INDIAN ASSOCIATION FOR AIR POLLUTION CONTROL

Delhi Chapter

Website: www.iaapc.org

Dr.J.S.Sharma
President
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24-7-2021

Dear Sir,

Please find attached our comments on the drafty MPD-2041 for your kind conseration and necessary action please.

We request you to call IAAPC for discussions while finalizing the MPD 2041.

Regards,

Dr. J.S.Sharma

To
Chairman
Delhi Development Authority
Delhi

COMMENTS ON DRAFT MASTER PLAN OF DELHI 2041

Volume 1

1. **Delhi Vision 2041**

Comments are given below against Goal 1, Goal 2 and Goal 3 for kind consideration.

1.1.1 The vision is to **"Foster a Sustainable, Livable and Vibrant Delhi"**

1.1.2 The following Goals will be pursued over the Plan period:

1.1.2.1 **Goal 1 (G1):** Become an environmentally sustainable city that provides a healthy environment for its citizens and is adaptable towards addressing impacts of climate change.

Comments:

i. The growth projections given in page 5 mentions the population in 2021 (base year) as 20.6 million. This would increase to 29.2 in 2041. This means addition of 8.6 million or 86 lakhs. The geographic area of Delhi will remain constant at 1486.5 km^2. The population density has increased from 6352 persons/km^2 in 1991 to 11320 persons/km^2 in 2011. In 2041, the population density would cross 15000 persons/km^2.

ii. The MPD at page no. 13 mentioned that "A major cause of concern for Delhi is the poor air quality index throughout the year. A large fraction of air pollution in Delhi comes from outside its geographic boundaries, implying that regional level action would be necessary"

    a. Is Delhi Sustainable today, (2021), in terms of Environment, Water, Power, Mobility, Housing, Facilities & Open space? Certainly 'NO' because of overpopulation and congestion. Therefore, the MPD Delhi must address actions for decongesting Delhi. The space is finite, how it is possible to accommodate another 86 lakhs people. Already the environment is severely degraded and Delhi is the world's top polluted city. The air and water pollution and garbage disposal has already crossed the carrying capacity, the 22 km Yamuna river is severely polluted (reduced to a sewage carrying nalla),

solid wastes landfill sites are overflowing with garbage, noise pollution level has crossed the standard, and roads are chocked with traffic. Please consider the baseline environmental status while framing the MPD-2041.

b. Nothing has been mentioned to address the transport of air pollution from outside Delhi's territory. There are more than 6000 brick kilns are operative at the border states of the Delhi using substandard fuel and are also responsible for Delhi's poor air quality. These Brick Kilns should be converted on Gas. Alternatively, some restricted zones can be created through an Inter State Coordination Nucleus mechanism.

1.1.2.2 **Goal 2 (G2):** Develop a future-ready city that offers good quality, affordable and safe living environment with efficient mobility systems.

Comments:

i. Is Delhi Ready today, (2021), in terms of good quality affordable and safe living environment with efficient mobility systems? Certainly 'NO'. Is it possible to accommodate more vehicles in city roads due to additional 86 lakhs people. Is Delhi having a sustainable Water budget for the existing 20.6 million people? From which source the additional potable water will come? Where will the municipal solid wastes from the additional 86 lakhs people disposed? Where are the new landfill sites? Just mentioning the word "Managing MSW Locally" (section 14.1) without considering the baseline or without learning from past is not expected to give desired results.

ii. Unauthorised colonies have been discussed but similar attention does not appear to have been given to slums. Authorisation is mainly an administrative matter, which has various legal, social and political implications. But slums are like manifestation of a disease. Urban settlements cannot be in healthy condition if slums continue and grow. Corrective and Preventive actions should be taken at appropriate time and manner for eradicating slums. The Master Plan should give due attention to these aspects related to slums.

These points may be considered while framing the MPD-2041.

1.1.2.3 **Goal 3 (G3):** Emerge as a dynamic place for economic, creative and cultural development.

