

POLICIES FOR THE PERSPECTIVE
PLAN FOR DELHI-2001

SUMMARY RECOMMENDATIONS/MAJOR CONCLUSIONS
OF THE SEMINAR WORKSHOPS - SUBMITTED FOR THE
CONSIDERATION OF THE ADVISORY COUNCIL MEETING
TO BE HELD ON 11th MARCH, 1982.

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BY PERSPECTIVE PLANNING WING
DELHI DEVELOPMENT AUTHORITY

SUMMARY RECOMMENDATIONS/MAJOR CONCLUSION
OF THE SEMINAR WORKSHOPS :

I. REGIONAL CONTEXT

II. EMPLOYMENT

III. INFRASTRUCTURE
(Physical & Social)

IV. SHELTERS

I. REGIONAL CONTEXT :

The first in the series of seminars on the Regional context was held on the 5th Sept. 1981. The reports of the workshop at the seminar are at Annexure 'a'. On the basis of the presentations, deliberations and workshop reports, some major conclusions of this seminar are highlighted below :-

- (i) Delhi has gradually changed from a government city and a business-cum commerce city to a multi-functional city wherein government employment, wholesale trade and business and small scale industries are the major employment generators vying to add to Delhi's growth. If current trends are maintained the urban population of Delhi by the turn of the century would increase from about 58 lakhs today to over 140 lakhs. It is necessary, therefore, to indicate disincentives in employment to enable a more manageable population. A projection of 122 lakhs for urban Delhi in 2001 by the DDA in consultation with the Registrar General of Indian is on the basis of constraints particularly in terms of water supply, electricity and transportation and also current national urbanisation policies geared to slowing the growth of metropolitan areas in the country. After, divergent views expressed by environmentalists and those concerned with the image of the city on the one hand that Delhi should be restricted to a population of not more than 80 to 90 lakhs by the turn of the century and by industrialists

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and economists on the other, who felt that there should be no restriction to growth, the seminar adopted 122 lakhs for urban Delhi by 2001 as an acceptable working population for purposes of Planning particularly in terms of land use and services. The seminar also took note that the Planning Commission is sanctioning the electrified surface ring railway system asked the Ministry of works and Housing to ensure that Delhi Administration worked on the basis of disincentives to major employment generators so as to ensure that urban Delhi did not grow at its present rate.

- (2) In order to ensure the proper development of Delhi, the National Capital Region needs to be accorded a minimum legal sanctity which could be either by Central Government enacting legislation under Schedule 'VII', of the Constitution or alternatively obtaining the concurrence of the concerned States to empower Parliament to enact the necessary legislation. In the event of difficulties being encountered for statutory arrangements, a High Powered Coordination Board should have powers to give proper effectuation to implementable programmes for regional priorities.
- (3) As incentives for integrated regional strategies, additional resources in the form of special funds be provided for the development of the National Capital Region.
- (4) In planning for this core region with urban Delhi as the hub, the seminar endorsed proposals for :-
 - (i) The growth of Delhi in harmony with the adjoining urban centres of Ballabhgarh, Faridabad, Gurgaon, NOIDA, Ghaziabad, Loni and Rohtak - all of which are growing as fast as Delhi but are in neighbouring States. An implementable plan would have to be prepared for the entire area to be termed as the metropolitan area.

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- (ii) Planning for Delhi and its metropolitan area within the framework of the National Capital Region as identified by the Town & Country Planning Organ. covering a total area of over 30,000 sq. km. within the neighbouring States of Western UP, Haryana and Northern Rajasthan.
 - (iii) Establishment of counter-magnets in growth centres with city infrastructure like, Ludhiana, Jullundur, Ambala, Mathura, Alwar and even possibly Jhansi and Gwalior so that Urban Delhi, Metropolitan Delhi and NCR developed in harmony.
- (5) The seminar noted with concern that the main reason why developments in the national capital region were not being undertaken as per plan, were differential rates in local and states taxes, differences in legislation for micro and macro planning between participating states; and variations in land policies and land use control measures between the participating states. These were major areas where some uniformity was necessary in planning for this core region.
- (6) Transportation activities for intra and inter urban movement be development to cater to the existing needs and for further growth of population; land use should be rationalised in such a way that the transit time from residence to work place and back be reduced to save cost of transportation and time; also bye-passes for goods and other traffic should be developed.
- (7) The availability of water and power being vital factors for development for the projected population, coordinated augmentation needs to be undertaken and the present geographical imbalances in the provision of these services should be removed. Also the drainage system is to be worked out on a regional basis.

- (8) To supplement the perspective plan being undertaken by DDA it was very necessary that proposals for the metropolitan area and the NCR as formulated by the TCPO in 1974 be quickly updated through the Ministry of Works and Housing and the participating States so as to enable planning and development of the region in harmony with Delhi. Aspects like determining the economic base and endorsing the broad goals, aims and objective for planning within the region be clearly spelled out by the Ministry Works & Housing and Planning Commission for purposes of integrated planned growth and appropriate funding.

Note: Please refer annexure-A

II. EMPLOYMENT

The second in the series of seminars on "Employment" was held on the 24th October, 1981. The reports of the workshops of the seminar are at Annexure 'B'. On the basis of the presentations, deliberations and workshops reports, some major conclusions of this seminar are highlighted below :

- (1) The seminar accepted that Delhi was no longer just a service city but a capital with a multi-functional economic base and metropolitan level facilities for growth. Therefore, disincentives in employment would help in restricting the population of urban Delhi to 122 lakhs by 2001 - a population which the capital would just about be able to cope with over the next 20 years in terms of water, power and transportation of modest standards in an environment increasingly geared to energy conservation.
- (2) In this context it was noted with concern that efforts in distributing the economic base of Delhi over the counter magnets, the National Capital Region and the Metropolitan area with its ring towns, lacked official level coordination. Therefore, in addition to legislative arrangements to the extent feasible, adequate resources and implementable and orchestrated policies were necessary for the equitable growth of this area. In particular, small and medium towns in the region need full encouragement in keeping with 6th Plan policies addressed to slow down the growth of metropolitan cities and correspondingly increase the rate of growth of small and medium towns as integrated growth and service centres for the rural hinterland. Also, due to the lack of implementation of the Delhi Master Plan proposals in respect of its metropolitan area and National DCapital Region, the counter-magnet concept merits full consideration where cities with adequate physical and social infrastructure can serve as reception centre for major employment generators not suited to the capital and with limited potential for location/relocation with the region.

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- (3) The role of the Planning Commission and the Ministry of Works & Housing in determining the appropriate employment policy for Delhi and its region was stressed and in this context the submission of the Town & Country Planning Organisation on the need to cater to Delhi's economic base within a regional context was significant.
- (4) The seminar noted that Delhi's industrial work force increased from about 18% in 1951 to about 25% in 1981 due to facilities conducive to the growth of service and small-scale units. With improving infrastructure the rate of growth could increase further, changing thereby the multi-functional balance of the capital. Efforts are therefore, required to level off the rate of this growth with stress on units that subserve Delhi's economy. The forthcoming industrial policy of Delhi ought to give weightage to this aspect. Within this framework, existing and new units which are not noxious or hazardous be offered the right operational climate in terms of land use and zoning with fresh thinking on mixed land use that does not embrace spot zoning. Interaction with the ring towns on location and or relocation and a proper work-home relationship are overdue on this important employment generator in terms of small-scale and service industries. For heavy and for extensive units, such interactions are necessary with the national capital region and the counter magnets.
- (5) The seminar also noted that wholesale trade and commerce continues being an important employment component of the capital and wherein facilities exists for accelerating growth in this sector. It was however, necessary to discourage new major uses also to reorganise some existing uses and/or their expansion at intermediate and peripheral locations as earmarked in the Master Plan so as to ensure a better organised.

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city structure. New centres for wholesale and distributive trade within the national capital region and in counter which have adequate magnets physical and social infrastructure, have to be developed with all incentives for growth. In this respect telecommunication facilities at the same level as in metropolitan areas was mentioned as a major incentive.

- (6) The seminar noted with concern the runaway growth of public sector undertakings in the capital which showed annual growth rate of over 8% over 20 years. The existing facilities in Delhi was cited as a main reason apart from operations of these undertakings on commercial lines in terms of acquisition and rentals. It was necessary that units which do not serve Delhi's economy be located outside the capital and even beyond in the counter-magnets to other metropolitan area and large cities of the country where adequate social infrastructure was available. Further location of such units or the expansion of existing units be strictly done by the Ministry of Works & Housing.
- (7) The seminar noted that local and city level government employment was on the increase. This was also necessary to service a growing metropolis. However, Central Government employment has also correspondingly increased though not as fast as Public Sector Undertakings. It was felt that such employment should be more strictly controlled and only those units essential to service the Ministries and protocol arms of the government from Delhi be kept in the Capital and the rest be discouraged from extending their operations or setting up new offices in the capital. The seminar also noted the tendency of Central Government offices to seek location in only prime areas in New Delhi and South Delhi zones even through change of land use. Thus several intermediate

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and peripheral areas for offices and government housing as per the Master Plan are not yet developed. New Central Government offices in the ring towns of the Metropolitan area and the NCR have also not come up in the absence of facilities in these areas in terms housing and house rent allowances, central health scheme and city compensatory allowances at scales applicable in Delhi. Such incentives are immediately required.

- (7) The employment potential of Delhi today is conducive to growth in all its major sectors; however with national policies addressed to slowing metropolitan growth on the one hand and services unable to cater to unrestricted growth on the other, there is no alternative to employment disincentives. Also, the informal sector constitutes a sizeable city level productive sector not fully considered in the Plan in terms of their special requirements for physical and social infrastructure, shelters, employment, transport and recreation. The seminar recommended due attention to this sector through integrated programmes without sacrificing the image of the city and the quality of the environment.

