

District Environment Plan



Prepared By



Environment Department, Government of Maharashtra



Maharashtra Pollution Control Board

Hingoli

1.0 Preamble

Hon'ble National Green Tribunal vide order dated 26/09/2019 in O.A. No. 360 of 2018 filed by Shree Nath Sharma Vs Union of India and Others directed that CPCB shall facilitate the District Magistrates in preparation of District Environmental Plan by placing Model plan on its website. This model plan may be adopted as per local requirements by all Districts under supervision of District Magistrate.

The said Order also directs that Department of Environment in respective States / UTs should collect district plans to prepare State Environment Plan, which shall be monitored by respective Chief Secretaries of State/UT by 15/12/2019.

Based on State Environmental plans, CPCB and Ministry of Environment, Forest & Climate Change shall prepare National Environmental Plan, under the supervision of Secretary, MoEF&CC and Chairman, CPCB by 31/01/2020. The National Action Plan needs to be submitted before Hon'ble NGT 15/02/2020.

In compliance to above directions, CPCB has prepared a model District Environment Plan (DEP) that covers following thematic areas;

In compliance to above directions and as per the model DEP prepared by CPCB, Environment Action plan for Latur District is prepared.

2.0 Introduction

Hingoli is a small city and a municipal council in Hingoli district in the Indian state of Maharashtra. Hingoli was actually known as the Nizams military base as it was bordered with Vidharbha. In that era military troops, hospitals, veterinary hospital were in operation from Hingoli. Being a military base the city was one of the important and famous places of the Hyderabad state.

General Hingoli district profile is presented in the Table 1 and location is shown in **Figure 1**.

Table 1 Hingoli District Profile

Description	Details
Average Climate	Summer: 34.2°C Winter :21.1°C. Rainfall: 1011 mm.
Geographical Location	It lies between 19.43" North Latitude and 77.11" East Longitude. It lies on northern part of Marathwada in Maharashtra. There are two medium-sized dams present on both East and West sides of the district namely Isapur dam and Yeldari dam, Isapur dam.
Area	4827 Sq. km.
Boundaries	Hingoli are surrounded by Akola and Yevotmal in northern side, Parbhani in western side and Nanded at south-eastern side.
Languages Spoken	Marathi, Hindi, Urdu are major languages but all Indian languages are spoken
Population	Total: 1,177,345; Male: 606,294 Female: 571,051 [According to 2011 Census Report]
Population Density	244 Per Sq. km.
Literacy Rate	78.17
Rivers	Kayadhu river, the Painganga river and the Purna river
Sub districts	3 Numbers
Villages	711 Numbers
Statutory Towns	3 Numbers
Tahsils	5 Numbers Hingoli, Kalamnuri, Basmat, Aundha, Sengaon)
Pin code	431513

