

National Capital Region Planning Board
(Planning Committee)

10th Meeting
7 July 1987

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Agenda & Minutes



Cat-902
Acc-1017
MC (10) 1987

राष्ट्रीय राजधानी क्षेत्र योजना बोर्ड
NATIONAL CAPITAL REGION
PLANNING BOARD
7th Floor, 'B' Wing,
I.O.C. Building, Janpath,
सहरी विकास मंत्रालय
(Ministry of Urban Development)

नई दिल्ली, तारीख

Dated, New Delhi, the 1st July, 1987

NO. K-14011/2/87-NCRPB.

Subject: 10th Meeting of the Planning Committee
of the NCR Planning Board being held at
11.00 A.M. on 7th July, 1987.

....

Kindly refer to the Meeting Notice of even number dated 17th June, 1987 regarding 10th Meeting of the NCR Planning Committee. The Agenda papers for the meeting are enclosed. Kindly make it convenient to attend the meeting.

2. As the recommendations relating to various aspects of the Draft Regional Plan will be discussed at this Meeting, your personal participation in the meeting is very necessary and will be appreciated.

(B.N. Singh)
Chief Regional Planner
&
Member-Convenor

Shri P. Jayapal,
Asstt. Town Planner,
NCR Planning Board.

AGENDA ITEMS FOR THE 10TH MEETING OF THE
PLANNING COMMITTEE TO BE HELD AT 11 A.M.
ON 7TH JULY, 1987 IN THE OFFICE OF
NATIONAL CAPITAL REGION PLANNING BOARD

- Item No.1 Confirmation of the Minutes of the last Meeting held on 8.6.1987.
- Item No.2 Review of the action taken on the Agenda items of the 9th Meeting of the Planning Committee.
- Item No.3 Policies for Development of Economic Activities - The Role of Informal Sector.
- Item No.4 Policies for Development of Economic activities in the National Capital Region
- Item No.5 Fiscal measures to be incorporated in the Draft National Capital Region Plan.
- Item No.6 Settlement System - 2001.
- Item No.7 Policies and Proposals for provision of Water Supply and Sanitation facilities.
- Item No.8 Strategy for Development of Education and Health facilities in the National Capital Region.
- Item No.9 Traffic and Transport Plan for N.C.R.
- Item No.10 Strategies and priority areas for development
- Item No.11 Counter-Magnet Areas
- Item No.12 Policies and Proposals on Environment and Ecology.
- Item No.13 Any other item with the permission of the Chair.

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AGENDA ITEM NO. 1

CONFIRMATION OF THE MINUTES
OF THE LAST MEETING HELD ON
8.6.1987.

The 9th Meeting of the Planning Committee was held on 8.6.1987 and the minutes of the meeting were circulated on 15.6.1987 (copy enclosed for ready reference). The Planning Committee may kindly confirm the minutes.

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MINUTES OF THE 9TH MEETING OF THE PLANNING
COMMITTEE OF THE NCR PLANNING BOARD HELD AT
11 A.M. ON 8TH JUNE, 1987 IN THE OFFICE OF
THE N.C.R. PLANNING BOARD, NEW DELHI.

The following members were present :

Members Of Planning Committee :

1. Shri K.K. Bhatnagar, Member Secretary, NCR Planning Board - Chairman.
2. Shri R.L. Pardeep, Jt. Secretary (UD), Ministry of Urban Development.
3. Shri A.P. Singh, Secretary (Urban Development), Govt. of Uttar Pradesh, Lucknow.
4. Shri R.N. Parashar, Chief Administrator, HUDA, Chandigarh.
5. Shri Ganga Das, Secretary (L&B), Delhi Administration.
6. Shri N.S. Johri, Chief Town Planner, Govt. of Uttar Pradesh, Lucknow.
7. Shri G.T. Narayan, Dy. Director General (TP), Deptt. of Telecommunications, New Delhi.
8. Shri V.K. Sood, Director (Power), Deptt. of Power, Ministry of Energy, New Delhi.
9. Shri D.P. Gupta, Chief Engineer, Min. of Surface Transport, New Delhi.
10. Shri B.N. Singh, Chief Regional Planner, NCR Planning Board - Member Convenor.

Other Participants :

1. Shri K.T. Gurumukhi, Town & Country Planner, TCPD, New Delhi.
2. Shri R.K. Sharma, Sr. Town Planner, Govt. of Rajasthan, Jaipur.
3. Shri N. Sankara Raman, Suptdg. Engineer (Roads), Min. of Surface Transport, New Delhi.
4. Shri S.M. Mittal, Exe. Director (MTP), Ministry of Railways, New Delhi.
5. Shri A.K. Garg, Distt. Town Planner (IUDP), Haryana.

6. Shri R.C. Malhotra, Director (IPS), Deptt. of Telecommunications, New Delhi.
7. Dr. R.A. Chansarkar, Director, DTRL, Min. of Defence, New Delhi.
8. Shri R.S. Bhatia, Asstt. Engineer (MTP), Min. of Railways, New Delhi.

Officers Of The Board :

1. Shri S. Arunachalam, Sr. Planning Engineer, NCR Planning Board.
2. Shri R.P. Rastogi, Associate Planner, NCR Planning Board.
3. Shri V.K. Thakore, S.R.O., NCR Planning Board.
4. Smt. V.R. Sundaram, Dy. Director, NCR Planning Board.
5. Shri K.L. Sachar, FAO, NCR Planning Board.
6. Shri P. Jayapal, Asstt. Town Planner, NCR Planning Board.
7. Shri J.N. Barman, Asstt. Town Planner, NCR Planning Board.
8. Shri Madhu Babu, Asstt. Town Planner, NCR Planning Board.

AGENDA ITEM NO. 1

CONFIRMATION OF THE MINUTES OF THE LAST MEETING
OF THE PLANNING COMMITTEE HELD ON 28.1.87.

The minutes of the meeting held on 28.1.1987 were confirmed after considering the suggestions for an amendment made on behalf of the D.D.A. under Agenda Item No.5.

Location Policy For Industry : Shri J.C. Gambhir, Director (Planning), Delhi Development Authority, who could not attend the meeting, had sent, through his representative, modification in the Draft Minutes of Agenda Item

No. 5 under the heading 'Location Policy For Industry' as under :

The following from "he narrated".....this policy" is to be replaced by - "He suggested that the above policy is not practical specially the idea that all industrial applications to be referred to a sub-group to be constituted by the Board".

The above was considered by the Committee and it was felt that the minutes of the meeting truly reflected the deliberations as made in the meeting. However, the committee felt that if the DDA wanted to raise additional issues, the same could be brought for consideration in the next meeting of the Committee.

The Chairman reviewed the progress of the various items included for action in the minutes of the last meeting and briefed the committee on the progress of various surveys and studies that have been undertaken. Action taken on other items are as follows :

1. Presentation of Interim Development Plan To The Prime Minister

The Chairman stated that presentation of the IDP was now scheduled to be made on the 26th June, 1987. Shri G.T. Narayan, Deptt. of Telecommunications requested that the Planning Committee should also have an opportunity of viewing the audio visual presentation made to the Prime Minister. Chairman agreed with the proposal and it was decided to have the AV presentation in the next meeting of the Planning Committee.

2. Surveys and Studies Taken-up By The Board In Connection With The Preparation Of The Regional Plan-2001.

The Committee noted the position given in Agenda note for Item No. 2.

The Committee also noted the progress on the following :

- a) Purchase of a Micro-Computer - A micro-computer was likely to be made available by UNDP through the Ministry of Urban Development.
- b) Documentary Film on the NCR Plan - Preparation of a documentary film on Draft NCR Plan will be taken up after the Draft Plan is approved by the Board.
- c) Printing of IDP and the Draft Regional Plan - The Interim Development Plan had since been printed and the Draft Regional Plan will be printed after the approval by the Board.

3. Action Plan To Implement The Proposals Contained In The I.D.P. Approved By The Board.

- a) Population Policies - The Chairman requested the representatives of the State Governments to finalise the Master Plan for towns identified for priority development and also take immediate steps for creation of Planning Cell for each Sub-region.
- b) Potential Surveys of the Priority Towns - Shri B.N. Singh informed that data relating to towns falling in U.P. Sub-region have already been

received. The Chief Administrator, HUDA assured that the data in respect of Haryana towns will be made available within 2 weeks. Shri Sharma, Sr. Town Planner, Town & Country Planning Department, Rajasthan, informed that the data relating to Rajasthan Sub-region for the remaining towns will be made available in a week's time.

4. Consideration Of The Conceptual Plan For Delhi-2001.

The Chairman informed the Committee that the views of the NCR Planning Board as approved in the meeting held on 17th February, 1987 had been intimated to the Ministry of Urban Development.

5. Criteria For Selection Of Counter Magnet Areas

The Chairman informed the Committee that the study on Selection of Counter-magnet Areas has been assigned to the School of Planning & Architecture. They have already commenced the study on May 15, 1987. An Interim Report is expected by 30th June, 1987 and the findings would be incorporated in the Draft Regional Plan.

6. Suggestions of Lt. Governor of Delhi regarding restriction on further growth of Delhi and to bring about the dispersal of population in the National Capital Region :

The Chairman stated that the suggestion of the Lt. Governor, Delhi have already been referred to the State Governments for their comments. No comments have been received from any State Government so far. Shri Pardeep stated that the State Government's views must be made available now as the preparation of the Draft Regional Plan for the NCR and also Delhi Master Plan was going to be finalised very soon and, therefore, the State Government should not lose this opportunity of making their views/comments available to the NCR Planning Board.

7. Examination of the Suggestions to levy cess to cover the development cost of telecommunication facilities while deciding the sale price of developed plots :

No further action was called for.

8. Co-option of Membership :

No further action was called for.

9. Institutional Arrangements for implementing the NCR Plan :

The Chairman stated that this item is being considered separately as one of the Agenda items in this meeting.

AGENDA ITEM NO. 2
PREPARATION OF DRAFT REGIONAL PLAN FOR NCR

Initiating the discussions, the Member-Secretary gave a brief resume of the action taken for the preparation

of the Draft Regional Plan and also various studies undertaken through professional Consultants. He also stated that a number of Study Groups had been constituted on various aspects of the Plan and several meetings had taken place and it was expected that the Draft Regional Plan would be ready by the second week of July, 1987. In view of the studies undertaken and also deliberations of the various Study Groups, some of the new policies which need deliberation of the Planning Committee for incorporation in the Plan would be discussed in this meeting and also in subsequent meetings. Shri Johri, Chief Town & Country Planner, Uttar Pradesh, wanted to know whether all the studies would be completed before finalising the Draft Regional Plan. Shri B.N. Singh gave the status of the various studies and stated that in all cases, an interim report/final report would be available to the Office of the Board before finalisation of the Draft Regional Plan. Shri R.N. Parashar, Chief Administrator, HUDA, pointed out that the main basis for the Draft Regional Plan being the IDP, which stands approved by the Board, it would come in the way of incorporating the views of the Haryana Government in permitting large and medium scale industries in the Delhi Metropolitan area towns. He specifically pointed out the case of Faridabad and stated if the policy of not allowing large and medium scale industries were adhered to, there would be un-surmountable difficulties in the development of Faridabad which has already come up as a major industrial centre in the State. He also added that the same difficulties would be felt in Kundli, Bahadurgarh and Gurgaon. Shri Johri stated that the Planning Committee in its various deliberations had consciously made recommendations of not allowing medium and large scale industries in DMA towns as this would result in a still greater growth of Delhi and its adjoining area creating serious difficulties. Thus, with a view to curb the growth of Delhi and DMA, the IDP

contains recommendations of not allowing medium and large scale industries and he was of the view that no change was needed in the above policy.

AGENDA ITEM NO. 3

DEMOGRAPHIC PROFILE : NCR - POPULATION
ASSIGNMENT FOR SUB-REGIONS AND PRIORITY
TOWNS

The Chairman stated that there appeared to be a need for having a re-look at the population assignment made in the IDP for the priority towns for the year 2001.

Shri Parashar recommended to retain the population assignment for Pootok as 5 lakhs against the revised proposed population assignment of 4 lakhs; for Palwal as 3 lakhs against the proposed revised population assignment of 2 lakhs and for Rewari as 1.10 lakhs against 1.00 lakh since these towns have immense potentialities and thus measures could be initiated for their induced development. Shri Sharma of Rajasthan stated that the population assignment of Alwar originally envisaged as 5 lakhs might be retained while he pleaded for higher assignment of population for Bhiwadi, which was coming up as a vast industrial township. Shri Johri of Uttar Pradesh agreed with the revised population assignment for Meerut, Hapur, Bulandshahr and Khurja. The representative of Rajasthan Government also pleaded for inclusion of 2 more towns, namely, Behror and Shahjahnpur as priority towns.

Shri Pardeep wanted to know whether the population assignment made for Delhi and DMA were also being revised. The Chairman clarified that the changes proposed

were only in respect of the priority towns and not for Delhi UT and DMA towns and added that this has become necessary in view of additional data having become available indicating the growth potential of the priority towns. Shri A.P.Singh, Secretary, U.P. said that the number of priority towns were short-listed in many deliberations of the meeting of the Planning Committee and it would not be feasible to include more towns as priority towns in view of the resource crunch and the need for developing a few towns intensively to achieve the objectives of NCR Plan. Shri B.N. Singh stated that the Draft Regional Plan would only identify regional centres while there would be 3 more hierarchy of settlements to be identified by the respective State Govts. while preparing the Sub-regional Plans after the approval of the regional plan for the NCR. After long discussion, the following population assignments were approved for the priority towns:

Priority Towns	Revised Population Assignment - 2001	Addl. Assigned population against projected population.
Meerut	15.50 lakhs	5.22 lakhs
Hapur	4.50 lakhs	2.47 lakhs
Bulandshahr	5.00 lakhs	2.65 lakhs
Khurja	3.00 lakhs	1.79 lakhs
Sub-Total Uttar Pradesh	28.00 lakhs	12.13 lakhs
Panipat	5.00 lakhs	2.14 lakhs
Rohtak	5.00 lakhs	2.03 lakhs
Palwal	3.00 lakhs	2.37 lakhs
Rewari	1.10 lakhs	0.33 lakhs
Dharuhera	0.75 lakhs	0.75 lakhs
Sub-Total Haryana	14.85 lakhs	7.62 lakhs
Bhiwadi	1.15 lakhs	1.15 lakhs
Alwar	5.00 lakhs	2.15 lakhs
Sub-Total Rajasthan	6.15 lakhs	3.30 lakhs
TOTAL	49.00 lakhs	23.05 lakhs

AGENDA ITEM NO. 4

ECONOMIC PROFILE OF NCR - EMPLOYMENT STRUCTURE

Shri B.N. Singh explained the proposals contained in the Agenda item. He stated that in view of the need for developing the priority towns for induced development, it was essential to have a broad idea not only of the magnitude of population but also about the employment that need to be generated for the balanced development of the NCR. With the approval of the strategy for developing a few urban centres beyond DMA, the composition of the working force in various activities in the identified priority towns need to be approved. This would enable the respective State Governments to initiate the development process with associated physical development and also fiscal incentives for creation of greater employment opportunities and also to attract entrepreneurs to set up industries, business and trade and commerce in such priority towns as an alternative to Delhi and DMA towns. After due deliberations, the Committee was of the view that the sectoral structure of the working population for the various priority towns shown in the agenda appeared to be in conformity with the objectives of the NCR Plan. The State Governments were, however, requested to consult their respective Industry Department and make their recommendations available to the NCR Planning Board in the next 2 weeks, so that the future "Economic Profile for the NCR" could be finalised and incorporated in the Draft Regional Plan.

AGENDA ITEM NO. 5

REGIONAL LAND USE

The Chairman stated that the existing landuse pattern of the NCR has been analysed on the basis of

landsat imageries, aerial photographs and Survey of India topo sheets. He particularly mentioned that the Board had been greatly benefitted by the collaboration with the Director, DTRL - Dr. R.A. Chansarkar in computing and analysing the landuse data. Dr. Chansarkar briefly explained the technique adopted for analysing the data and stated that the landsat imageries could be used as a reliable and effective tool for monitoring the landuse changes on a temporal level. He added that five years would be a good period for such monitoring that would clearly reflect the landuse changes taking place in the NCR. Based on the analysis made by the DTRL, the land utilisation in the NCR and its Sub-regions were presented to the meeting by Shri B.N. Singh. The forest cover as per landsat imagery was only 1.15%, which was very low against the national forest policy of the Government of India. The analysis has suggested bringing the barren land and culturable waste land under forest cover thus raising the area under forest from 1.15% to about 7.5%. It was felt that a minimum of 10% forest cover by the year 2001 would be a reasonable goal to be achieved. Social forestry may have to be pursued as one of the measures in achieving this objective.

Shri B.N. Singh explained the existing landuse plan and also proposed landuse plan 2001 which contained proposals for land for agriculture, forest, urban development and green belt/green wedge and green areas along the major transport routes. The Committee felt that in view of the employment opportunities to be created in non-agricultural sector, the conversion of existing agricultural land for non-agricultural uses was inevitable but measures must be devised to maximise the utilisation of available land and also use of barren land and culturable waste for urban expansion.

Land For Forest : The Committee felt that the proposals to increase the forest cover by identifying culturable waste, rocky area; planting suitable species

in sparsely forested zones, identifying alternate sources of energy for fuel, and conserving existing forests seemed to be adequate and rational. The policy measures suggested in the paper should also include areas for scenic and historic value and places of cultural heritage.

Land For Urban Development : The suggestion of working out land required for urban development based on the 4 different density norms for various types of settlements was considered. Shri Pardeep was of the view that the Draft Regional Plan should prescribe certain optimum density to be achieved rather than disaggregating them on different density patterns for various sizes of settlements. Shri Parashar suggested that in order to achieve an optimum density, group housing might be resorted to on land belonging to governmental agencies. After discussions, it was agreed that efforts should be made to achieve gross density of 80 to 125 persons per hectare in all the NCR towns.

It was also felt that the controlled area or regulated areas for DMA towns should be the same as identified in its areal boundary. This would require extending the controlled area concept in respect of some of the towns by the concerned State Governments.

Shri G.T. Narayan stated that there was a need for coordinated action for laying of underground infrastructure facilities like laying cables for power and Telephone and also other services like water supply & Sewerage. He suggested drawing up guidelines by the Board in this regard.

Green Belt/Green Wedge and Green Areas along the major Transport Routes : The concept of the green belt/green wedge as contained in the agenda paper was approved. As regards green areas along the major transport routes, it was felt that the width of 1 km. on either side of the highway would be difficult to be achieved. It was decided

that the width of the green areas along the National Highways may be 300m. and that along the State Highways 200m. Shri. Parashar stated that the Government of Haryana was already enforcing a green belt of 30m. width on either side along the National Highways by acquiring such land and including the cost of the same in the development of the adjoining towns.

The other policy proposals regarding regional landuses as indicated in the agenda note were also approved.

AGENDA ITEM NO. 6

POWER DEVELOPMENT - NORMS AND PROPOSALS

The Chairman stated that the Study Group on Power had recommended setting up of the NCR Electricity Authority with a view to meet the requirement of power for the NCR. However, the Region is under the Electricity Boards of the State Government. He requested the representatives of the State Governments to obtain the views of the State Governments on the proposal to set up a unified NCR Electricity Authority and communicate the same to the Board quickly. The representative of the Department of Energy supported the concept of a unified set-up of an Electricity Authority for the NCR. He stated that this would ensure availability of power, uniformity of power tariff and, such an authority if set up, could undertake generation as well as distribution. He clarified that since the area does not have potential for generation, generation could be taken up by another body such as the NTPC on behalf of the proposed authority.

The Chairman explained the norms proposed to be adopted for forecasting the power demand in the NCR. The methodology for working out the category-wise load forecast in the different sub-regions for 2001 on the norms suggested in the agenda was approved.

AGENDA ITEM NO. 7

MANAGEMENT STRUCTURE FOR IMPLEMENTATION
OF N.C.R. PLAN

The Chairman stated that management structure for creating Sub-Regional Area Development Authority proposed by the Planning Committee in the meeting held on 28.1.1987 was approved by the Board in its meeting held on 17.2.1987. However, with a view to make the final proposals there was a need to look into the existing planning and development management machinery in each State. He stated that in the 3 participating States and also Delhi UT, different management structure existed. In case of Haryana, there is a central authority for development while the State Town and Country Planning Department is responsible for all planning aspects of the urban areas. In case of Uttar Pradesh, there were development authorities, municipal corporations, municipalities and institutions like Housing Boards, Jal Nigam for specialised developmental activities and the planning was dealt as per provisions of different enactments. However, the Special Area Development Authority enactment passed by the UP Government has provision to make any area as a 'special area' for the purposes of planning development. Chairman enquired the representative of the Government of Uttar Pradesh about the conflict arising out of the existence of Development Authorities in the 'Special Area'. Shri Johri clarified that 'development areas' are usually not included in the 'special area' and both authorities may act simultaneously in their jurisdictions. In Rajasthan, since only part of one District was included as a Sub-region of the NCR, namely, Alwar, an Alwar Development Authority could be a suitable

agency for planning and development. In the context of the variations, there was a need for clearly evolving a suitable management structure, which may not be uniform for all the 3 States, so that at least centralised planning for Sub-region was done. This aspect needs to be studied in detail.

It was decided that the State Government would examine this aspect carefully and intimate their reactions quickly to the Board.


Any Other Items :

1. The representatives of the State Governments were requested to furnish upto-date list of local bodies/ authorities which would be required in connection with the Publication of Draft Regional Plan for inviting objections/suggestions thereon.
2. The State Government Representatives were requested to install a sign board indicating the boundaries of NCR as per design circulated in the meeting.

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

No.: K-14011/2/87-NCRPB
NATIONAL CAPITAL REGION PLANNING BOARD
Government of India,
New Delhi, dated the 15th June, 1987.

Copy forwarded to all Members of the Planning Committee and all the participants in the meeting for appropriate action.


(B. N. SINGH)
Member - Convenor
Chief Regional Planner

AGENDA ITEM NO.2

REVIEW OF THE ACTION TAKEN ON THE
AGENDA ITEMS OF THE 9th MEETING OF
THE PLANNING COMMITTEE.