Comments:

i. Today (2021) the main economic centers (mandis) are chocking due to congestion (Chandni chowk, Karol bagh, Gandhi nagar, Shahdara, Sadar Bazar, Sarojini nagar, Lajpat Nagar, Nehru place, etc. All major mandis in Azadpur, Okhla and Ghazipur are congested. Noise pollution due to aircraft movement in some south Delhi residential areas has crossed alarming level. The carrying capacity of all railway stations has exceeded the limit. No parking space is available near Metro stations. These points to be considered while framing the MPD-2041.

ii. Heritage appears to be identified mostly in the old buildings. Heritage is not limited to man-made objects. Natural endowments also qualify to be recognised as heritage. This approach shall also be in conformity with the goal of Ecosystems Restoration adopted by United Nations for the decade commencing from the current year. Therefore, the following should also be included as heritage and dealt with in the text appropriately with reference to their protection and rejuvenation.

   a. Yamuna and its river front (from Palla to Okhla)
   b. Delhi Ridge
   c. Asola sanctuary and adjoining areas

Section 1: Environment

1. Addressing Pollution & Climate Change

Please consider following points for addressing the pollution and climate change issues, while framing the MPD-2041.

i. Use of electricity generating sets has been mentioned in the document as a source of air pollution. People resort to diesel generating sets because of grid power outages. The solution clearly lies in improving the reliability of electricity supply rather than

exercising regulatory control over generating sets. The Master Plan should make provisions towards elimination of the need for diesel generating sets and domestic air purifiers. For mobile towers only CNG based Generating sets should be permitted

ii. No red and orange category SSI units should be permitted in Delhi. Only green and white category industries (as per CPCB criteria) should be allowed to operate in Delhi.

iii. Only approved fuel should be allowed by industries, hotels, dhabas, eateries, etc in Delhi. The approved fuel should be modified by Delhi government, based on air quality requirement, time to time as per Air act 1981.

iv. 50-75% of all two wheelers and four wheelers should be electric vehicle (EV) by 2040. Adequate charging stations for batteries should be created in Delhi and NCR region. All Govt vehicle should be EV by 2030. Only electric buses should be allowed to ply in Delhi from 2030.

v. Currently Delhi has more than 11 million vehicles and large number of heavy vehicles are passing through Delhi from border states and movement of Interstate buses. Emission from Railway and Aviation sector is also responsible for the Air Pollution. The Growth rate of vehicle in Delhi is about 5.8 % (March 2018). Therefore in view of population rise and also in vehicle population rise with fix geographical area of the Delhi, the issue of CONGESTION need be addressed.

vi. Airshed based approach with proper source apportionment studies for $PM_{2.5}$ and NO_2, should be conducted from time to time and findings should be used for preparing air quality improvement action plan for Delhi-NCR region.

vii. Ventilation coefficient (average mixing height multiplied by average wind speed of winter months) should be measured for planning and designing air pollution management strategies during winter months in Delhi.

viii. Land Use Land Cover (LULC) Map of NCT of Delhi for the Years 2011, 2021, 2031 and 2041 for entire Delhi (based on satellite imagery and GIS technique) and also for its 16 planning zones.

ix. Carrying capacity study with respect to proposed development planning for entire Delhi (Macro Level) and its 11 Districts and 16 planning zones

x. Large number of solar power facilities should be created in NCR region for clean power generation and to mitigate green house gas (GHG) emission. Roof top solar power should be mandatory for all large housing complexes, malls, Govt. Offices etc. in Delhi. SOP should be issued for maintenance of those solar panel.

xi. All large building should be green building as per green building code of Govt. of India. Energy efficiency measures should be adopted by all new buildings in Delhi.

xii. All crematoriums should be converted to CNG / Electricity. No wood based crematorium should be allowed to operate in Delhi territory.

xiii. CNG based DG sets should only be permitted and all mobile towers should use CNG based DG sets for its power requirement.

xiv. Refrigeneration gas (CFC) from Refrigerators, AC & HVAC should be collected and disposed as per government policy/international protocols.

xv. Indoor air quality as per international norms should be made applicable to all new housing complexes and commercial complexes.

