

District Environment Plan



Prepared By



Environment Department, Government of Maharashtra



Maharashtra Pollution Control Board

Parbhani

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 Parbhani District is prepared.

2.0 Introduction

Parbhani is a city in Maharashtra state of India. It is the administrative headquarters of Parbhani District. Parbhani is the fourth largest city in Marathwada region of Maharashtra after Aurangabad, Nanded and Latur. Parbhani is around 200 kilometres (120 mi) away from regional headquarters of Aurangabad while it is 491 km (305 mi) away from the state capital Mumbai.

Along with the entire Marathwada region, Parbhani was a part of the erstwhile Nizam State; later a part of Hyderabad State; after reorganization of states in 1956 it became a part of the then-Bombay state; since 1960, it has been part of the present Maharashtra state.

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

Table 1 Parbhani District Profile

Description	Details
Average Climate	Summer: 26.9 °C. Rainfall: 918 mm.
Geographical Location	Parbhani district lies between 18.45 and 20.10 North Latitudes and 76.13 and 77.39 East Longitude.
Area	6214 Sq. km.
Boundaries	The district is bounded on the north by Hingoli district. On the east by Nanded district, on the South by Latur and on the West by Beed and Jalna districts.
Languages Spoken	Marathi, Hindi, English are major languages but all Indian languages are spoken
Population	Total: 1,836,086 ; Male: 942,870 Female: 893,216 [According to 2011 Census Report]
Population Density	295 Per Sq. km.
Literacy Rate	73.34
Rivers	Godavari, Purna and Dudhana
ULBs	9 Numbers + 1 Municipal Corporations
Municipal Corporations	1 Numbers 1. Municipal Corporation, Parbhani
Sub districts	2 Numbers
Villages	843 Numbers
Statutory Towns	8 Numbers
Tahsils	9 Numbers Sailu, Jintur, Parbhani, Manwath, Pathri, Sonpeth, Gangakhed, Palam and Purna.
Pin code	431401

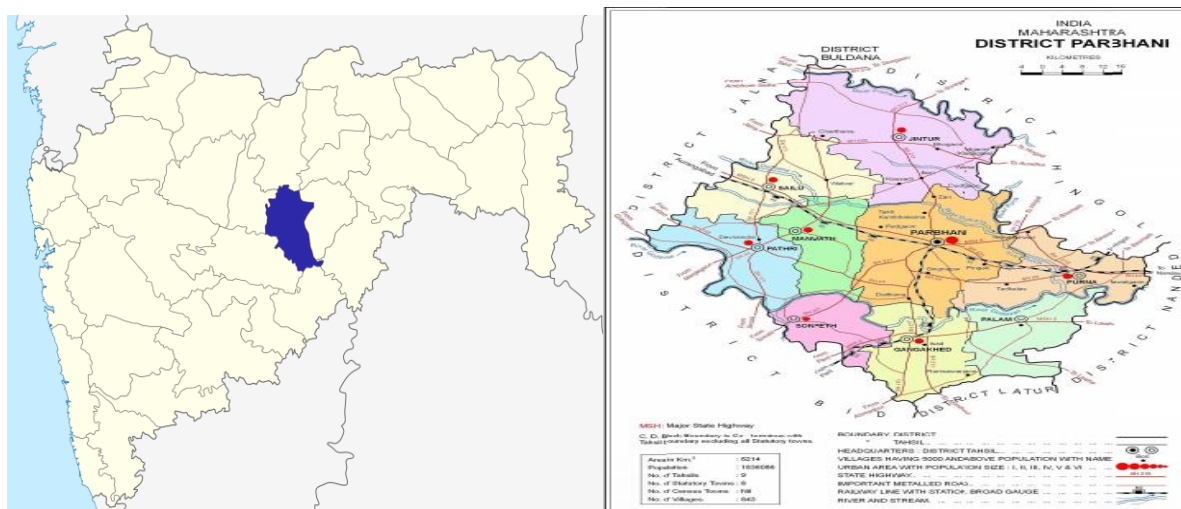


Figure 1 Location of Parbhani District

3.1 Domestic Solid Waste Management Plan

Parbhani district is having 9 ULBs with 114 wards. Municipal Solid Waste [Dry & Wet] generated from each ULBs and details of Other Types of Waste is presented in **Figure 2** due to its less quantity and for easy representation. As per collected data, total solid waste generation of Parbhani district is 251.6MTD [Need to review as the waste represented is same for all the 9 ULBs, the waste written is addition of wet and dry waste] wherein, Dry Waste generation is 73.88MTD and Wet waste is 95.62MTD.