- i) : The Draft Regional Plan for NCR has been prepared and some of the policies which were not included in the IDP, will be discussed in this meeting as separate agenda items.
- ii) Demographic Profile - NCR 2001 :
No action is called for.
- iii) Economic Profile for NCR 2001 :
No action is called for.
- iv) Regional Landuse Plan :
The existing Landuse Plan alongwith the proposed Landuse Plan for NCR 2001 have since been finalised in accordance with the decisions taken in the meeting held on 8.6.1987.
- v) Power Development - Norms & Proposals:
Power Development proposals have since been finalised and included in the Draft Regional Plan Report.
- vi) Management Structure for Implementation of NCR Plan:
The State Government representatives were requested to examine the proposal contained in Agenda Item No.7 of the meeting held on 8.6.1987. The views of the State Governments may be reported by the representatives at the meeting. The progress relating to setting up of Planning Cells may also be reported.
- vii) Any other item :
 - 1) The list of local bodies/authorities pertaining to the participating States were requested to be furnished. This should be expedited by 15.7.1987 positively.
 - 2) Action taken to install the signboards indicating the boundaries of NCR as per design circulated may be reported in the meeting.

AGENDA ITEM NO.3

POLICIES FOR DEVELOPMENT OF
ECONOMIC ACTIVITIES - THE
ROLE OF INFORMAL SECTOR.

It has been noticed that a large number of people who migrate to Delhi, engage themselves in unorganised production and service activities known as the 'Informal Sector'. It has also been observed that growth of employment in the informal industrial sector has taken place at a much faster rate in Delhi than the growth in the organised sector, i.e. the formal sector. In view of its contribution to employment generation as also the limited scope for expansion of employment in the organised sector, the informal sector cannot be neglected and allowed to remain outside the purview of Planning.

A study in this regard was, therefore, entrusted to the Society for Development Studies (SDS) in March, 1986. The summary of the conclusions arrived at by the SDS in regard to the 'Informal Sector in the N.C.R.' is annexed for consideration by the Committee.

REPORT ON INFORMAL SECTOR IN THE N C R

VI : CONCLUSIONS AND POLICY ISSUES

The major results are summarised in this chapter and a few policy issues are then examined in the context of preparing a regional development and investment plan that takes into account the reality of the informal sector activities and human settlements.

MAIN RESULTS

1. Informal Sector Concept

- a. There is no consensus of opinion on what is meant by the informal sector. It has been defined in terms of several parameters. The most common parameter is number of workers, generally less than a specified figure, which ranges between 5 and 25. Recent experience of researchers has been that the number of workers in an unit classified as an informal sector unit, is often found to be higher than what is stated by the owner. Another commonly-used definition is that an informal sector unit is an unregistered unit, in the sense that it is not registered with any official agency of the Government. Empirical evidence is now emerging to show that this definition is deficient because a large number of units are registered with some public agency like, for example, the Small-Scale Industries Department, the Road Transport Authority, the Sales Tax Department, the Municipal Corporation, the Railways, etc. Some other parameters that have been used to define an informal sector unit, are type of activity, investment, turnover, type of market and level of technology. The relevance of a definition based on money values (say, investment or turnover), however, is substantially eroded in times of inflation and it ceases to be comparable over time, unless adjusted for price rise. The other parameters suggest some

dominant characteristics of the unit, which may not necessarily be applicable at all times and in all situations and they may be also relevant to units in the formal or organised sector.

- b. We feel that the definition of the informal sector should be location-specific, situation-specific and purpose-specific, depending on the policy issue that is being examined. The ILO propagated the employment definition as it was interested in examining the employment potential of the sector.
- c. As the major objective of this study is to suggest policies for regional planning and investment allocation for urban infrastructure and services to cater to activities and groups of people that presently lie outside the purview of normal regional planning and investment exercises, we have defined purpose-specifically, the informal sector to include economic activities and human settlements that presently fall in the "overlooked" category. This is significant because such activities and groups make unanticipated demand on the services, on the one hand, but yet, like a sponge, absorb the new migrants and often those who fail to get absorbed in planned economic activities and human settlements. In a way, the informal sector may upset the calculations of regional planners and administrators but it also provides employment and shelter solutions. As supplementary parameters, we have kept in view the size of employment in the unit, working conditions and access to urban facilities and amenities, and have included an unit in the informal sector even if it has been registered with some Govt. agency or department. Hence, we may define an informal sector unit as one whose development needs, including infrastructure, finance etc. are not

specifically taken into account by the Government in the preparation of regional development and investment plans.

2. Profile of Informal Sector Economic Units

a. More than one-half of the units are registered with the Small-Scale Industries Department and some with local bodies. There seems to be an inverse relationship between registration status and degree of industrialisation. At the same time, the older the unit is, the higher is the probability of it being registered. Units in vicinity of organised large-scale industries and industrial centres like Faridabad, Delhi, Ghaziabad and Sonapat are non-registered small units set up mainly to service the large industries. But in centres which are less industrialised, more specialised and established for a long period, the registration of the unit is more common, as in Alwar and Khurja.

b. There is some degree of specialisation in activities: Khurja - pottery and ceramics; Tri Nagar - PVC and plastics; Vishwanagar - cables, plastics and utensils; Alwar - fabrication, metal products, handicrafts and light engineering; Faridabad, Ghaziabad and Sonapat - light engineering and metal products.

c. One major category of activity that stimulates a series of activities in the informal sector and also create dwelling units is construction. Construction is a major stimulating engine of growth. As the NCR plan will involve a large component of construction work (infrastructure, land development, etc), there will be substantial growth of construction workers in the sub-region both from within the sub-region as also from elsewhere. Their emergence will stimulate immediately activation of petty traders and street vendors to supply daily necessities of life to the project associated persons. In due course, services like laundry, transport, domestic help, etc. and supply of durable consumer goods will be also emerge in the location. Building material and allied activities are also complementary features of any construction programme. The NCR Board

should keep these development linkages in view while drawing up the investment programme for infrastructure and services. This is particularly important because though the construction activity may be a temporary phenomena in a specific location, its spill

over development effects are likely to be of a quasi-permanent or permanent nature.

- d. Three-fourth of the units are sole proprietorship concerns. 37.0 percent are one-man units. Remaining (27.6 percent) are partnership firms which mainly have two partners and in some cases upto the 4 partners. The main reason for undertaking an entrepreneurial activity is the inability to find any other source of income.
- e. The average size of an unit is 839 sq ft. This seems to be over-stated. We feel the average size may be around 600 to 650 sq ft. An entrepreneur may have declared a larger size in the hope that he may get entitled for a similar sized unit under any future development programme. Also, 68.0 percent of the units have integrated the residence of the entrepreneur with the working place.
- f. The average age of an unit is 9 years. The units are older in clusters with a long economic history (Ghaziabad and Khurja), In Faridabad and Delhi, the growth of informal sector activities gathered momentum in the mid-seventies.

3. Entrepreneurial Profile

- a. The entrepreneur is an important factor in the economic system, irrespective of whether he operates in the informal or formal sectors. There are many constraints in the informal sector : non-availability of bank finance and trained personnel, exploitation by suppliers of inputs and buyers of products, uncertainty of continuing in production, etc. The positive factors are : freedom from labour laws, capacity limits, quality standards, etc. An idea about the entrepreneur, his background, motivating factors, etc. is important if Government may like to consider schemes to encourage small-scale activities, largely on self-employment basis and may also want to explore the informal sector as a

training ground for future entrepreneurs of small-scale and medium-scale industries and skilled workers for the organised sector. In the NCR strategy to promote employment and raise levels of income, the informal sector entrepreneur may have an important role.

- b. The average age of an entrepreneur is 39 years. He is younger in the relatively new centres as compared to the older centres of Khurja and Alwar. The age group of an entrepreneur is such that it provides an opportunity for preparing programmes for skill upgradation and other support measures. The majority of the entrepreneurs today are those who started their enterprise when they were around the age of 28 to 32 years.
- c. The entrepreneurial class picked up the job from scratch. He is a self-made man, with little formal training in a recognised institution.
- d. The entrepreneur is not illiterate. He seems to be educated enough to be able to absorb some type of formal training/retraining input. He is of a young age and has demonstrated his capacity to pick up things which suggests that he is very much trainable.
- e. The entrepreneur is basically a local man. 45.0 percent of them in the NCR were born in the ^{town} where they presently live and work and another 13.0 percent were born in some other part of the State. Migration to the present site was mainly to earn an income.
- f. 78.0 percent of the entrepreneurs in the NCR were born in one of the sub-regions of the NCR. Only 22 percent have migrated from some other part of the country or from abroad (Pakistan).

- g. In the new clusters of Delhi and Faridabad, there has been substantial migratory entrepreneurial talent as these are new centres of business.
- h. The local features of the entrepreneurs also come out in their mother tongue : 66.0 percent speak Hindi, 18.0 Percent Punjabi, 12.0 percent Rajasthani and 4.0 percent other languages (mainly Urdu).

4. Linkages between Informal and Formal Sectors

- a. There seems to be little forward and backward linkage between the formal and informal sectors. About 75 percent of the market is provided by informal sector units in the same or neighbouring clusters (almost equally distributed) and another one-fourth was by individuals resident in the same cluster. A mere 1.0 to 2.0 percent of the linkage is with some formal sector unit. This was mainly because some middlemen of the organised sector is resident within the clusters and as the study did not examine the ultimate destination of informal sector products and services, it would be difficult to examine the ultimate linkage in the second or third stages of commercial transaction.
- b. As regards some of the secondary products of the informal sector clusters, the relationship with the formal sector is more evident, in the sense that about one-fourth of the informal sector units find a formal sector market for some of the secondary products, but the main product is sold within the informal sector, possibly to some middlemen of the formal sector.
- c. The backward linkage is also very poor, because over 90.0 percent of the materials are obtained from informal sector units in the same cluster (35.0 percent), informal sector

units outside the cluster (12 percent), or individuals resident in the same cluster (48 percent). Only about 5.0 percent of the inputs is provided by the formal sector units but some supplementary inputs, i.e. other than main raw materials, is obtained largely from the formal sector by 80 percent to 90 percent of the units.

5. Location Strategy

- a. Land is a critical determinant because the activities are largely non location-specific, in terms of input mix, utilisation of infrastructure, labour, etc. Thus, if proper shed with basic facilities is provided in proximity of, or accessibility to a residential unit, it may be possible to shift the informal sector. But it is very important that they will not be ready to go to peripheral areas. In fact, in more recent informal sector clusters, this problem is very obvious.
- b. Economic factors like proximity to materials are important in some of the new clusters as location-determining factors. This is because inputs are provided from within the cluster or sometimes from a neighbour cluster. Similarly the bulk of the products are sold within the cluster, very often, to agents of the formal sector. At the first stage of transaction the linkage between sub-sectors of the informal sector is very predominant and that between the formal and informal sector is marginal.
- c. Some entrepreneurs give importance to shelter unit location in selecting a site for an economic activity. In places like Khurja, there is a good integration of the working place with the shelter units.
- d. Availability of labour is not an important site location factor as basically the labour input is untrained workers, who pick up the job in due course.

e. The empirical evidence provided by the SDS study, thus, suggests that while land or plot is a crucial input in setting up an economic activity in the informal sector, the type of activities actually undertaken are not location-specific, in the sense that there is no location advantage in terms of inputs, labour or market. In Khurja, for example, the basic raw material is china clay for sophisticated ceramic items and pottery and ball clay for common pottery items. The supply of these items originate as far away as in Bikaner and Jodhpur and sometimes, even in Gujarat. Other important inputs like quartz and fels-par are normally obtained from different parts of Rajasthan and Gujarat. In the case of the more recent informal sectors of Tri Nagar, Vishwas Nagar and Faridabad, the major inputs are sheets of steel, aluminium and iron, liquid rubber and chemicals, which are purchased from agents in the vicinity and very rarely do the unit get in touch with the manufacturer or main distributor of the raw materials. These agents or local suppliers have a tendency to emerge wherever the economic activity takes place. In other words, the SDS study shows that suppliers of materials follow the economic enterprise in the informal sector rather than the location of the enterprise being linked to or dependent upon the availability of raw materials.

Similarly, the SDS study shows that the first stage of commercial transaction when the finished product of the informal sector changes hands is largely within the cluster or in the vicinity of the producing unit. We feel that an effective market for the products of the informal sector at the first stage of commercial transaction soon emerges in the cluster or in the vicinity of the product manufacturing unit. Thus, the location of the economic unit is neither determined by the availability of raw materials nor ^{by} the market for the products.

As the bulk of the labour input is of the unskilled category, at least, when they are initially employed, and they acquire skill mainly on the basis of on-job experience, the location of the economic unit is also not on the basis of the availability of labour.

6. Employment

- a. Total employment generation per unit is 6.5 jobs. Three-fourth of the jobs are provided on a regular basis. We feel that the job creation effort is under-estimated, as no satisfactory explanation was provided for the observed number of workers exceeding the declared number by the entrepreneur. The under-estimation may be around 25 to 30 percent. Hence, the job creation per unit may be taken as 8 persons.
- b. Unskilled workers are 52.0 percent and skilled workers 48.0 percent. However, the classification is subject to limitations as the definition of 'skill' is not very satisfactory.
- c. There exists sharp wage rate differentials, depending upon the skill content of the job and its regularity. In the different informal sector clusters, wage rate differentials between skilled and unskilled workers ranges from 28 percent to 80 percent; both for workers appointed on regular and casual basis. Average monthly wage rate of skilled workers is Rs.1142 (regular) and Rs.783 (casual) and for unskilled workers is Rs.730 (regular) and Rs.490 (casual).
- d. The working day extends, as per the entrepreneur's response, to 8 hours. We feel that the working day may extend upto 10 to 12 hours, especially for casual workers. Also, a number of workers provide services in the house of the entrepreneur and this is not taken into account.

- e. Workers are not illiterate and semi-literate and only one-third can be classified into this category (mainly in Khurja, Sonapat and Alwar). More than one-half of workers had some school education.
- f. Only one-tenth of workers had some formal training in institutions, but their education status suggests that they can be trained. The almost similar education ^{and} training status, and social background of the entrepreneur and the worker and the fact that a number of entrepreneurs have graduated from the workers' category suggests that an integrated training programme for workers and entrepreneurs might be successful and probably more effective.
- g. The worker is basically a local man, born in the same town (60.0 percent). If we include as 'local' person the people who have migrated from some other part of the State, the local persons are almost 100.0 percent in Khurja, 98.0 percent in Alwar, 91.0 percent in Ghaziabad and 70.0 percent in Sonapat. Data on place of last residence also bring out the local origin of the workers.
- h. The shelter unit is generally where the working place is located, or in its close proximity. Over 80 percent of the workers do not travel beyond one-half to one kilometer.

7. Investment and Resource Mobilisation

- a. The average investment per unit for the larger sample of 1180 units is Rs.67,329 and for the smaller sample of 143 units is Rs.96,741. The smaller sample accounts for 17.4 percent of the total investment of the larger sample.
- b. One-tenth of the units are "tiny", having investment of less than Rs.2500 and one-third of the units are "small" (less than Rs.10,000). The smaller units constitute more than 80 percent

of the units in Ghaziabad, Alwar and Khurja. The low investment in these units is due to their old age when investment requirements was low and the fact that they are engaged in more labour-intensive activities.

- c. The entrepreneur mobilises the finance almost wholly from his own savings and that of other family members (81.0 percent). A significant proportion of finance is generated through plough-back (15 to 16 percent). This high level of plough-back is a feature of the financial efficiency that needs to be appreciated.
- d. Friends and relatives provide 2.5 percent of finance but only in more recent centres and industrial activities like in Faridabad, Vishwas Nagar and Tri Nagar. Bank financeⁱⁿ very meagre amounts is available to a few units.
- e. The annual rate of growth of investment is estimated at 10.2 percent, which is creditable. The rate is higher in the newer informal sectors as compared to the older ones where the bulk of the investment was made long ago. Nevertheless, even these older centres have a positive growth rate of investment. Fixed capital formation is estimated at Rs.41,685 per unit. This may be somewhat under-estimated as very often second-hand equipments are purchased and then upgraded/restructured within the unit, without raising the value of the assets.
- f. The fixed capital formation is estimated to utilise 49.0 percent of the total investment and the proportion is significantly higher in Sonapat, Alwar and Faridabad (55.0 percent to 83.0 percent). The working capital requirement is as important as the problem of fixed capital investment. In fact, due to the working capital constraint, the entrepreneur is exploited both at the time of buying inputs and selling

his output as his capacity to hold on to inventory is very limited. The working capital for a three-month period is about Ru.31,190 per unit or 75.0 percent of the fixed capital investment. In terms of annual turnover, the working capital for a three months period is Ru.6.1 percent.

8. Informal Sector Human Settlements

- a. The average settlement contains 4 members, one-third of whom are men, one-fourth women and two-fifth children. The oft-propounded thesis that the informal sector settlement consists only of men who come to the city in search of a job, leaving the family in the place of their origin is one of the myths of the informal sector. In the older settlements, female and children members are more prominent than in the newer ones, but nevertheless they form a conspicuous feature of the new settlements also.
- b. The settlements contain predominantly nuclear families, the proportion of such families in the settlements ranging from 84.0 percent, to 95.0 percent in Ghaziabad, Sonapat, Vishwas Nagar and Faridabad and is over 65.0 percent in the other clusters.
- c. A large proportion of the members in the settlements are non-working (two-third), mainly because they are children and women. Only one-tenth of the male members fall in the category of non-earning members. 15.0 percent of the women earn some income either on a full-time or part-time basis.
- d. The employment of women varies considerably among the clusters, depending upon the employment opportunities and local customs.

49. Informal Sector Residents

- a. The head of the human settlements is a middle-age man, the average age being 31 years. In the individual clusters, the average age ranges between 25 and 36 years. The man is younger in a newer settlement as compared to an older settlement.
- b. The proportion of illiterate and semi-literate members is not high (30 percent). A large proportion have received some school education (47.9 percent). Some had studied in college, and may possess a graduate or post-graduate degree (22 percent).
- c. The migrant characteristics of the resident does not come out from the data. We used three parameters : mother tongue, place of last residence, and period of stay in the present settlement. An analysis of the responses brings out clearly that the typical informal sector resident is a local man. 41.0 percent have lived in the present informal sector settlement since birth and another 28.0 percent for more than 5 years. The people do not believe in large mobility in their living environment. Once a suitable habitat is located, which is also convenient from the point of working place, they wish to live there, irrespective of the inadequate infrastructure facilities, etc. Furthermore, they are always eager to shift nearer to their place of work, if they are staying far away.
- d. Two-fifth of the persons are employed as workers, mainly in some informal sector unit. They are largely skilled workers. Some work in a self-employed capacity, rendering some skilled services, such as, of mechanic, technician and electrician, etc (5.6 percent). 28.0 percent do purely informal jobs like of rickshaw puller, cobbler, street vendor, cattle, labourer, etc. 9.0 percent are petty traders and 13.0 percent work in offices.

e. Skill development is almost a wholly self-learning process.

A very large proportion of the people consider themselves to be unskilled and semi-skilled and these include collies, cobblers, petty vendors, traders, and office staff, apart from those whom we normally classify as unskilled workers. This type of self-assessment is very important because it is clear that the residents of slum settlements are aware about their deficiencies and of the need to upgrade their skill to earn more.

f. In some cases, training facilities are available but the people cannot participate in these programmes as they have to earn some income.

g. The informal sector worker is very conscious about his future plan. He is very ambitious. Three-fourth of them would like to set up their own economic activity in the near future. The idea is to set up some business or industry in the same town, though not necessarily in the same cluster where he presently resides. Thus, 13.0 percent of the potential entrepreneurs would like to set up a business in the same cluster but 60.0 percent in some other location in the same town. 15.0 percent are willing to migrate to some other part of the State and 12.0 percent to any place outside the NCR.

10. Infrastructure

a. The infrastructure facilities are very poor, particularly sewerage and water supply. But almost all of the units had access to power and about one-third of the units had access to water. This is true of both economic units and human settlements.

b. There is a close integration of the entrepreneur's home with his working place. 68 percent of the entrepreneurs stay in

their working place. A little more than one-half of the entrepreneurs rented their premises and less than one-half owned the premises. The ownership proportion is higher in small place like Khurja.

POLICY ISSUES

The study has provided evidence in terms of several parameters (production, growth in employment, profitability, employment) that the informal sector is a major growth point in the economy and contributes, to a significant extent, in providing solutions to two basic human problems. It provides an income earning opportunity to people who cannot get absorbed elsewhere, and a housing solution for people who find normal housing solutions inaccessible and non-affordable.

In this context, an important policy decision should be made, of accepting the existence of the informal sector and of its dynamic role in the development process. Once this is done, it follows then that a development strategy should consider how best to exploit the talent and expertise of this energetic, enterprising and resourceful sector to contribute more effectively and in a relatively more organised manner, to broaden the regional economic base, production system, employment potential, housing stock, manpower bank of skilled personnel, savings potential, etc. We recommend a 12-Point development strategy.

- a. Define the informal sector in purpose-specific terms, namely, a sector whose development needs are presently not taken into account in public development and investment plans. This is a dynamic definition (unlike the static definition in terms of level of employment, production, investment, type of market, product mix, registration status, etc.). Once a sector is included in the regional development plans, and work is taken up, it will cease to form part of the informal sector.
- b. In view of the resources crunch at any point of time, a phased programme for development of informal sector might be more realistic.

The aim should be to select some clusters each year for development, with the plan to cover all the clusters existing at a point of time, say, June 30, 1987, over a specific time period. As a first step, it will be necessary, therefore, to make an inventory of informal clusters, with some idea of the type of activities. To start with, we might include the clusters covered in the present study. Basic data on parameters covered in the present study may be collected simultaneously for other clusters. The State Government and local agencies should collaborate actively in this programme.

- c. An entrepreneurial development programme should be formulated and implemented. ... The programme package should provide technical know-how (to be tailor-made to suit the activities in the cluster), basic knowledge in finance and maintenance of books of accounts, marketing strategies and labour development. Details about the training programme and curriculum should be carefully worked out.

Skill upgradation programme for the workers is equally important and an urgently felt need, as revealed in the self assessment of the habitants of the human settlements in the informal sector. It is, however, desirable to structure the programme in a manner that the participants are not deprived of earning the normal income. Hence the time schedule for programme has to be flexible and carefully prepared. A scheme of scholarships should be an important component of the programme. Practical on the job work experience during the training should also be an essential ingredient of the programme. The programme should be in technical disciplines that improves working capacity of the people and widens the scope of his employability.

