

Chiplun Municipal Council

REPORT FOR DIALOGUE ON SOLUTIONS TO LOCAL PROBLEMS (RSLP) IN MUNICIPAL SOLID WASTE MANAGEMENT

SUBMITTED TO

THE URBAN INDIA REFORMS FACILITY

BY

**THE RESOURCES AND LIVELIHOODS GROUP,
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1 BACKGROUND

India, like the other developing countries in the world, is experiencing a hyper-urban boom. Surveys carried out by various organizations related to this predict that nearly 1/3rd of India's burgeoning population would migrate to and settle down in the urban areas in the near future. This explosion exerts huge pressures on the delivery of the basic services in the urban areas, such as housing, water transport, and other basic infrastructure services. This trend already has outstripped the planned growth in capacity of many service delivery systems, which are already in a battered state.

To address this pressure of urbanization on the urban service provisioning, the Government of India started a big-budgeted scheme in the form of Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in the year 2005. While a large part of the funds in JNNURM were allotted to the large cities, a separate scheme called Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) was designed for addressing the issues in the SMTs. Importantly, the JNNURM is not merely a scheme that provides funds, but it also introduced fundamental reforms in the financial and administrative governance of the state and of the local governments.

These urban reforms entail fundamental changes in the local and state level governance structures, which would cause far-reaching and irreversible impacts on the delivery of services. Restructuring also involves changes in the nature of accountability relationships between the citizens and the local governments. On one hand, reforms such as introduction of user-charges, and Private Sector Participation, indicate increasing the distance between ULBs and citizens; on the other hand, the reforms such as *Community Participation Law* and *Public Disclosure Law* offer some spaces for making local governance more transparent and accountable, provided that these spaces are offered adequately and used effectively.

Implementation of reforms requires funds at the level of ULBs, because reforms are closely linked with improving the services; such improvement being imperative at the ULB level. The overall improvement in delivery of urban services is rather a precondition for implementing the reforms. However, the allocation of funds amongst metros and small and medium towns (SMTs) show that while metros could obtain a large chunk of funds, the SMTs seemed to have not received a proportionate share. At the same time, the reforms were applicable to the SMTs as much as to the larger cities. Besides, the larger cities demonstrably possess a knowledge base and capacity of the administration that is much required for implementing the reforms. The SMTs, despite lacking this kind of knowledge base and capacity, operate under the same pressure for implementing the reforms. Similarly, extracting accountability is a great challenge which requires a knowledge-base among the civil society which is active and organized. SMTs, as in comparison with the metros also need attention in this respect. This stark difference between SMTs and Metros provided the basis for bringing the SMTs into focus under the project: "Building the foundations of Urban India Reforms Facility¹".

This emphasized the need for giving a comprehensive response in terms of assessing the opportunities presented by the reforms regime, and also the threats that may entail the reforms. This involved three things: understanding the ground situation, envisaging the impact of the reforms on various sections of society (including the vulnerable sections), and facilitating discussions on local problems and the reforms. Preparation of this report, and of other such documents for the towns covered under this project, is a small beginning towards building such a relevant knowledge base for deliberations on the reforms.

The outputs of this study in the selected SMTs encompass two types of documents, viz. the Town Level Background Note (TLBN), and The Report for Discussion on Solutions to Local Problems (RSLP).

¹ For further information on the UIRF, please refer to the base note compendium here: <http://tiss-uirf.org/downloads/bc.pdf>

The TLBN, as the name suggests, attempts to build a background to the study of the town and the ULB. It is attempted by considering the development of the town as it is seen today, its social, economic and demographic fabric, and the other issues and the aspects of the development of the town. The TLBNs are available separately.

The other output of the study is this report; the RSLP. This report is prepared based on the information obtained from a number of sources. A number of site visits were carried out by the RSLP preparation team. These visits included interaction with all categories of the stakeholders of the system, in order to build a multi-dimensional picture of the sector under consideration. The other sources of information were: interaction with the ground level community, interviews with key informants, interviews with the municipal officials, and collection of data from the components of the system of provisioning of basic municipal services².

This report does not intend to provide a one-stop or definitive solution to the problems in the town; however, the stakeholders of the basic municipal service provisioning expect efforts towards solving their problems. Keeping this in perspective, this report is titled and attempts to support a multi-stakeholder discussion towards solving the problems. The analysis towards seeking solutions while supporting a multi-stakeholder discussion also includes the strengths and weaknesses of the local system (including the town as such, the ULB, the local community, the CSOs, the local academic institutions, and the other stakeholder entities), and also the opportunities and the threats posed by the impending or the under-process reform- or project- initiatives at the ULB level.

This report has been organized in analytically interlinked sections as follows:

- Problem articulation – The problems being faced by various stakeholders of the basic service provision sector, along with the details of those such as the extent, impacts etc.
- Problem diagnosis and existing situation of the system – the causal analysis of the problems is included in this section. It involves identification, detailing and systematic organization of the causes of the problems.
- Prescription – Based on the analysis of the problems and causes, and the interaction with various stakeholders of the town's municipal service sector, this section builds upon the indication to course of action possible to be taken, to solve the problems.
- Action plan – A multi-stakeholder dialogue (MSD) is proposed in this phase of the analysis, to consolidate a sort of action plan, enunciating the responsibilities of various stakeholder entities in the town, along with the issues categorized according to their urgency or obviousness to be discussed.