Note: Please refer annexure-B

III. INFRASTRUCTURE (Physical and Social)

The third in the series of Seminar on "Infrastructure-Physical and Social was held on 8th December, 1981. The report of the workshop of the seminar are at Annexure - "C" . On the basis of the presentations, deliberations and workshop reports, some major conclusions have been made and these are highlighted below :

- (1) The Seminar noted that the over-riding objective in case of infrastructure would be to make it available to all those who need it at a monetary or social cost which they can afford, within the existing financial constraints. Social justice in case of infrastructure depends on its distribution and accessibility to the population. The need for infrastructure-physical as well as social, since changes with the time and mostly is always greater than the capacity of the authorities to provide, the establishment of standards of quantity, quality and location and the allocation of resources should reflect this basic fact.
- (2) The Seminar noted that the provision of infrastructure causes technological issues in terms of the choice between alternative combination of inputs to obtain a required output. Their implications are far reaching in terms of future uses, employment generation, income distribution, import dependence, social environmental and cultural impact. Choice concerning technology need to consider the requirements over the whole expected life of the assets formed and not only the monetary cost of its initial production.
- (3) Water is needed for most of the urban activities and for a healthy community we need to provide good quality of drinking water accessible to all. Delhi being a city with diverse population like foreign embassies, a large amount of floating population in the form of tourists as well as visitors on business etc. the per capita requirement of water per day would be much higher than other cities, and while accepting the norm of 70 gpcd as recommended by the expert working group, a minimum of 40 gallons per capita per day should be ensured in each area of Delhi.

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- (4) The Seminar noted the fact that the availability of raw water in Delhi is not even sufficient to meet the present demand. Therefore it was recommended that the decision regarding Delhi's share of water in the river Yamuna which is estimated to be about 1.153 MAF for domestic use and 1.111 MAF use for irrigation by 2001, be taken up on a priority basis by the Government of India as the availability of water will be a vital factor in determining the future growth of the city. It was further decided that while negotiating the share of Yamuna water, the issue of exchange of waste water with raw material should also be discussed with neighbouring states.
- (5) The seminar considered that sewage treatment is essential to check environmental decay. It is noted that the existing capacity of sewage treatment plants in Urban Delhi is highly inadequate as about 70% of present population does not have access to sewerage; and to cater to 100% of the population Delhi would require a sewerage system of about 700 mgd capacity (about 6 times the present capacity) by the year 2001. In this context it was therefore recommended that a scheme/legislation be prepared enabling the laying down of sewerage system in all the areas, and handling of the industrial waste in the city. This was considered important to prevent further pollution of river Yamuna.
- (6) In view of the fact that the estimated population of Delhi will be about 12.8 millions by the year 2001 and the total power requirements would be about 3500 MW (considering 30% outages), the seminar recommended for encouraging captive generation, and power generation by private sector. Further the present deficiencies in the power distribution system were noted and suggestions for an underground system for power distribution, and planning for energy conservation systems were made

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- (7) The seminar noted that in the twenty years perspective the total generation of solid waste including building rubbish (mulba) may be 8000 to 10,000 tons, which may not possibly be disposed of by sanitary land filling. Therefore sanitary land fill may progressively be revised by composting as well as by other methods of recycling waste. Further, for the proper management of solid waste in Delhi, establishment of treatment sites, and collection centres needs to be adequately provided for.
- (8) In view of the fact that the floods and storm water disposal problems are not local but are regional including areas of Haryana, Rajasthan and U.P. and further since drains in Urban Delhi suffer due to continuous loads of sewage and sludge, the seminar recommended that the drainage problem of Delhi be studied in greater depth. Further steps like assuming higher run off coefficients for the design of drains, and the possibilities of providing supplementary drains be examined.
- (9) The seminar noted that health facilities should not mean hospital care only, but should aim at preventive, promotive, curative and rehabilitation aspects. It was emphasised that special efforts be made to remove geographical imbalances in the distribution of health facilities within the city by way of creating a single effective agency responsible for approving plans, deciding locations, coordinate and regulate functions of all the agencies engaged in the provision of health care facilities as well as by opening new 100-200 bedded hospitals. Further it was recommended to prompt voluntary efforts in the areas where these facilities are lacking. Also, appropriate emphasis be given to the natural and child health care, family planning, health education, and preventive services like immunization, dietary provision of safe drinking water, etc.
- (10) The seminar noted that the provision of adequate educational facilities at various levels is one of the most pressing and immediate needs of the community for their overall developments. On the basis of population projections for

2001 AD adequate additional sites for preprimary, primary, secondary and senior secondary and college level be provided at the night time. Further, the needs of stadia, ~~gymnasia~~, Bal Bhawans, and places for social functions was also duly emphasised and it was recommended that these facilities be provided at least for a cluster of schools.

- (11) The seminar noted that telecommunications play an important role in the city's development process. Since the issue of providing efficient telecommunication system needs the coordination of the P & T Deptt., DESU, DDA & allied organisations - the seminar recommended for 'Utility Coordination Meetings' to resolve problems and to take timely decisions in terms of land, built space and other requirements.
- (12) The seminar noted that the Urban Communities in Delhi are comparatively anonymous and they more and more depend on police for security; hence adequate floor space needs to be reserved for different security and allied facilities i.e. police stations, police posts, police training schools, jails, etc., in appropriate locations and acceptable standards and at the night time, keeping in mind that land is a constraint.
- (13) The seminar also noted that the Delhi Fire Service to attend to calls of fire fighting, house collapse, accidents and other emergencies needs proper arrangements and for this their programmes need to be coordinated with the programmes of water supply department and the developing Plan. The seminar emphasised the need for a special code for fire fighting in multi-storeyed buildings and congested built-up areas. It was also necessary to realise the limitation of profile fire tenders in reaching heights above 80'-0" and this could be a reason to recommend only a limited number of tall structures in Delhi.

- (14) The seminar noted that the total milk supply in Delhi through public agencies is limited to as 7.30 lakh litres; whereas the requirement in 2001 would be at least 15.0 lakhs litres per day. This aspect has regional implications and thus adequate development of areas for diary farming needs to be identified properly connected for quick moment.
- (15) The seminar noted that Delhi has only about 3.22 lakhs L.P. Gas connections against the need of 11.45 lakh connections. The demand would increase and efforts at meeting the supply are to be made at national and regional levels. The feasibility of piped supply of gas from Sewage treatment plants and low temperature carbonisation requires being explored at an early date.
- (16) The seminar noted the growing air, water & land pollution in Delhi caused by way of increasing industrial activities, vehicular usages, urbanisation as well as shortcomings in sanitation. In view of this it was recommended to make detailed and intensive investigations along with creation of a specific agency responsible for the pollution control programmes in Delhi.

The fourth in the series of seminars is in Shelters. Some aspects on Shelters are highlighted in para 7(g) above. These and other issues on shelters are highlighted in background paper-2 for the consideration of the Seminar.

Note: Please refer annexure-C

IV SHELTERS

The fourth in the series of Seminar on "SHELTERS" was held on 27th February, 1982. The report of the workshops of the Seminar are at Annexure -"D" on the basis of presentation, deliberation and workshop reports, some major conclusion have been made and these are highlighted below:

- 1) The Seminar was of the view that they were dealing with a situation wherein at least half the population of urban Delhi would constitute the urban poor who were understood to be people who could not afford to rent or own a house in the present market system. Therefore, housing to them must be at very cheap rates and reasonable terms of payment. Developed sites and serviced plots with a sanitary core and progressive housing on safe tenures was considered a sound strategy so as to maximise shelters. However, the quality of services should not be below acceptable standards and efforts at reducing costs through innovation in design of the environment, building and materials should be a continuing exercise.
- 2) As a prime aim of shelters in Delhi was to ensure that the urban poor are not priced out, it was necessary for employers to provide housing to its employees. This can even act as a deterrant in expanding business and other enterprises in a metropolitan situation.
- 3) The Seminar felt that there were more advantages in a mix of different income groups in neighbourhoods rather than segregating the various groups but it was important that the urban poor were near their place of work. As longer trip lengths were economical to this target group, efforts at redensification to the extent possible should be a priority though new serviced lands for urban use are required to be brought in the market.

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- 4) It was noted that there were two lakhs families in 612 unauthorised colonies in Delhi at present and that the official machinery was not adequate to restrict the growth of such colonies. The population of these colonies did not comprise of only the urban poor and migrants from rural areas but a sizable section from within the city. It was therefore necessary to have better coordination and political will so as to prevent facilities like water and power connections, transfer of property etc. by way of discouraging to such growth. For existing colonies the seminar felt that a distinction between government and non-government land was not necessary, though facilities for upgrading such colonies should be mainly on government land.

- 5) Efforts to encourage group housing and regular plotted development in such colonies be encouraged and if this involves re-habilitation of some plots, this should be as near the site of original settlement as possible. Recovery should be fully from the beneficiaries for all internal and peripheral services but not for trunk and city level facilities. Standards could be at lower levels but it should take into consideration building by-laws and environmental requirements, social and economic infrastructure.

- 6) The Seminar were of the view that existing legislation regarding land acquisition and tenures be reviewed including the 1961 policy of large scale acquisition development and disposal of land so as to conform to new social objectives increasingly geared to safeguard the interests of the urban poor and who are the major sufferers in land speculation and high land values. In this context, it was felt that private development had a definite role and should be fostered as a means of increasing the tempo. Among the proposals that merited further consideration were the setting up of development co-operative societies, private sector agencies and individual developers for the built environment within

the given land use, zoning and bye laws framework. It was even suggested that their role in the servicing of land suitable for development be explored though land in public ownership is an official policy.