In the context of upgradation of skills of the entrepreneurs and workers in the informal sector/economic units and the residents of human settlements, we recommend that the training programmes may be structured on the lines of the Shramik Vidhyapeeth programmes of the Directorate of Adult Education, Ministry of Human Resource Development, Government of India. This programme is now two decades old and is based on the concept of a multi-dimensional approach to education of workers, keeping in view their specific requirements as well

as the requirements of the employers. The programmes are tailored-made to provide knowledge and impart skill in a very flexible time schedule. In fact, flexibility is the basic principle of the contents, duration and time schedule of the skill upgradation strategy. The Shramik Vidhyapeeth scheme is presently operated through 30 offices in different parts of the country of which three are in Rajasthan (Ajmere, Jaipur and Kota), three in U.P. (Kanpur, Lucknow and Varanasi), one in Haryana (Faridabad) and one in Delhi. We recommend that the NCR Board consider the setting up a Shramik Vidhyapeeth regional office in each of the sub-regions and the regional offices should undertake specific programmes for skill upgradation. The support of the Directorate of Adult Education should be obtained for this purpose.

On the basis of the present study, we recommend programmes in the following areas :-

1. Pottery and Ceramics;
2. Plastic-based products (PVC compound, chappel, electrical-related products like plugs and sockets, pipes, bangles);
3. Rubber-based products (shoe soles, carpet for cars and scooter, auto parts for clutch, break, hose pipe, tyres and tubes);
4. Metal castings (household utensils, trunks, almirahs, cooler boxes);
5. Spare parts for cycles and scooters;
6. Electrical products (cables wire, radio dials, TV assembling);
7. Miscellaneous (printing, binding, TV cabinet, optical lens, sari printing).

The list is illustrative and programmes in any informal sector cluster should be based on the major on-going activities and other activities which the NCR Board may feel, would be useful in promoting employment and raising income levels. The areas for diversification should be selected after a good study of the demand for the products.

- d. In the scenario of the supply of inputs and demand for output of the economic activities in the informal sector, not being location-specific, we are of the

view that it seems feasible to consider, selectively, the shifting of some of the present clusters of informal sector activities to other locations as the economics of such operations are unlikely to be adversely affected. Such a programme should be carefully planned and implemented on a very selective basis. Fear should not be created in the informal sector that they are being "pushed out". A careful selection of the clusters to be shifted and the new location to be developed is very essential so that the initial "location shifting" programmes become viable models of success that will demonstrate to the others the advantage of a shift. No force or coercion should be used. The policy should be based on the principle of incentives and rewards.

In the first place, it should be appreciated by the NCR Board that the entrepreneur, as well as the worker, would like to reside in the vicinity of his working place. It thus, follows that an integrated industrial location and human settlement policy should be developed in the new location. The policy should include the provision of an industrial shed with basic infrastructure like water supply, sanitation, electricity and transport facilities and a residential unit with adequate water supply and sanitation facilities (not necessarily on unit basis but through adequate number of common facilities), some open space, medical facilities and education facilities. A good transport system that links the informal sector cluster with the major parts of the towns will be an added attraction. A flexible training programme that will facilitate non-earning members of the household to earn some income and be gainfully occupied, especially women, children and youth will be a welcome feature. Some kind of institutional finance will contribute immensely to the success of the programme.

In this perspective, we recommend that the NCR Board reserves vacant land in different parts of the sub-region and develops the same by providing basic infrastructure first and then attempt to induce the economic unit and households to shift. The policy should be to take infrastructure to the people rather than attract people to existing infrastructure. People should be motivated and stimulated to shift, on their own with the help of suitable incentives.

We found that the people would be willing to shift if a residence and income-earning opportunity is provided in a composite manner, the quality of infrastructure facilities are better and some special support is guaranteed to minimise the financial loss that might accrue to the entrepreneur in the gestation period. We recommend that some financial incentives for the initial one or two year period, as may be considered proper, is likely to give to any location shift programme a higher probability of success. The NCR Board might however, stipulate some monetary ceiling on the amount of subsidy to be provided.

e. As the economic unit in the informal sector is of a non-specific location character in terms of materials, market and labour, it is further recommended that the NCR Board consider the promotion and extension of certain economic activities which have succeeded in some clusters to other parts of the NCR. Thus, for example, ceramics and pottery units can be promoted in Alwar and Delhi, metal and fabrication work in almost any part of the region. Some preliminary work will have to be done by the NCR Board to assess the demand for the products in the selected region or within the NCR or in the State of the location. // These two recommendations^(d & e) on shift of existing informal sector units and extension of new activities in existing and new informal clusters in the NCR will contribute significantly to reducing the load of population on Delhi as well as in stimulating growth and development in different parts of the sub-regions of the NCR. These developments will directly contribute towards attainment of the two basic objectives of the NCR development strategy, namely, of increasing employment and raising the level of income, and as the economic system is highly integrated, these developments will in turn, contribute to faster economic development, more equitable/balanced regional development and provide for higher levels of earning of the people.

In terms of investment, the expenditure on informal sector led growth process will be substantially lower than any development programme based on the growth of the formal sector. To start with, the cost of land development will be lower, the investments on infrastructure will be minimal as

compared to any similar activity in the formal sector. It would not be possible at this point of time to make an estimate of investment needed for the proposed strategy. This will have to be determined after an exercise on the cost of infrastructure to service the informal sector units.

- f. Another strategy which we recommend is to specifically benefit particular categories of informal sector workers and residents. To start with, the NCR Board might select rag pickers, rickshaw pullers, auto rickshaw drivers, collies, petty hawkers and domestic servants, who can be considered to be having an income below the poverty line. What is required for uplifting such people is organisation to get better prices for the work or some finance to acquire the assets or better wages. Location might be a critical issue in the case of such people and a good transport system will help for some of them. But in the case of categories of workers like rag pickers and street vendors, a problem may arise, of carriage of their workload in the public transport system. The NCR Board will have to look into this matter. It may be desirable to study the problem in more detail to get an idea of the collection, clearing and delivering points in the case of rag pickers and of sources of supply and market locations in the case of street vendors. Equally important is to make some prior assessment of the demand for the products and the capacity of the people to pay for some special transport scheme. A study should be undertaken on these issues on a priority basis.
- g. An area of activity on which more research input and data are required for facilitating policy decision relates to the linkages of the formal and the informal sectors. The objectives of the present study was to examine the linkage only up to the first level of transaction. In terms of backward linkage, the immediate source was studied and in the case of the forward linkage, first buyer status was examined. However, our study clearly found that there may be multi-stage system for both procurement of inputs and sale of the outputs. It will be necessary to do a few detailed studies of the ultimate source of supply of inputs to informal sector units and the ultimate buyer of the products of the informal sector. This is important for two reasons :-

1. The cost of inputs can be considerably reduced by minimising the number of intermediation between the source of supply and the informal sector unit.
2. The profit margin can be considerably improved for the economic unit by reducing the number of middlemen in the market.

We recommend that these two developments programmes should receive special priority of the NCR Board, particularly, if the Board takes up a policy decision that, in the interest of good regional planning, it would be desirable to shift some of the present informal clusters to new locations and also encourage the establishment of new clusters in the specific locations. As the profit margin will automatically improve through better input supply and price realisation, the quantum of subsidy for stimulating a shift in location may be reduced, if not completely withdrawn..

To implement this strategy, it is suggested that the NCR Board sponsors a detailed study on forward ^{and} backward linkage for selected products, which can be identified in discussions with research institutions and the NCR Board. Secondly, it is important to examine ways and means to organise the entrepreneurs, possibly on some cooperative basis to purchase common inputs in bulk amount. The availability of institutional finance, construction of godown for storage of inputs and products will be required to implement this strategy. The NGOs can also play a role in organising the entrepreneurs.

h. At the same time the accessibility to institutional finance should be strengthened. There does not seem to be a case for subsidy in interest rates, which if at all is to be given, should be restricted to very selected activities and limited to a specific loan amount and turnover. A monetary ceiling on the amount of subsidy per unit in these selected activities might be also considered. What the entrepreneur needs more urgently is access to institutional finance.

i. At the same time, there is a need to improve basic infrastructure, both for the economic unit and the housing unit. We suggest that priority should be

given to the following infrastructure programmes : water supply, sanitation and sewerage and public transport. It might be an attractive feature to provide open space/parks and education and medical facilities in the vicinity. We, however, do not recommend a high rate of subsidy in the pricing policy for provision of water supply, sanitation, etc. What is more relevant is their provision, as the beneficiaries are willing to pay for the services.

The human settlement should be upgraded in its quality by provision of basic facilities like water supply and sanitation. Common taps in larger number should be installed and Sulabh Sauchalaya type systems might be constructed in adequate numbers. A scheme to charges for these services (especially for toilets and bathrooms) appears to be feasible.

Some financial assistance may also be granted to upgrade and expand the human settlement units. With the setting up of the National Housing Bank network, this will become more feasible. It is proposed that a NCR Housing Finance Corporation might be considered to provide second-tier services in the proposed National Housing Bank system. Several States are considering the creation of State level housing finance institutions and the NCR is a composite economic entity where a regional level institution appears to be viable proposition. It would be desirable to study the mechanics of setting up such an institution, and also policies for resource mobilisation, credit allocation etc.

The informal sector human settlements have a good potential to generate saving and a programme should be examined to mobilise the savings from this sector.

AGENDA ITEM NO.4 POLICIES FOR DEVELOPMENT OF ECONOMIC
ACTIVITIES IN THE NATIONAL CAPITAL REGION

In the Interim Development Plan for National Capital Region which was approved by the Board, various policies with regard to location of economic activities viz. Government and Public Sector Offices, wholesale trade and commerce and industries were proposed. These policies were later on reconsidered by a Study Group constituted for the preparation of Draft Regional Plan. For the location of these activities in the Region, as also envisaged in the Interim Development Plan, a three-tier approach is proposed to be followed with strict control for creation of employment opportunities within the Union Territory of Delhi, moderate control outside Delhi UT but within the Delhi Metropolitan Area and encouragement with incentives in the area outside DMA within the NCR. A statement of policies showing the policies under different activities, as approved by the Board earlier and the policies now proposed for the Draft Regional Plan is annexed for the consideration of the Planning Committee.

Statement showing Policies approved in IDP
and the policies proposed for the Draft
Regional Plan.

Name of the economic activity	Policies approved in the Interim Development Plan	Policies proposed for the Draft Regional Plan.
1 A. <u>Government and Public Sector Offices.</u>	(a) <u>Strict control within the Union Territory of Delhi</u>	(a) <u>Strict control within the Union Territory of Delhi.</u>
*and expansion of Government offices	<p>With regard to Government Offices, the present policy and mechanism for screening the location of new government offices and expansion of existing government offices should be continued. The main criterion for location of offices in the Capital should be that they perform the ministerial functions, protocol functions or liaison functions which by their nature, cannot be performed anywhere else except in the national capital. The existing offices which do not perform any of the above functions should be shifted from Delhi. <u>The jurisdiction of the Committee, which already exists in the Government of India for scrutinising and screening the opening of new government offices in Delhi should be enlarged to include the public sector offices. The Committee should further those public sector offices or parts of their offices whose location in Delhi is not justified on the basis of the aforesaid three criteria.</u></p>	<p>With regard to Government offices, the present policy and mechanism for screening the location of new government offices and expansion of existing government offices should be continued. The main criterion for location of offices in the Capital should be that they perform ministerial functions, protocol functions or liaison functions which, by their nature, cannot be performed anywhere else except in the National Capital. The existing offices which do not perform any of the above functions should be identified and shifted from Delhi. In the case of public sector officers, there is an urgent need to scrutinise the list of existing offices and allow them to retain only very small establishments to cater for corporate and liaison functions. The rest of the establishments should be shifted out of Delhi. The accommodation which may thus become available could be used to cater to the needs of the essential growth of Central Government offices.</p>
7 identify	(b) <u>Control outside Delhi but within DMA</u>	(b) <u>Control outside Delhi but within the DMA</u>
	<p>(i) A similar control on the opening of new central government and public sector offices in the DMA towns should be exercised. Relocation or expansion of government offices which have ministerial, protocol or liaison functions which make it incumbent upon them to be located in Delhi should be encouraged to be <u>only</u> in the DMA towns.</p>	<p>A similar control on the opening of new Central Government and public sector offices in the DMA towns should be exercised. Relocation or expansion of government offices which have ministerial, protocol or liaison functions which make it incumbent upon them to be located in Delhi <u>alone</u> should be allowed to be located in the DMA towns. In so far as public sector undertakings are concerned, the restrictions on their opening new offices or expanding the existing ones should apply equally to the DMA also. <u>Rest of them have to go out to the priority towns to be developed in the MCR or in the counter-magnet areas identified by the Board.</u></p>
	<p>(ii) In so far as public sector undertakings are concerned, the restrictions on their opening new offices or expanding the existing ones should apply equally to the DMA also. <u>Relocation of those offices whose existence or continuance in Delhi is justified may be encouraged to be in DMA.</u></p>	

Portion underlined with broken
lines are proposed to be deleted/
altered.

Portion underlined with broken
lines are proposed for addition.

but within NCR

The Central Government offices which are considered for shifting from Delhi and DMA towns should be located in other towns of NCR and incentives in the form of CCA, HRA, etc, as given to employees working in Delhi, should also be given to these employees. A higher order of linkage of road, rail and telecommunication facilities should also be developed between other towns and Delhi.

The public sector undertaking offices which deal with Northern Region and are functioning in Delhi, can function in a better way at a place in the centre of North India. These offices need not be located in Delhi. Such offices of the Northern region should be located in the other towns of NCR.

The Central Government offices which are considered for shifting from Delhi and DMA towns should be located in other towns of NCR and incentives in the form of CCA, HRA etc, as given to employees working in Delhi, should be given to employees who may be affected by this shifting, for a limited period. Other incentives like providing government accommodation, generous allowances for study of their children also be given to act as an incentive.

The public sector undertaking offices which deal with Northern Region and are functioning in Delhi, can function in a better way at a place in the centre of North India. These offices need not be located in Delhi. Such offices of the Northern region should be located in the other towns of NCR.

B. Trade and Commerce

(i) Disincentives within Delhi

An approach of disincentives to the whole-sale trades which are not directly consumed in Delhi should be adopted. Only those whole-sale trades, at least 60% of which are directly used and consumed in Delhi and, are not hazardous in nature and do not require extensive space, should be allowed to continue and develop in Delhi.

(ii) Controlled development outside Delhi but within DMA

The policy of checks and disincentives is also to be followed in case of DMA towns but with some relaxations. Only those whole-sale trades which are directly used and consumed in Delhi and DMA towns should be allowed. In Delhi, there are certain whole-sale trades such as plastic and PVC goods, chemicals, timber, foodgrains, iron and steel and other building materials which are hazardous because of their location in congested areas and also due to bulk handling activities. These whole-sale trades should be encouraged to develop in DMA towns.

(iii) Outside DMA but within NCR

It is proposed that, as a matter of policy, incentives, concessions and infrastructure should be made available in the regional towns to encourage and accelerate the growth of trades. New trade functions with high growth potential should be identified and located outside Delhi and DMA to cater to the specified roles assigned to the selected towns.

(a) Disincentives within Delhi

An approach of disincentives to the wholesale trades which are not directly consumed in Delhi should be adopted. Only those whole-sale trades which are directly used and consumed in Delhi and are not hazardous in nature and do not require extensive space, should be allowed to continue and develop in Delhi.

(b) Controlled development outside Delhi within DMA

The policy of checks and disincentives is also to be followed in case of DMA towns, but with some relaxations. Only those wholesale trades which are directly used and consumed in Delhi and DMA towns should be allowed. There are certain wholesale trades in Delhi which are hazardous because of their location in congested areas and due to bulk handling activities such as plastic and PVC goods, chemical, timber, food grains, iron and steel and building materials. These wholesale trades should be encouraged to develop in DMA towns.

(c) Outside DMA within NCR

Incentives, concessions and infrastructure should be made available in the regional towns to encourage and accelerate the growth of trade.

I 2 3
C. Industry

(a) Strict control within the
Union Territory of Delhi

i. While continuing the present policy of not promoting location of medium and large scale industries within Delhi, location of even small scale industries is to be restricted to those which employ 20 or less persons and, are required either for providing or servicing the consumer needs of Delhi's population. All applications should be referred to a Special Group constituted by the Board for checking such industries.

ii. All non-conforming industries which have been identified in the revised Delhi Master Plan should be shifted outside Delhi. A Committee should be set up for selecting an alternative site for shifting these industries within the Region.

(b) Control outside Delhi but
within the DMA

No large scale or medium scale industries should be permitted to be set up in the DMA. Only small scale units should be permitted.

(c) Incentive for industries outside the
DMA but within the National Capital
Region

The towns selected for priority development should have a strong industrial content, and incentives should be given for location of large, medium and small scale industries by developing industrial estates in these towns. In addition to these towns, there should be no restrictions on the growth of industries in the Region except in the areas reserved for conservation.

Portion underlined with broken lines are proposed to be deleted.

(a) Strict control within the
Union Territory of Delhi

i) While continuing the present policy of not promoting location of medium and large scale industries within Delhi, location of even small scale industries is to be restricted to those which employ 20 or less persons and, are required either for providing or servicing the consumer needs of Delhi's population. The NCR Planning Board should be represented in the Statutory Licensing Committee for new industries in the UT, so that strict compliance of these policies is ensured.

(b) Control outside Delhi but within
the DMA

No large scale or medium scale industries should be permitted to be set up in the DMA. Only small scale units should be permitted.

(c) Incentive for industries outside the
DMA but within the National Capital
Region.

The towns selected for priority development should have a strong industrial content, and incentives should be given for location of large, medium and small scale industries by developing industrial estates in these towns. In addition to these towns, there should be no restrictions on the growth of industries in the Region except in the areas reserved for conservation.

Portion underlined with broken lines are proposed to be deleted.

AGENDA ITEM NO.5

FISCAL MEASURES TO BE INCORPORATED
IN THE DRAFT NATIONAL CAPITAL RE-
GION PLAN.

In the National Capital Region Interim Development Plan approved by the Board various fiscal measures were proposed for the harmonised and balanced development of the National Capital Region. These measures were proposed after deliberation in various meetings of the Planning Committee and also meetings with the concerned authorities of the constituent States and Delhi Union Territory. With a view to have indepth studies on the subject and to formulate a suitable tax structure so as to provide necessary incentives and disincentives to achieve the dispersal of industrial and commercial activities in the Region and also to analyse the implications of the new tax structure, a study was entrusted by the NCRPB to the National Institute of Public Finance and Policy (NIPFP). After examining the tax structure of the States and Delhi UT and analysing the built in incentives/disincentives in the existing tax structures, NIPFP has submitted its report. The various recommendations suggested by NIPFP and the recommendation included in the Interim Development Plan have been given in brief in the statement annexed for consideration of the Planning Committee.

COMPARATIVE STATEMENT OF FISCAL POLICIES APPROVED IN
THE INTERIM DEVELOPMENT PLAN AND AS PROPOSED BY NIPFP

(1)

Policies Approved In I D P

1. In order to achieve uniformity to some extent in tax structure in the National Capital Region, Delhi Union Territory should have minimum floor-level of taxation.

Policies Proposed By NIPFP

Fiscal Policies :

1. The existing structure of Sales Tax in Delhi needs to be replaced by the first point tax. A switch over to a first point tax would further bring down the level of Sales Tax rate in Delhi in comparison with that prevailing in the neighbouring States. For the sake of parity rates of Sales Tax at first point in Delhi would have to be raised. Sales Tax rates in Delhi should be raised to some extent in a few specific cases where diversion of trade is evidenced.
2. No levy of tax on raw material used by manufacturers in the entire region.
3. The tax structure of the Union Territory of Delhi should be so adjusted that the tax on industrial raw materials and industrial machinery should be slightly higher than that in the rest of the Region.
3. In order to prevent diversion of trade from the neighbouring States of Delhi, the present rate of CST of 2% levied on re-export of goods should be raised to 4% as is being levied in the three participating States of Haryana, Uttar Pradesh and Rajasthan.
3. To have balanced regional development of the NCR and to have this Region as unified economic zone, the State exporting goods from NCR Zone should levy CST @ 2% on all exports. As a result, the exodus of goods to Delhi would come to a halt.

.../...

(ii)

This would lead to tremendous growth of trade in the NCR Districts because of the savings in transportation costs to Delhi. Finally, this would cause export of goods directly from the NCR States yielding them the CST revenue.

4. It is felt that non-levy consignment tax is resulting in diversion of trade from other States to Delhi. It is, therefore, considered necessary that the Government of India take immediate steps as follow up action with regard to the 46th Constitutional Amendment Act, 1982 as per the recommendations of the Group of Chief Minister's Conference.

4. Effective combined burden of the motor vehicle tax and passengers and goods tax in Delhi is substantially raised to bring it at par with other states of the NCR.

5. To evolve NCR as a unified economic region Octroi should be abolished (To compensate the loss of revenue, the States comprising NCR could adopt entry tax along the lines recommended by the Gujarat Taxation and Enquiry Commission, 1982. The entry tax should not be levied on raw materials).

6. Additional tax could be levied on the preferences of the persons owning property in Delhi (This could be in the form of additional tax on new commercial properties constructed in Delhi for commercial and industrial purposes).

(iii)

7. A token levy in the form of congestion tax of Rs. 10/- per truck entering the Union Territory of Delhi could be considered.

8. Incentives :

i) States should give only reasonable tax concessions for industries in backward areas both for attracting them and for making them competitive until they are established and can stand on their own.

ii) Blanket exemption to small scale sector is not desirable.

9. Infra-Structure Facilities :

Power, transport, communication, roads, warehouses are conspicuously meagre in most of the areas of NCR except Delhi. The most important hindrance again is the inadequate availability of electricity. Thus, alongwith fiscal measures, it is necessary to provide the requisite infrastructure in these areas.

Specific studies are required to be carried out for each commodity on the basis of flow of goods to and from Delhi in relation to congestion of traffic in the City. On the basis of the recommendations of these studies, new wholesale markets in the designated areas outside Delhi would have to be developed by ~~NCRPB~~ or by an agency similar to CIDCO.

AGENDA ITEM NO.6

SETTLEMENT SYSTEM - 2001.