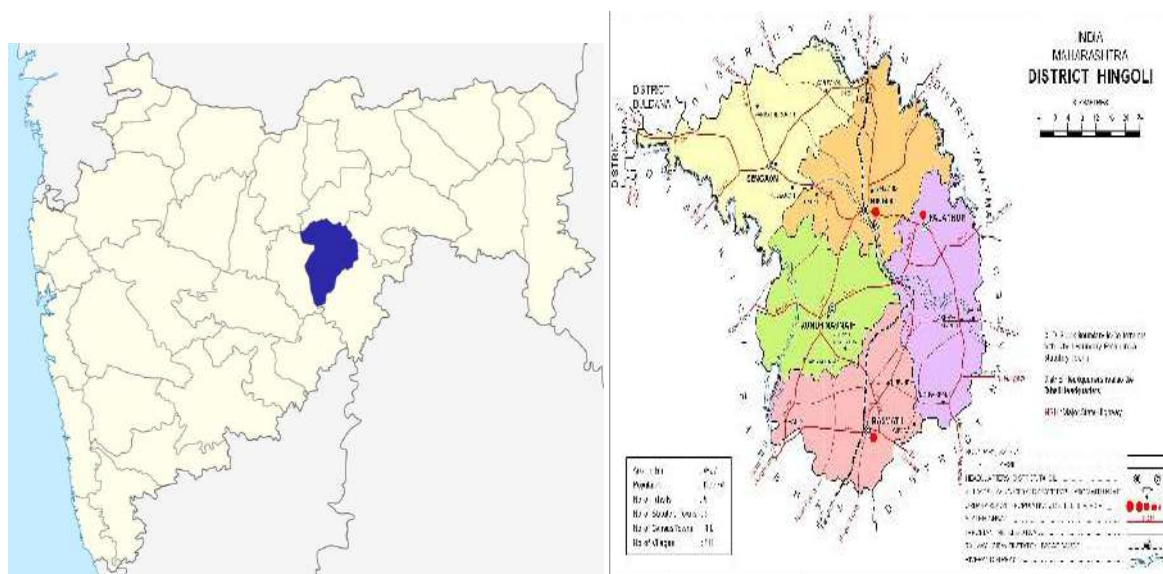


Figure 1 Location of Hingoli District

3.0 Waste Management Plan

Urban India is facing an ever increasing challenge of providing for the incremental infrastructural needs of a growing urban population. According to the 2011 census, the population of India was 1.21 billion; of this 31% live in cities. It is further projected that by 2050 half of India's population will live in cities. With this increasing population, management of Municipal Solid Waste (MSW) in the country has emerged as a severe problem not only because of the environmental and aesthetic concerns but also because of the sheer quantities generated every day.

Solid waste management is among the basic essential services provided by municipal authorities in the country to keep cities clean. In Hingoli city primary sources of solid waste are local households, commercial establishments, hospitals, hotels, restaurants, and markets. Local Bodies are responsible for collection, storage, segregation, transportation and disposal of all solid waste generated in the city. There are 5 Urban Local Bodies [ULBs] in Hingoli district. **Table 2** represents the list of ULBs along with population. Following section gives insight about waste management of Hingoli districts.

Table 2 Hingoli District Profile

Sr. No.	Urban Local Bodies	Population
1.	M.C.Hingoli	85,103
2.	Municipal council Basmat	68,846
3.	M.C. Kalamnuri	24,784

Sr. No.	Urban Local Bodies	Population
4.	Aundha	16,012
5.	Sengaon	9,016

3.1 Domestic Solid Waste Management Plan

Hingoli district is having 5 ULBs with 72 Wards. Municipal Solid Waste [Dry & Wet] generated from each ULBs is given in the **Figure 2** and details of Other Types of Waste is presented in **Figure 3** due to its less quantity and for easy representation. As per collected data, Total Solid Waste generation of Hingoli district is 59.6MTD. wherein, Dry Waste generation is 27.08MTD and Wet waste is 29.54MTD.