- 7) The seminar felt that in the process of getting the housing stock moving efforts should be made to adapt new construction technologies and also possibly turn key project involvements. Self-contained neighbourhood offered the best prospects to ensure economies and innovations in solar energy, experiments, bio-gas, pollution control etc. in an effective manner.
- 8) The seminar noted that the built environment of Delhi comprised generally of DDA housing and co-operative plotted developed. Co-operative Group Housing is now taking shape and large portions of South Delhi have Central Government housing. Developments by the Slum and JJ department are another set of experiences. By and large the designs required innovations in lay-outs, construction systems and in keeping with Delhi's life styles. The seminar did not favour high rise as a solution though for high income-groups this may prove useful. For the EWS & LIG categories, 2-3 storeys were considered a maximum height and for middle income group four storeyed terraced housing as suitable at high density.
- 9) The seminar noted that in a historic city like Delhi, the image of the city was a prime consideration. In this context, they noted that there are a number of areas in Delhi like Shahjahanabad, Nizamuddin, Chirag-Delhi, and Mehrauli which are ancient cities and are traditional areas which required to be preserved. For this a special legal framework may be required inclusive of special bye-laws so that the architectural and historical heritage is conserved. As an immediate measure insightly advertisements and hordings in these areas should be removed.

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- 10) Shahjahanabad, the largest and most important of the historic cities is losing population and is correspondingly having a higher commercial input. It is necessary to remove incompatible wholesale functions in co-operation with the railways and also to enhance the character of pedestrian dominated streets. Traffic free precincts and intermediate modes of transport situated to the needs of this area should be encouraged. Also the concept of districts centres need to be revised as the seminar felt that Shahjahanabad as a Master Plan central business district has precipitated commercial use with loss of traditional character.

Note: Please refer annexure -D

REPORTS OF WORKSHOPS ON THE REGIONAL CONTEXT SEMINAR
HELD ON 5TH SEPTEMBER 1981.

<u>Work Shop -I</u>	-	<u>Employment & Migration</u>
Chairman:		Shri Gurpreet Singh, Chairman, Delhi Committee, PHD Chamber.
Co-Chairman:		Shri B. Kambo, Chief Planner, Rajasthan.
Rep.:		Shri Rakesh Mohan, Consultant (Urban Development), Planning Commission. Shri P.S.A. Sundaram, Director (Urban Development), Ministry of Works & Housing.

The objective of the Group was to discuss employment and migration. Due to lack of any other data, the figures given in the Background papers were relied upon and accepted for the discussion as a base. The authenticity of these figures may be verified as a separate exercise and the group did not go into this question.

Similarly, the ratio pattern of jobs projected was not taken up for lack of data as well as lack of time. The figures given in the background papers were accepted for the purpose of these limited discussions.

Fundamental issues relating to the land pricing, pollution, general policy, the housing policy and the desirability of involvement of economists to consider the social costs were not discussed in this Group though these were considered relevant and important. It is hoped that an opportunity will be available later for discussions on these important aspects. The major issues discussed related specifically to the employment and some aspects of migration and are enumerated below:

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1. To provide jobs to an additional work force of 26 lakhs by 2001 the employment projections needed to be refined further and disaggregated. Derivative employment from different primary employment sectors could be determined better if a more extensive pattern of the primary employment pattern is available.
2. The industrial policy of Delhi should form an integral part of the overall development Plan. Industries should not be discouraged ab-initio. Industries which are capable of providing large employment in relatively conducive atmosphere must be encouraged as they will provide employment. In this connection the thought on mixed land use is welcome and the group suggests that a fresh look be taken at the rigid conforming, non-conforming regulations to make them more flexible so as to provide for normal operational facilities and ease employment pressures.
3. Whatever industrial areas exist or are planned adjacent land for industrial housing must be provided for so as to reduce the pressures on transportation. In future developmental programmes the industry should be involved with the development of these industrial housing enclaves.
4. The group noted that the informal sector provided a substantial amount of employment. The informal sector therefore must be integrated and provided normal operational facilities including relaxations in land use.
5. Relocation costs must be taken into account whenever industries are required to move and adequate financial assistance and incentives given for such relocation, so that the industry does not die.
6. Natural growth to industry must be permitted to prevent industries becoming sick and consequently death of the industry which would deprive job opportunities.
7. To reduce pressure on land more intensive use on existing area by way of higher FAR's should be permitted.

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8. Migration must be considered in the light of the overall demographic movement which suggest that a certain amount of migration will be inevitable. The pattern of migration suggests that migrants come from as distant as Eastern UP areas as well as from more prosperous areas. There is therefore no definite pattern of migration. This prevented the group from arriving at inclusive recommendation in regard to migratory character of the population. However, the following suggestions are made:

- (i) Moreover temporary construction workers who come for certain specific assignments such as ASIAD, trade exhibitions tend to reside on and ultimately become permanent settlers in jhuggi-jhompri. This aspect needs to be looked at.
- (ii) A dialogue at the State Government level was suggested and provision of better infrastructural facilities in the nodal towns since it was felt is necessary to relieve pressure of migration into Delhi.

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Chairman:	Sh. Prakash Narayan, Advisor, Planning Commission.
Co-Chairman:	Shri J.S. Ghuman, Chief Planner, Punjab.
Rep.:	Shri Bawa, Addl. Commissioner, Police, Delhi.
	Prof. M.S.V. Rao, Prof. of Traffic & Transportation, S.P.A., Delhi.

Discussions led to broad agreement on the following aspects :-

- (i) In the context of metropolitan transport planning, as in the case of other metropolitan planning maximum measures must be taken to slow down the population growth of the metropolis, through various measures including development of counter magnets.
- (ii) Notwithstanding the above, metropolitan transport planning for Delhi must take into account a reliable estimate of the degree of success that these measures might achieve plan for transport accordingly.
- (iii) A number of scenarios for 2001 A.D. should be developed with different parameters of population of land-use, work places and transportation facilities.
- (iv) It was found that there was no improvement in the modal split in favour of public transport to Delhi. Modal split also continues to be much lower than in other metropolitan cities. Planning must be related to an increase in the modal split and different alternative scenarios can be developed.
- (v) Counter magnets should be located beyond the NCR and positive efforts to develop them through various incentives including provision of infrastructures and

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tax incentives etc. The planning should be on the assumption that these will be independent and no commuter type of transport facilities would be necessary between these magnets and the city.

- (vi) Transportation facilities for intra-urban traffic be developed to cater to the existing needs and reasonable growth of population and in this context it should be examined as to what would be reasonable concept of an urban area.
- (vii) Counter-magnets should be developed from where the migrants are coming.
- (viii) Central Metropolitan Transport Authority or a Central Metropolitan Transport Coordinating Committee should be set up.
- (ix) When new colonies like Rohini are developed space required and transport services should be planned in advance.
- (x) Space must be provided for services like repairs shops, automobile shops etc.
- (xi) More stringent laws for traffic control and more effective enforcement measures, should be developed.
- (xii) Funding the metropolitan transport should be as far as possible made independent through levy of less tax etc.
- (xiii) Modes of transport. It should be examined as to what modes of transport should be permitted at the metropolitan city level particularly in respect of animal driven vehicles and cycle rickshaws etc.
- (xiv) Pedestrianization of some of the areas should be examined.

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- xv) Bypasses for the road traffic and goods and traffic terminals as peripheries and bypass for trucks etc. should be developed. The possibility of developing a dry-port should be studied.
- (xvi) Maximum number of buses which the Delhi road can take should be examined.
- (xvii) Possibility of introducing electric tramways and electric trolley buses may be examined.
- (xviii) Efforts should be made to rationalise the land use in such a manner that the transit time from residence to work place and back is reduced so that cost in time may be minimised.
- (xix) Proper planning of terminals both passenger and goods should be given due consideration.

Work Shop-III

Services

Chairman: Shri C.S. Chandrashekar,
Ex Chief Planner, T&CPO,
Govt. of India.

Co-Chairman: Shri D.R. Seth, Adviser,
Department of the Environment.

Rep.: Shri V. Virmani, PHD, Chamber.

This working group was concerned with utilities and services. In their regional context. Keeping in view the limitations of time the working group dealt with water, power drainage and floods, health education and other social services. The discussions in the working group brought forth the following conclusions:

At the outset working group recognised that problem of providing equitable services and utilities to the urban poor in the entire region have somewhat different dimensions and therefore decided to deal with this topic separately. The conclusions on the utilities and services are listed below:

(i) Water

The working group recognised that the availability of water both of ground water and surface water will be a vital factor in determining the future growth of Delhi. Taking note of the present level of supply, the shortfall of nearly 100 MGD and the high augmentation which would have to be undertaken according to the population projections, the working group came to the conclusion that in the first instance of total water balance sheet should be drawn up indicating the availability of water within the region and from outside the region and the distribution of this water for agrarian as well as non-agrarian uses of different types. In making this water balance sheet the working group recommends that in addition to the

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supply position, the cost factor should also be kept in view, and the manner of paying for supply of water should be fully determined.

(ii) Power :

After taking note that there was a short fall of power in Delhi and the surrounding region, the working group discussed the scope of future expansion and came to the conclusion that availability of power may not be a constraint to the growth of Delhi. However, the power distribution system unless organised to provide equitable distribution in the entire region by areas, sectors and categories of use may lead to imbalances of development and excessive concentration at some locations.