In connection with the preparation of the Draft Regional Plan, it was felt necessary to get the data analysed with regard to the Urban Settlement System as of 1981 with a view to develop a hierarchical system of Settlements in NCR for 2001. Accordingly, a study was entrusted to Physical Research Laboratory, Ahmedabad, which has developed a computer based software for evolving the settlement system. This analysis has been completed based on 38 variables and the findings of the study will be circulated in the meeting of the Planning Committee on 7.7.1987. for consideration and approval.

ANNEXURE TO ITEM NO.6

SETTLEMENT SYSTEM - 2001.

1. The settlement policy proposes to achieve the objective of NCR through a two-fold strategy:

- (i) To revitalise the economy of the stagnating regional towns and to integrate them in a form of a well-knit system of settlements with specific functions that would encourage an orderly development of economic activities and to integrate the smaller urban centres and villages in relation to priority towns to achieve the objective of balanced development of the NCR, the settlement pattern policy proposes to develop a four tier hierarchical system of settlements consisting of Regional centres, Sub-regional centres, Service centres and Basic villages. Even though such location and function recognition would be objective specific, the likely population size and probable functions of each tier settlement are as follows :

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Sl. No.	Level of Settlements	Population Size	Functions
1.	Regional Centres	3.0 lakh & above	To accommodate the over-spill Delhi's population by creating employment opportunities in secondary and tertiary sectors and to act as a magnet centre for decentralisation of economic activities.
2.	Sub-regional Centres	0.50 lakh to 3.0 lakhs	To serve as a focal point with development and revenue functions as that of a Sub-divisional Headquarters with corresponding facilities. In addition, this also will serve as a growth centre with industrial and other economic activities.
3.	Service Centre	10,000 to 50,000	To cater to the rural hinterland as agro-service centres including marketing functions.
4.	Basic Villages	5,000 to 10,000	To cater to basic needs of cluster of villages.

Whereas the main centres of utmost activity concentration in this hierarchical system are the Regional centres and Sub-regional centres, the Service towns and Basic villages are mutually dependent upon one another - in particular upon the Regional centres being self contained, thus forming an inter-dependent system independent to a great extent of Delhi Metro-polis.

(ii) To attract and contain the Delhi bound potential migrants to the extent of 19 lakhs of population, the 'intervening opportunities approach' would be followed. This is based on an understanding of migration motives and also on the assumption that the potential migrants will not be easily deterred from coming to the national capital unless equally attractive possible destinations are developed between the origin and destination (Delhi) of migrants. It is further assumed that only a near metropolitan environment would be able to offer variety in occupational structure and opportunities and hence a few selected centres would be developed on an intensified scale with conscious intervention to organise and stimulate economic activities so that these intervening centres are able to attract and contain the Delhi bound potential migrants. Such towns would be developed on priority basis.

2. Order of Settlements - 1981

To identify such settlements which may form Regional and Sub-regional centres, a development hierarchy has been proposed. Every settlement depending on its size in terms of population and areal spread, location in reference to transport network, availability of social facilities and concentration of economic activities, places itself among others in a development hierarchy within the region.

In consonance with its size and rank, these centres provide higher order services to the scattered population around them.

The aim being identification of such a hierarchy mainly to select centres that may attract Delhi bound migrants, the urban areas of Delhi UT have not been incorporated in the analysis for its relative development. The various indicators that have been considered for determining the hierarchy of 87 urban settlements (excluding 6 settlements in Delhi UT and Murad Nagar of Uttar Pradesh Sub-region for which data are not available) relate to revenue and development administration, demographic characteristics like population size, sex ratio, literacy level, growth trends during 1951-81, participation rate and industrial work-force, rate of migration, location of various facilities, such as educational, health, road, railway, water supply, power, marketing facilities, financial institutions, recreational facilities etc. in relation to population size. A total number of 38 indicators were used.* Of the four tier settlement system, as has been envisaged in the policy, the first and second order settlements, i.e., Regional and Sub-regional centres have been identified, while the third and fourth order settlements, i.e., Service centres and Basic villages would be identified in the Sub-regional Plans.

* Study on 'Settlement System in NCR' by Physical Research Laboratory, Ahmedabad, for NCR Planning

3. The basic model that has been used to identify relative weightages of each settlement in reference to the 38 indicators (annexed), i.e.

$$Z_i = a_1 x_{i1} + a_j x_{ij} + \dots + a_m x_{im} \dots (1)$$

Where Z_i is the composite index value of the i th settlement, a_1 is the weight for the 1st indicator and x_{ij} is the j th indicator value of the i th settlement.

The model attempts to determine the weight of a_j and after obtaining, z_i would be gained and ranked. The weights are obtained by optimizing

$$Z'Z = A'X'XA \dots (2)$$

Where Z is a 87×1 row vector, A is a $m \times 1$ row vector of weights and x is a matrix of $87 \times m$ indicator values. The full information based composite index has been used which offers the restriction that the sum of the weights comes to one and thus the optimization had been carried out. By taking 10% and 5% of the higher composite value obtained by any centre, the first and second order settlements have been indentified through a computer based model known as "Full information based composite Index" which is a modified form of "Factor Analysis" as below :

...../-

5. Bulandshahr
6. Hapur

Uttar Pradesh
Uttar Pradesh

8+3+6

- : 6 : -

<u>Order</u>	<u>of Towns</u>	<u>Sub-region</u>	<u>Population(1981)</u>
1.	Meerut (UA)	Uttar Pradesh	536615
2.	Ghaziabad	" "	287170
3.	Faridabad Complex Administration	Haryana	330864
4.	Rohtak	"	166767
5.	Alwar	Rajasthan	145795
6.	Panipat	Haryana	137927
7.	Sonipat	"	109369
8.	Bulandshahr	Uttar Pradesh	103436
9.	Gurgaon	Haryana	100877
10.	Modinagar (Uttar Pradesh	87665
11.	Hapur PT	" "	102837
12.	Khurja PT	" "	67119
13.	Shikarpur	" "	21499
14.	Mawana	" "	37620
<hr/>			
15.	Baraut	Uttar Pradesh	46292
16.	Rewari PT	Haryana	51562
17.	Pilkhua	Uttar Pradesh	37884
18.	Sikandrabad	" "	43135
19.	Murad Nagar	" "	26047
20.	Bahadurgarh DMA	Haryana	37488
21.	Palwal PT	"	47328
22.	Pahasu	Uttar Pradesh	9016
23.	Khekhada	" "	24984
24.	Jahangirabad	" "	29301
25.	Gohana	Haryana	26188
26.	Gulaothi	Uttar Pradesh	24416
27.	Sardhana	" "	30138
28.	Debai	" "	22430
29.	Jhajjar	Haryana	24247

30.	Siana	Uttar Pradesh	22410
31.	Ganaur	Haryana	16489
32.	Bawal	"	7760
33.	Faridnagar	Uttar Pradesh	9116
34.	Baghpat	" "	17157

The towns ranked 1 to 14 qualify for first order settlements. However, considering their spatial organisation in the regional context and location of centres too close to each other, the towns of Shikarpur and Mawana in U.P. Sub-region are proposed to be developed as Sub-regional centres. For the same reason, the second order towns of Rewari and Palwal has been proposed to be developed as first order settlements. Sonipat (Haryana) and Modi Nagar UA (Uttar Pradesh), which have ranked in developmental hierarchy to be considered as Regional Centres, owing to their location and direction of development that has been taking place, would be developed as Sub-regional centres. The population policy has already proposed moderate growth of DMA towns excluding Delhi and as such Regional Centres would have to be identified from among the centres that rank in the development hierarchy and are located beyond DMA. As such, the finally identified Regional centres which would be developed on priority basis and would be known as priority towns are :

	<u>Regional Centres</u>	<u>Sub-region</u>
1.	Meerut	Uttar Pradesh
2.	Rohtak	Haryana
3.	Alwar	Rajasthan
4.	Panipat	Haryana
5.	Bulandshahr	Uttar Pradesh
6.	Hapur	Uttar Pradesh

7.	Khurja	Uttar Pradesh
8.	Rewari	Haryana
9.	Palwal	Haryana.

Sub-regional Centres

Sub-region

1.	Sonipat	Haryana
2.	Modi Nagar (UA)	Uttar Pradesh
3.	Shikarpur	" "
4.	Mawana	" "
5.	Baraut	" "
6.	Pilkhua	" "
7.	Sikandrabad	" "
8.	Murad Nagar	" "
9.	Pahasu	" "
10.	Khekhada	" "
11.	Jahangirabad	" "
12.	Gohana	Haryana
13.	Gulaothi	Uttar Pradesh
14.	Sardhana	" "
15.	Debai	" "
16.	Jhajjar	Haryana
17.	Siana	Uttar Pradesh
18.	Ganaur	Haryana
19.	Bawal	"
20.	Farid Nagar	Uttar Pradesh
21.	Baghpat	" "

4. The Regional towns would be developed primarily to accommodate the over-spill of Delhi's population by creating employment opportunities in secondary and tertiary sectors and they would act as magnet-centres for decentralisation of economic activities. In order that various regional centres are planned to accommodate the excess population of Delhi, a rational distribution has to be attempted. To decide whether

all these centres should be equipped to attract and contain potential migrants or the number should be limited to a few, a scientific study had been undertaken to evolve alternative models* for primary urban form in NCR. Various models of population distribution among priority towns have been assessed. They are :

- (i) a rational distribution of the excess population of Delhi in all the 8 priority towns/complexes so that the priority towns together accommodate the excess population of Delhi besides their natural growth by 2001.
- (ii) development of only three Regional Centres, namely Meerut, Panipat and Alwar for an additional population of 10 lakhs each to their 1981 population which would include their natural growth by 2001.
- (iii) development of only three towns, namely Meerut, Panipat and Alwar for an additional population of 10 lakhs each besides their natural growth by 2001.
- (iv) development of only three towns, namely Meerut, Panipat and Alwar for an assigned population of 10, 5 and 5 lakhs respectively in addition to their natural growth by 2001.
- (v) development of only three towns, namely Meerut, Panipat and Alwar and the excess population of Delhi would be proportionately distributed among these three towns based on their 1981 population.

- (vi) development of only three towns, namely Meerut, Panipat and Alwar to accommodate an additional population 6.7 lakhs each besides their natural growth by 2001.

These scenario's have been evaluated against developmental costs for residential, commercial, industrial, public, and semi-public, community facilities, city infra-structure and provision of Telecommunication facilities and benefits--assessed in terms of employment absorption potentiality of each scenario, acceptable rate of growth, standard of living and an acceptable standards of linkages between Delhi and the scenario settlements. Cost-efficiency ratios have been evolved for each scenario. The results indicate that the model which involves developing all the Regional Centres (8) to attract and contain the additional population to be directed from Delhi is the least cost and most efficient model. Growth trends and regional potentials of each of the selected Regional Centre have been assessed. The Regional Centres - Bulandshahr and Khurja would be developed as a complex while Rewari would be planned in relation to Daruhara and Bhiwadi Industrial townships in a form of a complex. The priority towns and their assigned population are as under :-

<u>Regional Centre</u>		<u>Population (in lakhs.)</u>	
		<u>1981</u>	<u>2001</u>
<u>Uttar Pradesh</u>			
1.	Meerut	5.36	15.50
2.	Hapur	1.02	4.50
3.	Bulandshahr	1.03	5.00
	Khurja	0.67	3.00
} As a Complex			

...../-

Haryana

4.	Palwal	0.47	3.00
5.	Panipat	1.38	5.00
6.	Rohtak	1.68	5.00
7.	Rewari	0.52	1.10
	Daruhera	-	1.00

Rajasthan

	Bhiwadi	-	1.15
8.	Alwar	1.47	5.00

As
a
Complex

5. Rural Development Strategy

It is expected that if the living conditions of the people in rural areas are improved by providing community facilities, health services, recreational, cultural, civic and other urban amenities in addition to employment opportunities in the vicinity if not in each village, the rapid migration of the rural population to urban centres in search of employment and a better life in the wake of rising expectations would be diminished - if not totally curtailed. The service centres and basic villages as identified in the Sub-regional Plans would be based on their centrality to serve greater volume of population.

* * * * *

LIST OF INDICATORS FOR THE SETTLEMENT
SYSTEM ANALYSIS OF NCR.

1. Population size - 1981.
2. Density of Population : Population - 1981/Area in sq.km.
3. Literacy Rate (%) 1981 : Total Literates/Total Pop.
4. Sex Ratio 1981 : No. of Females for 1000 male population.
5. Administrative Status - District Hq.
6. Administrative Status - Tehsil Hq.
7. Railway Station Availability.
8. Location on Bus-route.
9. Distance from Bus-route.
10. Distance from National Highway or State Highway.
11. Percapita Receipt (in Rs.) : Receipt through taxes etc., Revenue derived from municipal properties and power apart from taxation and Receipt from other sources excluding Government grant, loan and Advance - 1978-79.
12. Road Density : Total Pucca Road length (in kms.)/area in sq.km,
13. Road Density : Total Kutchha road length(in kms.)/area in sq.kms.
14. No. of Latrines per 1000 population (Total) : This includes water borne, service and other latrines.
15. No.of Service latrines only/1000 population.
16. Method of Disposal of night soil.
17. Protected water supply - Source.
18. Percapita Storage Capacity (in litres).
19. Fire fighting service at a distance of (in kms.)
20. No. of Electric connections per 1000 household : This includes electric connection such as domestic, industrial, commercial, road lighting points and others.
21. Proportion (%) of industrial and commercial connections to total connections.

22. No. of family clinics and dispensaries per 1000 population.
23. No. of beds in all medical facilities per 1000 population.
24. No. of Arts, Science and Commerce colleges per 1000 population.
25. No. of professional colleges (Medical and Engineering) per 1000 population.
26. No. of Higher Secondary, Inter, PUC Colleges per 1000 population.
27. No. of Cinema/Auditoria per 1000 population.
28. No. of Secondary and Matriculation Schools per 1000 population.
29. Availability of Public Library or Reading Room.
30. No. of Banks per 1000 population.
31. No. of Agricultural and non-agricultural Credit Societies per 1000 population.
32. Proportion (%) of main workers to total population.
33. Proportion (%) of main workers to total workers.
34. Proportion (%) of workers in Household industry - Manufacturing, Processing, Servicing and Repairs (Va) to total main workers.
35. Proportion (%) of workers in other activities to total main workers.
36. Growth rate of population - 1971-81.
37. Rate of Migration - 1971-81.
38. Distance from Delhi (in kms.).

* * * * *

AGENDA ITEM NO 7: POLICIES AND PROPOSALS FOR PROVISION OF
WATER SUPPLY AND SANITATION FACILITIES.

A. WATER SUPPLY

i) Norms : Urban:

The water supply level depends upon the availability of adequate sources of water, their yield and quality, local bodies and agencies charged with the responsibility of providing water and sufficient resources for implementing the water supply schemes. The existing position gives a varied picture among the constituents of the Region and the agencies responsible for water supply. The design norms vary substantially, and even the CPHEEO norms are found inadequate in a number of urban areas. At the same time, the drought prone tracts and places not having local sources, including towns suffer from water scarcity which necessitate distant water sources to be tapped.

In view of the target of achieving a balanced and harmoniously developed region accommodating some extra population that would otherwise be flowing into Delhi, the standards and norms to be employed in the planning process should be uniform for the entire Region whether for urban or rural sector. The towns falling in Delhi Metropolitan Area namely Faridabad, Ballabgarh, Gurgaon, Ghaziabad, NOIDA and Loni being contiguous to Delhi will have the same norms as that of Delhi. In addition, the eight towns and complexes identified for induced development or priority basis namely Meerut, Hapur, Bulandshahr-Khurja, Palwal, Alwar, Rewari-Dharuhera, Bhiwadi, Rohtak and Panipat which are planned to absorb 20 lakhs and odd population that would otherwise be moving towards Delhi should also be provided with such norms of supply that would be comparable to that of Delhi in order to vest them with the power of attraction and pull that Delhi wields today.

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In fixing the norms, two needs are to be safeguarded:

i) minimum level of water supply that should be expected to be achieved, and

ii) the minimum in the accepted range of norms which should be possible depending on the local conditions and resources. The norms to be adopted are proposed as follows:-

Urban centres with population	Norms to be achieved in lpcd
1) 5 lakhs and above	275
2) 2 to 5 lakhs	225
3) 1 to 2 lakhs	100 minimum
4) For the DMA towns and priority towns, the starting point should be 225 lpcd(50 gpcd) with a target of achieving 360 lpcd(80 gpcd) by 2001. The requirements should be graded according to the size of the projected population of the concerned urban centre. In towns like Rewari, Palwal, Dharuhera and Bhiwadi, where water scarcity is experienced as a chronic problem, minimum of 225 lpcd(50 gpcd) may be taken as the target to be achieved.	
5) In no urban centre, the norm should be less than 100 lpcd which is the technical requirement.	

In designing the new system or in augmenting the existing system of water supply, sewerage system should be taken simultaneously as an integrated part of one total system, and the sewer lines should be laid as the water supply trunks are laid. During the Sixth and Seventh Plans, for want of such action, there were more cases of water pollution seriously affecting the hygiene of the environment in many urban areas.

b) ² Norms-Rural

A minimum norm of 70 lpcd including a supply of 30 lpcd for cattle is proposed for rural areas. If independent connections are given, a minimum of 100 lpcd is advised. Spot sources may supply a minimum of 40 lpcd which can be used to supplement the piped supply.

c) Targets

In view of the low levels of coverage in water supply, the targets which have been agreed by the Government to of India under the International Drinking Water Supply and Sanitation Decade 1981-1990 programmes to be achieved by March, 1991 are reproduced as under:-

	<u>Coverage</u>	<u>Level of service</u>
Urban water supply	100%	Piped water supplies in all communities, where feasible, Demand range 70-250 lpcd; average 140 lpcd. Stand. posts in fringe areas, if necessary at strategic localities; demand range 25-70 lpcd; average 40 lpcd.
Rural Water Supply	100%	Piped water supplied for 30% of the population; demand range 25-70 lpcd; average 40 lpcd. Spot source water supplies for 70% of the population in the form of dug or tubewells with handpumps and/or power pumps; average demand 40 lpcd.

It is proposed that in all towns other than DMA and priority towns, and all rural areas, the foregoing are targets to be achieved by 1991.

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B. Sanitation

a) Urban

In regard to sanitation, the situation is quite different and much more serious in terms of reaching each individual or family with adequate sanitary facilities. Urban sanitation services to the population residing in urban areas is more manageable from a project view point and can be provided with these services on a community or groupwise basis. Though, for want of adequate resources and materials, low cost sanitation can be thought of, it should be taken as a short term measure and will have to be converted into a proper sanitation system subsequently. This is mainly because of the fact, that 'one litre' per flush which is the mainstay of the low cost sanitation, will hardly suffice to cause the flowing in the sewers besides it being insufficient to take care of the drainage requirements. There should be, therefore, adequate drainage facility, and open drains, which are by and large the sources of nuisance and pollution, should be discouraged and discontinued. Wherever handpumps are used for supplying water should be supplemented in stages by organised water supply so that the flow of sewage is adequately achieved. In many towns sewage is not treated and sewage farming is widely practised which is harmful and hazardous to human health. Sewage should, therefore, be treated to bring the pollutant level to permissible limits as stipulated by the Indian Standards Institution and Pollution Control Boards irrespective of the type of disposal of the sewage.

To begin with, all the DMA and priority towns should be fully provided with sewerage and sewage treatment facilities. The storm water drains should be covered and should be separate from the sewerage system.

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b) Rural

The rural sanitation has not been given enough attention so far. The rural areas, where piped water is supplied should be provided with sewerage system with treatment facilities. The sewers should be taken separate from drainage channels. Low cost sanitation measures should be resorted to in villages with handpumps for water supply. Such villages should subsequently be supplemented by piped water supply and sewerage system should be taken up. As far as possible, the sewage should be recycled after treatment for using it for gardens, fire fighting, parks and lawns, street washing, cooling etc.

In this regard, it is proposed to achieve the targets as suggested and accepted by the Government of India under the International Drinking Water Supply and Sanitation Decade 1981-1990, to be achieved March 31, 1991, by which are reproduced as follows:-

	<u>Coverage</u>	<u>Level of Service</u>
Urban Sanitation	80%	100% coverage for Class I cities with sewerage and sewerage treatment facilities, low cost sanitation methods in other towns. Overall coverage of 80% in all cities and Towns.
Rural sanitation	25%	Low cost sanitary methods of disposal.

By 2001, it is proposed to achieve 100% coverage in the case of urban sanitation and 50% in rural sanitation.

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C. Solid waste management.

Solidwaste management is an important area which deserves serious attention of the authorities concerned. The neglect of management of solidwastes is found to be harmful, besides causing recurring loss to the local bodies and authorities. Solid waste disposal and management should be planned for a minimum of 20 years and at least 'controlled tipping' should be adopted in dumping the solid waste.

Even if a compost plant is installed to manage the solid wastes, nearly 50% of the wastes will have to be dumped. Compost is a solid stabiliser and proper composting yields a good fertiliser which is in great demand. Incineration of the garbage is not advisable. Areas should be identified in all the towns for sanitary refill and all the towns above one lakh population should have a solid waste management arrangement. It should be done in the same way as in the case of material handling project.

D. Environmental Protection.

Non-treatment of water and sewage gives rise to environmental problems. Solid waste management plays a vital role in containing the pollution of ground water as well as atmosphere. Scientific sanitary land-fill measures may play an important role in protecting the environment. The areas for dumping of solid waste garbage may have to be identified while preparing the development plans for each urban centre in advance, so that the Municipal Authorities responsible for solid waste management may utilise such pre-identified locations for disposal of garbage. The derelict land on account of brick kilns and quarrying may be suitable locations for such operations.

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It is suggested that particularly in the DMA towns and priority towns, physical infrastructure like sewerage and drainage should be integrated and an integrated plan should be prepared for them.

E. Policies.

i) Water Supply: '

(a) Urban:

Majority of the households in urban centres who can afford and wherever possible be provided with house connections. whereas for the economically weaker sections, standposts may be provided at strategic locations. The urban centres which are not having organised/protected water supply system so far should be accorded the foremost priority along with the DMA and priority forms. In some of the urban areas, the existing water supply network is old and wornout, and it causes heavy leakages besides being grossly inadequate to cope with the present demand which is beyond its design capacity. This needs special attention for its being rehabilitated with some investment. This will considerably reduce maintenance and operation costs.

