

District Environment Plan



Prepared By



Environment Department, Government of Maharashtra



Maharashtra Pollution Control Board

Dhule

1.0 Preamble

Hon'ble National Green Trng 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 Dhule District is prepared.

2.0 Introduction

Dhule is a major city located in the Dhule District in north-western part of Maharashtra state, India known as west Khandesh. This district is situated at the foot of the Satpuda hill. Dhule is the regional headquarters of MIDC, RTO, and MTDC. The city, with industrial areas, schools, hospitals, supermarkets and residential areas, has communications and transport infrastructures. Dhule is largely emerging as one of the upcoming hubs of textile, edible oil, and power-loom across the state and has gained a strategic advantage for being on the junction of three National Highways viz. NH-3, NH-6, and NH-211 and on most anticipated Manmad - Indore Rail Project.

General Dhule district profile is presented in the **Table 1**.

Table 1 Dhule District Profile

Description	Details
Average Climate	26.9°C average temperature and Rainfall: 612 mm.
Geographical Location	It lies between 20.9° North Latitude and 74° 78" East Longitude. It lies in the Khandesh region, which forms the northwest corner of the Deccan Plateau.
Area	7195 Sq. km.
Boundaries	Dhule district is bordered in the west by the Gujarat State and in the north by Madhya Pradesh along with Nandurbar district, and in the south and east by Nashik district and Jalgaon district respectively
Languages Spoken	Marathi, Hindi, English are major languages but all Indian languages are spoken
Population	Total: 2,050,862; Male: 1,054,031 Female: 996,831

Description	Details
	[According to 2011 Census Report]
Population Density	285 Per Sq. km.
Literacy Rate	72.8
Rivers	5 no's
ULBs	5 No's
Villages	678 Numbers
Statutory Towns	3 Numbers
Tahsils	4 Numbers Dhule, Sakri, Shirpur, Sindkhede, Dondhaichi
Pin code	424001

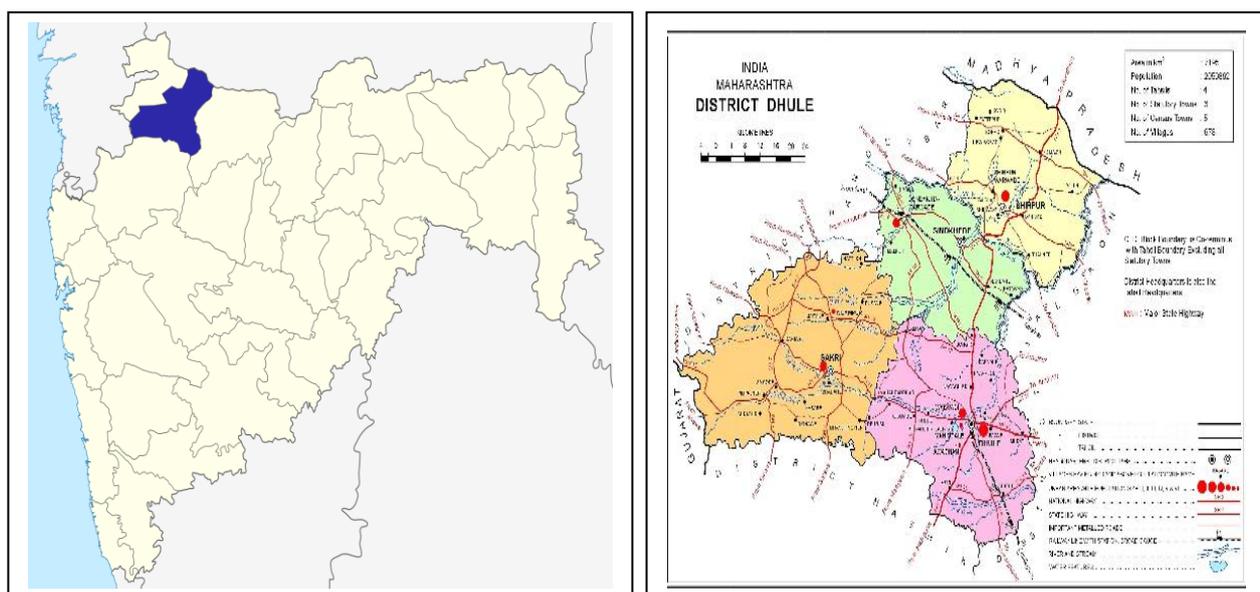


Figure 1 Location of Dhule District

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 Dhule 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 Dhule district. Following section gives insight about waste management of Dhule districts.