(iii) Communications :

The working group discussed the telephone/telex facilities as part of communication in the region and recognised that the extremely inadequate distribution of communication facilities in the region was primarily the factor causing over concentration in Delhi and in some other centres. By advance Planning of efficient communication system at all points at the region it should be possible to bring about decentralisation of activities and the population.

(iv) Drainage & Flooding :

The working group took note of the flood problem created in the Delhi in the recent years. The peculiar problems of drainage in Delhi on the western side of the ridge and the limited drainage facilities in terms of Najafgarh Nala, the working group also took note of increasing development on both sides of rivers leading to construction of the flood channel and thereby increasing floods hazards.

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The working group come to the conclusion that the problem of drainage of Delhi and the region cannot be solved except at the regional level, and drainage of flood waters of Jamuna river and its tributaries and it can be improved by re-designing Tajawala Head works and other control points so that crisis situations are not reached in the populated areas of Delhi as well as in the region.

In the same context that the working group recognised the pollution and prevention aspects of draining populated areas in the region would have to be organised and effectively maintained at the regional level.

(iv) Services :

The working group was concerned with health, education and other social services in Delhi and in the National Capital Region and took note that there were multiple agencies, official, semi-official and non-official dealing with these services and there was no coordination or integrated working amongst them. The result was of a lot of duplication, inefficiency and poor level of delivery of services. As an instance the working group quotes the health services, child care services, etc.

The working group came to the conclusion that 3 level action has to be initiated to overcome the problem and also to organise the services satisfactorily on a regional basis.

- (a) The present geographical imbalances in the provision and delivery of these services should be removed.
- (b) Each of the services should be regionalised so that the entire service throughout the region is delivered in an equitable manner.
- (c) Agencies for each kind of service should be unified appropriately so that the goals of efficiency and equity are achieved.

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(vi) Utility and Services in respect of Urban Poor :

The working group took note of substantial migrant population in Delhi and in the region which may continue to exist during the next two decades and the need for providing satisfactory services to this population which may not be in the same manner as in the case of settled population. The organisation of services should be done on regional scale and at distributed locations taking advantage of other economic activities to sustain the population of those locations.

The rationalisation and allocation of services will take note that while general services would be available throughout the region socialised services will be available in larger cities and the metropolitan centre.

(vii) Methodology for prospective Planning :

The group also took note that when we plan for the next 20 years, we must take into account the need element in terms of utilities and services today as well as the projected demand of the likely population by the year 2001. In this context, this is necessary that we should have a clear idea of the current developmental trends as well as the accelerated developmental targets which should be spelled out in terms of several alternatives approaches and scenarios. Once these are known to the planners, it will be easier to make physical allocation and also give benefit of equitable and efficient delivery of utilities and services.

Chairman:	Shri S.S. Shafi, Chief Planner, T&CPO, Govt. of India.
Co-Chairman:	Shri J.P. Dube, Chief Planner, U.P.
Rep.	Prof. A Datta, Professor of Municipal Administration, IIPA. Prof. G.B.K. Rao, Professor of planning S.P.A., Rebh.

At the very outset the Group felt that unlike the first planning exercise for Delhi which considered the Region as an expansion of Delhi's problems, the new planning exercise should consider the overall Region at the starting point and re-define the development objectives of Delhi in these terms. In this scheme, the preparation of a Plan for the NCR should be the responsibility of a Planning Organisation created with the active participation and collaboration of the concerned States and U.T. of Delhi. This Organisation should specifically be charged with the responsibility of not only having and maintaining the Plan but, also to prepare, well-conceived programmes which should be taken up for effectuation within the extended perspective. Although the plan may have to be made at one point, it must be with the active collaboration and cooperation with the concerned States and the U.T. of Delhi, and their programmes must be brought in the framework of the agreed objectives forming the regional development strategy. Following this scheme, it becomes necessary that this Organisation must be in a position to help in fixing the various priorities of development in relationship to each other.

2. The Group is of the opinion that the responsibility of developing detailed plans and their execution within the overall framework should be the primary responsibility of the each constituent State & UT respectively. The Group is of the opinion that in order to ensure the proper development, the Region (to be designated as NCR with its counter-magnets etc.), it is imperative need to accord a minimum necessary legal sanctity. For this the government felt that there are two options available :-

- (a) The Central grant to bring forth the necessary legislation, under the Schedule VII of the constitution, the (concurrent entry under Social and Economic Planning) or, alternatively.
- (b) to obtain the concurrence of the concerned States to empower the Parliament to enact the necessary legislation for the creation of an NCR and Planning Organisation.

3. The Group also felt that, for proper effectuation of such a Regional Plan, it would be essential to provide additionality of resources in the form of a special fund for NCR Development. The whole NCR area may be treated as a common economic market. It may require a new set of formulae to be devised within which the Centre may finance for some projects totally (e.g. Railways, Central Govt. offices) for other projects suitably State contribution (1/3rd or 2/3rd) may be explored. This would, of course, be in addition to whatever may be the legitimate programmes of States on their own for the development of their respective areas such as rural development, MNP etc.

4. The Group is of the considered view that, while the overall Plan should have the necessary legal backing, the detailing of development should, however, be left with the constituent States and the UT of course, within the overall perspective and frame-work furnished by the NCR Plan.

5. The Group is of the view that a small task-force should be set up to get the type of skills competence that would have needed for performing from prepage the tasks for the planned formulation programme and management.

6. The Group noted it with concern that whereas already considerable ground has been covered by the DDA in the preparation of a New Perspective Plan for Delhi (2001) so far no corresponding exercise has been initiated for the NCR at the Central level.

REPORTS OF WORKSHOPS ON THE EMPLOYMENT
CONTEXT SEMINAR HELD ON 24TH OCTOBER 1981.

REPORT OF WORKSHOP ON THE INDUSTRIAL SECTOR

Chairman:	Shri S.P. Virmani	Past Chairman, Punjab, Haryana and Delhi Chamber of Commerce and Industry.
Co-Chairman	Shri J.P. Dube	Chief Town Planner, Govt. of Uttar Pradesh.
Rep.	Shri M.K. Bezboruah	Director of Industries, Delhi Administration.
	Prof. N.S. Saini	Professor of Planning School of Planning and Architecture.

After a good deal of deliberations the workshop broadly accepted the population projections for Delhi as given in the background papers. It was felt that the industrial employment estimated at 25% of the work force is somewhat on the lower side. However, the workshop made the recommendations based on these projections. This would mean creation of additional employment of about 6.67 lakhs by the year 2001. The group recommended that for this purpose various constraints on the existing industries need to be removed and new industrial infrastructure needs to be created. It was suggested that about 25% of the future employment in the industries sector may assigned to the existing industries which would take care of 1.67 lakhs of additional anticipated industrial workers employment. The remaining 75% i.e. 4.91 lakhs additional work force would have to be absorbed by the new industries.

R e c o m m e n d a t i o n s :

- i) Liberal norms be prescribed for defining which units are non-conforming and which could be spot zoned, taking into

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consideration a minimum dislocation of resources on one hand and also that the environment is not spoilt. It was also suggested that areas which are predominantly industrial be declared as such and some existing industries in residential areas be considered for spot-zoning depending on special circumstances. These industries be given necessary facilities and additional power and water supply and other assistance for development, but not for expansion. If they are to be shifted for any purpose, alternative land may be provided so that the industry could function and develop on the new site.

(ii)

As per the present policy of Delhi Administration, small scale industries are to be developed. The average employment in this sector is about 10 per unit and about 49,000 new units will have to be set up. The workshop recommended that these units be provided necessary infrastructural facilities in the form of more developed plots or flatted factories or cheap workshops. All this infrastructure be developed with proper power supply, sewerage, water supply and other services. There should also be facilities for post offices transport, canteen, etc.

(iii)

All Industrial areas should have a workers housing colony close by so that the workers have not to travel for long distances to reach their work places.

(iv)

The prices of land in Delhi are going very high. Some measures be taken to reduce the prices so that industrial infrastructure does not become costly and remains within the means of even small and tiny units. High land prices should not disturb the economy of the industry. Many delegates felt that a system of competition could be introduced in the development and distribution of land which may bring down the prices and make the availability easier and faster. It was also suggested that co-operative societies of entrepreneurs could be organized to build flatted factories, which could be allotted land and provided cheaper institutional finance.

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- v) As a measure to reduce land prices the auctioning of land in small lots by the DDA may be avoided. As regards rural industrial development the workshop was of the view that future industrial growth in these areas be on planned basis mainly through growth centres and service centres as envisaged in the first Master Plan.
- vi) In spite of the Land Ceiling Act and the industrial policy applicable to the Union Territory of Delhi it would be desirable to have some industrial plots of bigger size so that such of the industries which are essential for Delhi could be accommodated on these plots on merits.
- vii) For better utilisation of land it was suggested that Floor area ratios may be relaxed and this aspect could be examined by concerned authorities.
- viii) It was felt that Delhi Administration should announce its industrial policy for Delhi so as to give a proper direction to industrial growth and achieve the employment targets. One industrial policy for Delhi should also take into consideration industrial development in the National Capital Region.
- ix) To ensure the development of industries and providing targetted employment, proper selection of entrepreneurs and proper incentive/disincentives is important. Also the increasing role of women entrepreneurs to be kept in view.

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REPORT OF WORKSHOP ON THE TRADE AND COMMERCE,
SECTOR

- Chairman Shri T.R. Mehandru : Past President,
Institute of Engineers, India.
- Co-chairman Shri M.M. Agarwal: President,
New Delhi Traders Assn.
- Rapporteur Shri M.B. Bhatia : Planning Consultant & Urban
Economist.