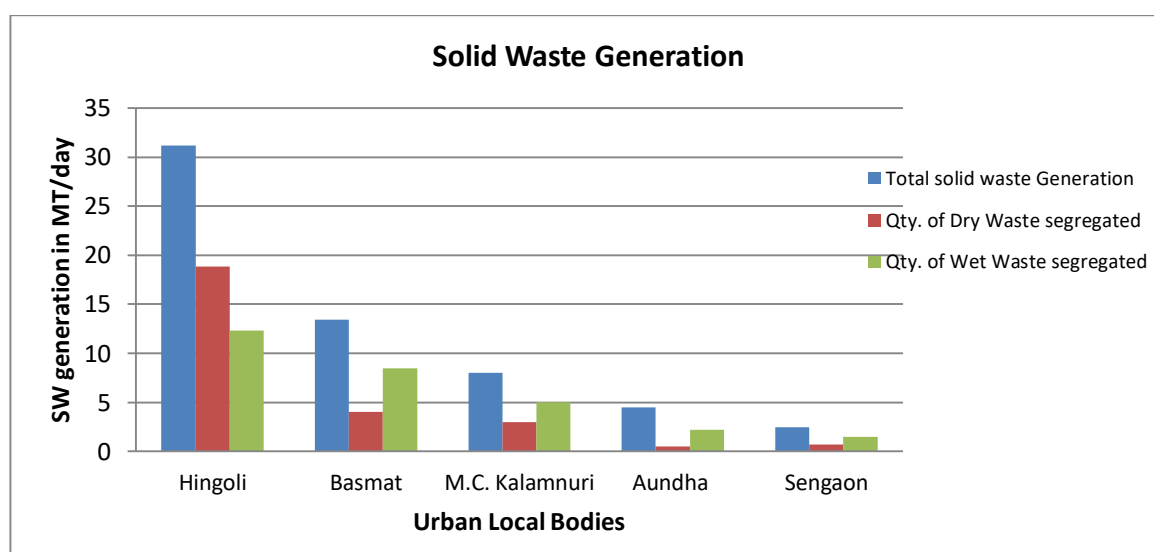


Figure 2 Solid Waste Generation of Hingoli District

It seems that Wet waste comprises of approximately 50% of total waste generated of the district and Dry waste contributes 45%. Hingoli Municipal Corporation stands on top with the highest quantity i.e. 31.2MTD out of which dry waste is 18.86MTD and wet waste is 12.34MTD. Sengaon generates lowest quantity i.e. 2.5MTD out dry waste is 0.7MTD and wet waste is 1.5MTD. It is observed that quantity of solid waste generation is in line with the respective population of ULBs.

As per the data presented in the **Figure 3**, details of other types of waste generation are presented as below;

Hingoli district generates 0.98MTD of Street Sweeping Waste. Maximum quantity of Street Sweeping Waste is generated by M.C. Kalamnuri with total quantity of 0.5MTD each followed by M.C. Hingoli & Municipal council Basmat with 0.2MTD each and Sengaon stands lowest

with 0.03MTD. Though Hingoli Council is largest corporation in Hingoli district, generation of Street Sweeping Waste is lower than Kalamnuri.

Total quantity of Drain Silt Waste generated is 5.92MTD. It seems that maximum quantity of Drain Silt Waste is generated by Hingoli Council with total quantity of 3MTD followed by Municipal council Basmat with 1.5MTD. Sengaon stands lowest with 0.02MTD.

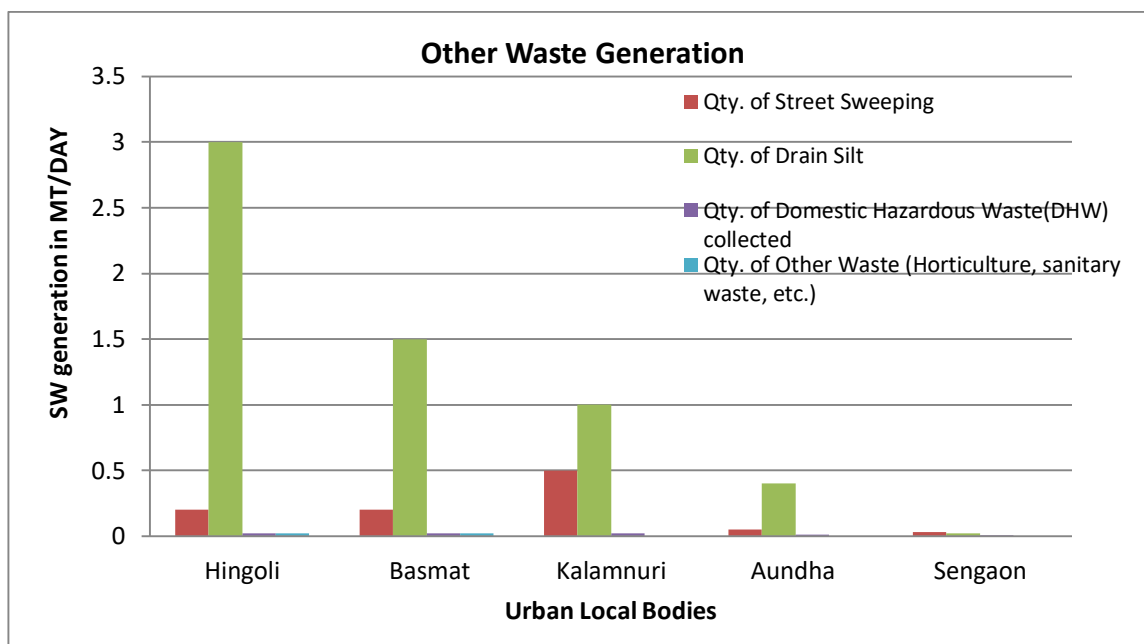


Figure 3 Other Waste Generation of Hingoli District

Total DHW quantity generated is 0.071MTD. Maximum quantity of DHW is generated by 3 ULBs total quantity of 0.2MTD each and Aundha and Sengaon stands lowest with 0.01MTD. each.