3.1 Domestic Solid Waste Management Plan

Dhule district is having 5 ULBs with 66 Wards. Total Municipal Solid Waste generated from each ULBs is 210.5MTD. As per collected data, Dhule Municipal Corporation stands on top with the highest quantity i.e.178MTD out of which 20MTD is treated through vermicomposting and 158MTD is dumped. It is observed that Sakri Nagar Panchayat generate least amount of waste from other ULBs i.e. 2.5MTD. Out of total waste generated in district from all ULBs, 49.6MTD is treated through composting and 160.9 is being dumped

Dhule district generates 25.25MTD of Street Sweeping Waste.Maximum quantity of Street Sweeping Waste is generated by Dhule Municipal Corporation with total quantity of 24MTD followed by Dondaicha NP with 0.6MTD and other 3ULBs stands lowest with 0.2MTD each.

Total quantity of Drain Silt Waste generated is 66.09MTD.It seems that maximum quantity of Drain Silt Waste is generated by Dhule Municipal Corporation with total quantity of 58MTD followed by Dondaicha NP with 4.59MTD.

Total DHW quantity generated is 0.140MTD.Maximum quantity of DHW is generated by Dhule Municipal Corporation with total quantity of 0.119MTD. Total Quantity of Horticulture, Sanitary and other waste is 0.148MTD, however the quantity is not estimated for Dhule Municipal Corporation.Maximum quantity of Other Waste is generated by Shirpur Warvade Municipal Council with total quantity of 0.075MTD and Sakri NP generates lowest quantity i.e. 0.001MTD. Dhule district is having total 11 bulk Waste Generator with the highest numbers Sakri NP. It is observed that all ULBs have onsite facility provided for treatment of wet waste. 90% of waste is segregated of which 100% is transported from all ULBs.

3.1.1 Waste Management Operations

All ULBs have provided 100% door to door collection facility. Only Shirpur Warvade Municipal Council has provided 50% mechanical road sweeping & 50% manual sweeping. All other ULBs carries out manual sweeping only.100% of waste is being transport through segregated waste transport system.

The generated wet waste is 100% treated through composting. Out of 5 ULBs, 4 ULBs is using Multi Re Use Facility to separate and prepare recyclable material whereas 1 ULBs have not installed MRF facility. Out of 5 ULBs, 3 ULBs have provision of Sanitary Landfill. 4 ULBs have started reclamation of old dump site too.

Only 1 ULB have linkage with waste to energy boiler / cement plant and 2 ULBs have initiated linkage with recycler whereas 3 ULBs have not started the process yet.

All ULBs have issued authorization to the waste pickers except Sakri NP. It is observed that no ULBs have initiated linkage with TSDF.

It is observed that there is only 1 waste Transfer points in Dhule Municipal Corporation with waste trolley of 179, Mini collection trucks 79 numbers and Bulk transport trucks 10. Composting units are available to treat wet waste.

3.2 C&D Waste Management Plan

The Construction and Demolition Waste [C&D Waste] generated by Dhule district is about 2558.05MTD. Out of which 42.55MT C & D Waste is disposed by landfilling without processing. It is observed that 2515.5MT C& D Waste is dumped illegally though there are 2 no's of facilities available for C & D Waste storage.

3.3 Plastic Waste Management

Total Plastic waste generated by Dhule district is 16.60MTD. Door to door collection and segregation system & segregation system is implemented with 96% & 94% respectively. There are total 10 Plastic Waste Collection Centre in the district. There are 186 Plastic Waste Pickers with the authorization for waste collection. District has no Plastic Manufacturer or Waste recyclers for Treatment and recycling of generated plastic waste.

3.4 Biomedical Waste Management

299 HCFs are present in the Dhule district out of that 231 HCF's have taken authorization. Total BMW generation from all above mentioned sources are to the tune of 1056Kg/D. There is only one CBMWTD facility in whole district.

3.5 Hazardous Waste Management

29 Number of industry is established generating 9205.85MT/Annually out of which 746.66MT is Incinerable 4378.65MT is land fillable HW & 4080.54MT is recyclable HW. There is no Common Treatment Storage Disposal Facility is present in District hence generated waste is being sent to other facility present within the state.