2 DETAILING THE PROBLEMS IN CHIPLUN'S SWM SECTOR

The reforms envisaged under the JNNURM regime would be applicable to the SWM sector and also that a part of the funds earmarked for the regime would be deployed in this sector. MSWM sector has been thus selected as a focus of this RSLP.

For a comprehensive analysis to find solutions to problems in a municipal service sector (MSS), it is important to understand the inter-linkages between the symptoms of problems in the sector, and the actual causes underlying them. Various aspects of the situation faced by the citizens can be largely classified as the symptoms of the problems, while the root causes that result in such situations are often understood upon analysis of relevant information.

In this chapter, the problems in the SWM sector, and various details of those have been presented. The description of problems has been carried out based on two criteria – the stages in MSWM

² For further information on the methodology used for preparation of this report, please refer to the Tools-and-Resources Kit (TRK) here: <http://tiss-uirf.org/index.php/trk.html>

process, and the various areas of the town based on various characteristics of those areas. Such an interwoven structure of the problem description was found to be effective in portraying the information obtained.

2.1 Problems in the SWM sector at Chiplun

The problems in the SWM sector of Chiplun were attributed to various characteristics of the areas of the city, such as the density of population, elevation of the areas, etc.

Starting with generation, no areas of the town were found to have SWM generation control in place. Very few households were reported to segregate their waste at source.

Waste was observed lying in open drains across many wards of different population densities, high lying & low lying, old & new, poor & rich areas alike. Residents of the areas close to the river reportedly used the river for dumping their waste into. The Bio-medical waste was not reportedly handled feasibly across the town. Also, no separate collection mechanism was found for bulk waste producers.

It was reported that:

- a. Both High and Low lying areas have regular day to day collection of solid waste. In elevated areas, baskets and small trolleys are used to collect SW from households
- b. Even in densely populated wards with narrow spaces within houses, door-to- door collection of waste is undertaken through baskets and small trolleys
- c. No major difference in day-to-day household waste collection is seen between affluent wards and poorer wards.
- d. Sweeping of public places is not carried out properly, resulting in littered roads, especially in the economically backward areas

Stages in MSWM	Characteristics of the wards for problem attribution			
	Elevation of Areas	Development Time	Density of Population	Economic and Social status
Transportation	Transportation to the dumping site is undertaken through <i>ghanta gadi</i> .			
Treatment	Untreated waste lies in the open dump atop a hill. The waste also burns there, emanating immense amounts of polluting gases and foul smell.			
Recycling	No organized or collective efforts are carried out for recycling.			
Disposal	<ul style="list-style-type: none"> • There is no sanitary landfill, the waste is dumped in the open at the dumpsite and is burned at dumping site. • Bio methanation plant is not functional • Vermi-composting plant for treatment of wet wastes not functional 			

Table 1 Snapshot of Various Problems in Chiplun's SWM Sector

The following sections elaborate the various aspects of the problems, such as their extent, effects on the citizens and inter-linkages with other municipal services.

2.2 Details of the problem symptoms the citizens face

The following sections elaborate, based on various factors, the details of the problems observed in the SWM sector of Chiplun.

2.2.1 Geographical extent and patterns

A random pattern of SWM collection related problems, cutting across all wards of the city was observed. Open dumping and dumping of waste in drains was the first major problem observed. It

was reported that unidentified people dumped waste in large open drains in a number of areas, while many of the areas had families who dumped waste in the open drain close to themselves as a regular practice. This was observed despite the much-effective *ghanta gadi* mechanism to collect waste on a door to door basis.

In addition, the problem of lack of public cleanliness was observed to be the most prominent in the Gowalkot ward.

Bio medical waste handling is a problem reported by many doctors of the city. The smaller doctors carry the waste from their establishments to a convenient location where they attempt to practice deep burial method, while the comparatively larger establishments avail the services of a biomedical treatment plant in the nearby MIDC.

The problems arising due to lack of waste treatment are confined only to the area where the waste is dumped, i.e. the hillock in Shivajinagar. Tremendous amount of smoke given out by the smoldering waste pollutes the ambient air. During monsoons, the waste atop the hill was reported to get converted to the source of waste wash off, flowing down the hill slope, through the existing inhabitation.

2.2.2 Socio-political and economic extent of the problems

Quite commendably, the *ghanta gadi* mechanism reportedly covers areas with population from all social and economic sections of the society. Open dumping and dumping in drains was observed despite this, across all wards.

For bio-medical waste (BMW) treatment, financially more capable medical establishments can afford the services of Maharashtra Bio-Hygienic Management, while the smaller establishments cannot.

2.2.3 Effects of the problems on the citizens

The open dumping was reported to result in breeding of mosquitoes, the most ubiquitous of all effects. Also, in the Gowalkot area, the unattended public waste is reported to be home to harmful creatures, such as scorpions and snakes, posing a risk to the residents as well as the children playing around in the area.

