

ENVIRONMENT

1. Creation of a sustainable physical and social environment for improving the quality of life is one of the fundamental objectives of Development Planning. MPD-2021 mentions that unprecedented scale and speed of urbanization in Delhi has resulted in enormous pressure on the physical environment of the city with a severe adverse affect in terms of pollution.

2. The city's environment can essentially be described in terms of Urban Management and the Services Management. The Urban Management pertains to natural features and resources including the elements of air, noise, water and land with reference to open spaces, green area and other surface and sub-surface conditions. The Services Management relates to built environment which includes the environmental infrastructure in the form of water supply, sewerage, solid-waste disposal and transportation network.

3. Delhi's main natural features are the river Yamuna and the Aravali hills. The length of river Yamuna in the National Capital Territory of Delhi is about 48 km. River Yamuna enters in Delhi Territory at Palla in the North and terminate its route in Delhi at Okhla in the South before entering into

territories of Haryana & UP. The total Yamuna river flood plain area is of around 97 sq. km. which is about 7% of the total area of Delhi.

4. Aravali Hills ranges are the tail end of Aravali Hills spread over Rajasthan, Haryana and Delhi. Aravali Hills in Delhi are known as Ridge starting from Delhi University Campus in the North to NCT border in the South. Part of this Ridge area has now been declared as Reserved Forest. The Ridge area is divided in 4 parts i.e. Northern Ridge (87 Ha.), Central Ridge (864 Ha.), South Central Ridge (633 Ha.) & Southern Ridge (6200 Ha.) making a total of about 7784 Ha.

5. Delhi has about 300 sq. km. of green area as per Forest Survey of India Report for 2009. It accounts for 20% of the total area of 1483 sq. km. of Delhi. The green area includes forest area, area under District Parks, City Parks, Community Parks, Neighbour-hood Parks and the open area covered under plantation in the residential as well as the large complexes like President's Estate, JNU, IARI, Delhi University Complex and plantation along open spaces, Road-side and drains. Two bio-diversity parks are also under development.

6. Within the Ridge area, the Asola-Bhatti Sanctuary has been developed in an area of about 6874 acres. The development of this Sanctuary succeeded in re-generating a no. of species of Original flora and fauna of Aravali Hills range.

7. The rapid pace of urbanization adversely affected the water bodies in Delhi. The Central Ground Water Board assessed that total ground water potential in Delhi has reduced from 428 Million cubic meters (Mcm) in 1983 to 292 Mcm in 2003. It indicates an overdraft and reduction of around 136 Mcm during the period of 20 years between 1983 to 2003.

8. Average annual rainfall in Delhi is 611 mm. The annual rain water harvesting potential has been assessed at 900 billion liters or about 2500 million liters per day. Owing to massive urbanization the run-off water get diverted into storm water drains and sewers which conveyed the rain water into the river Yamuna. If even 25% of the annual rain water harvesting potential could be harvested, it is estimated that it may make available 625 million liters per day and may meet the existing gap in the availability of raw water resources and water requirement.

9. The air quality in the city, in terms of pollution level is a matter of concern and responsible for a no. of respiratory diseases, heart ailments, eye-irritation, asthma etc. The main sources of air pollution in Delhi are vehicle emission (around 70%), industrial emission (around 20%) and remaining from other sources like Diesel generators and Domestic cooking etc.

11th Five Year Plan (2007-12)

1. Taking into account the fact that 70% air pollution is caused by vehicular emission in Delhi and at the same time the no. of vehicles is continuously increasing each year. Govt. has decided to improve the quality of Public Transport System in Delhi through construction of Delhi Metro, purchase of new low-floor air-conditioned and non air-conditioned convenient buses, replacing the blue-line bus system by private corporate sector system and introduction of Euro-3 and Euro-4 norms.

2. Besides Air Monitoring Stations of Central Pollution Control Board, Delhi Pollution Control Committee has been directed to set up its own Air Monitoring Quality Stations. Six new Air Quality Monitoring Stations have already been set up by DPCC.