3.6 E Waste Management

There is one authorized recycler present in Dhule district with allotted capacity of 2000MT/A. There is no information available regarding collection centres.

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 	<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 	Immediate

Sectors	Gaps	Action Points	Priority
	considered	<ul style="list-style-type: none"> ▪ Quadrate sampling methodology to be adopted in order to reduce quantity as well as quality 	
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 	Short to Mid Term
Infrastructure	<ul style="list-style-type: none"> ▪ Mostly composting is the main treatment methodology with about 98% coverage ▪ Only 5% Reclamation of old dumpsite is initiated ▪ Only 20% use of sanitary landfill 	<ul style="list-style-type: none"> ▪ Intermediate / Transfer station based decentralized waste treatment facility to be evaluated ▪ Additionally augmentation of existing composting facility with add on of bio-Methanation can be explored ▪ 100% reclamation of old dumpsite must be initiated 	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 ▪ Segregation only 80% 	<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 ▪ Strengthen segregation at source 	High & Immediate
C&D Waste	<ul style="list-style-type: none"> ▪ Illegal dumping is to the tune of 2515.5MTD ▪ 42.55 MTD is directly dumped by landfilling without processing 	<ul style="list-style-type: none"> ▪ Minimum 1 storage & processing facility of C & D Waste 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 ▪ Limited Inventorization ▪ 128 HCFs are operating without authorization ▪ Almost all HCFs are not meeting the barcode tracking system ▪ Approx. 70% pre-segregation of BMW is done by 2 ULBs, 	<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] ▪ HCFs to implement barcode tracking systems 	Very High & Immediate

Sectors	Gaps	Action Points	Priority
	however no pre-segregation is done by other 3 ULBs	<ul style="list-style-type: none"> All ULBs to achieve 100% pre-segregation 	
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 of domestic hazardous waste at source 	<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 	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 information regarding collection centre 	<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

There are 5 Rivers in Dhule district with 698km in length.

The 5 ULBs generate about 86MLD of sewage with an existing capacity of 8.64MLD of STP with existing sewage network system accounting to 67km in length leaving a deficit of 90% treatment scheme. There are total 6 no's of Nallah/drains identified. There are 40 no's of bore wells.

There is no major industries existing in Dhule district and no data regarding number of Industries and Industrial effluent generation is available. 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 In few ULBs no estimation of bore well is done 	<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 	High

	<ul style="list-style-type: none"> ▪ Quantification of Industrial waste water not done 	<ul style="list-style-type: none"> initiate Rejuvenation / remediation ▪ Online Monitoring system for surface water bodies to be established ▪ Need to prepare inventory of all groundwater resources ▪ Quantification of Industrial waste water must be carried out 	
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 80MLD of STP needed ▪ In situ treatment for 698km 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 information of industries discharging wastewater in to the river 	<ul style="list-style-type: none"> ▪ Need to carry out Inventorization of Industries present and effluent generated from these industries ▪ Digital compliance methodology to be developed ▪ Disposal system to be under constant surveillance 	High

5.0 Air Quality Management

It is observed that CPCB & MPCB through their NAMP & SAMP programme has not either set up manual or CAAQM stations across the district.

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"> ▪ There is no installation of manual or CAAQM stations in district 	<ul style="list-style-type: none"> ▪ Need to install manual or CAAQM stations for ambient monitoring in district 	High

	<ul style="list-style-type: none"> ▪ Limited 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 atleast 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 	
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6.0 Mining Activity Management plan

Total area covered under mining in Dhule district is 0.7505 Sq. Km. out of which area covered under sand mining is 0.193 Sq. Km. MPCB and respective authorities have issued 48 no's of licenses for mining activity. No mining is complying consent conditions.

7.0 Noise Action Plan

There are total 6 no. of noise measuring devices with district administration and MPCB. No complaints received on noise pollution in last 1 year. No Noise monitoring study is carried out in the district. District authorities have installed sign boards in towns and cities in silent zones. **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"> ▪ Noise measuring devices in 1 ULB is not available ▪ Noise monitoring study not carried out in any of the ULB ▪ Excessive exposure during noise generating potential events/ festivals 	<ul style="list-style-type: none"> ▪ Noise mapping to be carried out for zonation purposes ▪ Need to carry out noise monitoring study in each ULB ▪ 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 	High

		be effectively implemented	
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