Moreover, it is reported that the seepage caused by the leaching storm water through the openly dumped waste atop the hill in Shivajinagar results in serious soil and groundwater contamination.

2.2.4 How SWM problems affect other municipal services in Chiplun

Dumping of waste in the drains translates to stagnant drains, giving rise to mosquito breeding. This, combined with the improper design of the drains that collects wastewater in certain parts of the drains poses a compounded threat to the health of the residents in the surrounding areas.

2.2.5 Coping strategies adopted by the citizens

Frequently complaining to the MC about drains choked with garbage and about the garbage dumped in the open is the most widespread strategy adopted by the citizens of Chiplun. Some households arrange for disinfection in areas close to them from their personal kitties. This results in an expenditure incurred by the citizens.

2.3 Actual sources of the symptoms of the problems

The root problems underlying most of the problem symptoms elaborated in the earlier sections are as follows:

2.3.1 Unattended waste in the open

Although the *ghanta gadi* system has proven largely effective and has contributed in reducing the waste in a great proportion, the problem of open dumping and garbage dumping in the drains exists.

2.3.2 Room for improvement of scientific or effective waste disposal facilities

It was reported by the CMC administration that efforts are made to treat the solid waste from the town scientifically. The mechanism treating the waste was reportedly hit by a storm while this study was carried out, and the repair work was in progress. The waste lay on the top of the hillock in Shivajinagar in the meanwhile. This reportedly results in a slew of problems for the surrounding environment. Also, lack of effective treatment mechanism for BMW would eventually turn out to be a threat to public health and the environment.

2.4 Response from the CMC Administration about problems the citizens face

A meeting was held with the CMC administration in April, 2011, to share the findings of the study carried out to prepare this report. The following points were communicated by the CMC:

2.4.1 Source segregation of waste

About 50-60% of the households in Chiplun town segregate their waste at source. Only such segregated waste is collected by the door-to-door mechanism of waste collection.

Also, the waste from restaurants and canteens is collected separately. At the same time, the CMC administration is aware that rigorous measurement of waste is needed, and the CMC will take steps to achieve that. At the same time, the CMC administration also mentioned that the door to door collection mechanism has helped improve the situation of SWM in Chiplun much better than that in the other towns in Maharashtra, of size and standing comparable to that of Chiplun.

2.4.2 Increased cost of transporting waste

The issue of added costs of transportation of waste to atop the hill was raised in the meeting. The CMC administration responded to it by asking whether there was any option to address this issue. This is especially emphasized by the CMC administration saying that the site selected for the treatment and disposal of waste is a perfectly legal one, as mentioned in section 2.4.3.

2.4.3 Selection of site for treatment and disposal of waste

In connection with point 2.4.2, the CMC administration emphasized that a legally appointed committee comprising competent officials from the pollution control board, the district administration and the municipal administration had selected the site atop the hill in Shivajinagar, from the options of sites available. This means that the site selected for treatment and disposal of waste is a perfectly legal one.

Additionally, the CMC administration also conveyed that work is in progress to construct a boundary wall around the area where treatment and disposal of waste is carried out. Leachate generated due to the treatment and disposal of waste will therefore be arrested from flowing down the slope of the hill, once the work for the boundary wall completes. The CMC is also reportedly making efforts to establish windrows and gas management systems at the treatment and disposal site to address the problems of leachate and the gases escaping treatment and disposal of waste.

2.4.4 Recycling of waste

The CMC administration reported that the CMC is in talks with the representatives of cooperative society of waste pickers. This will enable the CMC to more effectively and efficiently address the lack of effective recycling of waste in Chiplun.

2.4.5 Ensuring safety and hygiene to SWM workers

The CMC administration regularly provides equipment to ensure safe and hygienic working conditions for the workers of SWM department. This includes soaps, hand gloves, brooms, gum-boots and other safety equipment. The administration also said in the meeting that there should be no reason for any flaws in this mechanism of distribution of safety and hygiene equipment to the workers.

On the other hand, the administration said that the workers in the SWM department are observed to not use equipment such as hand gloves and gum boots during the hot season as it makes them uncomfortable.

Additionally, the administration reported that the private contractors appointed to carry out SWM-related work in the town are regularly and repeatedly instructed to focus on the safety and hygiene of their contract workers.

2.4.6 Disposal of bio-medical waste (BMW)

The CMC administration said that the functioning of medical establishments, including the disposal of their waste is a complex matter that falls in the jurisdiction of not only Chiplun MC but also in the purview of the Ratnagiri Civil Surgeon and that of the Nursing Homes Act. It was reported that all the medical establishments in the town operated in strict adherence to all applicable norms in this regard; and that the CMC is making efforts to resolve the issue of overlapping jurisdiction.

2.4.7 Waste getting into drains

The CMC administration emphasized that work is in progress to prepare a DPR for and implement the scheme of underground sewage management system in Chiplun. Once this system is established and functional, all problems related to waste getting into drains meant for sewage will be solved, according to the CMC.

2.4.8 Technical details

The CMC said that while removing all the containers from the town for waste collection, the CMC has ensured that the door to door collection system reaches all areas of the city. It also reported that wherever the ghanta gadi cannot reach all households in an area, hand-carts have been provided for, to be able to collect waste from all the houses even in congested areas.