xvi. The existing trees in Central parts of Delhi has become fully mature and their carbon sequestration potential is therefore, limited. Millions of trees are to be planted immediately so that they became fully grown in 3-4years are starts carbon

sequestrating. This will minimise the green house gas like CO_2 emitted from use of fossil fuels.

xvii. Develop a separate institution with academic, research and training facility including testing laboratory for addressing the complex issues of Pollution and Climate Change.

xviii. The MPD-2041 should be linked with the Master Plan of Ghaziabad, Gurgaon, Noida, Sonepat and Faridabad so that dependency factor of Centralised National Capital Region be conceptualised.

xix. The MPD-2041 should adequately consider all the 17 components of Sustainable Development Goals (SDG 1-17) and 169 targets set by the United Nations as a blue print to achieve a better and more sustainable future for all (Agenda 2030). The targets plan for every 5 year intervals be identified for measuring the successive progress of implementation.

2. Enhancing Green-Blue Infrastructure

Please consider following points for addressing the pollution and climate change issues, while framing the MPD-2041.

i. The use of electric cars and two-wheelers shall increase significantly during the next two decades. Such vehicles shall need charging facility in the parking areas. Master Plan should make specific provision for installing this facility while mentioning low-carbon footprint for automobiles in the Master Plan.

ii. That river Yamuna is severely polluted is mentioned at several places. In this context, it is stated that no untreated sewage or industrial effluent shall be allowed to discharge in water bodies/river. It needs to be pointed out that the minimum flow in river Yamuna is one-third of the flow of wastewater into it. Normally it is assumed that the flow in a river will be ten times the flow of treated wastewater discharged into it. This clearly shows that the river is not able to assimilate even if the

wastewater is fully treated. Therefore, the Master Plan should have provisions for enhancing the flow in river Yamuna along with decreasing the flow of wastewater into the river.

iii. The widespread use domestic water purifiers, installation of booster pumps on water pipes and operation of water tankers are existing because of inadequacies in the water supply arrangements resulting in intermittent supply of water, poor quality of water at the tap and avoidable storage of water on account of uncertainty of water supply. In fact, the bottled water industry thrives on the deficiencies in water supply facilities. The society is financially burdened by having to plan for these items that would not have been needed if supply of power and water was not so unreliable and inadequate. The Master Plan should make provisions towards elimination of domestic water purifiers, booster pumps, water tankers and bottled water.

iv. No untreated sewage / partially treated sewage / industrial wastewater should be allowed to discharge in river Yamuna., The minimum environmental flow in Yamuna river is ensured.

v. 100% of municipal wastewater (sewage) generated from household should be treated up to tertiary level and treated wastewater should be used in industries, commercial complexes and parks/gardens.

vi. Common Effluent Treatment Plants (CETPs) already installed in Delhi should be upgraded and adopt zero liquid discharge (ZLD). Treated water recovered from ZLD plants should be given back to member industries. This will also reduce the river water drawl for industries in Delhi.

vii. All major wastewater carrying drains should have its own (individual) sewage treatment plant.

Section 6: Physical Infrastructure

13. Making Delhi Water Secure: Water, Wastewater & Drainage (INF1)

Please consider following points for addressing the pollution and climate change issues, while framing the MPD-2041.

i. Planning process for making Delhi water secure should be data based and quantified, which would serve as target-oriented, indicator-based plan whose implementation is measurable. After estimating the potable water deficit in 2021, the projected potable water demand in 2031 and 2041 be quantified. Action plan with targets be prepared. Indicator technology option such as treated sewage upto tertiary level recharging to flood plain and harvesting technology based on availability of STP water for recharging in 2031 and 2041 should be documented in MPD-2041. In a similar manner the sewage generation in 2031 and 2041 should be projected, its collection, treatment and utilization scheme should be planned and provided in MPD-2041.

ii. Centralised facilities for wastewater treatment have never been adequate to prevent pollution of river Yamuna. Besides, they do not offer opportunities to recycle and reuse wastewater. It is essential that decentralised sewage treatment plants are provided in housing estates and commercial complexes, whereby treated sewage can be utilised for flushing toilets, landscaping and cooling the condensers of centralised air-conditioning systems. From the viewpoints of resource utilisation efficiency and economic gains, the decentralised sewage systems must be adopted in all new urban development for housing estates and commercial complexes and attempt needs to be made to retrofit this arrangement in existing housing and commercial complexes. The mention of decentralised sewage treatment plants needs to be elaborated in the Master Plan.

