

Material for
Study Visit of the Department - related
Parliamentary Standing Committee
on Science & Technology, Environment &
Forests to
Hyderabad on January 9, 2014



Ministry of Environment & Forests
Govt. Of India

Hyderabad

General

Hyderabad is the capital and largest city in Andhra Pradesh situated on the banks of the Musi River at coordinates of 17.366°N 78.476°E. It occupies 650 square kilometres (250 sq mi) and with a metropolitan population of near 8 million, it is fourth most populous city and sixth most populous urban agglomeration in India. In 1956, the Telangana region of Hyderabad State was merged with Andhra State to form the modern state of Andhra Pradesh, with Hyderabad city as its capital.

Historically, Hyderabad was known for its pearl and diamond trading centres. Industrialisation brought major Indian manufacturing, research, and financial institutions to the city, such as the Bharat Heavy Electricals Limited, the Defence Research and Development Organisation, the National Remote Sensing Centre, the National Geophysical Research Institute, the Centre for Cellular and Molecular Biology and the National Mineral Development Corporation. The formation of an information technology (IT) Special Economic Zones (SEZs) by the state agencies attracted global and Indian companies to set up operations in the city. The emergence of pharmaceutical and biotechnology industries and the formation of *Genome Valley* during the 1990s earned it the title "India's pharmaceutical capital". The city has 140 lakes and 834 water tanks. The main lakes include Husain Sagar, built in 1562 near the city centre, Osman Sagar and Himayat Sagar, which are artificial lakes created by dams on the Musi and these two reservoirs constitute the major drinking water source of Hyderabad city. Water Quality Status of important lakes and Tanks of the State is depicted in Table 1.

Table 1: Water quality status of important lakes & Tanks

S.No.	Lakes & Tanks	Water quality criteria
1	Tummala Cheruvu	C
2	Dharmasagar	C

3	Bibinagar tank	C
4	Hussain sagar lake	C
5	Himayathsagar	C
6	Saornagar lake	D
7	Pulicat lake	C
8	Kistareddypet tank	D
9	Gandigudem tank	D
10	Kolleru lake	C
11	Bhadrakali tank	C
12	Noor Md. Kunta	E
13	Asani Kunta	D
14	Kazipally tank	D

NOTE: Criteria C water bodies are fit for drinking after conventional treatment and disinfection, Criteria D are fit for propagation of wildlife and fisheries and Criteria E are fit for irrigation, industrial cooling, etc.

Environmental issues:

Industrial Pollution:

About 350 green category, 130 orange category and 197 red category industries are existing in and around Hyderabad. The industrial areas which are originally located outside have become an integral part due to outward expansion of the city. The Industrial areas are Jeedimetla, HMT, Balanagar, Kukatpally, Sanathnagar, Moulali, Mallapur, Nacharam, Charlapalli, Kushaiguda, Uppal, Kattedan and Gaganpahad. Map of Hyderabad showing industrial areas in pink.

Critically Polluted Areas in A.P

CPCB has developed Comprehensive Environmental Pollution Index (CEPI) which is a rational number to characterise the environmental quality at a given location following the algorithm of source, pathway and receptor. The application of CEPI was studied in 88 industrial clusters/areas of the country and areas having CEPI score more than 70 were considered as Critically Polluted areas. Accordingly, Vishakhapatnam and Patancheru-Bollaram located in Andhra Pradesh were identified as Critically Polluted Areas.

Patancheru -Bollaram: CPCB conducted monitoring in respect of all 43 Critically Polluted Areas (CPAs) during February-April, 2013 and re-

assessed the CEPI scores and the revised CEPI score for Pattancheru-Bollaram is 76.05 as against 70.07 during the previous assessment made during 2011. Hence, Ministry of Environment & Forests vide O.M dated 17th September, 2013 re-imposed moratorium in Patancheru-Bollaram area.