(b) Rural

More than half of the Region lies in rural areas. There is a wide backlog in the provision of drinking water to the rural areas. This sector, therefore, deserves the highest priority particularly in regard to the villages with problems such as scarcity, bad quality of water, non-availability of local sources etc. The pattern of coverage to be adopted would be to provide at least 25% by 1991 and 50% by 2001 of the rural population with piped/protected water supply and the rest through spot sources. Different approaches will be necessary due to problems of site location. In hilly areas as in the south western part of the Region, preference has to be given to gravity systems, so that that the overdependence on power supply is reduced to minimise

operation and maintenance costs. Wherever possible devices such as hydraulic rains could be employed for lifting water for small rural communities. In areas where the quality of water is affected by excess flourides and other toxic substances, reduced per capita requirement may have to be adopted.

ii) Sanitation:

(a) Urban

All class I cities, DMA and priority towns should be provided with sewerage and sewage treatment facilities by 1991. However, in the fringe areas of the cities, low cost sanitation measures may be adopted to start with, to be replaced by regular sewerage system subsequently. The other urban centres from class II to VI will wherever it is not possible due to technical and other reasons to provide sewerage systems, be provided with low cost sanitation facilities.

(b) Rural:

Simple sanitary latrines, septic tanks and pit privies could be adopted in rural areas. Different versions of these devices to suit the local conditions have been brought out by the National Engineering and Environmental Research Institute, Nagpur.

iii) General:

Water supply and sanitation should be taken as one integrated project, and the water supply and sewer lines should be kept sufficiently away from each other to avoid difficulty in execution and subsequent repairs and also possible pollution in case of leakage of sewer lines. Sewerage and drainage should be separate where the average annual rainfall exceeds 75cm. The sewage should be invariably treated to safe limits before it is let off into water bodies or for farming purposes. The waste water should not be allowed to stagnate anywhere in and around human habitation. All the drains should be covered. In large towns,

the sewage treatment process should include units to obtain its byproducts such as cooking gas and manure from the sludge. Solidwastes should be properly managed and recycled to the extent possible to provide a healthy and living environment to the human settlements.

AGENDA ITEM NO. 8

STRATEGY FOR DEVELOPMENT OF
EDUCATION AND HEALTH FACILI-
TIES IN THE NATIONAL CAPITAL
REGION.

A separate group was constituted by the National Capital Region Planning Board on Education and Health facilities, comprising of the concerned authorities of the States and Delhi Union Territory, with a view to evaluate the existing level of these facilities in the Region and to suggest strategy for its future development. A note prepared on the basis of the deliberations in the meetings of the Group regarding strategy for future development of these facilities in the Region is annexed, for consideration of the Planning Committee.

STRATEGY FOR DEVELOPMENT OF EDUCATION AND
HEALTH FACILITIES IN THE NATIONAL CAPITAL REGION

With the progress in economic development and the rise in living standards, provision of adequate social infrastructure at various level assumes an added importance. The availability of job opportunities attracts migrants seeking employment, whereas availability of better social infrastructure, viz. medical and educational facilities to some extent is responsible for family movement. Delhi is endowed with both resulting in large scale migration from the neighbouring areas.

In order to have balanced development of the Region and to check large scale migration to Delhi from the neighbouring areas besides providing job opportunities, provision for the availability of adequate level of social infrastructure facilities within a reasonably accessible distance will have to be made. The Regional Centres which have been proposed in the Plan for the induced development are likely to attract larger section of the Delhi-bound potential migrants and would be the main centres of attraction for the Sub-regional population as regards availability of higher order educational and medical facilities are concerned. Some of these Regional Centres, viz. Meerut in Uttar Pradesh, Rohtak in Haryana and Alwar in Rajasthan Sub-region, because of location of University education, affiliated medical, engineering and other professional colleges or being the biggest town or district headquarters are endowed with some of the higher order educational and medical facilities, which at present not only caters to the needs of the local population but are also attracting the population residing in neighbourhood areas. The other Regional Centres proposed in the Plan do not at present have adequate medical and educational facilities which can cater to the needs of the population living in their hinterland. In order to make these centres more attractive, augmentation of the educational and medical facilities to be atleast comparable to that of Delhi, would be necessary. The facilities at these centres will have

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to be improved not in terms of quantity but, quality also. The medical and educational facilities in the Delhi Metropolitan Area towns are also proposed to be improved to make them comparable to those of Delhi. The improvement of these facilities in these towns will make them self-contained.

The distribution of the educational and medical facilities in the lower order settlements, viz. Sub-regional centres, service centres and basic villages on equitable basis in the three Sub-regions will help to remove the sub-regional imbalances in the region. As the norms and standards followed in the three Sub-region are not uniform, keeping in view the existing norms prevailing in the sub-regions and the norms prescribed by the Central Government, the Plan proposes specific norms for the location of education and medical facilities in the urban and rural areas of the Region (Annexure - I). Special efforts will have to be made by the State Governments to achieve these norms till 2001 by making special provision also, wherever necessary. Incentives in the shape of free land or on concessional rates, along with financial assistance for construction of buildings should be considered by them to attract philanthropists and premier educational and medical institutions in the country to set-up their branches in the region.

Annexure - I

Norms and Standards for Location of Education
and Health Facilities

Sl. No.	Type of Facility	<u>Norms Proposed</u>	
		Rural	Urban
A. EDUCATION			
1.	Nursery School	One in each village	One for 2,500 population.
2.	Primary School (incl. classes upto VIII Standard.	One in each village	One for 5,000 population
3.	Higher Secondary	One in each village with population 10 - 15,000	One for each town with 10 -15,000 population.
4.	College	-	One for each town with 80,000 to 1,00,000 population.
B. HEALTH			
		<u>Rural/Urban</u>	
1.	Sub-Centre	One for 5,000 population.	
2.	Primary Health Centre	One for 30,000 population.	
3.	Community Health Centre with four basic specialities;	One for 1,00,000 population.	

AGENDA ITEM NO. 2a

TRAFFIC AND TRANSPORT
PLAN FOR N.C.R.

In connection with the preparation of the Draft Regional Plan - 2001, Traffic and Transport Surveys and Studies were entrusted to the Operation Research Group, Baroda. Their recommendations will be circulated at the meeting for consideration by the Planning Committee.

ANNEXURE TO AGENDA ITEM NO.9

TRAFFIC AND TRANSPORT PLAN-NCR

1. The NCR Plan would be multi-sectoral in its nature and scope ensuring inter and intra-sectoral integration. Transport would be one of the important sectors of development. The NCR Planning Board appreciates the important role of transport in providing accessibility and mobility to enable efficient movement of passengers, goods and services and also guiding the overall pattern of development within the Region. The transport sector development would be highly capital intensive and of long gestation period. In view of this, it is necessary to have adequate and relevant data/information to identify and test transport sector development under different policy scenarios and select the appropriate system. For this purpose the Board got traffic and transportation studies conducted through Operation Research Group (ORG).

2. ORG have conducted various types of transportation surveys such as :-

- i. Volume Count by vehicle type on all important links (NH & SH) in the NCR.
- ii. Road side interviews on sample basis at about 60 cordon points representing major nodes (urban) in NCR.

- iii. Road inventory survey.
- iv. O.D. characteristics of passengers and goods by bus and rail at major rail and road terminals.
- v. Rail network inventory and speed and delay surveys etc.,

In addition, the socio-economic profiles of urban zones in the NCR have been prepared from various sources including special reports dealing with the region.

3. On the basis of above surveys and data an analysis has been done regarding the traffic generation and attraction characteristics with respect to population and economic basis of an area. Future passenger and goods flows have been projected. Calibration and projection using suitable models have resulted in the development of alternative networks under two scenarios viz.

Scenario 1:

DELHI TO BE CONTAINED IN TERMS OF BOTH POPULATION AND ECONOMIC GROWTH

Ghaziabad and Faridabad to be contained in terms of large and medium industrial growth but population will grow and the

city to achieve more balanced population employment(job) relationship. Gurgaon, Panipat , Sonapat, Hapur and Alwar to grow as important industrial centres.

Meerut, Rohtak, Bulandshahar to grow as urban centres with higher growth of trade, services and small industry.

Scenario II :

DELHI AND GHAZIABAD CAN NOT BE CONTAINED TO THE
DESIRED LEVEL AND WILL GROW AT LESSER RATE THAN
THE PAST.

4. Alternative Network :

Rail network:

4.1 Short Term improvements:

To cater to additional passenger traffic in existing network, the Railways plan to increase the composition of passenger trains from 12/13 coaches at present to twenty coaches. It is expected to double the carrying capacity of existing passenger trains without increasing their number.

In view of very large projected increase in passenger traffic in some of the corridors which is presently catered by the railways system an attempt has been made to what extent the railway system can relieve the pressure on road system. The alternative of increasing the number of coaches on a train as well as increasing the number of trains on the various corridors have been examined in detail.

In generating the above estimates, the following assumptions have been made :

- a) For Broad gauge standard occupancy per coach for suburban traffic is taken as 100.

- b) Number of coaches per train have been taken as 22.
- c) For meter gauge section, maximum length of trains, of 20 MG coaches and passenger occupancy per coach has been taken as 80.

4.2 Long Term improvements

In the long term, it is observed that the existing network has a number of bottlenecks which can be removed to create quite a large capacity in the rail network. The most important of them are discussed below:-

- a) Create additional capacity by rerouting certain through-trains by avoiding lines like Frontier Mail. For example this train could be routed via Delhi avoiding line and sent to Punjab via Delhi-Ambala line instead of Ghaziabad - Saharanpur as at present. It would need the expansion of facilities at Safdarjung station which is envisaged as a future terminal for Delhi.
- b) Rationalisation of movement of freight traffic to Punjab/Haryana to avoid their concentration via Delhi at present. Due to shortage of diesel trains

about 10 coal trains per day which should normally move via Lucknow Saharanpur route are now moving via Allahabad-Ghaziabad electrified route.

- c) Eliminate existing bottlenecks on short stretches by providing following additional facilities:(Map.1)
- i. On Palwal-Faridabad-Delhi section existing 3 lines will be converted to 4 electrified lines.
 - ii. It will be necessary to lay a dedicated single M-G line from Delhi (Patel Nagar) to Rewari/ Alwar. This section will not be electrified and trains will run with diesel traction on Pull-Push system. In addition a full fledged suburban terminal with all facilities will have to be developed at Patel Nagar.
 - iii. Providing an additional line on the single line Murad Nagar-Meerut Cantt section and electrifying the entire section with an EMU terminal at Meerut.
 - iv. Quadrupling of Ghaziabad-Sahibabad section, with electrification.

- v. Provision of an additional third line (reversible) and a fly over at Khurja will enable traffic to move from Bulandshahr to Ghaziabad.

The above estimates of maximum capacity have to be reduced from the total forecasted public transport trips only for those O-D pairs which both are on the route. Another consideration is the problem of peak which will have to be met during a short time interval. Disadvantage in terms of low returns from suburban traffic in view of its intrinsic fare structure and the advantage of road in moving short-haul traffic is also an important issue.

However the significant advantage in terms of operating cost per passenger and the availability of land along the corridors where the improvements have been suggested call for a scientific comparison of the construction of road infrastructure with that of the rail.

4.3 Rail/Road shares of projected traffic

The rail share in the existing corridors vis-a-vis the total public transport in the existing situation is 35% as compared to the overall share of 25% for the whole of NCR. In scenario I these shares are estimated to be 53% for the corridors and about 30% for the whole

This is based on the assumption that the additional traffic only can be allocated to the rail system and this share will depend on both the quantum of total additional traffic as well as the additional capacity creation on each corridor.

5.0 Alternative Network and traffic loading

The projected traffic by road has been obtained by deducting the possible traffic which can be carried by rail. As discussed in the earlier section, the additional carrying capacity has been estimated under two alternative short-term and long-term measures. Short term measures imply only marginal improvement in terms of utilisation of spare capacity for passenger traffic and doubling of rakes in most of the train. Long term measures on the other hand, suggest rerouting from the existing congested corridor additional lines and electrification. Alternative road network presented in this section is based on the projected share of bus transport (out of total public transport) under assumption of realisation of short term measures only. Implication of long-term measures in terms of rail road share are briefly discussed in the following section and will be

elaborated in the subsequent report. This traffic has been then been loaded on the networks under consideration using the "all or nothing" assignment. The loading is done after working out the shortest time path on the network between any two O-D pairs.

5.1 The networks on which these loadings have been made are

- a) Existing Network
- b) IDP Network (Map.2)
- c) Freeway Network (Map.3.)

5.2 The IDP network envisages conversion of all National Highways into Motor way which would be of limited access and all intersections grade separated. The network also envisages an outer and inner ring road connecting the priority towns both to serve as a bypass for Delhi as well as to connect the different priority towns.

5.3 The freeway alternative on the other hand is only a modification of the IDP network. The major difference is that it suggests the construction of 4 freeways on new parallel alignments between Delhi-Ghaziabad-Meerut, Delhi-Sonepat-Panipat, Delhi-Gurgaon-Rewari and Faridabad-Noida-Ghaziabad. The inner grid suggested in IDP network, Faridabad-Sikandrabad is removed and

so also is the Panipat-Muzafarnagar link on the outer grid, upgradation to M-1 standard of Delhi-Meerut, Delhi-Panipat, Delhi-Rohtak, Delhi Gurgaon and to M-2 standard of Kurja-Palwal is also not considered.

Loading on these alternatives shows that the utilisation of links has increased in each progressive network.

The overutilised links in the existing network is 71%, IDP network 22%, Freeway Network (scenario I) is 14% and Freeway Network (Scenario II) is 13%

6.0 Under different options the traffic distribution and flows on important roads within NCR.

- a) In the year 2001 existing network is going to be totally ineffective to carry the volume of traffic likely to move over them.
- b) Even after upgrading the NH into M.1 road and providing inner and outer grid of M.II standard, traffic flow on important roads will be operating at considerable high volume for three links namely Delhi-Ghaziabad, Delhi-Gurgaon and Sonipat-Panipat (Volume/capacity ratio exceed 1.5).

- c) Introduction of free way net work reduces the load, on the corridors sizeably. This will give better flow conditions and higher operating speed on existing network.
- d) Three of the M-I road namely Delhi-Ghaziabad-Meerut, Delhi-Panipat, and Delhi-Gurgaon will be operating at relatively higher volume of traffic. Taking into account, the growth rate, these links will become congested in near future (beyond 2001). Apart from this fact under such heavy volume, operating speed will be considerably reduced. The very purpose of reducing travel time will not be achieved. This picture radically changes with the free way network.
- e) Under freeway network both the roads existing as well as freeway offer much higher travel facility.
- f) Total transportation cost under freeway system will be much less.
- g) Freeway system will serve through and local traffic in more meaningful way. Upgradation of existing links to M-I will not serve local traffic

which will be generated in between intervening links under freeway conditions. The existing link can act as service roads.

- h) Under IDP network, only one link out of the four existing links leading to Ghaziabad will be converted into M-I. These links will be practically operating at 1.5 times the capacity, while under freeway system these links will be operating at half the capacity. Similar is the case with other links also.
- i) The introduction of new freeway links namely Faridabad-Noida-Ghaziabad will divert fairly good amount of traffic and will relieve burden on Delhi roads.
- j) However the costs of the Freeway network estimated roughly at Rs.400 crores (likely to be revised upwards) and the cost of IDP network Rs.240 crores (also likely to be revised upwards) needs to be considered against its respective benefits to arrive at a cost-effective alternative.

7.0 Comparison of IDP and Freeway network:

A comparison of the IDP and Freeway network are given below:

IDP NETWORK

1. INNER RING ROAD

- a) Connection from Sonipat-Gauhana changed to Sonipat-Rohtak.

2. ALWAR-INNER RING CONNECTION

3. Conversion of existing National Highways and Delhi-Meerut into Motorway (M-1)

FREEWAY ALTERNATIVE

1. INNER RING ROAD

- a) Change in Faridabad-Dankaur-Sikandrabad to Faridabad-NOIDA-Ghaziabad
- b) Change in Sonipat-Gauhana to Sonipat-Rohtak
- c) Palwal-Khurja road made 2 lane from M-2.

2. ALWAR-INNER RING CONNECTION

- a) Connection made through Alwar-Ramgarh-Tijjara road instead of new alignment suggested in IDP.

3. Parallel freeway alignments on Delhi-Meerut, Delhi-Rewari and Delhi-Panipat recommended

IDP NETWORK

4. OUTER RING ROAD

5. RAILWAY

- a) Khurja-Palwal-Rewari-
Rohtak rail connection

- b) Electrification of Selected
lines.

FREEWAY ALTERNATIVE

4. OUTER RING ROAD

- a) Panipat-Muzzafarnagar
link not considered.

5. RAILWAY

- a) Short term improvements
in the form of increasing
number of rakes per
train.
- b) Long term measures by
train rerouting and
augmentation of capacity
on corridors, through
addition of lines/
electrification.

8.0 The road network costs of the IDP alternative will be about Rs.240 crores as against Rs.400 crores for the Freeway alternative. However it should be observed that the Freeway network is under revision in view of the increased capacity which can be provided by rail system. Another point which needs consideration is the difficulty in converting the existing national highways and important state highways into limited access motorways.

The freeway and the rail proposals are competing to each other on the Meerut and Rewari corridors. This has to be explicitly examined in the context of overall network evaluation.

9. Regional Roads :

The approach adopted to evolve a viable settlement system in National Capital Region involves identification of a four tier system of settlements in which while the nearby same order centres would be linked directly, efforts would be to link the lower order centres with the nearby higher order centres. It envisages developing a few selected Regional centres on an intensified scale which would form first order settlements irrespective of other settlements which may be identified later and selection/identification of such centres would be based on their ability to attract and accommodate greater volume of activities and population. Such Regional centres have been identified as:-

- i. Meerut, Hapur and Bulandshahr - Khurja from Uttar Pradesh Sub-region.
- ii. Panipat-Rohtak, Rewari-Dharuhera and Palwal from Haryana Sub-region and

iii. Alwar and Bhiwadi from Rajasthan
Sub-region.

The studies which have been undertaken as a part of the transport sector plan have primarily dealt with the connectivities of the three major components of NCR viz., Delhi Urban Area, Delhi Metropolitan Area and the priority towns. The further connections to be provided to the lower order settlements will form part of the next phase. In this phase, taking off from the finally evolved network for the major areas, connectivity will have to be provided to these settlements. This phase of the exercise in coordination with the earlier phase (nearing completion) will be the final transport sector development plan. To this end some of the state Governments have already submitted their requirements of regional road of the next order as follows:-

A. Uttar Pradesh

1. Widening and strengthening of
 - (i) Delhi-Baghpat-Baraut Road
 - (ii) Ghaziabad-Bulandshahr-Khurja.

2. Bye passes around Meerut on

- (i) Delhi - Muzaffar Nagar road (Part)
- (ii) Delhi - Garh and
- (iii) Delhi Hapur roads.

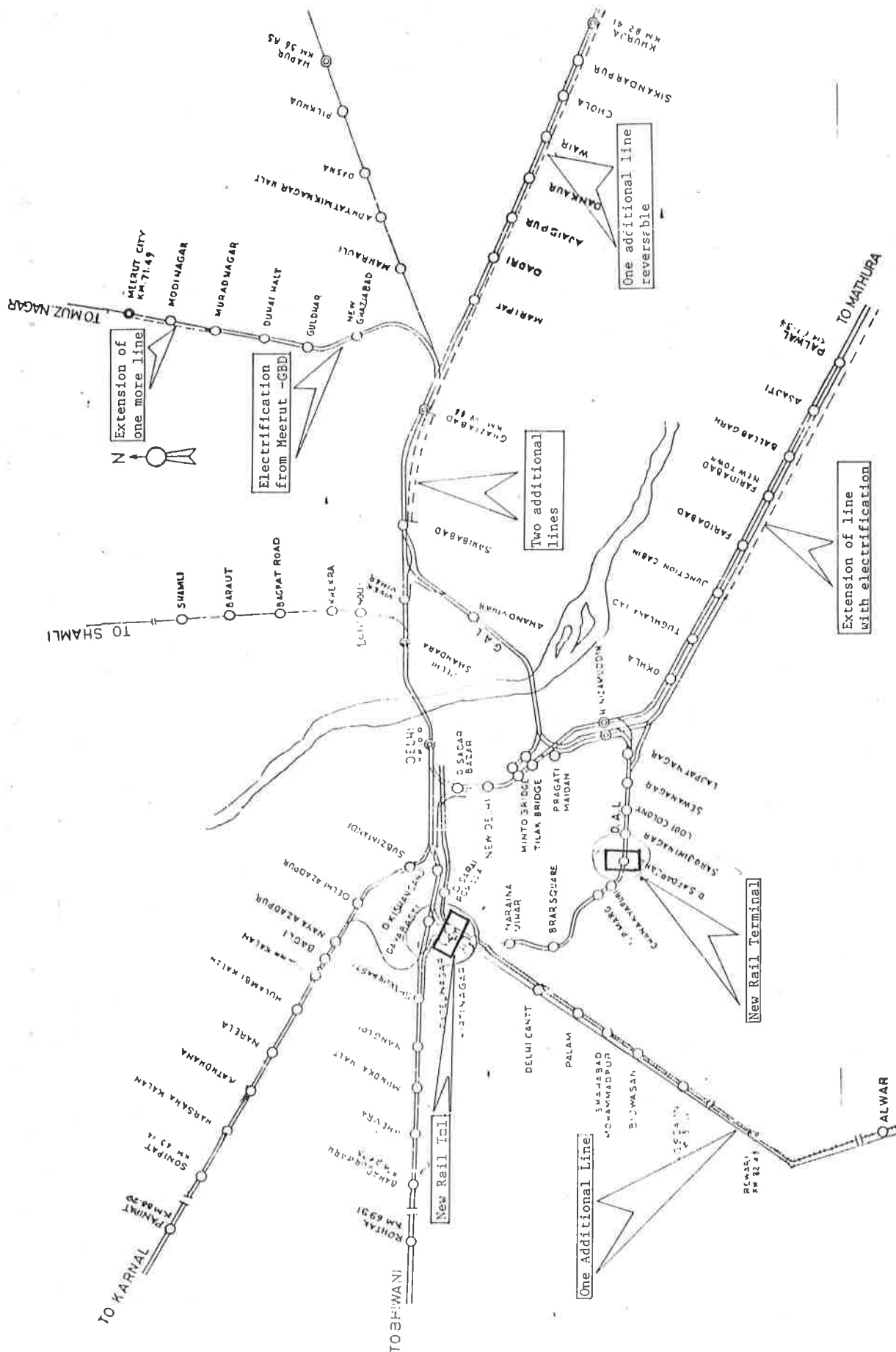
3. Road overbridges near Partapur on DLI-MEERUT ROAD
and Meerut Railway Station on Meerut-Baghat road.