3 CAUSAL ANALYSIS

This section concentrates on the analysis of the causes underlying the problems in Chiplun's SWM sector.

3.1 Current status of the SWM system in the town

Regular collection of household waste from the doorstep of citizens is carried out, 6 days a week. Roads and public spaces are swept five times a week. The following paragraphs elaborate on different aspects of the SWM system existing in Chiplun.

Knowing the current status of the SWM system in the town is essential, as it indicates to not only the problematic areas, but also potential spaces for intervention and improvement.

3.1.1 Human resources

Of the 88 staff on roll for SWM, 12 workers are reportedly almost always absent. 22 staff members on rolls of SWM dept are employed as administrative and support staff in the MC premises. 25 workers are employed through a contractor.

As per the reported existing manpower deployment, 3 workers exclusively collect waste from the vegetable market area, and 2 from mutton and fish market areas.

All the same (88+25) employees are engaged to clean the public places including roads, and drains during the second half of the day. The CPHEEO (Central Public Health and Environmental Engineering Organization) has stipulated norms for road sweeping as follows:

19.6.1 Norms of Work for Street Sweepers		
• High density area & Markets (Population above 50000 per sq.km.)	=	250 to 350 Running Metre (RMT)
• Medium density area (Population from 10000 to 50000 per sq.km.)	=	400 to 600 RMT
• Low Density area (Population less than 10000 per sq.km.)	=	650 to 750 RMT

Figure 1 Street sweeping norms as per CPHEEO - a snapshot

No information was available on whether the distribution of street sweeping work was made based on these norms.

The functioning of the SWM system is headed by 2 sanitary inspectors, with an assistant. One of the sanitary inspectors was also reported to have presided over the MC's sanitation workers' association for over 5 years.

3.1.2 Funds utilized

The funds utilized by the CMC for SWM are summarized in the following table.

Year	Expenditure (Rs.)	Expenditure Head
2005-06	5004287	Establishment costs (Salaries etc)
	779749	Maintenance of the waste management vehicles
	488216	Fuel costs
	31071	SWM 1999 (no details given in the document)
2006-07	5101962	Establishment costs (Salaries etc)
	255918	Maintenance of the waste management vehicles
	499262	Fuel costs
	117715	SWM 1999 (no details given in the document)
Total expenses from CMC funds over the 2 years	1,22,78,180	
2007-08 (from 12 th FC funds)	2000000	Construction of the Nisargaruna project
	631850	Establishment of electric connection at the SWM project
	261786	Barbed wire compound around the SWM project premises
	790000	Construction of the Nisargaruna project
Total expenses incurred in the year 2007-08	36,83,636	Total expenses incurred towards SWM treatment project and operations, 2007-08
Proposed expenses till March 2010	1350000	Generation of electricity from the Nisargaruna plant
	2874078	Purchase of 3 dumpers
	1192000	Solid waste management service provision
	54,16,078	Total expenses planned for SWM service provision

Table 2 Summary of expenses incurred for the SWM sector in Chiplun, from the 12th FC funds

These expense details form a solid foundation to the issues observed with the SWM system of Chiplun town. The foremost thing is that, if a massive expense of over Rs. 36,00,000 was incurred for establishment of a treatment plant for the town, why is there still burning waste, emanating smoke, and the washing off of waste down the slope of the dumping yard in rainy season?

At the same time, the information presented in the table above is pertaining to the expenses carried out for the entire town's SWM system. This may be the reason for the SWM services in a few stages of SWM, in a few areas of the town may have improved, but not in all the areas or not all the stages of SWM.

As may be observed from the above table,

- a. No expenditure has been incurred on awareness building or penalization or enforcement of laws and regulations related to SWM.
- b. Considering there is no overlap of reporting, a sum of over Rs. 1 Crore has been spent on the SWM system at Chiplun. This needs to be assessed for a normative funds requirement, especially considering the amount of solid waste generated at Chiplun (need scientific and rigorous measurement system to assess this figure). Comparison of normative funds requirement per unit waste generation would enable assessment of efficiency of the funds spent.

3.1.3 Technical aspects

The waste generated in the city is not measured. The DPR of proposed solid waste management system reports the solid waste generated in the city as approx. 15 tons, based on normative per capita municipal solid waste (MSW) generation and the population estimates. An approximate collection efficiency of 80% is assumed, to yield the daily collected waste amount of 12 tons.

Interaction with the workers of the SWM system also revealed that there was little or no protective gear or equipment provided to the workers while on duty.

The following table presents the snapshot of the town's SWM system, in terms of the mechanical and technical components of the same:

Elements of MSW system	Details
Trucks	7 (5 with the MC, 2 contracted)
Disposal Site	Atop a hill in Shivajinagar, 6 acres' area
Bio Methanation Plant	5 TPD reported capacity NisargaRuna plant (BARC technology), dysfunctional as of February, 2010

Table 3 Snapshot of Technical Details of Chiplun's SWM System

The radical issue here is that the treatment site is chosen to be atop a hill, which makes little sense, given the unnecessarily increased costs of waste transportation to the place. Moreover, such a site selection would also have resulted in higher construction costs because of added transportation costs of materials.