Sewage Management: 12 STPs are operational treating about 606 MLD and one more STP of 51 MLD is to be commissioned in the city. The STPs are inadequate to treat the entire sewage generated from city.

S N	Location	Installed Capacity	Treatment process	Operational status
1	Amberpet	339 MLD	Primary treatment by screening, detritus tank and grit chamber. UASB followed by facultative aerobic lagoons	120-250 m ³ /hr of biogas is produced and power so generated is used for operating aerators Treated sewage is discharged to River Musi
2	Nagole	172	Primary treatment by screening, detritus tank and grit chamber. UASB followed by facultative aerobic lagoons	48-50 m ³ /hr of biogas is produced and power so generated is used for operating aerators Treated sewage is discharged to River Musi
3	Nallacheruvu	30	Primary treatment by screening, detritus tank and grit chamber. UASB followed by facultative aerobic lagoons	Fully operational
4	Attapur	Under NRCP Hyderabad Metro Water Supply & Sewage Board (HMWSSB) was to construct two STPs of capacity 21 MLD and 60 MLD at Ziaguda and Nandimusaliguda respectively. But due to non-availability of land, HMWSSB proposed to construct STP of capacity 51 MLD at Attapur and given contract to M/s Ramky Infrastructure Ltd, Hyderabad. The construction is in progress.		
Other STPs operated at GHMC are given below:				
Location				Capacity in MLD
Saroornagar				2.5
Langar House				1.2

Safilguda	0.6
Miralam Tank	10
Peddacheruvu	10
Durgamcheruvu	5
Necklace Road (Kharatabad)	20
Kukatpally	12
Kattedan, (Noor Mohammed kunta), RR Dist	4

Four STPs funded by NRCDC were monitored by CPCB and these were found complying with the standards. Further, to treat the balance sewage flows of 610 Mld presently flowing in the river Musi. MA&UD, GoAP directed the HMWSSB to formulate the NRCDC Phase-II project proposals for construction of additional STPs to prevent pollution to the river Musi.

Accordingly, HMWSSB formulated the Phase-II Project at a cost of Rupees 923 Crores to treat 610 MLD sewage by constructing STPs at 10 locations. The project is under final stages of sanction. Govt. of A.P has constituted Lake Protection Committee. Hyderabad Metropolitan Development Authority had taken up 38 lakes for beautification during 2013-14. Hyderabad Metropolitan Authority with the aid of Japan International Cooperation Agency (JICA) is implementing project to restore the pristine glory of the Hussainsagar lake.

Salient points of Environmental Monitoring :

APPCB is monitoring AAQ manually at 21 locations. (NAMP stations- 6nos & SAAQM stations- 15) Monitoring twice in a week.	Type	Location of NAMP station	
	I	CITD, plot NoA1 to A8, IDA Balanagar	
	I	Uppal Modern foods & IDA	
	R	Jubilee hills	
	R	Paradise	
	R	Charminar	
	S	Zoo park	
CAAQM-3 stations in Hyderabad City and one in Medak	Location		Parameters monitored
	Punjagutta		PM ₁₀ , CO, O ₃ , NO _x , NH ₃ & Benzene
	Hyderabad Central University		
	Zoo park		
Real time Noise monitoring stations- 5nos. (APPCB is manually monitoring noise levels at 6 locations)	Jeedimetla		
	Abids		
	Zoo park		
	Jubilee hills		
	Punjagutta		

Ambient Air Quality:

Hyderabad	2009			2010			2011			2012		
	SO ₂	NO ₂	PM ₁₀	So ₂	NO ₂	PM ₁₀	SO ₂	NO ₂	PM ₁₀	SO ₂	NO ₂	PM ₁₀
	05	23	81	05	24	79	05	28	74	04	27	80

Ambient Air quality data with respect to SO₂ & NO₂ revealed that Hyderabad is within the standards (NAAQS) of 50ug/m³ (annual standard for SO₂) & 40ug/m³ (annual standard for NO₂). With respect to PM₁₀, Hyderabad is not meeting the national standard (NAAQS) of 60ug/m³ (annual Standard). Source Apportionment studies carried indicates that the main contributor of PM₁₀ and PM_{2.5} is the vehicular pollution. In this regard, Govt. of AP has taken measures for traffic management, improved infrastructure like elevated expressway, Outer Ring Road, fly overs, road widening etc, promoting the use of alternate fuels and implementation of Bharat stage-III & IV norms. The metro project is expected to carry 15 lakh passengers by 2016-17, easing pressure on road traffic.

