the matter soon. Chairperson suggested that a meeting needs to be called for the same in August / September 2019 and directed the concerned officer to take necessary action.

2 The RCTA agreement on Stage Carriage, was signed on 22.04.2010 and further decision on extension / amendment will be required till 22.04.2020.

3 ***Planning Committee noted the status and suggested that action may be initiated in time for the same as well.***

(Action: NCRPB and NCR participating States)

AGENDA ITEM NO. 21: ANY OTHER ITEM WITH THE PERMISSION OF CHAIR

SUPPLEMENTARY AGENDA ITEM NO. 1: ACTION TAKEN W.R.T WORKS REGARDING REGIONAL PLAN 2041 PREPARATION

1. The Committee was briefed about the various initiative being taken by the Board towards action on preparations of RP 2041. It was informed that apart from RP 2021 work and population projection for 2041, which was already discussed, States should expedite the submission of Data on the circulated formats as was also requested during Video Conferencing helps on 10.7.2019. States appreciated the efforts and requested to continue the meetings via Video Conferencing and it also helped them to coordinate at DC level within the States.

2. It was informed that development concepts (e.g. *Transit Oriented Development (TOD), Compact Development, Green Building/Development, Smart Cities, etc.*), technologies (e.g. *Digital mapping/Planning, On-line monitoring of the land & development using Regional/City Observatories, etc.*) and policy interventions (e.g. *Affordable Housing, Transferable Development Rights (TDR), etc.*) are [proposed to be looked into while preparing the Regional Plan for the perspective year 2041 for NCR, which is one of the most urbanized and fast growing region in the country. For the better understanding and hands on experience of such new/innovative planning &



development concepts, technologies and policy interventions, the best practices at local and global level could be studied thoroughly, so that Regional Plan-2041 for NCR can address all the future issues/challenges smartly/innovatively. Series of brainstorming sessions, seminars, workshops, etc. are also proposed to be undertaken which may cover stakeholders, developers, etc. States should also make necessary efforts to assist the Board in this direction.

(Action: NCRPB and NCR participating States)

SUPPLEMENTARY AGENDA ITEM NO.2: DECISIONS TAKEN IN EMPOWERED COMMITTEE AND BOARD MEETINGS REQUIRED TO BE CARRIED FORWARD

2.1 The Committee was briefed about the decision of the 3rd Empowered Committee of the Board, held on 25.2.2009, chaired by Secretary, UD, GoI, regarding water management, sanitation and development of Tourism.

(i) With respect to **Water Management**, the Empowered Committee had suggested that NCR Constituent states

- would implement policies of rainwater harvest and would consider changes in building byelaws or new legislation.
- Action Plan for Ground Water recharge may be prepared for rural as well as urban areas in NCR states.
- Scheme for check dam construction and deepening of village ponds and lakes could be taken up.
- States should make Integrated Water Management Plans covering aspects of recycling of waste water, conserve water, reduce losses and promoting and launching public education campaigns.

(ii) With respect to **Sanitation**, the Empowered Committee had suggested the following for all NCR towns:

- Preparation of Sanitation Development plans including SWM Plans by concerned States
- DPRs be prepared for sewerage system, STPs, SWM and Drainage schemes by concerned States
- For financial assistance for above, NCRPB or other agency as felt appropriate, be approached with DRP by the States

(iii) With regards to **Tourism within NCR**, following was decided:

- Functional Plan for Tourism be prepared through consultant with active participation of Ministry of Tourism, ASI and NCR States.
- Ministry of Tourism to create a forum consisting of Secretaries of Tourism, Depot. Of NCR states, ASI representative for identification and selection of Tourism circuits in NCR and preparation of Conservation and Development Plan including Investment Plan which could be implemented by the States.



- Committee be constituted in the NCRPB with Secretary / Commissioners of Tourism Department of NCR States and representative of Ministry of Tourism, ASI (Centre & State both), etc. to discuss and resolve issues related to tourism sector in NCR, on the pattern of Committee of Transport Secretaries/Commissioners.

2.2 Further in the 32nd meeting of the Board held on 20.03.12 Hon. UDM, it was suggested that neighbouring states should develop hospitals in Government and private sector because Delhi hospitals are received about 40% patients from neighbouring States.

Discussions:

Chairperson requested for cooperation from the NCR participating States in this direction. Committee agreed that NCR States should not only have the requisite plans prepared but should also be clear regarding implementation the same. Chairperson indicated that the States as well as TCPO would need to actively participate and supplement the efforts of NCRPB in the direction of carrying forward decisions made in the Empowered Committee and Board Meeting.

Committee noted the information and agreed that work on the said aspects needs to be taken forward by NCRPB.

(Action: NCRPB and NCR participating States)

The meeting ended with a vote of thanks to the Chair.



ANNEXURE-I

List of the participants of the 67th Meeting of the Planning Committee held on 15.07.19

	Chairperson
1.	Member Secretary, NCR Planning Board.
	Members
2.	Ms. Manisha Saxena, Secretary , Urban Development, GNCT of Delhi
3.	Shri Rajesh Prakash, Addl. Commissioner, NCR Monitoring & Planning Cell, representing Principal Secretary, Housing & Urban Planning Department, Govt. of UP
4.	Ms. Indira Choudhary, CTP (NCR), Govt. of Rajasthan, representing Additional Chief Secretary of Urban Development & Housing, Govt. of Rajasthan
5.	Shri S. Surendra, Addl. Chief Planner, TCPO
6.	Dr. K. Srirangan, Addl. Commissioner (Plg.), Delhi Development Authority, Delhi.- <i>representing VC, DDA</i>
	Co-opted Members
7.	Shri K.K.Chauhan, Regional Chief (NCR), HUDCO, representing CMD, HUDCO
	CMA
8.	Ms. Saurabh Malik CA, Patiala Dev. Authority Punjab Counter Magnet, Patiala
	Others
	GNCT Delhi
9.	Suresh Bhandari, Special Secretary, UD,
10.	Shri Sri Ram Assistant Director, PWD,
11.	Shri Shan E Alam, DD Planning Department,
	DDA
12.	Ms. Alka Arya Dir (Planning) MPMR/NCR DDA
	HUDCO
13.	Ms. Namika Negi GM (C&P), HUDCO
	Government of Uttar Pradesh
14.	Shri S. C. Gaur, Chief Coordinator Planner, NCR Cell UP Ghaziabad.
	Government of Rajasthan
15.	Shri Vijay Meena, ATP, CTP NCR Office, Jaipur, Rajasthan
	CMA Patiala
16.	Ms. Saurabh Malik CA, Patiala Dev. Authority Punjab Counter Magnet, Patiala
17.	Ms. Mandeep Kaur, Sr. Town Planner, Patiala
	NCRPB
18.	Shri Jagdish Parwani, Director (A&F)

19.	Shri J.N. Barman, Ex- Director (Tech) & Consultant (Planning)
20.	Shri P.K. Jain, FAO
21.	Shri Abhijeet Samanta, Dy. Director (Tech.)
22.	Shri Nabil Jafri, Dy. Director (GIS)
23.	Shri Ramesh Dev, Dy. Director (Tech.)
24.	Ms. Nilima Majhi, Asstt. Director (Tech.)
25.	Shri Satyabir Singh, Asstt. Director (Tech.)
26.	Dr. Himadri Shekhar Dey, Consultant Planning)