B. Haryana

- (i) Kotkasim - Rewari Road
- (ii) All road over bridges falling on proposed
NH & SH.

C. Rajasthan

- (i) Alwar - Kishangarh - Tapukara-
Bhiwadi
- (ii) Kishangarh - Kotkasim - Rewari
- (iii) Road over bridge on these roads
- (iv) Alwar - Ramgarh - Ferozpur-Jhirka
- (v) Alwar-Behror
- (vi) Alwar - Shahpura



RAILWAY NETWORK INVENTORY IN NATIONAL CAPITAL REGION
Map 1



LEGEND

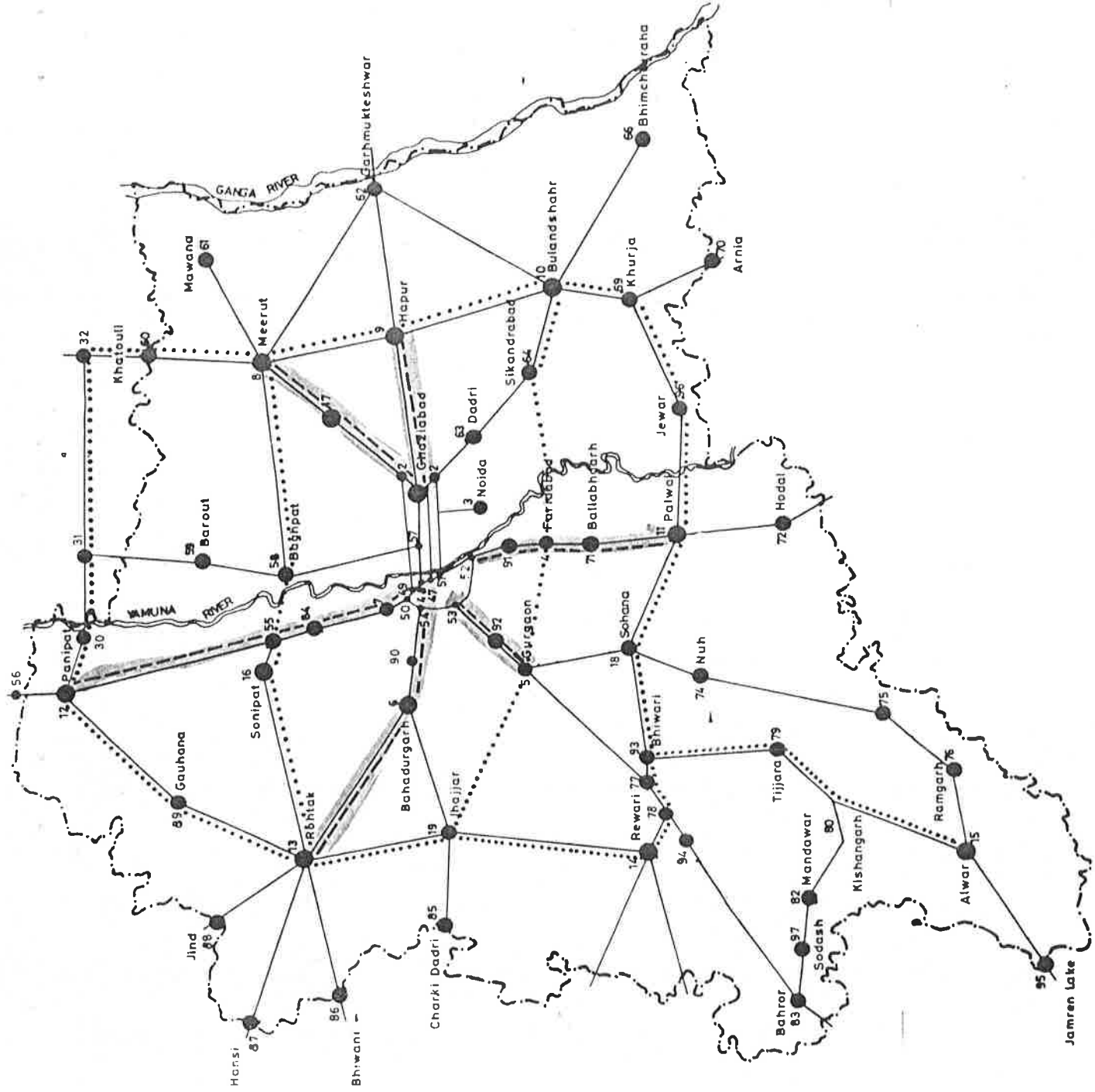


PROPOSALS



IDP ROAD NETWORK

Map 2

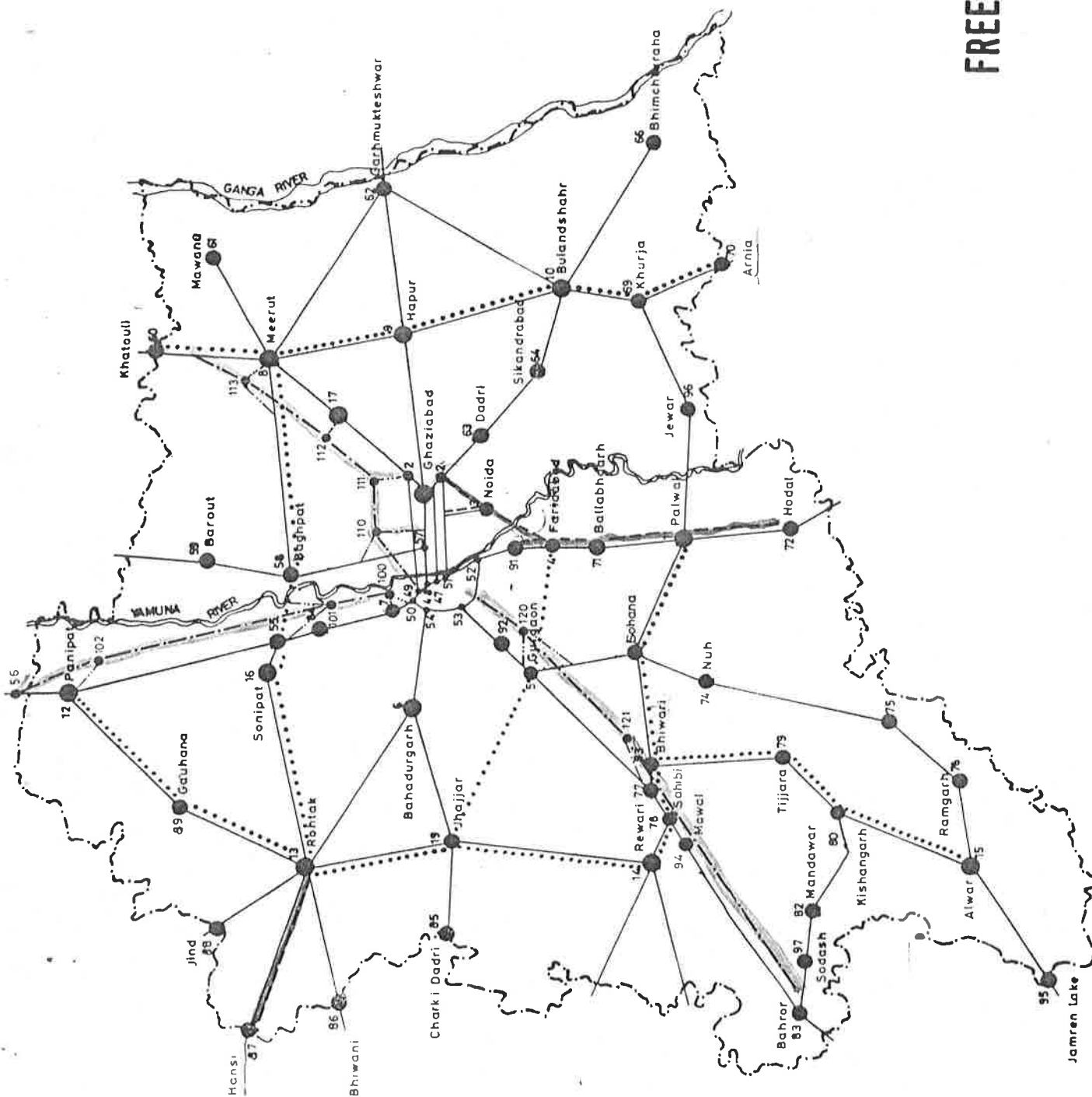




LEGEND



PROPOSALS



AGENDA ITEM NO.10

STRATEGIES AND PRIORITY
AREAS FOR DEVELOPMENT.

Under Section 10(2)(f) of the NCR Planning Board Act, the Draft Regional Plan is required to indicate the 'priority areas' for development. Accordingly, the strategies for development and also the 'priority areas' for 2001 is annexed for consideration of the Planning Committee.

* * * * *

STRATEGIES AND PRIORITY AREAS FOR DEVELOPMENT - 2001

The Draft Regional Plan for NCR 2001 stipulates an inter-related policy frame work for achieving the objectives of NCR Plan. The policies require several strategies to be followed each of which has significant impact on programmes to be undertaken in the NCR. Various strategies and priority areas for development as discussed are related to the goals of the NCR Plan to be achieved by 2001-AD, the goals being (i) a manageable Delhi, ii) Harmonised and Balanced development of the NCR.

1.1 Policies and Strategies

The policies and strategies to be followed for achieving the objectives of the NCR Plan are annexed. The policies contained in the IDP are reproduced with slight modifications where necessary for the approval of the Committee. The strategies to achieve the policies are, for the first time, set out for consideration and approval of the Committee.

Although the year 2001 has been taken as perspective for the Draft Regional Plan, the Plan is not finite but is a part of a continuous process. Nevertheless it is essential to structure this continuous process into discrete phases, that can be organised within the limits of the resources and implementing capability of organisations involved. It is equally essential to place the tasks into an order of priority. The tasks can be divided into three categories:-

- i) Continuation of ^{the} work of Regional Plan through the preparation of Functional Plans by the NCRPB and Sub-regional plans by each of the participating States and Delhi U.T.
- ii) Action plan, programmes and project plans by each of the participating States and Delhi UT
- iii) Institutional Improvements
- iv) Resource mobilisation
- v) Approval & Monitoring of Projects
- vi) Implementation of Regional Plan

The tasks are elaborated as below:-

1) Continuation of work of Regional Plan:

The Draft Regional Plan contains broadly policy framework, strategies and guidelines for development of the Region together with broad landuses for the NCR 2001. After the Regional Plan has been published for inviting objections/suggestions, the next step would be to discuss the proposals as widely as possible with the governmental agencies both Central and State, Implementing agencies and community at large, for making suitable modifications in the light of objections/suggestions received. For this purpose, an illustrated presentation of the main components of the Regional Plan would need be prepared and presentation made to various forums. Seminars will ^{also} be held with the implementing agencies who will play a role in achieving the aims of the Regional Plan. This is expected to provide an useful contribution to the continuing development of policies.

The office of the NCRPB will prepare Functional Plans for various sectors of development in close collaboration with the Central/State government agencies. The Functional Plans will identify areas of action to achieve the objectives of the NCR Plan.

The action plan will suggest measures:

- a) to contain the population of Delhi U.T for decelerated growth
- b) Moderate growth of DMA excluding Delhi UT
- c) Action to induce growth in towns/complexes identified for priority development by enhancing the momentum of economic expansion and technological development and also adopting effective promotional measures to create employment opportunities to attract the Delhi-bound migrants.
- d) Action to expand and to effect qualitative and quantitative improvement in physical and social infrastructure in towns identified for priority development.

The Sub-regional plans will be prepared by each participating State for their respective sub-regions. The Sub-regional plan will indicate the following elements to elaborate the Sub-regional plan at the Sub-regional level namely;

- a) reservation of areas for specific landuses which are of the regional or sub-regional importance,
- b) future urban and major rural settlements indicating their area, projected population, predominant economic functions, approximate site and location,
- c) road net-work upto the district roads and roads connecting major rural settlements,
- d) proposals for the co-ordination of traffic & transportation, including terminal facilities,
- e) priority areas at sub-regional level for which immediate plans are necessary,
- f) proposals for the supply of drinking water and sanitation and drainage; and
- g) any other matter which is necessary for the development of the Sub-region.

ii) Action Plan, Programmes & Project Plans by each of the participating States and Delhi UT.

a) The Draft Regional Plan for the NCR envisages the spread of economic activities over a wider area in the Region more specifically in the towns/complexes that are identified for this purpose. These priority towns need to be planned each as a self contained unit and action taken for their coordinated and synchronised development both physical and economic to maximise their growth. This can only be done through an inter-related programme for which projects would be required to be identified over a time-scale.

b) The development strategies approved in the Draft Regional Plan need to be translated into a set of programmes and phased suitably to achieve the major objectives of the plan. The three phases may be as follows:

- Phase I (1987-1990) corresponding to the remaining part of 7th Five Year Plan period.
- Phase-II (1991-95) corresponding to the 8th Plan period
- Phase-III (1995-2001) corresponding to the 9th Plan period and part of 10th Plan period.

c) Bringing ^{down} the growth rate by inducing the Delhi

bound migrants to priority towns through creation of job opportunities will have a strong impact on priority towns and will require serious planning efforts. These towns cannot absorb a large number of migrants who are presently moving to the National Capital without inducing growth rate in them three to four times higher than their present rate. In view of the greater concentration of population in the Capital, the need for flow of migrants to be re-directed to priority towns will be greater. This will require well identified projects to gradually increase the migration share to the priority towns by improving their economic base. The dominant force in triggering immigration is the growth of secondary and tertiary sectors. The secondary sector has a greater multiplier impact upon the expansion of local and regional economy than a similar employment expansion in the service sector. For effectuation of such a programme, the institutional framework both at the State and city levels will need to be strengthened and action taken to improve the resource mobilisation at the local level. This will also call for inter-linkages of investments and programmes of the agencies responsible for economic activities, State level functional agencies and local authorities incharge of the infrastructural services and maintenance.

NEED FOR MULTISECTORAL PROJECTS: In the context of above, coordinated urban development projects for various sectors of the Region/selected towns will need to be prepared.

The regional level components will be:

- Surface Transport both for N.H and regional roads
- Railways
- Telecommunications

And the priority towns components will be:

- Development of economic activities - Industry, Distributive Trade & Commerce and Government and Public Sector Offices to promote employment and improve the economy.
- urban services like water supply, sanitation, storm water drainage, solid waste management and traffic & transportation etc.
- provision of social infrastructural facilities such as education and health
- development of shelter

In this regard, more appropriate action could be to designate the areas where urgent planning action is needed and to treat these as 'priority areas' for which integrated plans and programmes would be prepared. These would be called 'action areas' and the plans would be called 'action plans'. To prepare the plan, it is suggested that the Planning Cells of the State Governments would be responsible for complete programming including the tasks, of coordinating public and private agencies. A programme would be devised in relation to the priorities finally culminating into projects for implementation.

iii) Institutional improvements

For efficient implementation and management of the projects, it is necessary to tone up institutions incharge of urban development, services and management at all levels. This will involve review of the working of the development authorities, taxation and tax recovery system of the local authorities and monitoring methods of the projects, at the local level.

iv) Resource mobilisation

Under Section 22 of the NCR Planning Board Act, it is provided that a NCRP Board Fund be constituted. The sources for such fund shall be:

- a) all grants and loans from the Central Government
- b) all sums paid to the Board by the participating States & UT
- c) all sums received by the Board in consultation with the Central Government, participating State Governments & UT.

NCRPB's Resources:

It is proposed to mobilise resources under Section 22(1)(c) for implementation of the NCR projects through:

- a) Life Insurance Corporation of India
- b) Debentures/bonds
- c) Nationalised Commercial Banks
- d) Proposed Urban Development and Urban Water Supply Finance Corporation

State Government Resources:

At the State level, the general provision of pattern of matching share will continue. However, the State Governments will make efforts to raise additional resources through

- a) HUDCO
- b) LIC
- c) Nationalised Commercial Banks
- d) Market Borrowings

Local Government Resources:

- a) Locally raised taxes
- b) User charges
- c) Market Borrowings
- d) other non-tax revenues for performance of statutory and regulatory functions
- e) transfers from higher level of Government including shared taxes and grants-in-aid.

V) Approval and monitoring of Projects:

The project plans will be mainly prepared by the implementing agencies at local levels within the framework of the Regional/Sub-regional/Functional Plans in collaboration with the proposed Planning Cells at the State levels. NCR Planning Board will assist the implementing agencies in preparation of identified projects. Each implementing agency will have a Monitoring Cell for the projects under that agency and they will submit timely progress of the performance in implementation and problems, if any, arising in the course of implementation as a feed back to the NCRPB. The NCRPB will develop a Monitoring and Evaluation system and also extend assistance in the preparation of objective-effective projects in addition to financially viable projects.

VI) Implementation of the Regional Plan :

The Regional Plan, although containing socio-economic policies has alternative strategies with investment implications. The Regional Plan represents an end product, the implementation of which would be pursued on the desired strategies and goals through a number of projects. However, in the light of the impact the development would create, the Plan and its strategy in its entirety would be reviewed every five years and, after such review, substitute it by a fresh regional plan or make such modifications or alterations therein as may be found necessary.

POLICIES AS IN INTERIM DEVELOPMENT PLAN	POLICIES AS PROPOSED TO BE INCLUDED IN THE DRAFT REGIONAL PLAN
<u>GOALS</u>	<u>GOALS</u>
1. Evolving harmonised policies for control of landuse and development of infrastructure in the NCR so as to avoid any haphazard development of the Region.	Evolving harmonised policies for control of landuse and development of infrastructure in the NCR so as to avoid any haphazard development of the Region.
2. Achieving a manageable Delhi by 2001 AD.	Achieving a manageable Delhi by 2001 AD.
<u>POPULATION POLICY</u>	<u>POPULATION POLICY</u>
1. To control the growth of population of Delhi to 112 lakhs by the year 2001.	To decelerate the growth rate of Delhi UT to achieve a manageable Delhi by 2001 A.D. with a population of 112 lakhs.
2. To control the growth of population in the towns in the Delhi Metropolitan Area (DMA) so as to restrict its population size to a total of 37 lakhs by 2001 AD with the individual towns having the growth restricted to accommodate the following population: In DMA the rural population would be 1 lakh.	To control the population increase of Delhi Metropolitan Area (DMA) excluding Delhi to achieve a moderate growth
3. The Region is to be planned for a total population of 325 lakhs with an urban component of 234 lakhs.	To induce growth rate of urban population in the area beyond DMA in the NCR.

SETTLEMENT PATTERN POLICY

1. To counter-act the pull factors exerted by Delhi and also to absorb the difference between the projected growth and assigned population of both Delhi and the Delhi Metropolitan Area, the following towns in the Region are to be developed on priority basis to accommodate the population noted against each:

Meerut	- 13 lakhs
Hapur	- 6 lakhs
Bulandshahr-Khurja	- 10 lakhs
Palwal	- 3 lakhs
Alwar	- 5 lakhs
Rewari-Dharuhera-	- 3 lakhs
Bhiwadi	
Rohtak	- 5 lakhs
Panipat	- 5 lakhs
Total	- 50 lakhs

To counter-act the pull factors exerted by Delhi and also to absorb the difference between the projected and the assigned population figures of both Delhi and the Delhi Metropolitan Area, the policy proposes to develop a few selected areas intensively on priority basis.

2. For a judicious distribution of the population a four tier system of settlements has to be evolved to include regional centres, sub-regional centres, service centres and basic villages. The functional character of these centres are to be identified in terms of the available infrastructural and social services. The remaining 37 lakhs of urban population and 91 lakhs rural population will be accommodated in a hierarchical pattern of settlements consisting of intermediate towns, growth centres and villages.

In evolving a future settlement pattern for the region for judicious distribution of population, the policy proposes a four-tier hierarchical system of settlement consisting of regional centres, sub-regional centres, service centres and basic villages for the balanced development of the region.

POLICIES AS PROPOSED TO BE INCLUDED IN
THE DRAFT REGIONAL PLANPOLICY ON PHYSICAL INFRASTRUCTURE
(WATER SUPPLY AND SANITATION)WATER SUPPLY

1. The supply of drinking water of the required norm and standard should be made available to the priority towns in the first stage and to all the towns and rural settlements in the second phase.
2. To meet the additional requirement of water supply to 10,025 lakh litres per day for the priority towns, existing sources of water supply have to be developed and efficiently distributed on a unified basis.
3. The development of most of the water supply sources would require interstate cooperation and, problems of water supply should be dealt in a unified manner for the NCR as a whole. A survey to assess the ground water yield would be undertaken in the priority towns. It would be necessary to plan, design and implement and maintain all water supply schemes in an integrated manner for NCR.

a) Urban : Majority of the households in urban centres who can afford and wherever possible be provided with house connections, whereas for the economically weaker sections, stand-posts may be provided at strategic locations. The urban centre which is not having organised/protected water supply system so far should be accorded the foremost priority along with the DMA and priority towns. In some of the urban areas, the existing water supply network is old and wornout, and it causes heavy leakages besides being grossly inadequate to cope with the present demand which is beyond its design capacity. This needs special attention for its being rehabilitated with some investment. This will considerably reduce maintenance and operation costs.

b) Rural : More than half of the Region lives in rural areas. There is a wide backlog in the provision of drinking water to the rural areas. This sector, therefore, deserves the highest priority particularly in regard to the villages with problems such as scarcity, bad quality of water, non-availability of local

sources etc. The pattern of coverage to be adopted would be to provide at least 25% by 1991 and 50% by 2001 of the rural population with piped/protected water supply and the rest through spot sources.

Different approaches will be necessary due to problems of site location. In hilly areas as in the south western part of the Region, preference has to be given to gravity systems, so that the overdependence on power supply is reduced to minimise operation and maintenance costs. Wherever possible, devices such as hydraulic rams could be employed for lifting water for small rural communities. In areas where the quality of water is affected by excess flourides and other toxic substances, reduced per capita requirement may have to be adopted.

SANITATION

4. Detailed Plan for sewerage scheme, solid waste management and sanitation should be prepared and adequate funds should be arranged for implementation of schemes.