3.1.4 Institutional, administrative and regulatory aspects

Of the 7 vehicles used for door to door waste collection, 2 are deployed on a contract basis. Also, the BMW management contract of the city has been trusted with a private entity situated in the *Lote Parshuram* MIDC area. The entity is responsible for collection of BMW from various medical establishments of the city, and is free to charge the clients as per its own will.

The CMC issued advert and notice in the local newspapers, urging the citizens to use only the ghanta gadi mechanism for disposing their waste. This notice explicitly prohibits the citizens from dumping their waste in the open drains.

3.2 Causes of the problems – various aspects

This section deals with the causal mechanism operating behind the key problems plaguing the SWM system in Chiplun.

3.2.1 Social causes

- a. Lack of control on generation of solid waste, and lack of 100% source segregation were not reported by the citizens as problems at all.
- b. The residents are reported by the system staff and officials to be dumping their waste in open drains. It was also reported and observed that a number of residents simply burn their garden waste in their backyards, resulting in smoke and ash at a number of places in the town.
- c. A social aspect in terms of the caste system was observed to be instrumental in the town's SWM system: only people from a certain caste are found to be working for the SWM system. This has reportedly put constraints on the manpower deployment, reducing the overall collection efficiency of the system.

3.2.2 Economic and financial causes

- a. The study team was reported that cases of manipulation of wages paid to the workers have happened. Although the reasons for such incidents were not very clear, the workers may have resorted to informal lending at high costs, resulting in requirement to set up additional ways of income, demanding more time for that, in turn affecting their duty efficiency.
- b. The SWM treatment plant at Shivajinagar area was reported to be out of order, because of a recent storm and the damage due to that. At the same time, various steps such as bringing in cow-dung to make the plant operational again, tendering for re-construction of the damaged parts of the treatment plant were reported to be the bottlenecks in re-operation of the plant.

3.2.3 Political aspects

Informal staff transfer from the health department (handling SWM) to other department was reported. It was reported that the workers who do not wish to be working for the SWM or the health department, approached the elected public representatives who have good rapport with them, to have an informal transfer to other departments. They continue to draw salaries under the SWM heads but actually work for other departments. This is envisaged as one of the important causes for the lack of manpower in the SWM system. Efficiency of the expenses incurred for the SWM system also gets majorly hampered because of the phenomenon.

3.2.4 Administrative and institutional system-related aspects

- a. Segregation at household level is still not carried out in Chiplun, and no serious punitive steps or awareness building measures have been taken, citing the lack of operation of the treatment plant. This forms a vicious cycle, in terms of lack of segregation due to non-operation of the plant and operation of the plant being hindered because of lack of segregation at source of waste generation.
- b. It was reported that there is no facility to handle bio-medical waste by Chiplun MC. A private company has been appointed for the same, who determines the user charges itself (Approx. Rs. 300 per month for a hospital as per reports). Such unregulated user charge mechanism is reported to be unaffordable to many hospitals and nursing homes, which opt out of the BMW treatment mechanism, and independently treating their waste without monitoring or regulation.

- c. No Sanitary Landfill was observed to be located in the MSW treatment area of the town. The waste was dumped in the open atop a hill, resulting in waste being washed off down its slopes into the residents' backyards and onto the streets.
- d. Given the overall status of compliance of the CMC, it was observed that it has not been able to implement MSW rules 2000 in an appropriate manner.

3.2.5 Technical aspects

It was observed and reported that an excessive emphasis has been put on the door-to-door collection mechanism for the solid waste in the town, and hence no community litter bins have been placed at any places in the town. This results in even small errors in the collection system translating to open dumping of waste, and dumping of waste into the drains by the residents.

Commercial and other public areas are also places where community litter bins, regularly serviced by the transportation system of the CMC make much sense, but were not observed.

4 SOLVING THE PROBLEMS – POSSIBLE DIRECTION

As mentioned in the opening section, this report is not intended to provide one stop or definite solutions to the problems in the SWM sector of Chiplun. Instead, it aims to consolidate and effectively use the views of various stakeholders of the sector, and attempts to devise a direction for the efforts to solve the problems. The following sections bring this out step by step.

4.1 Assessment of Addressing the Root Causes of Problems

Multiple causes were observed to be linked to multiple effects that constituted the problems of SWM system in Chiplun. Such criss-cross linkages mean that addressing one set of causes may address a number of problems, and alternately, addressing one problem may require addressing a number of root causes. After making such preliminary assessment of the criss-crossing linkages between causes and problems, the following set of options for achieving the desired results emerged. This table is based on the consolidation of views obtained in the study of the town.