It seems that Wet waste comprises of approximately 56.41% of total waste generated of the district and Dry waste contributes 43.58%. The highest quantity of wet and dry waste is generated at Parbhani Municipal Corporation which is 113.22MT/Day and 138.38MT/Day. It is observed that quantity of solid waste generation is in line with the respective population of ULBs.

A] Street Sweeping Waste: Parbhani district generates 2.95MTD of Street Sweeping Waste which is only of 3 ULBs from which M.C. Gangakhed generates large amount of street sweeping waste i.e 1MT/Day. The street sweeping data for 6 ULBs is not estimated. Parbhani Municipal Corporation having largest population generates second highest street sweeping waste

B] Drain Silt Waste: Total quantity of Drain Silt Waste generated is 2.6MTD. It seems that maximum quantity of Drain Silt Waste is generated by M.C. Gangakhed with total quantity of 1.5MTD followed by Nagar Panchayat Palam with 0.9MTD. However, it is observed that quantity of Drain Silt waste is not estimated by other 6 ULBs

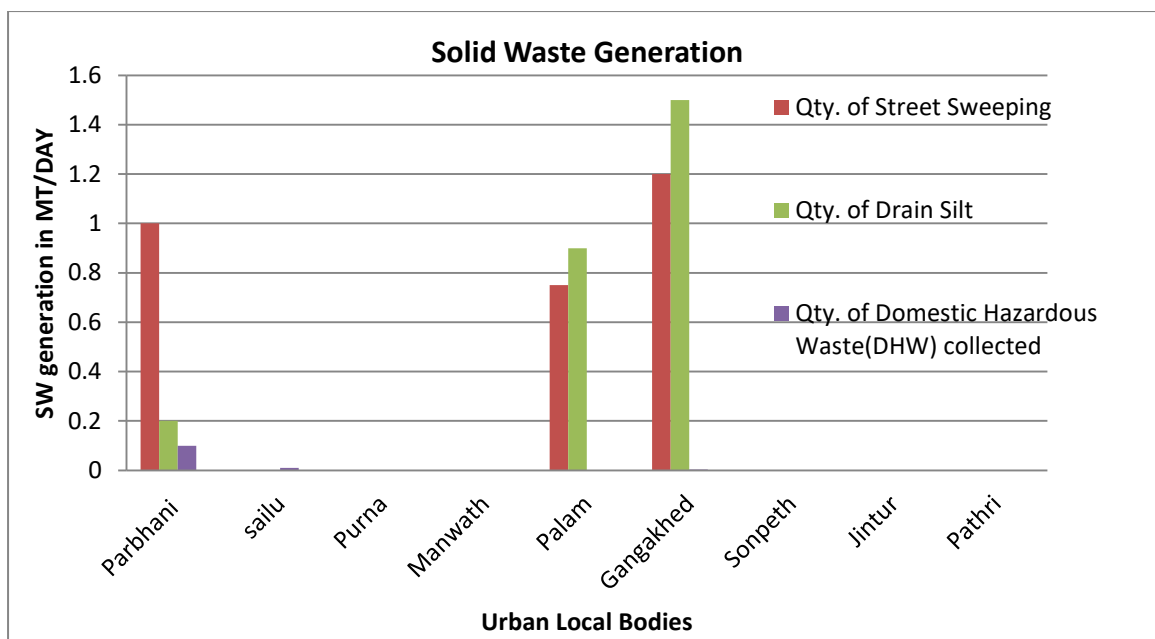


Figure 2 Other Waste Generation of Pune District

C] Domestic Hazardous Waste (DHW): Total DHW quantity generated is 0.115MTD from 4 ULBs. Other ULBs like M C Purna, M.C. Manwath, M C Sonpeth, M C Jintur and Pathri have not provided facility for collection of domestic Hazardous waste.

D] Other Waste (Horticulture, sanitary waste, etc.): Quantity of data is not estimated for any of the ULBs

E] Bulk Waste Generator: Raigad district is having total 17 bulk Waste Generator and total number of onsite facility provided for treatment of wet waste is 8

3.1.1 Compliance in Segregated Waste Collection

Total Waste generation from Parbhani district is 215.6MTD and almost all waste is being segregated. [Need to verify the exact quantity of solid waste generated as there are two different quantities and the summation does not match the same]

A] Waste Management Operations

Out of 9 ULBs, 6 of them have provided 100% door to door collection facility and other 3 ULBs have provided 80% and 90% door to door collection facility respectively. Mechanical Sweeping is not provided at any ULBs. 100% Manual Sweeping is carried out at 4 ULBs and other 5 ULBs carry 80-90% of manual sweeping.