5. Settlements where a sewerage system is not available, low cost sanitation system for individual families should be adopted as a short term measure.

a) Urban : All class I cities, DMA and Priority towns should be provided with sewerage and sewage treatment facilities by 1991. However, in the fringe areas of the cities, low cost sanitation measures may be adopted to start with to be replaced by regular sewerage system subsequently. The other urban centres from class II to VI will,

wherever, it is not possible due to technical and other reasons to provide sewerage systems, be provided with low cost sanitation facilities.

- b) Rural : Simple sanitary latrines, septic tanks and pit privies could be adopted in rural areas. Different versions of these devices to suit the local conditions have been brought out by the National Engineering and Environmental Research Institute, Nagpur.

6. Integrated Master Plans for providing water supply, power, sewerage and storm water drainage facilities in the DMA towns and selected towns should be prepared both for the existing areas proposed for development so as to offset the existing deficiencies as also to meet the estimated demands from these towns.

7. Strict enforcement of Water Pollution Control Act of 1974 is an immediate must. Complete treatment of waste water before discharging it into the rivers is essential for controlling pollution and maintaining better environment.

Water Supply and Sanitation should be taken as one integrated project, and the water supply and sewer lines should be kept sufficiently away from each other to avoid difficulty in execution and subsequent repairs and also possible pollution in case of leakage of sewer lines. Sewerage and drainage should be separate where the average annual rainfall exceeds 75cm. The sewage should invariably be treated to safe limits before it is let off into water bodies or for farming purposes. The waste water should not be allowed to stagnate anywhere in an around human habitation. All the drains should be covered. In large towns, the sewage treatment process should include units to obtain its by-products such as cooking gas and manure in the form of sludge. Solid-wastes should be properly managed and recycled to the extent possible to provide a healthy and living environment to the human settlements.

POLICIES AS IN INTERIM DEVELOPMENT PLAN

1

POLICIES AS PROPOSED TO BE INCLUDED IN THE DRAFT REGIONAL PLAN

2

POWER DEVELOPMENT

1. The power supply should be uninterrupted and available in adequate quantity throughout the Region. Without a satisfactory power supply throughout the Region, the basic objective of National Capital Region Plan cannot be achieved.

In order to ensure that priority towns get a satisfactory power supply, power should be supplied to these towns on preferential basis.

1. The National Capital Region has to be given special importance & attention so that power supply is uninterrupted and available in adequate quantity throughout the Region. The percapita power supply standards in the DMA and priority towns will be comparable to that of Delhi.

2. In view of the preferences, priorities and commitments, the Constituent Governments may not be in a position to treat the portions of their States and UT under the NCR in a special manner. This necessitate setting up of a unified authority for the NCR.

3. There should be provision for extra allocation of funds to meet the cost of additional generation of power consequents disturbances of the same in the NCR.

2. All the 'under-construction schemes falling the Region, especially the the Narora atomic Plant, need to be given top priority and completed in time. At present, the electricity tariff is not uniform throughout the Region. It may not be possible to

have complete uniformity in tariff rates throughout the Region. However, electricity rates for industrial and commercial uses in the Region need to be revised in such a way that Delhi becomes a 'less-preferred' area for industrial activities. The participant States of NCR (Haryana), Rajasthan and Uttar Pradesh) have demanded a sum of Rs.684 crores to improve the level of power supply in their sub-regions. This includes a sum of Rs.420 crores for generation. With regard to laying of transmission and distribution lines and construction of sub-stations, it is suggested that in the Seventh Plan, only those lines and sub-stations should be taken up which are required to improve the level of power supply in 'priority towns'.

LAND USE POLICY

Policy for agricultural land

1. The new employment opportunities are proposed in the non-agricultural sector and consequent concentration of population in the selected priority settlements would need more area and this expansion would have to be met mostly from the existing agricultural land. This necessitates the need for a rational policy of utilisation of less valuable land for urban expansion and, as far as possible, unproductive or barren land for location of urban/industrial centres.

1. Protection of cultivated land as per land records from change into urban and non-agricultural use.

2. In view of the anticipated changes in land use there would be heavy pressure on agricultural land to the extent that new employment opportunities are proposed in non-agricultural sector and consequent concentration of population in urban areas, the urban expansion would have to be met mostly from the non-agricultural lands. This necessitates a rational policy as to the utilisation of less and least valuable land for the urban expansion/new urban centres.

2. The reduction of agricultural land may be caused by the creation of lakes, reservoirs, flood protection works; urban water supply schemes and irrigation works. This also calls for an intensive utilisation of available agricultural land for production purposes.

3. Intensive food production units which are subject to planning control will be permitted in the urban and rural areas where they conform to the policies for conservation or environmental protection. The improvement for reclamation of land for agricultural use will normally be permitted where this would

Policy for Forest Development

1. The policy for development of forests should aim at preservation, improvement of existing forest areas in Alwar tehsil and along the Ganga river in Uttar Pradesh Sub-region.

2. Tree plantation should be carried out on cultivable waste and barren lands and public lands.

In each settlement, tree plantation programme like social forestry should be speeded up for the amelioration of local, physical and economic condition and for production of fuel wood for local consumption.

3. Restriction should be imposed on conversion of forest lands for agricultural purposes.

Policy for Urban Development

1. The projected urban population of 234 lakhs by 2001 in the region means an addition of 143 lakhs to the urban population of 91 lakhs as of 1981. To accommodate this additional population, nearly 2.8 lakh hectares of land would be required on the basis of prevailing overall average density of population in the towns of the region. However, it is necessary to conserve agricultural and other

1. Conservation and improvement of existing forest areas in the Region.

Increase in the forest cover from existing 1.2% to a minimum of 10% of the total area of the Region by 2001.

2. Encourage social forestry and tree plantation along transport routes, rivers, canals and on Government land.

3. Strict implementation of National Forest Act to safeguard the forest cover and promote the forest development on marginal and barren lands.

1. It has been proposed that out of the assigned population of 325 lakhs by 2001 AD, about 234 lakhs would be accommodated in the urban areas of NCR. In view of the scarcity of land, it is necessary to adopt stringent methods for land being allocated for urban and other non-agricultural uses.

Master Plan for the DMA and Priority towns should be prepared under the existing rules and Acts of the participating States

lands and minimise the area of land coming under urban use. If properly planned, most of the existing towns, especially the DMA towns and priority towns can accommodate the additional population by re-densification reducing thus the need for additional land. It has been estimated that out of the 110 lakh urbanites by 2001 AD, as much as 82 lakhs could be accommodated by modification of densities within DUA-31 urbanisable limits', and the remaining 28 lakh population could be accommodated in 17000 hectares of land in urban extension. This would mean that the additional urban population of 53 lakhs between 1981 and 2001 would need an additional land area of only 17000 hectares.

In DMA towns, the additional 28.32 lakh persons can be accommodated in 10,000 hectares of land. In the 8 towns and complexes selected for priority development, a land area of the order of 20,000 hectares could be sufficient for 36 lakhs additional population. Thus, it would be seen that for accommodating nearly 120 lakh persons, a total additional area of 47,000 hectares may be adequate. The State Governments will prepare Master Plans for the towns keeping in view the policies indicated.

In order to avoid land use conflicts especially in DMA Towns, the Master Plan of all the towns within the National Capital Region should be prepared in consultation with NCR Planning Board and approval of the Board obtained before notifying them statutorily.

Policy for Green Buffer

1. The NCR Plan aims to improve the physical environment of the whole Region. This would be achieved by ensuring both existing uses within the Region and the development which are contemplated by the proposals. The green buffer will support the promotion of the priority settlement/areas by controlling the growth of their built-up areas. Besides, the green buffer will prevent neighbouring settlements from merging with each other and help to preserve their special character. The detailed demarcation of the buffer zone is indicated in L.P.25.

2. The character of the buffer zone will be retained, protected and enhanced wherever possible by safe-guarding areas of mainly open rural areas to take account of the interest and needs of agriculture and provide source of recreation.

3. The green buffer zone policies are designed to restrain the encroachment of urban activities into the open rural areas. The buffer zone could be used for the purposes of agriculture, horticulture, forestry and other uses appropriate to the character and function of the buffer zone.

4. The establishment of outdoor sport, recreation or leisure facilities to meet the needs of community could be directed to the suitable parts of the buffer zone.

5. Mining activities and brick kilns could be permitted in the buffer zone, subject to their conforming to the restrictions to be imposed in the nature of minimum distances

1. To achieve orderly and balanced development and improvement physical environment of the Region.

on roads, schools, public places and habitation etc., and further to strict to atmospheric pollution restrictions.

6. The ridge which extends as a spur from Delhi right upto Alwar and beyond and the forest areas adjacent to it need to be preserved carefully. No urbanisation proposals are to be entertained in areas falling in this ridge.

Location of Buffer Zones

The following are the proposed locations of the Buffer Zones. However, detailed demarcation of Buffer Zones will be shown in the landuse plan.

- i) Buffer zone of suitable width surrounding DUA which will prevent DUA towns from merging with DUA.
- ii) The area between the urban areas of Ghaziabad and Loni.
- iii) The stretch along the NH-2 between Faridabad-Ballabhgarh Complex and Palwal.
- iv) The area between Ghaziabad, Muradnagar, Modinagar and Meerut.
- v) The area around Bulandshahr and Khurja Urban Complex.
- vi) The areas around Rewari-Dharuhera and Dharuhera-Bhiwadi of proposed Rewari-Bhiwadi Urban Complex.

Policy for Regional Recreational Areas

1. Areas with general level amenities as re- 1. To develop Regional recreational parks in the proximity of the metropolis could be developed. area in the Region.

2. River front as recreational areas by developing them and making them more accessible for such use.
3. Historical monument, natural and areas of scenic beauty, both existing and potential, and forest land, should be preserved.
4. Parks in rural areas noted for their landscape and scenic beauty which could be used as picnic spots.
5. National Parks/Wild Life/Bird sanctuary in the vicinity of the Region could be developed for tourist attraction.

Policy for Nature Conservation

1. To achieve the overall development of the NCR without destruction to its natural environment, all economic activities need to be well planned. Special attention should be given to check the damage to the environment by man's interference for development purposes. 1
2. Development which is likely to affect adversely sites of special scenic beauty or national or local nature reserves will not be permitted
3. Full account will be taken of feature of importance with regard to nature conservation when considering major development proposals.
4. Special attention will also be given to protection of special landscape areas and areas sensitive to development pressures.

2. National Parks/Wild Life Sanctuary in the vicinity of the Region could also be develop for tourist attraction.

5-

1

1. Conservation and improvement of natural environment through controlled development.

1-
d.

Section 8(f) of the NCR Planning Board Act, 1985 provides for development of Counter-magnet Areas outside the National Capital Region in furtherance of the objectives of the NCR Plan. A conscious decision was taken that the identification of the Counter-magnet Areas might not precede the preparation of the Regional Plan. However, it was felt that a few towns could be short-listed for this purpose on the basis of norms to be finalised by the Board.

Accordingly, a study was entrusted to the School of Planning and Architecture in May, 1987 to identify the towns to be developed under the Counter-magnet concept. The findings of the study will be circulated at the meeting for consideration by the Committee.

ANNEXURE TO AGENDA ITEM NO.11: COUNTER MAGNET AREAS

An Interim Report indicating the methodology adopted for identifying counter magnet areas in five States in the vicinity of National Capital Region, namely, Haryana, Uttar Pradesh, Rajasthan, Punjab and Madhya Pradesh has been prepared by the School of Planning and Architecture, New Delhi. The findings of the Study which mainly relate to the methodology to be adopted are as follows:

1. Characteristics of a Counter-magnet

A Counter-magnet area to Delhi should be located sufficiently away from the NCR and should have its own established roots and inherent potentialities to function as viable independent growth foci. Such identified counter magnets would have the attributes of physical, social and economic viability; nodality with respect to transportation network and will have the quality of physical linkages in the form of facilities for transportation and communications.

2. Approach to identification of Counter-magnets

In addition to the attributes of individual cities to be a counter-magnet to Delhi, few basic issues relating to their spatial organisation in the regional context have been analysed. They are:

- a) Nodality consideration - how far the potential counter magnets should be located in terms of distance or travel time from the metropolitan core and the NCR.
- b) Spatial consideration - how evenly they ought to be distributed among the constituents and adjoining states.
- c) Size and viability consideration - what size range they should possess in the base year (1981) to function as viable centres of growth.
- d) Migrants flow consideration - how much volume of migrants the districts in which these potential counter-magnets are located or their neighbouring districts contribute to Delhi.

2. Factors adopted for identification

✓ a) Nodality considerations: The counter magnets are expected to maintain certain amount of complementarity in respect of metropolitan functions with Delhi and the NCR and as such a range of 250 - 300 Kms. from NCR boundary or 350 - 400 kms. from Delhi representing 6 hours journey time - at the present transport conditions should enable occasional interaction between the chosen counter-magnet and the metropolitan core, without impairing its developmental autonomy and functional identity as a regional growth centre. However, this distance for search zone delineation would be only a broad guideline since speed of travel is a function of technology improvement in transport sector and as such search would extend to the entire constituent States specially along major transport corridors. To avoid over-lapping of influence zones such identified centres would be spaced atleast about 60 kms. apart.

✓ b) Spatial considerations: To infuse complimentarity, the location of counter-magnets would be chosen in relation to spatial pattern, size and functional specialisation of priority towns designated and their linkages outside NCR, particularly in the belt identified for locating possible counter-magnets. Further, care would be taken that such potential counter-magnets avoid functional conflict with vicinity towns.

✓ c) Size and viability considerations: Studies have established that a city of around 3 lakhs population is an established urban centre having a distinct service area, basic level of social and economic infrastructure, and diversified economic base. At the same time, a population range of 5 to 6 lakhs which such a city would assume by 2001, would still keep itself within manageable limits in terms of activities, transportation needs, infrastructure support, housing provision, social cohesion and urban administration. While this would be only a general guideline, emphasis would be sub-region and location specific.

✓ d) Migrants flow considerations: It is presumed that the need for a counter magnet would be more in districts, or group of districts, ^{within a State} which have shown a higher rate of out-migration of population to Delhi. Development of a counter magnet as a nodal centre in such districts would also help to establish a new alignment for future migratory tendencies from farther districts.

4. Under the above considerations, a list of 36 urban centres in the neighbouring States of Uttar Pradesh, Rajasthan, Haryana, Punjab and Madhya Pradesh has been prepared

by the School of Planning & Architecture and is annexed. To screen the list of 36 urban centres the following methodology would be followed:

3.3.4)

Criterion of relatively wide physical-locational spread of the proposed countermagnets.

It is considered imperative that the proposed countermagnets should be so located within the identified belt around the NCR that the likely zones of influence in the next 20 years should at best coalesce but not overlap. A minimum distance of 60 km between two countermagnets appear as essential factor, though 80 to 100 km would be desirable. From this point of view, it has been considered desirable that, as far as possible, depending upon the size of the district, not more than one countermagnet should be selected from the same district. Also, the proposed countermagnets should form a ring around the NCR so that the future migration streams from each and every possible direction can be arrested. The directional split however would depend upon an analysis of the migratory flow besides other considerations of viability and nodality.

3.3.5)

Administrative status criterion

Any urban centre acting as a district headquarter acquires a certain edge over other urban settlements in the district in terms of its attractiveness for economic activities and hence employment generation and population growth. Normally, certain amount of care must have already been taken while choosing a particular centre to be designated as a district headquarter. The centrality of the centre vis-a-vis population and physical spread, least hostile environment and certain level of facilities and amenities are generally considered essential before designating an urban centre as the district headquarter. Moreover, entrepreneurs prefer to locate near the centre of decision-making and administration. Such locations, also, generally provide easy access to forces of security in case of any law and order problem.

Accordingly, in a district, while discarding an urban centre from the set selected as a part of the first stage identification and selection procedure, the following criteria would be adopted:

- a) If one urban centre has to be chosen from a district, choose one which is a district headquarter; and
- b) Only if there are overwhelming reasons in regard to viability and nodality, a centre other than a district headquarter would be chosen.

Normally, more than one urban centre would not be chosen as counter-magnet from the district.

111) Special Characteristics Criterion

Certain types of urban centres would not be considered as counter-magnets because of their special significance and characteristics that are likely to be adversely affected, if the centre is subjected to accelerated development and allowed to expand to a relatively large size city.

Such centres which would thus be excluded from consideration are:

- a) Urban centres of known religions and cultural importance;
- b) Urban Centres of strategic importance from the point of view of defence; and
- c) Ecologically sensitive urban centres.

1v) Specific Criteria

This would exclude consideration of a few centres straightaway. Besides the three general criteria, ^{the} following five specific criteria have been identified and are outlined below:

1. Accessibility and Linkages:

- a) Availability of both road and rail is considered as a must. Air-link/proximity to airport is a desirable factor; ✓
- b) Location at cross-roads, viz. at highways convergence point would be preferred; ✓

- c) Location on NH would have preference over SH and ODR;
- d) Economic, Social and Physical linkages with the hinterland will be desirable factor.

2. Population Size and Growth:

- a) Degree of viability indicated by a population size group closer to 3 lakhs;
- b) For less urbanised states a minimum size of 1 lakh to be considered if it satisfies other parameters; and
- c) 1971-81 growth rate compared to state average.

3. Administrative Base:

- a) District headquarter to be given weightage over Tehsil headquarter and other towns;
- b) Local government status; weightage to be in descending order - Municipal Corporation, Municipality, NAC; and
- c) Towns having development authority to be given more weightage than others.

4. Productive Base:

- a) Working force participation rate.
- b) Percentage of secondary sector force; and
- c) Presence of organised wholesale trading and manufacturing functions.

5. Growth Impulses:

- a) Towns developed area/agglomeration area/Density of development.
- b) Designated standard urban area; and
- c) Hinterland served (population within 30 km. radius).

From the above list, as many criteria would be considered as are expected to provide a tangible clue to comparative suitability of the centres under considerations. As a result of this second step scanning around 12 to 16 towns out of the initially chosen 30 to 35 towns would be identified for detailed evaluation using quantifiable indicators as well as qualitative assessment based on location-specific parameters. The key variables to be used for purposes of quantitative evaluation fall in eight broad groups and the evaluation procedure adopted would lead to identifying the level of propensity as also potential for each town which would then provide a ranking system for final identification and selection of the countermagnets in Stage-III of the Selection Procedure outlined below.

STAGE-III

This would involve developing a detailed list of measureable and non-measurable variables, and subjecting each of the short-listed urban centres to a comprehensive quantitative evaluation as well as a qualitative assessment of development potential and sensitivity, in order to arrive at a final selection of urban centres for development as countermagnets (Refer Appendix). Weightage system and factor analysis techniques are being considered for evaluation depending on data suitability.

Certain basic variables included in the list would have, however, been considered generally during the earlier stages of the selection process. But, in this final stage, an in-depth evaluation of the shortlisted urban centres in all its ramifications is envisaged.

4.1) Quantitative Evaluation

The following 21 key variables have been identified for third step scanning of the potential urban centres through quantitative evaluation techniques.

DEMOGRAPHIC CHANGES;

- 1) Population Growth rate 1971-81 (1961-71 also to be observed);
- 2) Sex Ratio Changes 1971-81
- 3) Productive age group 1971-81.

PRODUCTIVITY ACTIVITY:

- 4) Participation ratio of workers
- 5) Percentage of workers in secondary sector
- 6) Input-output ratio of Industrial units
- 7) Percentage of workers in Trade and Commerce (component of tertiary employment based on 1971 proportion).
- 8) Wholesale output in Quantals handled annually and value.

FINANCE AND COMMERCIAL SERVICES

- 9) Number of banking establishments and leasing companies.
- 10) Number of telephones and telexes
- 11) Number of petrol pumps.

PUBLIC AND SEMI-PUBLIC FACILITIES

- 12) Number of institutions of higher education (collegiate, technical, vocational)
- 13) Number of hospital beds
- 14) Number of cinema and theatres.

URBAN MANAGEMENT

- 15) Annual municipal budget
- 16) Number of regular employees (establishment size)

INFRASTRUCTURE: UTILITIES AND SERVICES

- 17) Percentage of area covered by municipal water supply
- 18) Per capita availability of water
- 19) Per capita consumption of electricity (annual per capita supply)
- 20) Percentage of town area covered with sewerage.

GROWTH IMPULSES

- 21) Population catchment (increase¹ between 1971-81)
(30 kms. radius zone urban and rural)
- 22) Increase in size of Standard Urban Area/Agglomeration area,
(1971-81).

Qua. litative Assessment: Development Sensitivity

For assessment of development sensitivity, three main aspects would be considered, and the case of each selected urban centre analysed using value-judgement and accepted planning logic. These are outlined below:

A) EMERGING SPATIAL PATTERN:

- Directional Split,
- Geographical setting in relation to districts having higher out migration rate;
- Nodality

B) DEVELOPMENT FEASIBILITY:

- Land availability for expansion
- Environmental assets and constraints
- Infrastructure capacity and threshold.