3. The use of plastic bags is a major environmental hazard for a Mega City like Delhi. Govt. has banned the production, storage and sale of all types of plastic bags.
4. Keeping in view the role of water bodies in ground water recharge as well as rain water harvesting, a massive programme for preservation and development of all water bodies is being implemented.
5. For promotion of rain water harvesting, Govt. is providing subsidy up to ₹1 lakh to the Cooperative Group Housing Societies. Special programme is being implemented to construct rain water harvesting system in all Govt. schools and colleges complexes.
6. To control the water pollution from industrial waste, 13 CETPs have already been constructed and 11 CETPs have already been handed over to the societies of the respective Industrial Area Associations for their operation and management.
7. All projects approved under Yamuna Action Plan Phase-II are going to be completed by DJB in this financial year 2011-12 and the projects proposed to be taken up under Yamuna Action Plan Phase-III have been selected.

8. The projects for laying of interceptor sewer along major drains falling in river Yamuna has been taken up for implementation on 3 major drains i.e. Najafgarh drain, Supplementary drain and Shahdara drain.

9. The entire 150 km. Trunk Sewer Network of DJB will be made fully functional during this year with the completion of the project for rehabilitation of silted and settled trunk sewers of balance 50 km. length.

10. The projects for laying of sewers in non-sewered areas i.e. unauthorized colonies and rural villages have been started and are in progress.

11. To increase the green cover area in Delhi, massive plantation is being undertaken during each year with the involvement of all Govt. agencies, NGOs, RWAs, Children and Students through Eco-clubs in Schools/Colleges. The target for plantation for the year 2011-12 was 1 million. Plants are being made available free of costs to the citizens willing to participate in Plantation drives.

12. Govt. of Delhi is continuously pursuing for early completion of the construction of Eastern and Western Peripheral Express Ways so that all Inter-State vehicles passing through Delhi roads may use these Express Ways

and do not enter Delhi's roads so as to reduce the traffic congestion as well as vehicular exhaust. Govt. of Delhi has already released ₹ 653.50 crore for these two projects to NHAI.

13. All vehicular air pollution under control certificate service providing centres have been connected with the Headquarters network of the Transport Department so as to monitor the no. of vehicles issued Air Pollution under Control Certificates and the no. of vehicles not issued. Special Campaigns for checking of vehicles plying without air pollution under Control Certificates are being organized.

14. I.P. Thermal Power Station has been closed and Rajghat Thermal Power Station will be closed during this year. The closer of these thermal power stations, will contribute in control of air pollution to a great extent.

15. To improve the Solid Waste Management Services, MCD is being provided sufficient funds under each Annual Plan. For collection and transportation of solid waste, MCD has engaged Private Sector in 8 Municipal Zones.

16. The Gazipur Sanitary Landfill site is being re-developed by recycling the dumped solid waste with the involvement of Private Sector.

17. The Solid Waste is being utilized for making compost at Okhla and Bhalswa Sanitary Landfill sites. Solid Waste is also proposed to be used for generation of electricity at Gazipur and Okhla Sanitary Landfill sites through Private Sector Participation.

12th Five Year Plan (2012-17)

The Issues & Challenges for 12th Five Year Plan (2012-17) relating to Environment Sector were discussed in two Workshops organized on 25th November & 29th November, 2011. These Workshops were participated by a number of NGOs/Civil Society Organizations, Academic & Research Institutions viz. TERI, Centre for Science & Environment, School of Environmental Sciences, JNU, CRRI, DMRC, INTACH, NIUA, HUDCO, IL&FS, Amity School of Urban Management, MGICCC, DPCC, Senior Officers from Planning Commission, Delhi Govt. Departments, MCD, NDMC, DJB, etc. The suggestions received from the citizens and various organizations with reference to Appeal of the Chief Minister, Delhi have also been taken into account in framing the Approach for Environment Sector besides the deliberations made in these two Workshops.

