District Environment Plan

Prepared By

Environment Department, Government of Maharashtra

Maharashtra Pollution Control Board

Solapur

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 Solapur District is prepared.

2.0 Introduction

Solapur is a city located in the south-western region of the Indian state of Maharashtra, close to its border with Karnataka. Solapur is located on major Highway, rail routes between Mumbai, Pune, Bangalore and Hyderabad, with a branch line to the cities of Bijapur and Gadag in the neighbouring state of Karnataka.Solapur international Airport is under construction. Solapur leads Maharashtra in production of beedi. Solapuri Chadars and towels are famous in India and also at a global level, however there has been a significant decline in their exports due to quality reasons. "Solapuri chadars" are the famous and first product in Maharashtra to get a Geographical Indication tag It has been a leading centre for cotton mills and power looms in Maharashtra.

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

Table 1 Solapur District Profile

Description	Details
Average Climate	Summer: 30°C to 45 °C. Winter: 10 °C. Rainfall: 545 mm.
Geographical Location	Solapur is located at 17.68°N 75.92°E. It has an average elevation of 458 metres (1502 feet). It is bordered by Ahmednagar district on the north, Osmanabad district on the north and northeast. Gulbarga district on the southeast and Bijapur Districts on the south of Karnataka State, Sangli district on the south and southwest; Satara district on the west, and Pune district on the northwest.
Area	14895 Sq. km.
Boundaries	Ahmednagar district on the north; Osmanabad district on the north and northeast. Gulbarga district on the southeast and Bijapur Districts on the south of Karnataka State, Sangli district on the south and southwest; Satara district on the west, and Pune district on the northwest
Languages Spoken	Marathi, Hindi, English are major languages but all Indian languages are spoken
Population	Total: 4,317,756; 2434980 Male: 2,227,852 Female: 2,089,904 [*According to 2011 Census Report*]
Population Density	290 Per Sq. km.
Literacy Rate	77.02
Rivers	Bhima
ULBs	13 Numbe rs + 2 Municipal Corporations
Municipal Corporations	2 Numbers 1. Solapur Municipal Corporation 2. Barshi Municipal Council
Sub districts	3 Numbers
Villages	1,154 Numbers
Statutory Towns	10 Numbers
Tahsils	11 Numbers Karmala, Madha, Barshi, Solapur-North, Mohol, Pandharpur, Malshiras, Sangole, Mangalvedhe, Solapur South and Akkalkot.
Pin code	411001 - 411053

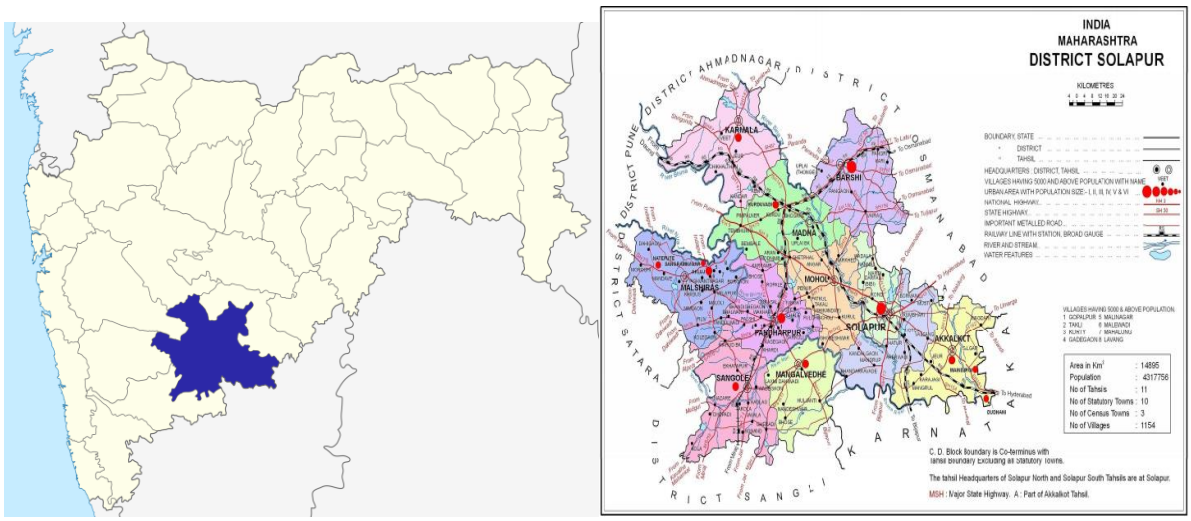

Figure 1 Location of Solapur District

3.0 Waste Management Plan

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 Solapur District 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 12 Urban Local Body [ULB] in Solapur district.