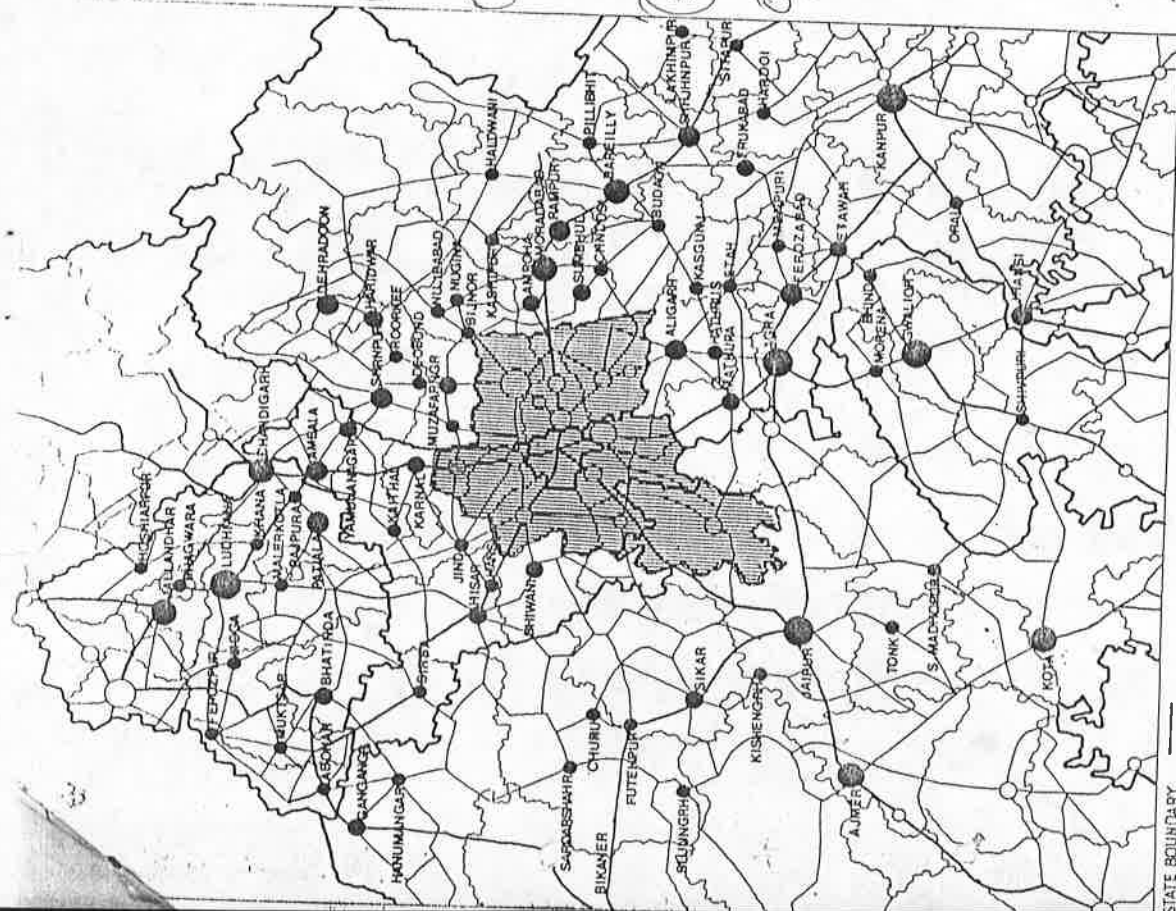
C) URBAN MANAGEMENT:

- Status, strength, and weakness of urban management institutions;
- Resources, activities and achievements for urban development works.

A cumulative evaluation based on the quantitative and qualitative assessment using the above-mentioned indicators would yield a final identification of urban centres best suited for development as counter-magnets in the context of the NCR and would further provide the base for strategic planning and development programming of the selected centres.

SEARCH ZONE DELINEATION - COUNTER MAGNET STUDY

STATE	POPULATION				CLASS-1 (100,000 POPULATION)	CLASS-11
	300,000 and above	200,000-299,999	100,000-99,999	30,000-99,000		
PUNJAB	1. LUDHIANA 2. JALLANDHAR	3. PATIALA	4. BHATINDA		HOSHIAPUR BOCHAR MOGA PHAGWARA MALEKOTLA FERDZPUR RUPNURA MIKTSAR KHANNA SIRSA KATTHAL JIND HANSI	
HARYANA		5. AMBALA	6. YAMUNAGAR 7. HISSAR 8. KARNAL 9. BHITWANI		TONK CHURU KISHENGARH SANKHANWARI SAWAI MADHOPUR SARDARSHAHAR SUJANKARH FATEHPUR	
RAJASTHAN	11. AJMER 12. KOTA	13. BIKANER	14. GANGANAGAR 15. BHARATPUR 16. SIKAR		SHIVPURI BHIND MORENA	
M.P.	17. GUALIOR					
U.P.	18. KANPUR 19. AGRA 20. BAREILLY 21. MORABAD 22. ALICAH	23. SAHARANPUR 24. DEHRADOON 25. JHANSI 26. SHAHJAHANPUR 27. RAMPUR 28. FERIZABAD 29. MIZAFFARGARH	30. MATHURA 31. FARUKABAD 32. HARIDWAR 33. AMRITA 34. ETAWAH 35. SAMBHAL		SITAPUR HATHRAS BUDAON PILLIBHIT HARDOI ROORKEE HALDWANI CHANDUSI ORAI KASGANJ LAKHIMPUR MAINPURI BILNOR ETAN NAJIBABAD KASHI PUR DEOBAND NAGINA	
UNION TERRITORY		36. CHANDIGARH				



SEARCH ZONE DELINEATION 4.12
LOCATION OF URBAN CENTRES

50 100 150 km

COUNTER MAGNETS' STUDY (SPA NEW DELHI)

STATE BOUNDARY

DISTRICT BOUNDARY

N.C.R. BOUNDARY

NATIONAL HIGHWAY

OTHER ROAD

TOWN WITH POPULATION

50-100,000

100-200,000

200-300,000

300-500,000

>500,000

AGENDA ITEM NO.12

POLICIES AND PROPOSALS ON ENVIRONMENT
AND ECCLOGY

In connection with the preparation of the Draft Regional plan - 2001, a set of policy measures for environment and eco-system are being evolved. The policies and recommendations will be circulated at the meeting for consideration by the planning Committee.

POLICIES AND PROPOSALS ON ENVIRONMENT AND ECOLOGY

1. Air Pollution:

The main sources which contribute to air pollution are emission from automobiles, industries, thermal power plants, fertilizer Plants, coal burning and indirectly putrefying odour from slaughter houses, raw sewage disposal, solid waste dumping and stagnating water. There is a direct relationship to air pollution levels and urbanisation and industrial activities. The levels of air pollution in the NCR are severe in several pockets such as in the metropolitan and urban industrial areas, major transport corridors, etc. Therefore, any further urbanisation and industrialisation in the NCR has to be reckoned for their air pollution impacts and the general tolerance levels that should be achieved for viable development programmes. These have to be identified through appropriate field research studies so that the levels and types of industrialisation can be established for different sub-regions.

2. Water Pollution:

(i) No industry be permitted to discharge its effluents over land or other water bodies without treating it to requisite pollution control standards.

(ii) As far as possible, new industries be developed in identified and classified industrial areas/estates which should have proper effluent treatment facilities in-situ before they are discharged into natural areas.

(iii) Urban wastes should be treated to requisite levels of pollution control standards before being discharged into rivers or other water bodies.

(iv) The existing water sources should be developed through inter-State cooperation and water supply problems should be dealt with in a unified manner for the NCR as a whole.

3. Sewage Disposal:

Detailed schemes should be prepared at local level for sewage treatment for all DMA, priority and other towns so that the sewage water may be recycled for irrigation and other purposes. The settlements where regular sewerage schemes are not available, low cost sanitation system for individual family or community may be adopted as a short-term measure.

4. Solid Waste:

Solid waste from urban and agricultural areas, if properly recycled, can be a valuable source of nutrient and energy. This approach will also lessen the pollution loads of the solid wastes on the environment or the eco-system. A scientific approach should be adopted for the solid waste management and its re-use in all urban and agricultural areas.

5. General:

(i) To lessen the pollution effects of human wastes on soil and water environments, efforts should be made to introduce alternate technologies like low cost sanitation, integrated bio-gas generation system, etc. in towns and villages where the conventional sewerage system is not available.

(ii) A Joint Board for prevention and control of pollution of water and air should be established for the NCR. Its main functions may be as below:

(a) To coordinate the activities of the State Boards for the prevention of pollution and the environmental committee constituted at local levels and to provide them the technical assistance and guidance to carry out and sponsor investigations and research relating to problems of water and air pollution and prevention, control and abatement of such pollution.

(b) To enforce law for treatment of liquid effluents from domestic areas, industrial and commercial areas for making them fit for recycling.

- (c) Promote solid waste management for extracting its nutrient value.

(iii) Human Settlements:

Care should be taken by the local planning and plan implementing authorities at the time of preparing and implementing the development plans of the urban areas in their sub-region to contain the spread of corridor developments all along the major arteries of the Region. All urban developments should be regulated within identified geographical areas. As far as possible, each of the settlements may be surrounded by a green belt comprising social forestry, urban forestry or agro-horticulture with adequate vegetal and bio-mass cover. These would inter-alia, act as climate balancers.

Location of industries in the NCR should be regulated with respect to pollution propensities. Industries should be located in such a way that smoke emitted by industries is carried away from the main human settlement. Industries that may generate liquid wastes should be located on such sites so that the water sources are not polluted and no liquid effluents should be released without proper treatment to reduce its toxic effect.

MINUTES OF THE 10TH MEETING OF THE PLANNING
COMMITTEE OF THE NCR PLANNING BOARD HELD AT
11 AM ON 7TH JULY, 1987 IN THE OFFICE OF THE
NCR PLANNING BOARD, NEW DELHI.

The following members were present:

Members of the Planning Committee:

1. Shri K.K. Bhatnagar, Member-Secretary, NCR Planning Board - Chairman.
2. Shri R.S. Malik, Special Secretary, Town & Country Planning, Government of Haryana.
3. Shri P.B. Mathur, Commissioner & Secretary (Urban Development), Government of Rajasthan.
4. Shri N.C. Vasishtha, Director, Town & Country Planning, Government of Haryana.
5. Shri H.S. Mathur, Chief Town Planner, Government of Rajasthan.
6. Shri N.S. Johri, Chief Town & Country Planner, Government of Uttar Pradesh.
7. Shri D.P. Gupta, Chief Engineer (Planning), Ministry of Surface Transport, New Delhi.
8. Shri Om Kumar, Vice Chairman, Delhi Development Authority.
9. Shri B.N. Singh, Chief Regional Planner, NCR Planning Board - Member Convenor.

Other participants

1. Shri P.K. Sinha, Deputy Secretary, Deptt. of Power, Government of India.
2. Dr. H.D. Goyal, Deputy Adviser (HUD), Planning Commission,
3. Shri K.T. Gurumukhi, Town & Country Planner, Town and Country Planning Organisation, New Delhi.
4. Shri J.C. Gambhir, Director (PPW), Delhi Development Authority.
5. Shri Satya Swarup, Asstt. Director General(TP.V), Telecom Directorate, New Delhi.
6. Shri V.P. Maheswari, Regional Chief, HUDCO, New Delhi.
7. Shri Shankar Aggarwal, Jt. Secretary, Housing & Urban Development, Uttar Pradesh.
8. Shri J.C. Chopra, Chief Town Planner, Haryana.
9. Shri R.C. Aggarwal, District Town Planner, Karnal.
10. Shri Prakash Narain, Deputy Director(PPW), D.D.A.

Officers of the Board

1. Shri S. Arunachalam, Sr. Planning Engineer.
2. Shri R.P. Rastogi, Associate Planner.
3. Shri V.K. Thakore, Sr. Research Officer.
4. Shri Pran Nath, Deputy Director.
5. Shri K.L. Sachar, Finance & Accounts Officer.
6. Shri P. Jayapal, Asstt. Town & Country Planner.
7. Shri J.N. Burman, Asstt. Town & Country Planner.
8. Shri Madhu Babu, Asstt. Town & Country Planner.

The meeting was preceded by an Audio-Visual Presentation of the Interim Development Plan of the NCR.

The Chairman welcomed the new members, namely, Special Secretary, Housing & Urban Development and Director, Town & Country Planning, Haryana to the Meeting.

AGENDA ITEM NO.1

CONFIRMATION OF THE MINUTES OF THE LAST MEETING
OF THE PLANNING COMMITTEE HELD ON 8.6.1987

The minutes of the meeting held on 8.6.1987 were confirmed.

AGENDA ITEM NO.2

REVIEW OF THE ACTION TAKEN ON THE AGENDA ITEMS
OF THE 9TH MEETING OF THE PLANNING COMMITTEE

(v) Referring to the proposals for power development, Shri P.K. Sinha, Deputy Secretary, Department of Power, Government of India, stated that the proposal for setting up a NCR Electricity Authority for NCR suggested by the NCR Planning Board is under examination by his Department. However, he suggested that the Authority may not be named as NCR Electricity Authority but instead as NCR Electricity Agency.

(vi) The Chairman drew the attention of the members that in view of no definite consensus having been arrived at the proposed management structure for the NCR in the last meeting, the views of the State Governments, if now available, could be reported in the meeting by the representatives of the State Governments. Shri R.S. Malik, Special Secretary, Haryana said that the views of the Haryana Government would be sent later. However, he felt that in view of the existence of Haryana Urban Development Authority, Town & Country Planning Department and Panchayats, there may be a problem for creation of a separate Sub-region Area Development Authority. The representative of the Uttar Pradesh Government said that creation of a Planning Cell at the State Government level is being vigorously pursued. He further stated that another authority for the entire Sub-region may not be created

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in Uttar Pradesh in view of development authorities existing in Meerut, Ghaziabad and NOIDA and also in view of the proposal to create development authorities for Bulandshahr-Khurja Complex. On a query from Member-Secretary as to how the development of the rural areas will be ensured in the absence of an unified agency at the sub-regional level, Shri Shankar Aggarwal, Joint Secretary stated that comments on this aspect would be made available to the Planning Committee by the State Government as soon as possible. Shri P.B. Mathur, Secretary, Housing & Urban Development, Rajasthan agreed with the proposal of the creation of a Sub-regional Area Development Authority for the Rajasthan Sub-region. Summing up the discussion, the Chairman stated that the Draft Regional Plan would contain the proposals as approved by the Board in its meeting held on 17th February, 1987 and the State Governments can give their suggestions when the Draft Regional Plan would be published for inviting objections/suggestions.

AGENDA ITEM NO.3

POLICIES FOR DEVELOPMENT OF ECONOMIC ACTIVITIES - THE ROLE OF INFORMAL SECTOR

Reacting on the findings of the Study, Shri P.B.Mathur Secretary, Housing and Urban Development said that the recommendations made in the Study did not contain the definition of the informal sector and also the study does not establish the growth of informal sector as linked with the formal sector activities. Shri Om Kumar, Vice Chairman, Delhi Development Authority felt that the major focus of the Study should concern itself in identifying the percentage of migrants who are involved in various informal sector economic activities. There was a need for quantification of the migrants who get absorbed in various economic activities both formal and informal and the extent which remain without job. Such a quantification will lead to policy options for absorption of migrants in various economic activities. The Chairman said that efforts would be made to finalise this report in the light of the observations made by the members.

AGENDA ITEM NO.4POLICIES FOR DEVELOPMENT OF ECONOMIC ACTIVITIES
IN THE NATIONAL CAPITAL REGION

Shri N.C. Vasishtha, Director, Town & Country Planning, Haryana referred to the policies approved in the Interim Development Plan and that proposed to be incorporated in the Draft Regional Plan specifically to industries. He said that in the DMA towns, large and medium scale industries should also be allowed since DMA towns in Haryana have still not been saturated. He suggested that the embargo on medium and large scale industries should be deferred for a period of 10 years in DMA towns. He also stated that similar policies relating to Government Offices be applied to DMA towns. Shri R.S. Malik, Special Secretary, Urban Development, Haryana stated that the DMA towns deserved location of large and medium scale industries and the embargo proposed for location of such industries in DMA towns was not justified. He also referred to the problems of availability of power in Haryana. He said that power was available only for 6 hours in Haryana while Delhi enjoyed uninterrupted supply and therefore, the dispersal of economic activities from Delhi, particularly industries would not be possible unless availability of uninterrupted power supply is ensured in the constituent areas of the NCR. Shri Om Kumar, Vice Chairman, DDA said that with a view to curbing the growth of Delhi, the policy of strict control regarding location of industries need to be adopted not only within the Delhi UT, where only small scale industries employing 20 or less persons are being permitted but also in DMA towns equally. Member-Secretary referred to the policies relating to economic activities in the Interim Development Plan for NCR as approved by the Board. He stated that the policies of economic activities as approved by the Board are being incorporated in the Draft Regional Plan. In case Haryana wishes to raise this issue, that could certainly be done at the meeting of the NCR Planning Board.

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With regard to trade and commerce, it was decided to remove the words "and develop" in the last line of the recommendations under 'disincentives within Delhi'.

AGENDA ITEM NO.5

FISCAL MEASURES TO BE INCORPORATED IN THE
DRAFT NATIONAL CAPITAL REGION PLAN

Member-Secretary informed the members that an expert study was commissioned by the Board through the auspices of the National Institute of Public Finance Policy (NIPFP) whose report has now been received. The annexure enclosed with the Agenda item gives comparative statement of the policies approved in the IDP and the policies as proposed in the study by the Institute. The Planning Committee in their meeting held on 7th July, 1987 had reiterated the broad policies as indicated in the IDP that uniformity of tax structure was absolutely necessary to remove certain anomalies in the tax structure of trade and industry in the Region.

Shri Malik of Haryana stated that as already mentioned by him, it would be difficult to curb the growth of Delhi in view of better power supply situation in Delhi and also concessional taxation structure as compared to other constituent areas of the NCR. It was generally felt that the tax structure for the entire region need to be rationalised.

After discussions on the policies suggested by NIPFP, the Committee felt that to work out the exact mechanism for rationalisation of tax structure and existing anomalies in trade and commerce, a Committee of the Finance Secretaries of the three participating States and Delhi UT and the representatives from the Ministry of Finance, Home Affairs and Planning Commission under the Chairmanship of Union Secretary for Urban Development may be constituted. This committee would take into consideration all the relevant factors and make suitable recommendations for the approval of the Board.

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AGENDA ITEM NO.6

SETTLEMENT SYSTEM 2001

The Member-Secretary stated that a study was entrusted to Physical Research Laboratory, Ahmedabad to suggest a suitable settlement system for NCR based on computer aided model. He also referred to the CBRI, Roorkee's studies commissioned to evolve a suitable urban development model for the region. Shri B.N. Singh explained the findings of the study and stated that the proposals contained in the IDP more or less conforms to the findings of the Physical Research Laboratory. Shri Singh also explained the various alternative models developed by CBRI to suggest a suitable pattern of settlement system which would be efficient, objective and cost effective. He explained that the 8 towns/complexes identified as regional centres in the IDP conform to the findings of both the studies and are accordingly proposed to be incorporated in the Draft Regional Plan. Special Secretary, Haryana stated that according to the study, Sonapat falls within the first higher order of settlement and as such this should be included in the list of priority. Shri Singh ^{while} explaining the rationale for not including Sonapat, Modinagar, Shikarpur and Mawana which fall in the first order of settlement of the Study said that in each of the transport corridors, only one town has been identified for inclusion in the first order settlements on consideration of selectivity, whereas the other towns in view of their close proximity to Delhi have been deliberately omitted. However, Shri Singh explained that these towns would be developed as second order Sub-regional centres. Special Secretary, Haryana agreed with the findings of the report.

AGENDA ITEM NO.7,

POLICIES AND PROPOSALS FOR PROVISION
OF WATER SUPPLY AND SANITATION FACILITIES

The Chairman explained the recommendations, policies and proposals for provision of water supply and sanitation both for urban and rural areas in the NCR. The recommendations were approved by the Committee to be incorporated in the Draft Regional Plan.

AGENDA ITEM NO.8

STRATEGY FOR DEVELOPMENT OF EDUCATION AND
HEALTH FACILITIES IN THE NATIONAL CAPITAL REGION

The norms and standards for education and health facilities included with the Agenda item were considered and approved by the Committee. The Member-Secretary, however, informed the members that the State Governments who normally give concessions in the shape of developed land at nominal prices to educational institutions could extend such concessions to a large number of institutions who have applied for such facility in Delhi. If details on concessions as approved by the State Governments are made available to the Board, the matter could be taken up with the Delhi Administration for locating such institutions in various Sub-regions.

The members also suggested that effort could be made for setting up Navodaya-vidyalayas in the various towns by the NCR.

AGENDA ITEM NO.9

TRAFFIC AND TRANSPORT PLAN FOR NCR

The Chairman stated that M/s. Operations Research Group had been entrusted with the study who have conducted the various types of surveys in the NCR. On the basis of surveys and data, an analysis has been done regarding traffic generation and attraction characteristics of the area. Based on the data, future passenger and goods flow have been projected and calibrations made using suitable models in the development of alternative network under 2 scenarios. The Consultants have made available an interim report. He further stated that their final recommendations may not be much different than what has been circulated in the meeting today. The Chairman requested the representative of the ORG to explain the salient features of the transport proposals. Shri Ramchand of ORG presented the main findings of the study. Shri J.C. Chopra, Chief Town Planner, Haryana, reacting on the proposals of the Consultants stated that the proposal of an outer goods avoiding rail line had been there since

1973 Plan and should not be dispensed with. He further added that this line was conceived on the hope that it will lead and open up vast areas for development and as such it should not be evaluated in terms of economic viability. Shri Prakash Narain, DDA also stated that the present Delhi avoiding line runs right through the city and it should be exclusively reserved for intra-urban passenger movement and as such the outer rail grid should be developed by 2001. Member-- Secretary reacting to the suggestions made clarified that the projections made by the Consultants indicate that with improvement of the terminals and augmentation of capacity of the existing rail network and increasing the number of coaches of passenger trains, the increased goods and passenger traffic could be easily handled without such a lengthy new line. Shri Shankar Aggarwal, Joint Secretary, U.P. stated that in addition to the four terminals, Ghaziabad could also be made another terminal. Shri P.B. Mathur, Secretary, Rajasthan stated that Rewari - ^{Dharuhera} ~~Dharuhera~~ need to be connected by rail. After discussions at length, it was felt that the interim findings of the report may be incorporated in the Draft Regional Plan and the Committee felt that the reports of all the studies and surveys be circulated to the State Governments, who would consider the findings of the Consultants and make their comments available to the NCR Planning Board. These could then be considered along with the final report of the ORG for the final net-work.

AGENDA ITEM NO.10

STRATEGIES AND PRIORITY AREAS FOR DEVELOPMENT

The proposals contained in the Agenda item were considered and approved.

AGENDA ITEM NO.11

COUNTER MAGNET AREAS

The paper suggesting the concept and approach to counter magnet areas were considered and approved.

AGENDA ITEM NO.12

POLICIES AND PROPOSALS ON ENVIORNMENT AND ECOLOGY

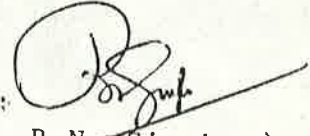
The paper circulated on the above aspect was considered and approved.

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

NO. K-14011/2/87-NCRPB
NATIONAL CAPITAL REGION PLANNING BOARD
7th Floor, B -Wing, IOC Bhawan,
Janpath, New Delhi -110001
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Dated, the 16th July, 1987.

Copy forwarded to all Members of the Planning Committee and all the participants in the meeting for appropriate action.


(B.N. Singh)
Chief Regional Planner
&
Member - Convenor