Causes reported to be at the root of the problems in Chiplun's SWM sector	Desired results to solve the problems of the town's SWM sector	Options for achieving the results
Lack of funds	Financial strengthening of the CMC to make its SWM sector self sufficient	Improving property tax as a revenue source
		Implementing user charges mechanism for the SWM system
Insufficient manpower	Improvement of the solid waste collection efficiency in Chiplun town through increased manpower	Private participation in the collection mechanism
		Community based organizations participating in the collection mechanism
Lack of appropriate treatment of MSW	Ensuring proper siting and treatment of the MSW and establishment of an appropriate BMW handling mechanism	Expediting the re-construction of the damaged MSW treatment plant
		Establishing distributed waste handling mechanism (small composting pits, regulated and monitored BMW management facilities with the medical establishments) to reduce the burden on the town's waste management system

Causes reported to be	Desired results to solve the	Options for achieving the results
Corruption and lack of willingness to work, political influence on the waste collection work, informal worker transfers	Ensuring public participation to reduce corruption	Establishment of a grievance redressal cell with independent officials to record public grievances and respond to those with the actual situation and explanation
		Regulating the amount of waste generated in the town to reduce the burden on the waste management system
No monitoring and regulating, compliance checking or grievance redressal mechanism	Having strict regulations and monitoring mechanism implemented to ensure minimal deviation from the prescribed norms for waste treatment	Establishment of a separate waste management regulatory cell by the CMC
		Assigning staff with clear exclusive responsibility of monitoring and regulation of the waste management mechanism in the town

Table 4 Consolidation of options possible to achieve desired results

4.2 Analysis of the Strengths, Weaknesses, Opportunities and Threats

This section attempts to assess:

- Strengths and weaknesses of the town as a ULB to be able to implement and carry out the solutions proposed or underway, and
- Opportunities and threats presented by the solutions implemented/ underway, including those in the form of reforms an projects initiatives.

The town possesses certain strengths, and certain weaknesses that may have implications on the options the town can adopt to solve the problems. At the same time, issues external to the town's fabric may give rise to certain opportunities and/ or threats that the town may have to work around. The analysis of these strengths, weaknesses, opportunities and threats (SWOT) is therefore necessary in assessing the direction for solving the problems in Chiplun's SWM sector. The following sections attempt to achieve this in a step-wise manner.

4.2.1 Strengths and weaknesses in terms of adopting the solutions

Keeping in perspective the solutions from the previous section, the following table attempts to assess the strengths and weaknesses of the ULB.

Aspect	Strengths		Weaknesses	
	Of the town or the CMC	Of the local academic institutions	Of the town or the CMC	Of the local academic institutions
Geographical	1. Large scope for improving and enhancing economic activity to bolster financial situation, due to location w.r.t. the Mumbai-Goa highway	Proximity to various centres from where a diverse set of students attend the college and schools in the town	Having the waste treatment plant site atop a hill poses serious challenge in improving the condition and mitigating the damage caused.	
Social	1. Relatively less dense population as compared to a number of other MCs 2. Quick grasp of social	Large human resource base in the form of students available	Due to Chiplun being a small town, the individuals involved in bringing about a change can be easily	Considerable part of the student base may hail from outside Chiplun, thereby isolated

Aspect	Strengths		Weaknesses	
	Of the town or the CMC	Of the local academic institutions	Of the town or the CMC	Of the local academic institutions
	problems amongst the community, due to an overall high level of education		identified and thwarted the ways of.	from the town's problems
Political	Direct connection of local political scenario with the state level political scene	No data		Usage of the educational institution to further political and personal interests
Administrative	Centralized working	No data	Possible lack of capability at lower level administration to make sound decisions	No data
Technical	<ol style="list-style-type: none"> 1. Little or no industrial or hazardous waste due to lack of heavy industrialization within the town 2. Largely computerized systems within the CMC, including information dissemination website mechanism, and soft copies of various documents such as scheme DPRs, budgets and other records 	A well equipped chemical laboratory, in case qualitative analysis or testing is needed to be done		No data

Table 5 Strengths and weaknesses of select local entities

It is understood that there could be a few more active entities which can be instrumental in setting the overall direction to solving the problems of the town's SWM sector. These are envisaged to be invited for the suggested multi-stakeholder dialogue, based on the issues raised in this document.

Their strengths and weaknesses should also be considered during the dialogue, to formulate the roadmap for solving the town's SWM related problems.

4.2.2 Opportunities and threats from the reform initiatives

Table 6 details the opportunities or threats posed by the various reforms initiatives, for Chiplun's SWM sector.

4.2.3 Opportunities and threats from on-going and proposed initiatives – the project DPR

The Ministry of Urban Development issued guidelines as to what should be contained in a project DPR, for solid waste management. The following table summarizes a comparison of the DPR for Chiplun's SWM project, with these guidelines, to assess the appropriateness of the DPR.

The objective of this exercise is to enable issues to be raised about the following points:

1. Effective and efficient utilization of funds invested in preparation of the DPR;
2. Feasibility and applicability of measures suggested in the DPR to the on-ground situation in the town;
3. The measures taken for improvement in the town's SWM system need to be owned by the town's citizens, because otherwise the system may not function effectively, as observed in the case of mismatch between the measures for collection and treatment of waste.

Table 7 summarizes a comparison of the DPR for Chiplun's SWM project, with these guidelines, to identify the standing of the DPR vis-a-vis the objectives mentioned above.