Total Quantity of Horticulture, Sanitary and other waste is 0.04MTD. Maximum quantity of Other Waste is generated by M.C. Hingoli and Municipal council Basmat with total quantity of 0.02MTD each. It is observed that Aundha and Sengaon do not generate any waste. Data is not available for M.C. Kalamnuri

Hingoli district is having total 3 bulk Waste Generator. Each ULB has one generator except for Kalamnuri and Aundha.

Total Waste generation from Hingoli district is 59.6MTD and almost all waste is being segregated.

3.1.1 Adequacy of Infrastructure

All of 5 ULBs provide 100% door to door collection facility. All ULBs have implemented Manual Road Sweeping facility. Almost 92% of waste is being transport through segregated waste transport system. Hingoli district generates approximately 29.34MTD of wet waste and Out of which 92% is treated through composting. It is observed that all 5 ULBs are using Multi Re Use Facility to separate and prepare recyclable material. It is noted that there is no provision of Sanitary landfill within the district. 3 ULBs have initiated reclamation of old dump site. Also only M.C.Hingoli have linkage with waste to energy boiler / cement plant. All ULBs have initiated linkage with recycler and have issued authorization to the waste pickers too. Only 1 ULB have linkage with TSDF / CBMWTF whereas other ULB has not initiated the process

Availability of infrastructure to handle the waste generated from the Hingoli district is presented in **Figure 4**.

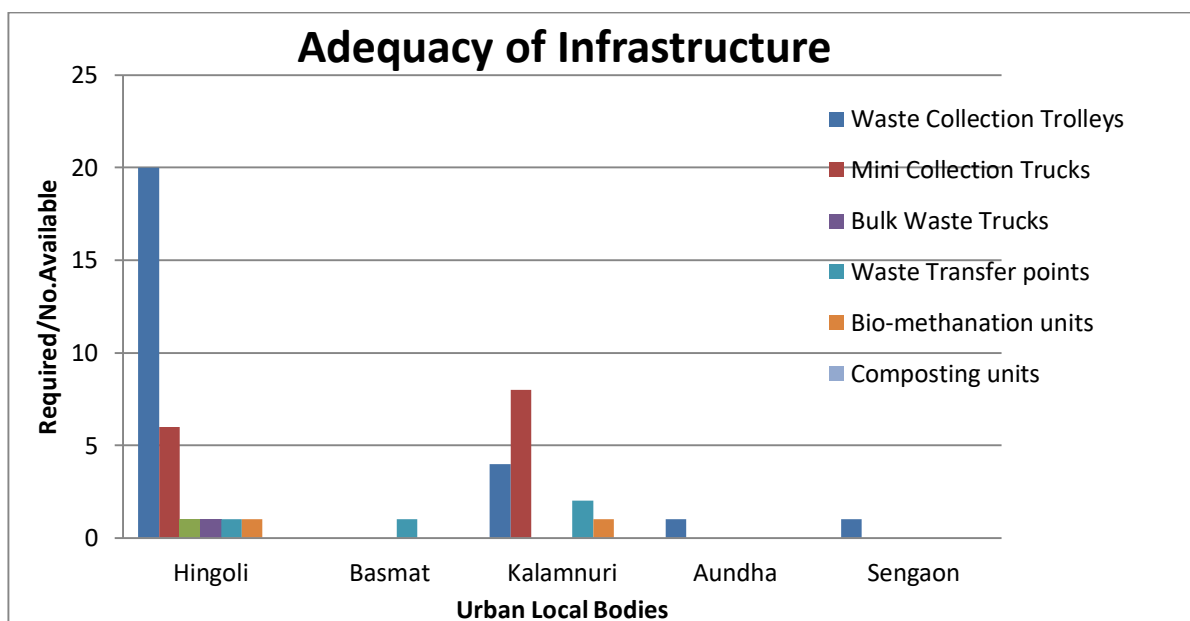


Figure 4 Adequacy of SW Infrastructure

It is observed that there are total 2 waste Transfer points in Hingoli district with waste trolley of 26, Mini collection trucks 14 numbers and Bulk transport trucks 4. Composting units available to treat wet waste are 10. As per record, all ULBs have implemented the Solid Waste Management Rules.