The workshop on trade and commerce after detailed deliberations has come to the conclusion that trade and commerce is a very important sector of economy and shall play a predominant role in future development of economy of Delhi and in its total employment potential. They classified trade and commerce into 3 main categories namely: (a) Wholesale (b) Retail and (c) Informal. The informal sector has been recognised to be one which at present has no fixed place to operate.

2. RECOMMENDATIONS

(a) Wholesale Trade

Development of more wholesale markets to meet the increasing regional and inter marketing needs.

(b) Retail Trade :

More shops and shopping centres to be provided to cater to local needs and habits.

(c) Informal Sector :

The existence of the informal sector to be recognised. Steps should be taken to provide suitable facilities at appropriate places and also to ensure proper sanitation, traffic and other controls therein.

REPORT OF WORKSHOP ON GOVERNMENT SECTOR

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| Chairman - Shri C.S. Gupta | Ex-Chief Planner
Town & Country Planning organisation |
| Co-Chairman-Shri S.S. Shafi | Chief Planner
Town & Country Planning organisation |
| 1. Shri M.C.K. Swamy | Principal
Scientific Officer,
Department of the Environment. |
| 2. Rakesh Mohan | Consultant
(Housing and Urban Development)
-Planning Commission. |

The Group considered the projection indicated in the Background document regarding Employment in different sectors and noted that particularly in regard to the Central Government Employment Sector basically there was no specific recommendations. Nothing that the proposal was for 28 lakhs workers in different sectors of which the expected informal sector component is 50 per cent. The group was not clear as to what is the projected component for the Government sector ;in the rest of the 14 lakhs workers. Considering this fact, the group was of the view that there is need to have more feed-back either from available sources or from indepth studies, to ascertain whether any change is required in policy matters concerning Government Employment in Delhi vis-a-vis the previous Delhi Master Plan recommendations. The group also considered that while the projected Urban population for 2001 is 122 lakhs, the basic assumption regarding employment, migration and the economic opportunities in the region have not been into consideration in all their entirety. The group expressed reservation about the population contained of .122 lakhs arrived at and its reconsideration.

2. RECOMMENDATIONS :

- (1) Nothing from the document that the growth rate in public sector undertakings in Delhi is faster than the other components of government employment, the group felt that until the DDA finalises their studies there is need to put a restriction on the growth of public sector undertakings employment in Delhi. This is all the more indicated considering

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the fact that already certain areas are reserved for development of central government offices, and the public sector undertakings are functioning in rented accommodation. At least such restrictions would avoid a fait-accompli situation in the future until the correct perspective in this regard is known.

- (ii) The government as a benevolent employer of growth of employment in that sector in Delhi can thereby give the much needed leadership for the other sectors to follow the lead and locate outside Delhi.

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REPORT OF WORKSHOP ON INFORMAL SECTOR

Shri C.S. Chandrasekhava

Chairman,
Ex-Chief Planner
Town & Country Planning
organisation

Rep: Shri S.S. Suryanarayana

Deputy Director,
Employment,
Ministry of Labour

The Group took note that employment in the informal sector formed a substantial part of the metropolitan economy and provided living for a large section of the population who would otherwise be unemployed. Further, taking note of future growth of population, and the general experience that informal sector employment continues to increase in the metropolitan cities both on account of migrant population as well as educated unemployed, in any development plan it is very necessary that the development of the informal sector be viewed in a positive manner and sufficient provisions be made in the plan for promoting the development of informal sector on healthy lines, safeguarding at the same time, environmental pollution that may occur because of informal sector activities

2. Keeping the above objectives in view, the working group first attempted the identification of the informal sector as evident from the report, experience and observations of its members and the following characteristics of the informal sector were identified : (i) Unorganised (ii) Small enterprises, petty traders, casual labours (iii) not space bound (iv) weak bargaining position (v) Generally exploited (vi) outside the purview of any labour laws (viii) No permanency or assured continuation.

3. The informal sector, thus, consists of small industrial enterprises, petty trades and casual labour. The type of industrial enterprises may be domestic industries, employing under four people, dhobis, textile printing, boutiques, cycle workshops, envelope making, running of transport vehicle,

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such as cycle rickshaws, tongas, handicrafts and petty trading such as vending of food, fruits, newspapers, etc.

4 Recommendations :

a) Promotional Policies :

- (i) Informal sector activity should be permitted freely in domestic units subject to simple restrictions regarding environmental pollution and safety.
- (ii) For carrying out informal sector activities in the areas of trade and services, the plan should earmark specific spaces for these activities in different parts of the city, based upon a survey of felt demands.
- (iii) These spaces should be integrated as far as possible to the adjacent neighbourhoods.
- (iv) Specific areas should be earmarked for holding weekly bazaars in each residential areas and provided with basic amenities.
- (v) Arrangements for extending credit facilities to meet the needs of this specific population should be made.
- (vi) Where a substantial population is engaged in informal sector industrial activity, planned industrial sheds should be provided to them and separate byelaws and regulations to which they can easily conform to, should be framed to enable them to carry on their activities on a cooperative basis.
- (vii) For providing for informal sector activity multiple use of space such as parking areas should

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- (viii) Facilities for improving special skills or new skills should be provided close to the areas where the informal sector population lives or works. In providing such facilities improvements and advances in technology should be kept in view.
- (ix) Assistance centres should be provided close to informal sector activity areas with impact from the workers so that there is a sense of participation.
- (x) "Udyog Bandhu" or "Udyog Sahayak" centres should be set up close to the informal sector establishments.
- (xi) In order that this programme of promotion of the informal sector is not hindered, the present byelaws and regulations should be reviewed.
- (xii) While promoting informal sector activity priority should be given to the disabled, widows and women.

b) Environmental safeguards :

- (i) In the case of domestic activity, activities should be confined within the dwelling unit or the space attached to it for the use of the dwelling unit.
- (ii) Noxious or hazardous activities should not be permitted so as to ensure a safe, hazard free and pollution free life to the household and the neighbours.
- (iii) In the case of outdoor activity, such activities should not be permitted to

misuse or spoil normal public amenities like school playgrounds, parks, footpath etc.

- (iv) Some shelters, better than the existing night shelters, should be provided to the houseless informal sector population at appropriate locations on nominal charges.
- (v) In nominal new commercial (retail and wholesale) and industrial areas, adequate provision should be made for carrying out informal sector activities.

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ANNEXURE 'C'

REPORTS OF WORKSHOPS ON INFRASTRUCTURE-PHYSICAL
AND SOCIAL SEMINAR HELD ON 8TH DECEMBER, 1981

RECOMMENDATIONS OF THE WORKSHOP
ON WATER SUPPLY & SEWERAGE

Chairman : Shri G. M. Vaidya, Member CWC
Rep. : Shri J. D. Cruz, C.E./DWSDU
Shri A. Sen Gupta, Asstt. Adviser/
CPHEEO

1. Delhi being a city with diverse population like foreign embassies, a large amount of floating population in the form of tourists as well as visitors on business, the per capita requirement of water per day would be much higher than other cities or towns. The working group therefore felt that it would be proper in assessing the requirement of water at a higher norm of 80 gallons per capita per day instead of 70 gallons per capita per day as recommended by the Committee on Delhi's water supply and sewerage.

The Working Group also recommend that while accepting the norm minimum of 40 gallons per capita per day should also be ensured in each area of Delhi.

2. The Working Group also took note of the fact that the availability of water at present is not sufficient to even meet the demands of 1985. The availability of additional water will therefore depend on Delhi's share of Yamuna water.

The Working Group therefore recommend that the decision regarding Delhi's share of Water in the River Yamuna should be taken immediately by the Government of India because the availability of water will be a vital factor in determining the future growth of the City.

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3. The Working Group recommended that in view of the non-availability of the required supply of water, complete purification of the waste water for re-use must be carried out on priority. That is also necessary from the environmental point of view as well as from the requirements of the Central Board for the Prevention and Control of Water Pollution.

The Working Group recommends that in deciding the share of water supply to Delhi, the exchange of the treated waste water, for raw water may be negotiated with the neighbouring states. If this is not possible, then, the re-use of water in Delhi itself for flushing and gardening purposes will have to be considered.

4. If Delhi is to get a share from the Storage Reservoirs on rivers to be constructed, then the development of Delhi will have to be linked up with the programme of creation of these storage and the conveyance of water to Delhi.

The Working Group also took note of the fact that the Central Ground Water Board has carried out a survey and had found that the ground water in Delhi is not available in adequate quantity and of required quality.

The Group was also informed that the experience of the existing tube wells shows that the quality and quantity of water is deteriorating with time.

5. The Working Group also noted that there is a great lag between the requirement and actual treatment of waste water. It is possible to treat all this water but this could require a greater pace of activity in this sphere not only to wipe up the back log but also to keep abreast with the progressive demand of water.

6. The Working Group also recommends that in order to prevent the pollution of the Yamuna, it is necessary that all areas are sewered. The large number of unauthorised and regularised colonies have to be provided with a sewerage system. A Scheme/legislation should be prepared so as to enable the Authorities to lay down the sewerage system in these colonies and recover the cost from the beneficiaries.

RECOMMENDATIONS OF THE WORKSHOP
ON POWER DISTRIBUTION

Chairman: Shri J.R. Jindal, Past President of DFOA

Rep. Shri Basu, CE/DESU

Shri M.C.K. Swamy, Department of
Environment.