16 ULBs have implemented Mechanical Road Sweeping and rest of other ULBs have not provided Mechanical Road Sweeping facility. All the waste transported to various facilities is

first segregated on site. The generated wet waste is composted. Nearly all the ULBs carry out composting activity for which 43 composting units are provided. But it observed that only 50% of the generated wet waste is treated.

Multi Re Use Facility is to separate and prepare recyclable material wherein 3 ULBs have installed MRF facility and 1 ULB namely M. C. Gangakhed is under process. Reclamation of old site is initiated at only 2 locations. 7 ULBs have initiated linkage with waste to energy boiler / cement plant. All the ULBs are having linkage with recyclers and have authorization for the same. Data is not available for linkage with waste pickers. 9 ULBs have linkage with TSDF/ CBMWTF

3.1.2 Adequacy of Infrastructure

Availability of infrastructure to handle the waste generated from the Parbhani district is presented in **Figure 3**.

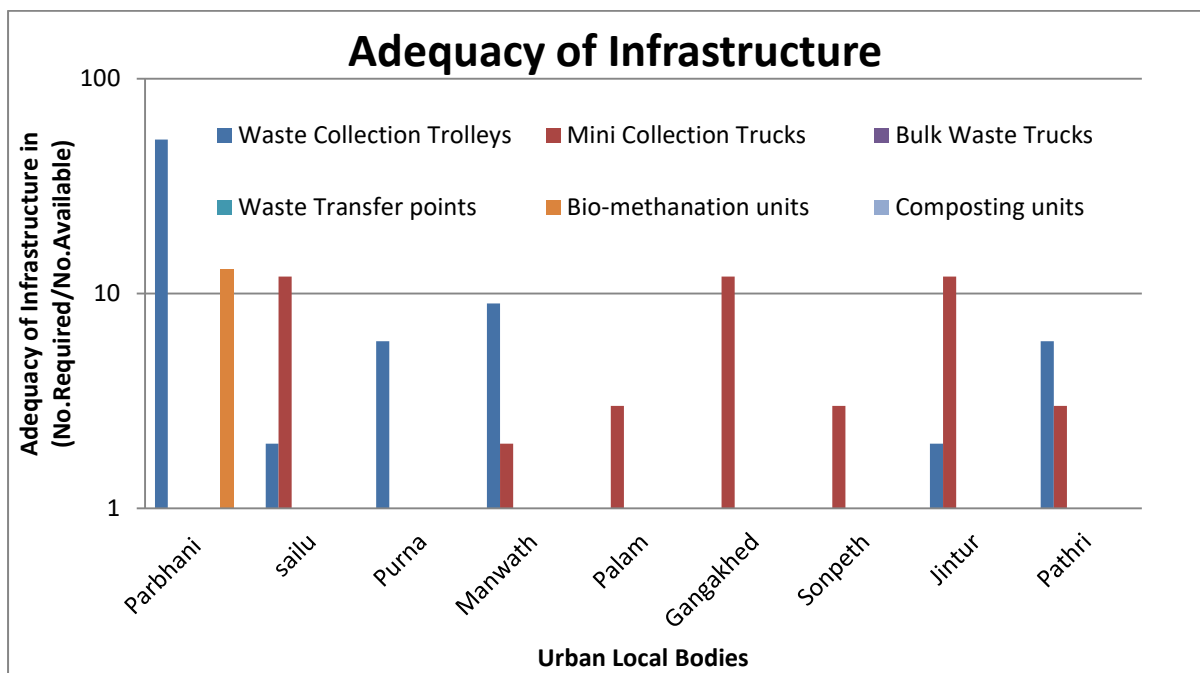


Figure 3 Adequacy of SW Infrastructure

It is observed that Total Number of waste trolley are 78, Mini collection trucks 47 numbers and Bulk transport trucks 14. There is no Bio - Methanation units but 2 Bio-Methanation units are required. Composting units available to treat wet waste are 43. There are 8 Material Recovery units.