Reforms	Opportunities	Threats	Prerequisites to ensure opportunities	Steps to mitigate the threats
1. Issue of Bonds by the ULB for raising funds	<p>1. Raising funds from the market could act as an additional source of funds for the CMC.</p> <p>2. Due to the inherent financial nature of fixed returns being payable on bonds, the funds raised through bonds carry an increased level of accountability to the stakeholders.</p>	<p>The bonds issued by the CMC are likely to elicit a weak response. Combined with the overall economic standing of the council, this raises serious concerns about the credibility of the council.</p> <p>2. The obligation to provide fixed returns on the bonds may result in a compulsive user charge mechanism to recover the O&M costs of the projects implemented by the ULB.</p>	Building capacity of the ULB officials and staff to handle the required work for this	Building through transparent and accountable working of the council, an image of a credible institution which could in the future go for issuance of bonds.
2. Reforms introducing other sources of funds (Property Tax, User Charges for O&M cost recovery, and Rationalized Stamp Duty)	<p>1. The rationalization of property tax (PT) may reduce cases of property tax payment evasion.</p> <p>2. Establishment of accountability of the ULB to the residents through a clear relation between user charges and SWM system provision may boost revenues.</p>	Linking of property tax with locality may raise issues related to equity of service provision in particular areas. For example, the level of basic service provision such as SWM should ideally be uniform across all areas of a city; however, the difference in PT payments made by residents of different localities may result (informally at the political level in the ULB) in differences between the level of service provision across different areas.	<p>1. Ensuring willingness of the staff and other mechanism to rationalize the PT system</p> <p>2. Establishing a mechanism to prevent the 'social bullies' from evading property tax payments.</p>	Direct inclusion of high end technology (such as GIS) in property tax mechanism may mean upping the tax for many payers, necessitating a mechanism to ensure equity in property tax charging.
3. Introduction of Double Entry (Accrual Based) Financial System	This reform may be utilized by the CMC to start building the image of a credible and transparent institution.	Strong opposition is possible from the corrupt entities who do not want this transparency to be ingrained in the working of the CMC.	1. Incorporation of this may require a higher level of knowledge of accounting as a field.	1. Establishment of a strong public disclosure and public participatory mechanism to curb the anti-transparency forces would be required.
4. Introduction of Internal Earmarking of funds for providing basic services to urban poor	Extension of the SWM service to the poor, inhabiting the town area, and also to those at the fringes of the towns could be achieved by incorporation of this	Issues related to funds prioritization, arising from the weak financial condition of the CMC may arise, to decide the priorities of the services provided.	Capacity building and creating willingness amongst the staff to perform better for public good are essential to convince the	A clear transparent and participatory mechanism to prioritize the service

Reforms	Opportunities	Threats	Prerequisites to ensure opportunities	Steps to mitigate the threats
	reform.		administration the need to implement this reform.	provision to the poor, with ensured significant participation from all the stakeholders, needs to be established.
5. Encouraging Public-Private Partnerships (PPPs)	Incorporation of advanced technologies is possible through PPPs, if needed, since the private sector is reported to be abreast with latest technologies involved in various SWM system components.	<p>1. Commercialization and involvement of advanced technologies through privatization of municipal services such as SWM may put burden of user charges on the users.</p> <p>2. The private operator needs to be carefully assigned responsibilities to, to avoid situations where the operator does not provide services to areas that do not generate enough profits.</p>	Capacity building of the CMC staff and office bearers to learn lessons from the past experience and use those in the future.	Well regulated user charge mechanism to ensure equity, along with a participatory mechanism to decide responsibility allocation to the private operator needs to be devised and implemented.
6. 74th Constitutional Amendment Act	Among other things, the ULB has been made totally responsible for SWM services by this act. This may result in a direct accountability of the locally selected government body to its residents, for service provision.	Social bullies and corrupt entities have been misusing the financial powers bestowed upon the ULBs, to their personal or political interests. This may continue in the future of new initiatives.	Awareness and capacity building of the community as well as the ULB staff	Ensuring transparency and participation in the functioning of the CMC is a vital aspect to ward off the threats posed.

Reforms	Opportunities	Threats	Prerequisites to ensure opportunities	Steps to mitigate the threats
7. Community Participation Law	<p>1. Better decision making (e.g. what kind of systems will perform better for particular areas) has been made possible through direct community participation, vis-à-vis the current closed-doors system.</p> <p>2. Through participation and inviting comments from the community stakeholders, the equity principle may find more space in the decision making process.</p> <p>3. Through community participation in decision making, the self accountability of the citizenry may be enhanced. (For example, if a decision is made to enforce source segregation of waste, if residents are a part of the decision made, they are more likely to comply) This may result in better system operation.</p>	NA	<p>1. Ensuring the information reaches all stakeholders of the system by active steps taken by the CMC is an essential step.</p> <p>2. Capacity and awareness building of citizens and CMC staff members alike</p> <p>3. Strong opposition may be faced from the parties whose interests are curbed by such initiatives. Political vandalism in such forms is a major threat.</p>	NA
8. Public Disclosure Law	<p>1. Establishing Public Consumption Standards is a part of the steps to be taken for this reform. Such standards may be extended to the SWM system, translating possibly to the upper limit on how much waste could be generated.</p> <p>2. Increased accountability towards public through regular voluntary disclosure of information by the relevant governing bodies would help mitigate the helplessness expressed by the citizenry, towards the decision making framework, and the corruption giving rise to service failures, including those of SWM system.</p> <p>3. Key and far-reaching decisions such</p>	In a small place like Chiplun, this may not be effective given the feeling of insecurity amongst the active members of the society	Establishment of a proper channel to ensure continuous stakeholder engagement and participatory, consultative decision making is required to ensure such initiatives are effective.	Building a strong unified base to ensure no insecurity is involved in the public participation mechanism