1. In view of the fact that the estimated population of Delhi will be nearly double in 2001 i.e. 12 millions, the total power requirement is estimated at 2500 MW net. It will be, therefore, advisable to plan for gross power requirement of 3500 MW which would also take care of 30% out ages.
2. The group noted that all the above power requirement cannot be met by local generation alone and to tide over the requirements, captive generation be encouraged by Industrial Units and any disincentive in this regard be removed.
3. While considering the augmentation of generation capacity for the needed requirements by 2001, the possibilities of generation by private sector may be considered in line with the national policy in the matter.
4. The group also noted the present deficiencies in the distribution system and recommended that the city-wise distribution system be designed for an underground system to provide more space for tree-planting and good aesthetics and also to cut transmission and distribution losses involved.
5. The group noted that for the projected development of the ;Metropolis the minimum requirement of electric power is of the order of 2500 MW and local generation capacity being limited the Govt. has to ensure the

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availability of this requirement. The group strongly feels that this issue need to be resolved first before the planned development of the city is taken up on the scale envisaged.

6. The transmission and distribution system should be properly designed and laid to avoid voltage fluctuations beyond specified limits, so that consumers are not required to install voltage regulators, boosters etc.
7. The group noted that the capital and maintenance cost for such a magnitude of power requirement at the city level is of colossal order, future planning and development of the city should on energy conservation system and not of energy intensive system.
8. The group is also of the view that to the extent possible, use of alternative sources of energy for specific requirements at all levels industrial, residential and commercial be encouraged to minimise the dependancy on conventional energy system. To that extent, the planning for the city be innovative.

RECOMMENDATIONS OF WORK SHOP ON
DRAINAGE & SOLID WASTE MANAGEMENT

Chairman: Shri C.S. Chandrasekhara,
Ex-Chief Planner, TCPO.

Co-Chairman: Shri Virendra Aggarwala, Chairman
Delhi Study Group.

Rep: Shri Khurana, CE/MCD

Shri S.K. Jain, SE/UP Jal Nigam

(A) SOLID WASTE MANAGEMENT

The Working Group took note that presently about 2000 tonnes of garbage was being collected by M.C.D.. NDMC Contonment Board and D.D.A. and disposed of in 4 or 5 places. The manner of disposal was mainly sanitary fill. The garbage was first filled in and later on mulba was put on top and consolidated with bulldozers. Trees were then planted so that the area of the sanitary land fill became a garden.

Much of the mulba (Building waste) is being disposed of privately.

The working Group noted that in the twenty year perspective, the total generation of consolidated waste including the building waste may reach a figure of 8,000 to 10,000 tonnes and it would not be possible for the Sanitary Land Fill method to be followed for disposing of mulba, as land would not be available.

The Working Group also noted that the garbage produced valuable manure if properly composted and for which already the Local Bodies had established already two plants of 150 to 200 tonnes capacity.

The Working Group after reviewing the problem recommends as follows:-

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- 1) In the future perspective, the sanitary landfill may be progressively revised by composting and utilising the separated inorganic waste into useful products.
- 2) For this purpose, a number of treatment sites may be established both on the periphery as well as within urban areas taking into consideration the economy of transporting the waste.
- 3) In these treatment plants, the garbage may be separated from the building rubbish and the garbage may be composted and made available to farmers.
- 4) The Building rubbish may be pulverised and made into suitable bricks and blocks for use in construction works, if necessary by adding a cementing material.
- 5) The composting process should be subsidized by the Government, so that the farmers may obtain the composted manure at reasonable remunerative prices.
- 6) Possibilities may be explored of using the organic material for energy/gas generation through suitably designed plants.
- 7) In the view Development Plan for Delhi, in each area, garbage collection centres should be provided and facilities for garbage collectors and their equipments should be provided.

(B) DRAINAGE:

The Working Group noted the various dimensions of the drainage problems of Delhi and came to the following conclusions:

- 1) The increasing urban spread of Delhi, the narrowing of the river regime and the increase in the floods created by modernised farming practices in the region, would create in the future great flood hazards for the city.

- 2) In order to meet the situation created by such hazards, the following steps are recommended.
- i) The design of the drainage system of Delhi should assume a much higher run off coefficient than what was earlier assumed so that adequate safety factor is built into the system.
 - ii) Portions of the river may be allotted to be dredged by extracting sand so that the storage capacity of the river increases. Further wherever feasible, in low lying areas ponds or tanks may be created for storing rain water and to function as balancing of the drainage system.
 - iii) The drainage problem of Delhi should be studied in great depth in collaboration with the flood Organisations of Delhi and adjacent states in its regional dimensions and appropriate steps should be taken in the region in order to minimise the intensity of the flood problems of the city .
 - iv) The possibilities of building a siphon aqueduct at the mouth of the Najafgarh Drain so that the Najafgarh drain water is carried out across the river and drained into the river downstream at a feasible point.

RECOMMENDATIONS OF THE WORKSHOP ON
HEALTH & EDUCATION

Chairman: Prof. Mahale, Acting V.C. J.N. University.
Co-Chairman: Prof. Howart Hirt, Visiting Prof. of Geography.
Rep: Dr. O.P. Sharma, Director (Health)
Delhi Administration.
Mrs. Kamla Menon, N.C.E.R.T.

HEALTH CARE FACILITIES:

Health should not mean hospital care only but total health care as defined by World Health Organisation i.e. preventive, promotive, curative and Rehabilitation aspects with special emphasis on maternal and child health care. Family planning should occupy an important place in the total health programme.

There should be an equitable distribution of health care units for all citizens in the Union Territory within easy reach of their residence. Special efforts should be made to remove geographical imbalance. No facility additional beds should be added to existing health care units like large hospitals.

To achieve this objective it is essential that a single effective agency is created which will approve plans of all agencies engaged in health, care, decide locations of health care unit including hospitals, co-ordinate and regulate functioning of existing health care units. The agency will also device a mechanism with appropriate feed-back including private and Voluntary efforts which at present is not reflected in the health care planning for Delhi. Such an agency is absolutely essential if we have to achieve proper referral system and regionalisation of health care. This agency will also take up with the neighbouring states creation of identical health facilities having similar standards so that inflow of population for seeking health care in the Union Territory is minimised.

With appropriate emphasis on material and child health care, family planning, health education, preventive services e.g. immunization

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Couple with supply of safe drinking water requirements of hospital beds in Delhi is not likely to exceed 2.5, beds per thousands of population, norms approved by Delhi Administration, Health Ministry and Planning Commission. Additional 18,000 beds thus needed by the year 2001 A.D. should be created through 100 bedded hospitals capable of being raised to 200 beds. Hospitals of less than 100 beds and more than 200 beds are less economical and create management problems. Voluntary efforts should be encouraged to come forward and establish health care units including hospitals in such areas where these facilities are lacking. No beds should be created in sector where facilities already exist in excess of prescribed norms. These 100-bed hospitals should provide community health cover in true sense i.e. primary health cover to creches, ICDS blocks etc. through chain of health care units; primary health care units, polyclinics. DDA through special appeals should provide land for health units where there is a felt need but land is not available due to variety of reasons like high density population, construction etc.

In development of proper referral system it is essential that beside primary health units secondary and tertiary units are provided. At present secondary units i.e. diagnostic unit, maternal and child health care centres and maternity homes are lacking specially in areas populated by low socio-economic groups. DDA should earmark land for these facilities. Yard sticks for such units exist as per norms of Health Ministry which can be suitably modified for the needs of Delhi.

Norms should be identified for provision of gymanesia and other physical health and training activities in all the neighbourhood of the Union Territory. These facilities will be instrumental in maintaining high standard of physical fitness and this reduce need for units providing creative cover.

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EDUCATION

1. Educational facilities should be linked up with the size of population demand that is to say every 15,000 population there shall be:

10 pre-primary schools in area of 0.5 - 0.75 ac.
4 primary schools in an area of 1.5-2.00 ac.
2 secondary schools in an area of 4.0-6.00 ac.

These standard although lower than these provided for in the first Master Plan. nothing should be done reduced them.
2. The unevenness in the availability of schools in each zone at each of the three stages and the college level should be removed in such a way that allocated space is utilised and additional space is provided for in terms of the present deficit; and provision of space for the increase in the next ter must be kept in mind.
3. Given that on the basis of the population projection for 2001 A.D. there should be a need for approx. 3,000 sites at the pre-primary level and same number of additional sites for the primary level and nearly 800 more sites at the secondary level. The provision for this need should be made in the Perspective Plan.
4. Given that the DDA now plans dwelling units and reserve sites for schools it should also consider handing over constructed school buildings rather than sites to those who are responsible for running schools. This will ensure the adherence to building norms and elimination of tented and semi-pucca and even badly structured buildings.
5. For a cluster of schools there should be provision for stadily gymnasia and Bal Bhawan because all co-curricular and extra-curricular activities cannot be managed in the school premises and within the usual timings of the school.

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6. Under this special appeal it must be possible to provide social facilities particularly schools in areas where demand exists.
7. Uniform spread of college and work-cum-training facilities should be ensured in areas where the facilities are inadequate.
8. To increase the educational facilities in urban Delhi available to EWS, Government and Local body controlled schools should be increased from the present 50% at the middle and secondary stage to 100%. These schools should be provided with space for work-cum-training centres and child care facilities and play-ground space.

RECOMMENDATIONS OF THE WORKSHOP ON
TELE-COMMUNICATION, POLICE, FIRE, GAS
& MILK DISTRIBUTION

Chairman: Shri R. Nagrajan, Dy. Gen. Manager,
Delhi Telephones

Co-Chairman: Shri Amarjeet Singh, Post Chairman
PHD Chambers of Commerce.

Rep. Shri Tondon, Adl. Commissioner(Police) Delhi
Prof. Ashish Bose, Delhi University.