3.2 C&D Waste Management Plan

The Construction and Demolition Waste [C&D Waste] generated by Hingoli district is about 859.25MT/Annum except the quantity has not been estimated for M.C Kalamnuri.. Again being with most populated corporation, Hingoli Municipal Corporation& Municipal council Basmat contribute maximum share of C&D waste to the tune of 1000Kg/Day each. Least C&D waste is generated by Aundha and Sengaon with the quantity of 100Kg/Day. Non availability of data will not help in preparing ingenuous and executable plan for waste management of the district hence local bodies must ensure proper sampling and factual measurement of the various types of waste being generated.

It is observed that all ULBs have initiated Deposition centres for C & D waste collection. Also only 3 ULBs have established C & D Waste recycling facility.

3.3 Plastic Waste Management

Total Plastic waste generated by Hingoli district is 2.57MTD. With 1.6MTD quantity, M.C.Hingoli is the highest plastic waste generator and Municipal council Basmat generates the lowest i.e.0.07MTD of plastic waste.

In almost all ULBs, door to door collection and segregation system is implemented with 5 Plastic Waste Collection Centre. There is 1Waste recycler in district.

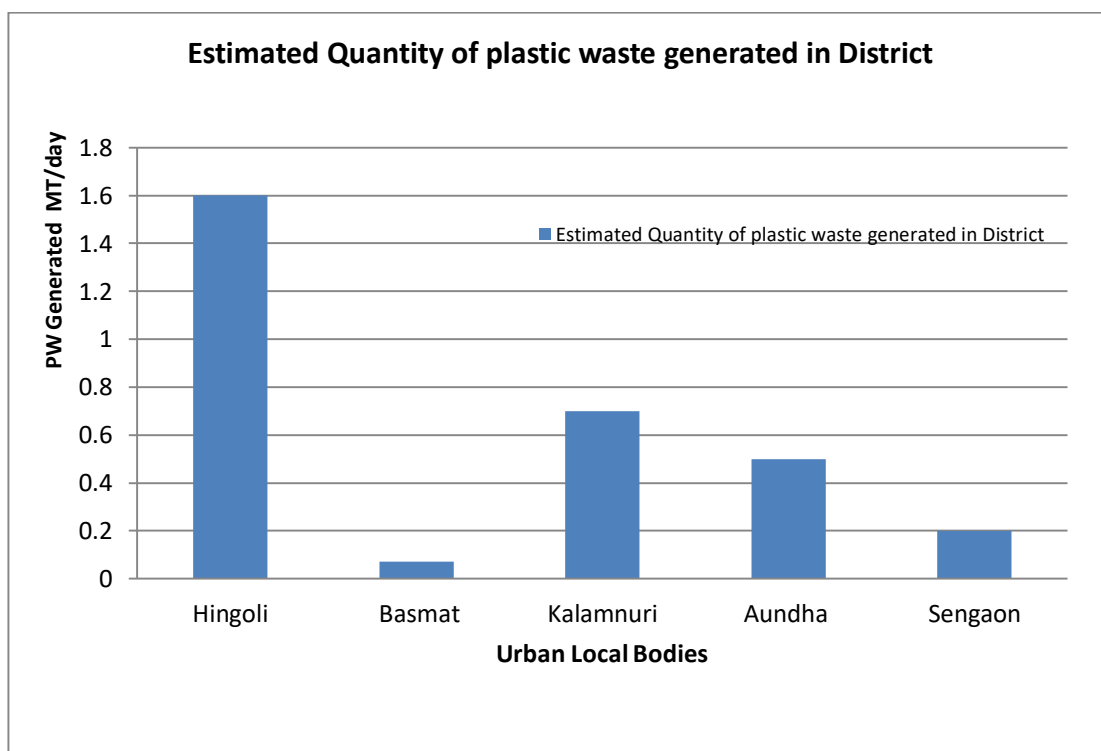


Figure 5 Details of Plastic Solid Waste Generation

3.4 Biomedical Waste Management

All thenon-bedded hospitals have taken authorization. There are 51 Clinics and 7 Veterinary hospitals. Total BMW generation from all above mentioned sources are to the tune of 98 Kg/Day