iii. The water works (potable drinking water) located at Wazirabad, Chandrawal, Hyderpur, Sonia Vihar, etc should be upgraded to treat heavy metals, pesticide and other toxic pollutants. The high quality of treated water meeting BIS 10200:2012

norms should be supplied to all household in Delhi with proper smart metering and billing system.The raw water availability in existing water tratement plants and proposed water treatment plants should be ensured .Serious discussion and signing of MOU with Haryana, UP ,Uttarakhand govt is required to ensure adequate raw water availability in water works in future.

iv. In the floodplain of river Yamuna near Palla and other locations, Excess water flowing in Yamuna river during mansoon seasons(July to September) should be stored by constructing large storage ponds. This storage water shall recharge the ground water in Delhi and used during lean period. The feasibility report of IIT –Delhi may be referred.

v. No ground water usage should be allowed by industries, hotels, commercial establishments, commercial complexes and service stations in Delhi.

vi. Rainwater harvesting should be made compulsory to all housing societies, large hotels, malls, Government offices, etc. to recharge the ground water. Housing society should be supplied the tap water by Jal Board and they should not be allowed to use ground water.

14. Managing Solid Wastes Efficiently (INF2)

Please consider following points for addressing the pollution and climate change issues, while framing the MPD-2041.

i. Immediate steps should be taken to identify new Municipal Solid Wastes disposal / treatment/ landfill sites, to be developed as per CPCB Guidelines. Composting facilities, Waste Recycling facilities (for inert like paper, metals and plastic) and Waste to Energy Plants should form part of the landfill site.

ii. The legacy garbage lying in the three landfill sites at Okhla, Ghazipur and Bhalswa should be immediately utilised or disposal as per CPCB guidelines.

iii. Incentives should be given to promote s

iv. Segregation of wet garbage from dry waste at household (unit) level. The segregated waste should be disposed as per CPCB guidelines.

v. More waste to energy (WTE) plants should be setup in Delhi and NCR region based on latest technology. Use of incinerator-based technology should be discouraged. The plant should be equipped with advanced air pollution control equipment to meet the international discharge standards.

vi. Conversion of MSW to Refuse Derived Fuel (RFD) and should be encouraged.

vii. Disposal of MSW waste at landfill should be minimized and as far as possible, zero landfill policy may be adopted after 2040.

viii. Sludge generated from wastewater treatment plants should be disposed in TSDF facility as per Hazardous Waste Management Rules, 2016. TSDF facilities should be created in Delhi and NCR region as per requirement.

ix. In place of river sand, metallurgical slag should be used in construction activities. River sand usage should be prohibited in Delhi.

x. Water use efficiency in agriculture sector in NCR region to be increased from 35% to atleast 60% as per NITI Aayog to get more ground water / surface water in NCR region.

xi. Photovoltaics (PV) cell disposal facilities should be created in NCR region. The hazardous components should be disposed as per Hazardous Waste Management Rules, 2016.

xii. Number of recycling facilities for lithium-ion batteries of electric vehicles should be setup in Delhi - NCR.

xiii. State-of-the-Art vehicle scrapping facilities should be created in Delhi and NCR region. Recovery of recycling of metals and other materials should be done as per SOP of CPCB.

GENERAL COMMENTS

xiv. Historical Monuments located in delhi should be preserved as per ASI guidelines

xv. More than 18000 existing Parks should be maintained and tertiary treated STP water should only be used for gardening , no ground water should be used

xvi. **Existing more than 300 lakes /water bodied should be cleaned and developed (CPCB report may be referred)**

xvii. **Green Cover /Green belt should be increased from present 20% to atleast 33%**

xviii. **More well planned satellite towns near Delhi in Haryana , UP , Rajasthan should be developed to decongest Delhi**