IA) TELE-COMMUNICATION

1. The DDA should make available to the P & T Department new sites for building telephone exchanges, telephone offices, quarters for their staff etc. on a priority basis and not wait till the integrated development of the District Centres as visualised under the Master Plan is taken up. This will cut the delays in providing the telephone services.
2. The DDA may consider earmarking land in the District Centre plans for telephone, postal, police and other services together and allow these organisations to undertake plotted development. Very often security requirements for safe-guarding the telephone installations are of prime consideration, in the location of telephone exchanges. This should be kept in view.
3. The DDA should relax FAR and ground coverage rules to enable the P&T Department to meet their demands in crowded areas, because human occupancy is negligible in these cases.
4. There should be Utility Co-ordination meetings where representatives of P&T Department, DESU, DDA and allied organisations meet regularly in order to co-ordinate the future development plans more efficiently. For

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example, in view of the development of new technology in the field of electronic telephone exchanges, cable ducts etc., there is need to lay the path way well in advance, right from the planning stage.

- 5) There was a general demand on the part of the consumers for the quality of telephone service to improve in the foreseeable future. The Department should take into consideration the new demands of the national capital region. In particular, it was pointed out that one of the reasons for industrialists and others not giving to the ring towns in the NCR region was lack of instant communication. The telephone department could consider in their perspective plan the linking up of the ring towns within this region on a priority basis. It was further pointed out that as the NCR region has not quite crystallised, the P&T Department would await for concrete proposals from DDA in this regard.

(B) POLICE & FIRE

1. The DDA was requested to allot land in new colonies to the police stations and police posts right at the initial stage. In this context, the need for earmarking suitable residential accommodation for the police personnel within the police station premises should be considered.
2. While planning for the fire stations, it should be advisable to locate them near the police stations as far as practicable.
3. An emphasis was laid by the Police Authorities on the need for improving telephone communication which could greatly contribute to the efficiency of the Police. In particular, a request was made to the P&T Department to look into the working and also give priority to the Police in the matter of telephone connections, maintenance etc. There was agreement that the police lines should be checked everyday.
4. In regard to the special requirements of high rise buildings for protection against fire, it was necessary to match the new demands of plots with the existing infra-structure in the fire stations.

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5. The question of traffic accidents etc. was discussed but recommendations were deferred to the next Seminar which will be specifically held on Traffic and Transportation.
6. It was pointed out because of the lack of playgrounds and other recreational facilities for the younger people, there was considerable crime which could be avoided through better planning by the DDA. Similarly, in regard to location of milk booths, the DDA could do more detailed planning which would avoid congestion in the narrow lanes of crowded areas and also encroachments on the foot-paths and streets.
7. The question of students indiscipline and the need for improving the quality of DTC also came for discussion but specific recommendations were deferred to the next Seminar.
8. In regard to the distribution of milk, it was recommended that new technology should be explored which preserves milk for a long time and the present network of distribution of milk could be minimised.
9. In regard to the supply of gas, the possibility of piped supply of gas and bio-gas should be explored in the context of development of new technology keeping in mind the requirements of pollution control.

REPORT OF GROUP 'A' STRATEGIES FOR DEALING WITH THE
URBAN POOR

Chairman	Dr. E. Sileazar Programme Officer, North India, UNICEF.
Co-Chairman	Shri Vajpai, Secretary, Land, Delhi Administration.
Representatives	Shri Shekhar Singh, Reader, IIPA Ashok Lal Consulting Architect.

The Group first spent some time in defining what was meant by the urban poor. Definitions of quantitative nature based on income, and descriptive nature based on the sort of housing available were offered. It was decided to adopt a working definition where the urban poor were understood to be people who could not afford to rent or own housing in the present market system.

The suggestions for shelter solutions that came from the Group could be broadly classified under the following headings:

1. Considerations of finance
2. Considerations of location

Considerations of finance :

It was stressed that if housing was to be made available to the urban poor it must be at very cheap rates, and reasonable terms of payment. An example was given where it was possible to provide developed sites and serviced plots, with a built in sanitary core and developed plinth for one room: all for Rs. 2,700/-.

It was generally felt that, barring problems of location, such pricing would be acceptable for the urban poor. However, the quality of the services should not be below acceptable standards which otherwise imposes future liabilities on the maintaining agencies.

However, this did not mean that efforts should not be made in further reducing this cost especially through innovations in design and materials.

This price, the group was told, was without specific subsidy and any subsidy that existed was the result of cross subsidy in a larger housing programme. Cross subsidy could also be made in development programmes in general, not restricted only to housing programmes.

In so far as the availability of funds, with these urban poor, for going into such schemes, it was felt that if they were provided with security of tenure, perhaps in the form of ownership, this would be enough incentive and would develop in them the capacity to mobilize the own resources.

It was further felt that one way in which some of the pressures for housing the urban poor could be removed was by making it mandatory for every employer to provide housing to its employees. This would not only ensure that all workers in the organised sector got housing but would also be a deterrent to people from further setting up for expanding their business and other enterprises in metropolitan cities like Delhi. The suggestion for charging tax, for a similar purpose, was also considered but it was felt that it might not be as practical as the earlier suggestion.

2. Location Policy :

- a. The group felt that efforts must be made to locate people as far as possible, near their places of work.

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- b. It was also felt that people should not be segregated into different economic classes but colonies should be developed where all the different economic classes live near each other. Many advantages of such a system were enunciated.
- c. It was pointed out that, while considering the question of location one must consider the question in terms of areas already developed separately from areas yet to be developed.
- d. The Group also felt that first priority should be given to the densification of Delhi, as it exists, and only there should new colonies on the periphery be developed.
- e. It was pointed out that, given the prevailing market forces, it was becoming more and more difficult to acquire land for the purpose of housing and urban poor. Even where the DDA managed to acquire the land, the market value of the land shot up so drastically that the gap between the real value and the official value became too much to sustain.
- f. It was also suggested that the earmarking of land for service personnel be enhanced, in keeping with the general thrust of employers providing land to employees. In fact, it was pointed out that even the existing allocation of land for this purpose had not been fully utilised. The group also felt that it must be ensured that this land is developed in a way such that it benefits the Group that it is intended for and not some one else.

GROUP 'B. REPORT OF THE WORKSHOP ON UNAUTHORISED COLONIES

Ch. Sh. B. Kambo	Chief Planner, Government of Rajasthan
Ch. H. D. Shouria	Chairman, Common Cause
Sh. D. D. Mathur	Town Planner, MCD
Prof. N. S. Saini	Prof. of Planning SPA, Delhi.

A. Statement of the Problem

1. According to available statistics, there are presently nearly 2 lakh families in 612 unauthorised colonies in Delhi. According to the projections made in the DDA's working paper, the population in the unauthorised colonies may increase to about 4 lakhs by the year 2001 AD.
2. The reasons that brought about the development of unauthorised colonies range over a wide field which are well known. Primarily the causes have been hunger for housing and house plots developed over the years, non-availability of developed residential plots in adequate number for lower income group, political patronage to unauthorised construction etc. etc.
3. The group observed that nearly 20-25 percent of these unauthorised colonies had been built on government land. Thus the majority of these had come up on private land.
4. Surveys conducted of unauthorised colonies on government land have shown that nearly 80 percent of these could be regularised if slightly lower standards of planning and development were adopted.

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5. The group recognised that the population in these unauthorised colonies did not consist of the urban poor only or of the migrants from the rural areas. There were sizeable section of the population who came from within the city and those who had promoted these unauthorised colonies.

B. Recommendations relating to existing unauthorised colonies

6. The group felt that certain positive criteria shall have to be laid down for accepting these colonies as permanent urban settlements. Such a criteria should be developed after conducting detailed surveys of these colonies as the problems may vary from colony to colony. This criteria should include building by laws, planning standards, environmental requirements, social and economic infrastructure etc.
7. Considering the magnitude of the problem and the number of people involved, the group felt that all unauthorised colonies up to certain date be regularised provided those satisfied the criteria laid down for the purpose.
8. There should be no discrimination between unauthorised colonies on government land and those on private land. All colonies should be examined and evaluated on similar norms.
9. Detailed surveys shall have to be conducted and plans prepared for each colony indicating structures on plot by plot basis and each colony plan judiciously examined.

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10. The group recognised that the criteria for regularisation of these colonies shall have to lower standard that prescribed by the Master Plan and the Building by laws.
11. In case of private colonies care shall have to be taken that the present residents benefit by the regularisation procedure and not the developer or the speculator.
12. Where areas meant for city level facilities have been built upon and alternatives for providing the same are not feasible, such part of the areas should necessarily have to be demolished and persons/families affected should be rehabilitated as near as possible.

C. Financing development works - unauthorised colonies

13. The group felt that city level facilities and services should be provided one of the funds of central government/Delhi Administration/DDA/MCD/NDMC.
14. Expenditure required for all internal development within the colony area should be borne by the beneficiaries themselves. There need not be any subsidy in this regard.

D. Future line of Action

15. The group strongly felt that it would be very inappropriate to consider that there would be inevitable expansion of the unauthorised colonies in the future also. There must be very strong political will not to prevent any more unauthorised construction otherwise this problem will be unending.