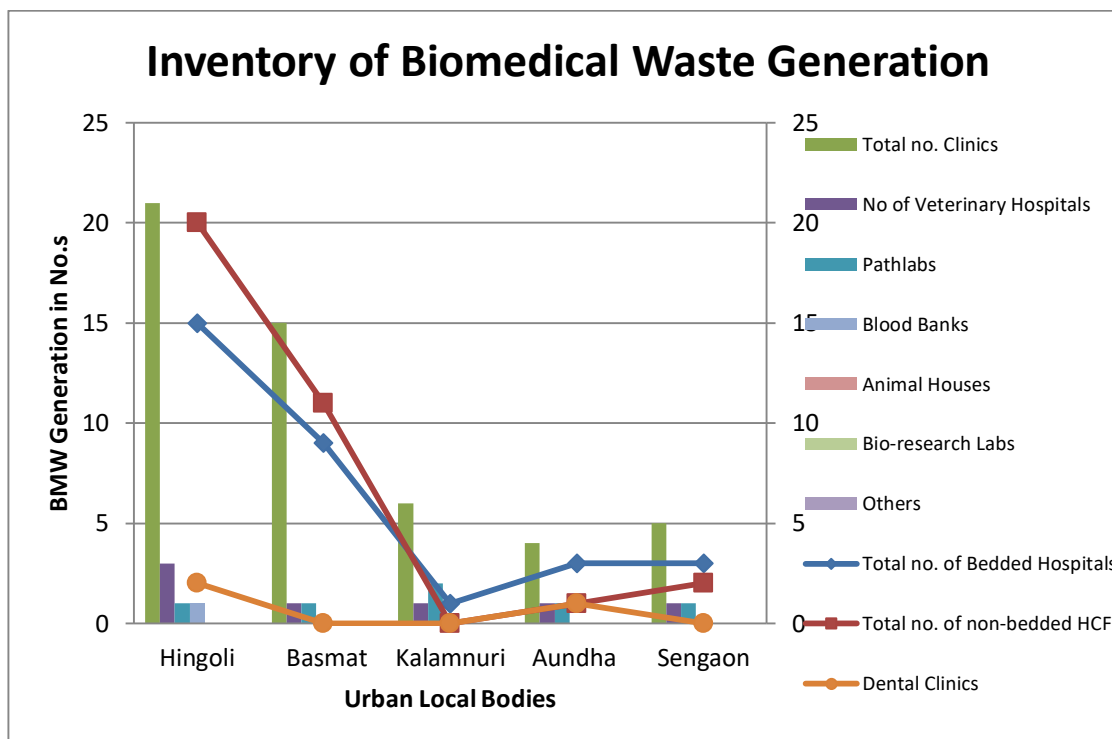


Figure 6 Details of BiomedicalSolid Waste Generation

There are no Common Facility available for treatment and disposal of BMW within district thus have linkages with facilities outside district. An average BW taken by these facilities is 98 kg/day. There is requirement of at least one CBWTF in each ULB. Inventory of BMW generating units are mentioned in the **Figure 6**.

3.5 Hazardous Waste Management

5 Number of industry is established generating 1.6MT/Annually which is Incinerable HW. HW is sent to Common Treatment Storage Disposal Facility is present in other district within state as there is no facility within the Hingoli District.

3.6 E Waste Management

1 Collection Centres established by Producer under EPR scheme. There are no authorized E-Waste recyclers / Dismantler& Authorized E-Waste collectors within district. 2 ULBs have conducted Awareness Campaigns whereas only in one ULB Producers and PROs have conducted Awareness Campaigns.

3.7 Action Plan

As per the above mentioned observation, it seems that almost all ULBs are handling solid waste generated as per the Municipal Solid Waste Management Rules, however there are certain issues that needs to be addressed for 100% implementation of the rules as mentioned in **Table 3**.

Table 3 Action Plan for Solid Waste Management

Sectors	Gaps	Action Points	Priority
Domestic Solid Waste			
Quantification	<ul style="list-style-type: none"> ▪ Methodology for solid waste quantification should be ascertained ▪ Quantification based on Income group, culture affluence and technology to be considered 	<ul style="list-style-type: none"> ▪ Mechanism for graded weighing system either through intermediate transfer station or at the common receiving station to be created. Usually one weigh bridge at any treatment / disposal location required ▪ Quadratesampling methodology to be adopted in order to reduce quantity as well as quality 	Immediate
Collection System & Transport System	<ul style="list-style-type: none"> ▪ Some of the places, efficiency of the collection system is not up to the mark 	<ul style="list-style-type: none"> ▪ Ideally most proven method of SWM is 3 Tier System with door to door, community and transfer station approach ▪ 100% efficiency to be achieved ▪ Intermediate ▪ Approximately 12 Ghanta Gadi would be required 	Short to Mid Term
Infrastructure	<ul style="list-style-type: none"> ▪ Mostly composting is the main treatment methodology ▪ MRF facility is also available but limited to few ▪ Sanitary landfill is not provided 	<ul style="list-style-type: none"> ▪ Intermediate / Transfer station based decentralized waste treatment facility to be evaluated ▪ Additional alternative treatment such as bio-Methanation can be explored 	High