Common Effluent Treatment Plants:

S.N	Name of the Facility	Type of processing plant	Capacity
1	M/s Jeedimetla Effluent Treatment Plant	LTDS- Chemical followed by biological treatment HTDS-MEE	LTDS-700KLD HTDS-200 KLD
2	M/s Patancheru Effluent Treatment Plant	LTDS effluent is treated by Chemical methods followed by Membrane bio-reactor	LTDS-1300KLD
3	Indian Drugs and Pharmaceuticals Ltd, Balanagar	Treatment of effluent generated from 10 sick industries combined with sewage	

Municipal solid waste disposal facilities:

S.N	Name of the Facility	Type of processing plant	Capacity
1	M/s SELCO International Ltd., Elikatta (V), Faruqnagar (M), Mahboobnagar (D)	Refuse Derived Fuel & Power plant (6.6 MW)	700 TPD
2	M/s Sri Venkateswara Green Power Prjects Ltd, Sy.No. 122,	Refuse Derived Fuel	700 TPD

	123 & 125, Yacham (V&M), Rangareddy	(12 MW)	
3	M/s Rudram Constructions Medak Dist	Refuse Derived Fuel (2 MW)	120 TPD
4	M/s Integrated Municipal Solid waste management project, (proposed by GHMC), Sy.No. 173, Jawaharnagar (V), shameerpet (M), Ranga reddy	Refuse Derived Fuel (2X1200=2400) + Compost plant (3X680=2040)+ Biomethanization (10X50=500)	4940 TPD

Bio-medical waste Management in Hyderabad:

S.N	Name & address	Facility
1	M/s G.J. Multiclave (India) (P) Ltd Sy.No. 179 & 181, Eadulapally (V), Kothur (M), Mahboobnagar	one incinerator of 250 kg/hr and two incinerators of 100 kg/hr capacity
2	M/s SembRamky Enviro Management (P), Ltd Isnapur (V), Patancheru (M), Medak	one incinerator of 250 kg/hr capacity

Common Hazardous Waste Treatment Facility: M/s Hyderabad Waste Management Project located at Dundigal, Rangareddy (D) has an incinerator for destruction of incinerable hazardous wastes with 1.5 TPH capacity and a secured landfill with annual land-filling capacity of 2,00,000 TPA. The total area of the facility is 200 acres. The first cell is filled and capped while the 2nd cell is completely filled and capping is under progress. Third cell, 1st phase part-A filled and part-B is in operation and 2nd phase part-A is under construction.

Vehicular pollution: There are around 2.7 million vehicles in Hyderabad and to control vehicular pollution implemented by following Bharat stage-III & IV norms and phasing out of vehicles (3&4 wheelers) of age more than 15 years. Government of Andhra Pradesh under the AP Motor Vehicles Taxation Act, 1963 is promoting alternate fuels by granting exemption from payment of tax in respect of motor vehicles operated with battery / compressed natural gas / solar energy for a period of five years from the date of registration of such vehicles.

Initiatives to Control vehicular Pollution:

- In Hyderabad City, 165 CNG buses are under operation
- APSRTC ready to introduce 350 new CNG buses subject to availability of CNG
- A total of 2,821 Buses with BS-II, BS-III & BS-IV norms (76% in total volume) in Hyderabad City APSRTC used Bio-diesel in Hyderabad city with 10% blend.
- VAT exemption for CNG buses