16. There should always be available adequate developed land to meet the needs of all income groups more especially the lower income group at reasonable cost and in different parts of the city.
17. All vacant government land near these unauthorised colonies should be taken up for development on priority basis so that these areas are also not lost for all time to come.
18. Unauthorised construction and sale of unauthorised land should be made cognizable offence. The existing legislation should be immediately suitably amended.
19. Redevelopment of unauthorised colonies on a planned basis in the form of group housing or plotted development should be encouraged. Incentives should be provided for such an effort in the form of building material supply, services etc. This will improve environmental standards and provided better services.
20. Effective Administrative framework should be set up this may forestall development of any potential unauthorised colony.
21. Institutional framework should be established of all development agencies concerned that urban development programmes are regulated in a co-ordinated manner. This should especially include check on regulation of unauthorised sale deeds, water connection or power connection or construction of approach road to unauthorised building or colony.
22. There should be continues efforts through mass media to deducate the people against the proliferation of unauthorised construction against the sale/purchase of unauthorised plots for construction.

GROUP - C HOUSING IN TRADITIONAL AREAS

Chairman Prof. B. Ghosh, Director, S.P.A.

Co-Chairman: Shri B.S. Shafi, Chief Planner, TCPO

Rep. Shri G.D. Mathur, Architect Planner, TCPO

 Prof. A. Moitra, Professor of Housing,
 SPA, Delhi

 Prof. Mrs. Narayani Gupta, Reader in History,
 T.P. College, Delhi.

The historic evolution of Delhi is manifested in a number of cities which have transcended through age. Traditional areas are the ancient cities. There are number of sites in Delhi, like Shahjahanabad, Nizamuddin, Chirag-Delhi and Mehrauli which are, in fact, the sites of ancient cities. All these sites should be considered as a part of our urban heritage and should be conserved. Although the discussion focussed on Shahjahanabad, the recommendations apply equally to all other sites in Delhi.

In the Master Plan for Delhi 1961-81, parts of Shahjahanabad was designated to function as the Central Business District of Metropolitan Delhi, which resulted in intensive commercial development, traffic congestion and steady deterioration of the living environment. Unfortunately, the District Centre planned at Khyber Pass, which could have provided relief, was not built. The pedestrian-oriented network of the old city was not capable of meeting the traffic demand which resulted in congestion. The commercial use expanded beyond the main street frontage and traditional living areas were encroached upon.

The present trend indicated a fall in population, with rise in employment level. However, the decision by the Northern

Railway to remove the goods yard from Delhi main station may act as an inducement to shift some of the wholesale functions from the old city, which can provide considerable relief. The Delhi Development Authority should seize this opportunity to remove incompatible wholesale functions and thus improve the present situation.

The character of pedestrian-dominated streets and lanes need to be restricted and maintained to retain the spatial coherence. This can be achieved by restraining traffic within the area. Traffic should be areally separated to create distinct traffic free precincts, streets which will allow a mixture of pedestrians and vehicles, and vehicular traffic only. ; In order to achieve this objective, traffic should be restricted to major peripheral roads of the city. For access to individual areas some form of intermediate transport system should be adopted. Within the areas no vehicular traffic should be allowed. The incompatible economic activities should be relocated outside these areas. The concept of District Centres need to be revised as Town Centres to accommodate activities which are incompatible in the traditional area.

The traditional areas grew in response to the climatic demand and material adaptation resulted in the form. The spatial character evolved is a part of the cultural heritage. It is necessary to conserve the spatial structure and the fabric of the structure not as museum pieces but as living habitat.

Therefore, it is necessary that the social services are delivered to these areas at the desirable level of standard. The areas of dilapidated buildings should be cleared and the space available should be used for community purposes.

In order to be able to preserve the traditional areas, they should be declared as conservation areas and separate legal frame-work should be formulated for them, which would

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allow flexibility. Special bye-laws are required to deal with each individual area so that their architectural and cultural heritage is conserved.

Redevelopment within these areas should conform to the architectural style, the building materials, proportions etc. so that they do not appear incongruous or incompatible to the urban scape of the area.

As an immediate measure, the unsightly advertisement hoardings should be removed and strict advertisement control imposed.

GROUP 'D' ROLE OF PRIVATE DEVELOPERS IN HOUSING

Chairman	Dr. Robert Shaw, Secretary, Commonwealth Association of Planners.
Co-Chairman	Shri V.P. Singh, P.H.D. Chamber of Commerce.
Rep.	Shri V.V. Sara Nathan, President, Apex Association of D.D.A. Colonies.
	Shri J.C. Rao, Consultant-Housing Finance.

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The following points were agreed for discussion:

1. Scope for private development.
2. What form should it take ?
3. How should land be allocated for private development ?
4. What controls would be needed for satisfactory developments ?
5. Land Values and speculation.
6. Various forms of land tenure.
7. Is new legislation needed or any changes required in existing legislation ?

1. Scope for private development

It was felt that there is certainly scope for private development which has a specific role and which should be fostered as a means of increasing development provision and reducing public expenditure.

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2. What form should it take

In order to promote private development every facility should be provided to :

- (a) Set-up development co-operative societies, private sector agencies and individual developers.
- (b) assist the development of ; individual and group plots.
- (c) service land suitable for development, properly programmed in relation to resources.

3. How should the land be allocated to private development?

Land cannot be allocated unless it has been acquired. Excessive land values are seriously inhibiting development, placing house ownership beyond the resource of many people and consequently placing increasing burdens on local government. There is an urgent need for Government to develop equitable policies to enable land to be acquired and purchased as and when required by local authorities and private agencies.

The group did not come to any conclusion on arrangements for allocation of land and recommended that this subject is so important that it needs more discussion.

4. What controls would be needed for satisfactory development.

Private development should conform in ;all respects to land use policies and all forms of development requirements as laid down by the local authorities.

5. Land values and speculation

Land speculation and the resultant high values are a form of inflation and are socially detrimental. To avoid excessive profiteering, a percentage of house/plot unit should be handed over to local authorities for their allocation and the remainder disposed of commercially by private developer. Which would ensure the achievement of social objectives.

6. Various forms of land tenure.

Sufficient time was not available to discuss this topic.

7. Legislation

Existing legislation regarding land acquisition and tenure should be reviewed. Land acquisition in Delhi was formulated by Government as long as 1961, regarding large scale acquisition, development and disposal of land. The group was of the opinion that government should now review these policies urgently; in the light of experience.

GROUP 'E' - RECOMMENDATIONS OF THE GROUP ON HOUSING DESIGN AND STANDARDS :

Chairman Sh. J.P. Dube Chief Planner, Govt. of U.P.

Co-Chairman Sh. A. Bhardawaj Consulting Archt.

Rep. Prof. H. Bahri Professor of Housing SPA, Delhi

Prof. R.M. Verma Sociologist, Institute of Social Work.

Design and Planning :

- i) The group noted the standards and concepts of housing as built by the DDA so far and was of the view that there was a need for more varied approach in terms of design, environment and construction system etc. to be used for future construction particularly ;in view of the very large housing to be built by 2001.

- ii) There was a need for new design concepts being evolved for evaluating existing housing which would be more in keeping with Indian Life Style and climatic conditions. It was also felt that there should be more flexibility in the houses to be built in future so as to cater to growing aspirations of the people, higher standards of living, with possibility of physical growth of the houses themselves by providing incremental housing.

- iii) The group felt that the large sector of future housing may have to be in the form of high density, low rise pattern. In the case of EWS it should not exceed 2.1/2 to 3 storeyed, while in the case of LIG & MIG it should be in the form of four storeyed terraced houses. In the case of HIG housing, high rise buildings can be considered.

- iv) In view of the growing need to conserve energy and service's infrastructure, new housing should be patterned as far

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as possible in self contained neighbourhoods. This would make it possible to use solar energy, bio-gas etc. in a more fruitful and effective manner. Such steps would also lead to a more pollution free environment for which there should be a major stress.

v) An evaluation of the DDA colonies gave an impression that mostly it tended to become monotonous, were repetitive and leading to the creation of an identical environment. The group felt that there is need for variety and improvement of aesthetic standards as far as possible.

vi) Since densification would be required in time to come to cater for the influx to imigrants, it is vital that the densification to be carried out in a balanced way vis-a-vis Walled City, Government land, DDA colonies and private lands, keeping in mind the infrastructure facilities.

Material and Technology :-

i) The group felt that massive housing programme which has been undertaken by the DDA was one of the rare cases, where new construction technologies and component pre-fabrication could have been undertaken. It is felt that now with higher labour cost, much larger construction in scale and the need for speedier construction for revolving funds, DDA must seriously consider inducting higher and progressive construction technologies for future constructions. This view was based on the fact that the major constraints envisaged for this building activity would be scarcity of conventional building materials, to the extent which would be required for such a programme. The group observed that in view of increasing prices, there was a need for adopting every conceivable measure to contain cost, while improving standards and qualities of construction.

ii) Taking such factors into consideration other countries have successfully introduced the concept of turn-key projects, whereby a more competitive situation is brought in by organisations offering to build housing on their own design, construction systems based on equipments available with them, higher efficiency and better project management, yielding

cheaper cost of the end products. It would be worthwhile for the DDA to adopt such a turn key for a part of its construction and if found successful to enlarge it further.

Socio-economic :

i) The group recommends that the existing rigid economic stratification of the city should be reduced and in the new projects, particularly those of large size a mixed housing system be used.

ii) The group felt that the problem of section of the society which cannot even afford to buy a plot but who requires a house has been approached from different angles like providing a site on higher purchase basis and providing materials only at a subsidised cost for the houses to be built by the allottee through his own personal efforts or plots and some built houses being offered with skelton frame to be completed and finished by the allottee himself. It would be worthwhile for the DDA to explore housing by such means.

iii) The group felt the strong need for creating an independent infrastructure of community personnel who would assist in creating better living standards, community life and management of the civic improvements.

Standards & Bye-laws :-

The group felt there is a need for reviewing all norms, standards and bye-laws to provide higher efficiency designing, construction technology and space utilisation.