3.1 Domestic Solid Waste Management Plan

Solapur district is having 12 ULB. As per collected data, total solid waste generation of Solapur district is 330.77MTD. It is observed that Solapur Municipal Corporation generates maximum quantity of waste i.e. 250MTD. It is observed that total treated qty. of Solid waste in district is 264.15MTD. District has different types of MSW Processing facility like Vermicomposting, Pit composting, etc.

3.1.1 Collection and Transport

In line with the total Solid waste generated, District have 80-100% of collection system. All ULB's have facility of door to door collection of Solid waste. Some of the local bodies have not initiated Mechanical Road Sweeping facility however; district has 100 percent Manual Road sweeping facility. The district has 80 - 100% segregated waste transport for all ULB's. Segregated wet waste is further treated through composting.

3.2 C&D Waste Management Plan

The Construction and Demolition Waste [C&D Waste] generated by Solapur district is about 4096MTA. 560MTA of generated waste is recycled and 2265MTA is disposed by landfilling without processing or filling low lying area. Total 1270.49MTA of waste is dumped illegally in Solapur. There are 7 Storage Facilities for C&D Waste Storage facilities in district.

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. Issuance of Permissions by ULB is been already initiated. C & D Waste is used in Sanitary landfill (for solid waste) by 4 ULBs. 2 ULBs Municipal magistrates are appointed for taking penal action for non-compliance with C & D rules.

3.3 Plastic Waste Management

Plastics are integral part of society and have varied application. Total Plastic waste generated by Solapur district is 15.7MTD.

Solapur have 97% door to door collection system and 100% of segregation system in its major ULBs. District have 22 Plastic Waste Collection Centre. 364 Authorization for waste collection centres has been given in District. District has no Plastic Manufacturer whereas, 22 Waste recyclers. For Treatment and recycling of generated plastic waste, there are no Pyrolysis Oil Plant. PW Management Rules, 2016 is implemented in the ULBs.

District has implemented the PW Management Rules, 2016 in its 6 ULB's resulting in Sealing of units producing < 50-micron plastic, prohibiting sale of carry bags < 50 micron followed by Ban on Carry bags and other single use plastics as notified by State Government.

On other hand, there are no producers associated with ULB's to produce Plastic nor any Infrastructure is supported by Producers / Brand owners to ULBs.There's no Implementation of Extended Producers Responsibility (EPR) through Producers / Brand owners in Solapur

3.4 Biomedical Waste Management

Bio-medical waste refers to any waste, which is generated during the diagnosis, treatment or immunisation of human beings or animals or research activities pertaining there to or in the production or testing of biological or in health camps,etc

Solapur district generate in total 1550kg/d of BMW waste which is completely treated with its treatment facility provided. Segregation of waste is done 100% by the District.

3.5 Hazardous Waste Management

Total 157 No's of Industries in Solapur District generates 7754.87MT/Annum of Hazardous waste is generated. 5336.02MT/A qty of waste is Incinierable waste while 1140.86MT/A qty of waste is land-fillable waste. Based on the type of waste it is further sent for treatment i.e either landfilling or Recyclable/Utilizable waste. Hazarodus waste generated is sent to CHWTSDF for further disposal.

3.6 E Waste Management

Only one authorized E-Waste recyclers / Dismantler is established by district. The capacity alloted for dismantling is 250MTA. Citizens are not able to deposit or provide E-Waste through Toll-free Numbers in the District. The top class mobile companies have provided their collection centres from where the discarded mobiles are collected. There is no E-waste recycler nor the local bodies have linked up for same with anyone.To create awareness among the people The district administration arranges District level 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 need to be addressed for 100% implementation of the rules as mentioned in **Table 2**.