Sectors	Gaps	Action Points	Priority
Plastic Waste	<ul style="list-style-type: none"> ▪ Lack of SOP for not only quantification but also life cycle analysis [LCA] ▪ Limited understanding / interpretation of EPR / PRO 	<ul style="list-style-type: none"> ▪ Strengthening surveillance of life cycle assessment for type and quantity of Plastic Waste ▪ Effective EPR Policy 	High & Immediate
C&D Waste	<ul style="list-style-type: none"> ▪ ULB need to establish C&D Waste recycling Plant 	<ul style="list-style-type: none"> ▪ Minimum 1 such facility at each of the ULB to be established ▪ System for utilization of recovered material and processed C&D waste to be effectively implemented and monitored 	High
Biomedical Waste	<ul style="list-style-type: none"> ▪ Rooting and effective collection within 48hrs from the time of generation to be effectively handled ▪ No Treatment facility within district ▪ Limited Inventorization 	<ul style="list-style-type: none"> ▪ Regular Inventorization through automatic / digital platform to be developed ▪ Up-gradation of existing facility to meet 2016 CPCB norms ▪ Additional at least 1-2 facilities to cover the of umbrella zone along with increasing burden on the existing coverage area to be planned ▪ Collection mechanism to be strengthen with additional vehicles to cover vast area and scattered HCF [miniscule quantity] 	Very High& Immediate
Hazardous Waste	<ul style="list-style-type: none"> ▪ Domestic HW being mixed with solid waste posing threat ▪ No separate handling of domestic HW ▪ Not effective 	<ul style="list-style-type: none"> ▪ Either decentralized 4 - 5 step segregation practices to be initiated or at least advisory for intermittent storage and collection of domestic HW to be initiated ▪ Inventory to be initiated and 	Very High& Immediate

Sectors	Gaps	Action Points	Priority
	segregation at source	maintained	
E Waste	<ul style="list-style-type: none"> ▪ Lack of inventory ▪ Limited understanding of E waste rule and management ▪ Neither segregation nor separate transfer / handling facility 	<ul style="list-style-type: none"> ▪ Detailed inventory for domestic e waste under 26 different categories ▪ Mass awareness campaign ▪ Every ULB to have at least one E waste management centre and minimum one collection / drop centre in a radius of 25-30km ▪ Atleast one e waste processing unit in a district 	Very High & Immediate

4.0 Water Quality Management Plan

The Hingoli district has 4 rivers. Total sewage generate is of about 8.2MLD of which as per current data is domestic sewage and nil industrial effluent. The total domestic sewage undergoes treatment before being discharged to environment.

A detailed issue based management action plan is provided in **Table 4**.

Table 4 Action Plan for Water Quality Management

Sectors	Gaps	Action Points	Priority
Water Resources	<ul style="list-style-type: none"> ▪ Limited information available on mapping of surface water resources in terms of quantity ▪ Limited Inventorization of quantity, usage, availability exploitation etc. ▪ Limited Rejuvenation / remediation of water bodies ▪ Solid waste dumping in the river bodies 	<ul style="list-style-type: none"> ▪ Thorough Mapping of resources to be taken up ▪ Extensive assessment of quality to be done ▪ Criticality indicators to be established for each water body/resource ▪ Extend water quality monitoring network to include representativeness ▪ Based on the criticality initiate Rejuvenation / 	High