3.2 C&D Waste Management Plan

The Construction and Demolition Waste [C&D Waste] generated by Parbhani district is about 2634Kg/Day. C&D Waste generated by each ULBs is presented in **Figure 4**. Sailu generates maximum number of waste accounting to 1400Kg/Day and lowest generation at Nagar Panchyat Palam and M.C.Gangakhe. The C&D waste values are not estimated at 5 ULBs. Non availability of data will not help in preparing ingenious 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.

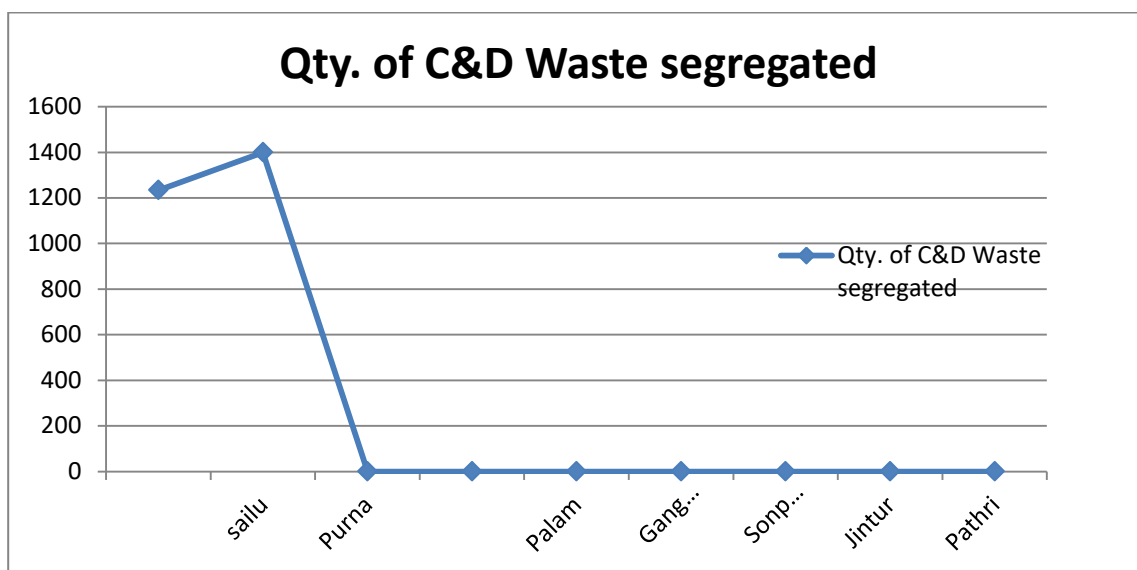


Figure 4 C&D Waste Generation of Parbhani District

3.3 Plastic Waste Management

Total Plastic waste generated by Parbhani district is 2.625MTD. With 0.5MTD quantity of the waste generated at 4 different ULBs.

Almost 7 ULBs have provided 100% door to door collection and segregation system with 3 Plastic Waste Collection Centre.

There are 24 Plastic Waste Pickers with the authorization for waste collection. District has no Plastic Manufacturer nor Waste recyclers [Data needs to be checked]. Treatment and recycling of generated plastic waste, is done by either making use of plastic in Road Making or Co-processing in cement kiln. Stringent application of Plastic Waste and Management Rule 2016, is done in all the ULBs.