MISSION

- » Environmental Sustainable habitats.
- » A combination of technology, regulatory and strict enforcement measures to curb vehicular exhaust pollution, the major source of air pollution in Delhi.
- » A combination of technology, regulatory and projects implementation to check pollution in Yamuna River.
- » Application of polluters pay principal.
- » Replacement of polluting and conventional industrial units by hi-tech, non-polluting, knowledge based industrial units.
- » Expansion of green cover.
- » Recycling and re-use of municipal solid waste, sewage and waste water.
- » People's participation and involvement for environmental upgradation through comprehensive and continuous IEC.

APPROACH

1. The number of vehicles is increasing in Delhi at a very high rate but the increase in length of roads kilometer lane is not commensurate to the growing no. of vehicles. Even though a large number of personal vehicles got converted to

CNG fuel, the increasing no. of diesel operated vehicles in Delhi is continuously aggravating the vehicular exhaust pollution.

2. Delhi Metro services are being used by more than 18 lakh commuters each day which contributed in diverting the vehicles from roads. Much more is required to reduce the no. of vehicles on Delhi's roads with a mix of incentives and disincentives.

3. Incentives for shifting of commuters from Personal Vehicles to Public Transport Modes may be in the form of assured, convenient and integrated multi-modal Public Transport System with common ticketing and linkages between different modes.

4. Disincentives for use of personal vehicles may be in the form of congestion charges for entry into certain areas, annual carbon cess, higher parking charges, efficient enforcement network for inspection of vehicles plying without pollution under control service, insurance, fitness and prescribed Euro norms etc.

5. Air and water pollution control, expansion of green coverage, exploration of ground water and disposal of municipal solid waste need to be planned for Delhi in the

perspective of entire National Capital Region for targeted impact. NCR Planning Board may play catalytic role through promotion of joint sector projects.

6. The minimum flow of fresh water in river Yamuna downstream of Wazirabad is equally essential for rejuvenation of the river in Delhi territory. The required minimum flow of fresh water in the river Yamuna may be possible on construction of identified reservoirs at Renuka, Keshau and Lakhwar-Vyasi in the upper basin of the Yamuna River and restoration and maintenance of Wetland in entire territory.

7. The re-use of treated waste water need to be expanded for some of the uses like requirement of power plants, requirement of construction industry, Delhi Metro, Railways, Automobile workshops and DTC depots for cleaning of vehicles and to the full extent of requirement of horticulture, parks and irrigation in cultivable land. The maximum re-use of treated waste water will contribute in controlled exploration of ground water.

8. Programmes need to be formulated for collection of entire run of water and its use in recharging of ground water

level as well as filling up of all water bodies and deep depressions in Delhi.

9. Excess water available in the river Yamuna during monsoon need to be impounded in the river bed pondages. It will contribute in charging of the river bed area and may also be available to meet the gap of raw water during summer and winter seasons in Delhi.

10. The Ground Water recharge has been affected to a great extent with concretization of the open spaces and footpaths. Some policy and planning system need to be evolved to check the present trend of concretizing the available open space and space along foot paths and drains.

11. Rain water harvesting programme need to be promoted with construction of more surface water bodies/underground tanks and by providing incentives and involvement of all citizens, NGOs, CSOs with effective IEC programmes.

12. Arrangements will have to be made to ensure that no sewage is discharged into storm water drains. Entire sewer network system needs to be maintained with zero failure so as to achieve the said target.

13. Hazardous waste, Bio-medical waste and Electronic waste disposal system need comprehensive planning for disposal of the estimated quantum in future with integrated system for disposal of MSW and these three wastes.

14. The concept of green buildings need to be promoted for conservation of water, reduction in generation of waste water & solid waste and saving in consumption of electricity etc.

15. The final disposal of solid waste shall be minimized through maximum recycling and re-use of the waste in view of technological advancement and potential available. The contribution of Rag pickers need to be acknowledged by providing them necessary kits, education & training and health insurance coverage.

16. The Yamuna river bed including flood plain area need to be developed in view of its geographical, aesthetic, river bed recharge, wet land development, flood control, green cover potential requirements and also to check any encroachment and prohibited use.

17. A comprehensive Action Plan may be prepared for increasing Green Cover Area in Delhi from 20% in 2009 to 30% by the end of 12th Five Year Plan.