		<p>remediation</p> <ul style="list-style-type: none"> ▪ Online Monitoring system for surface water bodies to be established ▪ Protection methods to be developed for creative stoppage of dumping of solid waste in the surface water bodies 	
Domestic	<ul style="list-style-type: none"> ▪ Correlation between generation and treatment often misleading ▪ Water budgeting exercise often missing ▪ Computation of water footprint missing ▪ Surveillance /Inventorization in cradle to grave approach absolutely never applied ▪ Limited collection system and treatment facility especially in remote area ▪ Often polluting water resources ▪ No established reuse options / reuse network 	<ul style="list-style-type: none"> ▪ Digital Platform to accommodate water budgeting / reuse potential ▪ Approximately 10MLD of STP needed ▪ In situ treatment for River stretches to be developed ▪ Strengthen the sewage collection network to cover 100% Population ▪ Policy for reuse / recycle of treated wastewater 	Very high & Immediate
Industrial	<ul style="list-style-type: none"> ▪ No data on industries generating effluent 	<ul style="list-style-type: none"> ▪ If there are any industries required the effluent generation and number of industries 	High

5.0 Air Quality Management

Air quality assessment and sectoral management needs are ought to be essentially planned and executed in Hingoli district. There are no CAAQM stations across the district.

It seems that PM₁₀ in Ambient Air is one of the prime reasons of the concern. An exceedance factor as per the monitored data that needs immediate attention as is the case in most of the areas of India. In view of the same the primate of every ULB shall be to establish at least one such Ambient Air Monitoring Station and coordinate / collaborate with other monitoring organisation to provide for advisory to general public towards health associations and risk of exposure.

Inventory and policy formulation action plan is stated in **Table 5**.

Table 5 Action Plan for Air Quality Management

Sectors	Gaps	Action Points	Priority
Air	<ul style="list-style-type: none"> ▪ Need to install CAAQMS to establish / corroborate inferences ▪ Sectoral action plans not effectively established 	<ul style="list-style-type: none"> ▪ Emission inventory and source apportionment supported with dispersion and health based iterative process for science based AQM strategy to be established ▪ Each ULB to have at least one urban and one rural CAAQMS or three manual stations at least to include criteria pollutants with minimum one location to include parameters of 2009 CPCB notification and meteorological data including cloud cover ▪ Fugitive emission control system for hot spot emission control to be installed ▪ Green barriers / Photo catalyst options to be evaluated ▪ Capacity building to be enhanced 	High

6.0 Mining Activity Management plan

Being directly under the promissory control of District Collector, the total lease land and the mining in Hingoli district is 0.0856 Sq.km. It is important to mention that the total area is under sand mining.

7.0 Noise Action Plan

Other than event base monitoring and special projects related / orders monitoring, MPCB carries out annual noise monitoring at 3 locations. Noise quality reveals mainly source specific non-compliance such as traffic related in most of the kerb side analysis. No. of noise measuring devices with district administration is 2 and 1 with SPCB. Though zoning categories and regulations therein are particularly specified, in limitation of noise regulations has always been challenge to the regulatory authority. It is also observed that no sign boards in towns and cities in silent zones are displayed in any ULB except in Hingoli council partially done. **Table 6** spells potential management plan that could be taken up on priority by each of the ULBs.

Table 6 Action Plan for Noise Quality Management

Sectors	Gaps	Action Points	Priority
Noise	<ul style="list-style-type: none"> ▪ Most of the source related noise areas show exposure beyond compliance ▪ Excessive exposure during noise generating potential events/ festivals 	<ul style="list-style-type: none"> ▪ Noise mapping to be carried out for zonation purposes ▪ At source control using physical or natural attenuation methods to be adopted ▪ In the path noise control methodologies using noise absorbers creating zone of inhibition / silence zone to be done ▪ End of the pipe measures such as PEs acoustic enclosures etc. to be adopted ▪ Event based noise control policy to be effectively implemented 	High

8.0 Conclusion

There seems to be vast data gaps and a detailed exercise to collate and validate data gathered through this process needs to be urgently taken up in addition to the adopting a holistic & inclusive consultative process of gathering information, collating & converging it in order to be able to device strategies of future. Also, it is equally important that projection for at least next 20 years be done in order to evaluate management plans for futuristic view to

meet the objective of such vast exercise. Digital data availability needs to be one of the prime tasks of government & methods of its validation be created with scope for improvement in near future. The practise needs to be a continual one to be updated regularly in order to monitor progress and effectiveness of this process & shall be linked with financial allocations being designed to be promoted by government of the day. With regards to action plans, the priorities shall be aligned based on sustainability objectives.