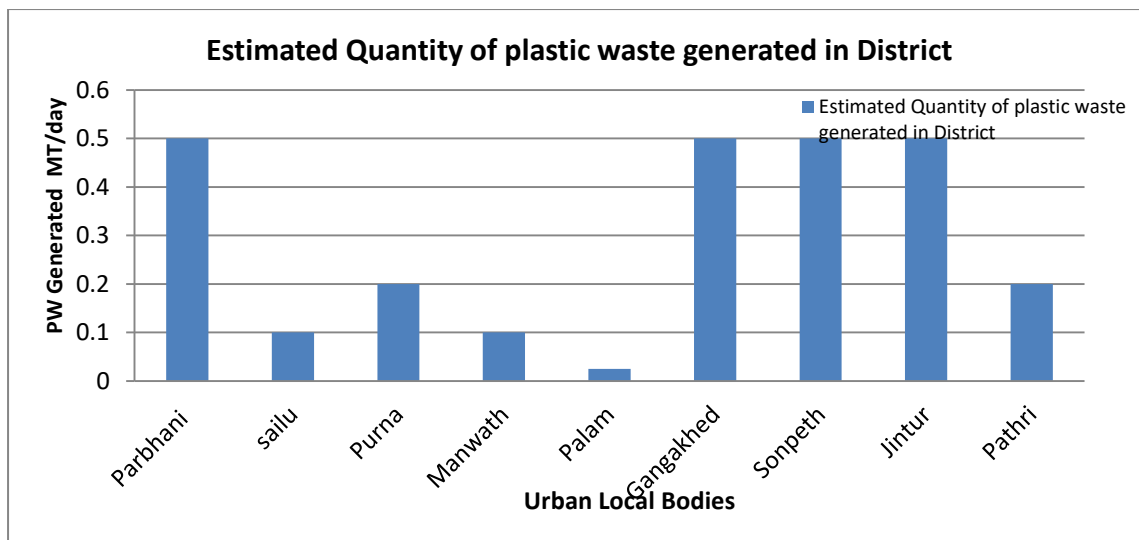


Figure 5 Details of Plastic Solid Waste Generation

3.4 Biomedical Waste Management

656 hospitals present in the Parbhani district. Bedded hospital are 471 numbers, out of which only 226 HCF have taken authorization. 185 are non-bedded hospitals, out of which 88 have taken authorization. 73 Clinics and 7 Veterinary hospitals. Total BMW generation from all above mentioned sources are to the tune of 395 Kg/Day

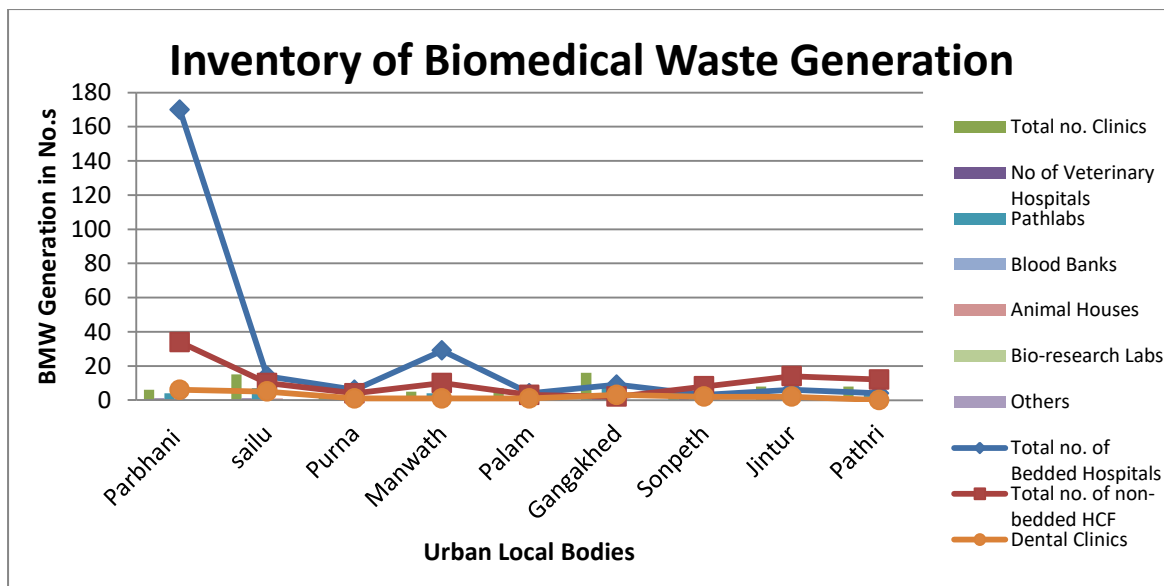


Figure 6 Details of Plastic Solid Waste Generation

There are Common Facility available for treatment and disposal of BMW and average BW taken by these facilities are 395 kg/day. Inventory of BMW generating units are mentioned in the **Figure 7**. Barcode system is partly utilized at 5 ULBs.

3.5 Hazardous Waste Management

The entire district is having 6 Hazardous waste generating industries which generates about 2.6MT/Annum of waste [Need to cross check as the quantity seems to be very less]. The waste is sent to common TSDF of other district within the state. Details of Hazardous waste treated are not provided.

3.6 E Waste Management

1 Collection Centres is established at Sailu. District does not have authorized recycler/dismantler. The district has linkage with authorized E-waste recycler /Dismantler.