Table 2 Action Plan for Solid Waste Management

Sectors	Gaps	Action Points	Priority
Domestic Solid Waste			
Quantification	▪ Methodology for solid waste quantification should be ascertained ▪ Quantification based on Income group, culture affluence and technology to be considered	▪ 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	▪ Some of the places, efficiency of the collection system is not up to the mark	▪ Ideally most proven method of SWM is 3 Tier System with door to door, community and transfer station approach ▪ 100% efficiency to be achieved ▪ Approximately 36 Ghanta Gadi would be required	Short to Mid Term
Infrastructure	▪ Mostly composting is the main treatment methodology with about 80% coverage	▪ 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	▪ 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	▪ 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

Sectors	Gaps	Action Points	Priority
C&D Waste	▪ ULB need to establish C&D Waste management system	▪ 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	▪ 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	▪ 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	▪ Domestic HW being mixed with solid waste posing threat ▪ No separate handling of domestic HW ▪ Not effective segregation at source	▪ 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	▪ Lack of inventory ▪ Limited understanding of E waste rule and management ▪ Neither segregation nor separate transfer / handling facility	▪ 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	Very High & Immediate

Sectors	Gaps	Action Points	Priority
		▪ At least one e waste processing unit in a district	

4.0 Water Quality Management Plan

There are total 3 Rivers in Solapur district. The rivers flowing through Solapur are Bhima, Chandrabhaga and Sina respectively. ULB generate about 140.59MLD of sewage. The quantity of sewage treated in Solapur district is 71.08MLD sewer network approximately 649KM.

Industrial waste is not estimated in District. There are total 326 industries generating industrial effluent is of 3 MLD in the region of which 296 meet the discharge norms and 30 fail to meet the discharge norms.

It is essential as part of the ULBs to map HFL, demarcate and protect flood plains especially in light of the erratic precipitation witness in the recent years 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.

A detailed Issue based management action plan is provided in **Table 3**.

Table 3 Action Plan for Water Quality Management

Sectors	Gaps	Action Points	Priority
Water Resources	▪ Limited information available on mapping of surface water resources in terms of quantity ▪ Limited Inventorization of quantity, usage, availability exploitation etc. ▪ Limited Rejuvenation /	▪ 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	High

	remediation of water bodies	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	
Domestic	▪ 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	▪ Digital Platform to accommodate water budgeting / reuse potential ▪ Approximately 75 MLD 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	▪ Industrial Effluent is not estimated.	▪ Data needs to be estimated. ▪ Digital compliance methodology to be developed ▪ Disposal system to be under constant surveillance	Very High

5.0 Air Quality Management

As Solapur 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. CPCB & MPCB through their NAMP & SAMP programme has set up one manual and one CAAQM stations across the district.

PM_{10} is Ambient Air is one of the prime reason of the concern with regards its air quality management. An Exceedance factor 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 priamafece 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 4.**

Table 4 Action Plan for Air Quality Management

Sectors	Gaps	Action Points	Priority
Air	▪ Not all ULBs have CAAQMS to establish / corroborate inferences ▪ Sectoral action plans not effectively established	▪ 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

Mining waste is the high-volume material that originates from the processes of excavation, dressing and further physical and chemical processing of wide range of metalliferous and non-metalliferous minerals by opencast and deep shaft methods. Solapur district has Sand mining and stone mining activities. Solapur district has not estimated its mininig activity details for any of its ULBs.

7.0 Noise Action Plan

The goal of noise management is to maintain low noise exposures, such that human health and well-being are protected. The specific objectives of noise management are to develop criteria for the maximum safe noise exposure levels, and to promote noise assessment and control as part of environmental health programmes.

There is noise measuring devices with district administration to monitor the noise levels along with SPCBs. No any other data for Noise monitoring is collected in the district.
Table 5 spells potential management plan that could be taken up on priority by ULBs.

Table 5 Action Plan for Noise Pollution Management

Sectors	Gaps	Action Points	Priority
Noise	▪ Noise monitoring is not carried out in the district.	▪ 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	Immediate