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 ▪ Quadrate sampling 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 34 Ghanta Gadi would be required 	Short to Mid Term

Sectors	Gaps	Action Points	Priority
Infrastructure	<ul style="list-style-type: none"> ▪ Mostly composting is the main treatment methodology with about 80% coverage ▪ MRF facility is also available but limited to few 	<ul style="list-style-type: none"> ▪ Intermediate / Transfer station based decentralized waste treatment facility to be evaluated ▪ Additional 20% alternative treatment such as bio-Methanation can be explored 	High
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 ▪ Only two ULBs lacking implementation of PW notification 	<ul style="list-style-type: none"> ▪ Strengthening surveillance of life cycle assessment for type and quantity of Plastic Waste ▪ Effective EPR Policy ▪ Initiation of 100% compliance to PW Rules at the earliest 	High & Immediate
C&D Waste	<ul style="list-style-type: none"> ▪ 2-3 of the ULB need to establish C&D Waste management system 	<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 ▪ Treatment facility lacks implementation of 2016 Notification in line with CPCB audited report ▪ 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 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

Sectors	Gaps	Action Points	Priority
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 segregation at source ▪ Treatment facility to be provided ▪ No Common TSDF 	<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 maintained ▪ The generated waste can be either sent to incinerated, land fill or recycled. Units for the same need to be established. ▪ There shall be at least 1 TSDF in the entire district 	Very High & Immediate
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 ▪ No campaign arranged for creating awareness 	<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 ▪ District Administrator should organize the campaign for creating awareness among the people 	Very High & Immediate

4.0 Water Quality Management Plan

The 9 ULBs generate about 22.25MLD of sewage and there is no STP for treating the same. All the generated sewage discharged directly into the river thus polluting the river.

Absence of planned and well connected sewage conveyance system (Sewer Networks) adds up to the problem of STP system setup. Even though MPCB has been eying to formulate policy w.r.t. reuse treated sewage as a regulation, lack of basic STP setup infrastructure limits the implementation programs.

It is also quintessential as part of the ULBs to map HFL, demarcate and protect flood plains especially in light of the erratic precipitation witness in the recent year some of the ULBS have already included this features as their regulatory mandate though the irrigation department seems to be directly responsible for the same.

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 ▪ Partly 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 / remediation ▪ 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 	High
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 	<ul style="list-style-type: none"> ▪ Digital Platform to accommodate water budgeting / reuse potential ▪ Approximately 25MLD of STP needed ▪ In situ treatment for River stretches to be developed ▪ Strengthen the sewage 	Very high & Immediate

	<p>in cradle to grave approach absolutely never applied</p> <ul style="list-style-type: none"> ▪ Limited collection system and treatment facility especially in remote area ▪ Often polluting water resources ▪ No established reuse options / reuse network 	<p>collection network to cover 100% Population</p> <ul style="list-style-type: none"> ▪ Policy for reuse / recycle of treated wastewater 	
Industrial	<ul style="list-style-type: none"> ▪ No information of industries provided 	<ul style="list-style-type: none"> ▪ Digital compliance methodology to be developed ▪ Disposal system to be under constant surveillance 	High

5.0 Air Quality Management

As it is Pune district being one of the most vibrant and outgrowing areas in Maharashtra, Air quality assessment and sectoral management needs are ought to be essentially planned and executed. Manual and CAAQM stations are not set up across the district.

It seems that PM10 in Ambient Air is one of the prime reason of the concern and historically Parbhani has been in the centre of controversy with regards its air quality management. An exceedance factor that reveals 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 prima facia 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"> ▪ Most of the places PM10 seems to exceed by a factor of around 2 - 4 ▪ Manual and CAAOMS stations are not set up 	<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 atleast one 	High

	<p>across the district</p> <ul style="list-style-type: none"> ▪ Sectoral action plans not effectively established 	<p>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</p> <ul style="list-style-type: none"> ▪ 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 	
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6.0 Mining Activity Management plan

Being directly under the promissory control of District Collector, the total lease land and the mining in Parbhani district is 0. 2783.sqkm.

7.0 Noise Action Plan

Other than event base monitoring and special projects related / orders monitoring, MPCB carries out annual noise monitoring at 2 locations. Noise quality reveals mainly source specific non-compliance such as traffic related in most of the kerb side analysis. Though zoning categories and regulations therein are particularly specified, in limitation of noise regulations has always been challenge to the regulatory authority. **Table 7** spells potential management plan that could be taken up on priority by each of the ULBs.

Table 7 Noise Action Plan

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 	High

		<ul style="list-style-type: none">▪ End of the pipe measures such as PEs acoustic enclosures etc. to be adopted▪ Event based noise control policy to be effectively implemented	
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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.