Reforms	Opportunities	Threats	Prerequisites to ensure opportunities	Steps to mitigate the threats
	as the site of the SW treatment plant, collection mechanism to be implemented could be invited public opinion on, through information disclosure. This may result in avoiding delays arising out of improper planning and grievance redress in the relevant conditions.			
9. City Planning as a function of the ULB	1. Advance planning for a suitable system of SWM, and the development control regulations required for that as part of the city planning, may address the inequity- and inefficiency- related problems.	Formation of nexus between realty developers and city administration may result in flouting of the rules and regulations, posing a threat to the proper functioning of the SWM system. For example, it was reported that a number of buildings have been constructed with incorrect setbacks, causing hindrances to the collection vans plying in the area.	Capacity building of the ULB officials is an essential aspect of this	Nexus formation and corruption are maladies that need long term action through participation and transparency building.
10. Introduction of E-governance (GIS/MIS)	1. Enabling remote grievance registration without personal contact, vis-à-vis the current situation where residents hesitate/ are unable to visit the ULB themselves, may improve the resident feedback mechanism. 2. Better monitoring of systems by higher-ups in the hierarchy may be possible.	Such a reform may translate in abolition of mechanism for grievance registration in person, thereby alienating the residents who do not have access to communication modes such as the internet. In Chiplun, this is likely to be the case with many residents.	Ensuring proper via-media are established to enable all the community components to be able to use such e-governance related aspects.	Widespread installation of the infrastructure required to implement the reform. Also, consideration of the fact that there is a significant amount of floating population needs to be incorporated in the implementation of the reform. A workable solution could be devised based on the multi stakeholder dialogue.
11. Ensuring delivery of	1. Ensuring SWM will also be covered as		Capacity building of the ULB staff and	

Reforms	Opportunities	Threats	Prerequisites to ensure opportunities	Steps to mitigate the threats
basic services	a basic service, and this may mean ensuring accountability through service provision to all residents, and also through a well functioning grievance redress mechanism, by the ULB.		officials	
12. Structural Reforms	1. Creation of cadres for class 2 and class 3 staff may address problems arising out of locally vested interests of staff such as those of health inspector, head of the health department, sanitary inspector etc.	Inclusion of staff from places away from Chiplun may result in such staff members not having a real feel of the problems in the town	Building willingness and capacity to handle change and also to be able to appreciate the need for such an initiative	Awareness building and sensitization of the staff who belong to places other than Chiplun
13. Administrative reforms	1. Overall improvements in transparency and accountability may be achieved, possibly contributing to effective services provision.		Creating a willingness amongst the staff and office bearers in the Chiplun MC to ensure the reforms actually achieve what they are designed to achieve.	
14. 25% earmarking of land for poor for housing (LIG/MIG)	1. Earmarking of land for housing of economically weaker sections may ensure identification of poor settlements, thereby possibly translating to avoidance of exclusion of such areas from SWM provision.		Creating awareness to ensure public participation and building of pressure on the city administration to ensure the implementation of the initiative	
15. Computerization of registration of land and property	1. A possibly simplified property registration mechanism through remote systems may ensure property identification, further resulting in avoidance of unregistered properties, improving tax collection and the overall financial health of the ULB.		Capacity and awareness building of various stakeholders involved in the mechanism	
16. Security of tenure	1. Illegal settlements, especially of the economically weaker sections, may be avoided as a result of this reform. Ensuring SWM service provision to those may thus be achieved.			

Reforms	Opportunities	Threats	Prerequisites to ensure opportunities	Steps to mitigate the threats
17. Bylaws for waste-water recycling	1. An improved drain management is an implicit prerequisite for this reform. Such improvement may aid the SWM service provision, through avoidance of dumping of waste in drains.		Build administrative capabilities to be able to appreciate the technical linkages between the drain systems and SWM systems.	

Table 6 Feasibility Analysis of Reforms for the CMC (In prevailing conditions)

Importance of the component	If the DPR contains the relevant aspects, what are the steps required to ensure their effectiveness?	If not [‡] , steps needed to compensate for such shortcoming of the DPR
Components specified from CPHEEO manual and JNNURM Guidelines		
Population projections of the city over the project life period		
The amount of waste generated and hence the project capacity required depends directly on this	The area-wise pattern of population growth also needs to be forecasted, to ensure proper waste collection.	
Present condition of the city, population and area covered by the existing SWM system		
The applicability of modifications/ improvements suggested in the DPR would be based on this.	The on-ground situation needs to reflect clearly in the report, such as the length of road sweeping assigned to each road cleaning worker.	
Justification/ need for the proposed SWM project		
Principle of accountability towards the stakeholders of the project is reflected in this component	The options for enforcement of the mechanisms proposed also need to be worked out by the CMC A multi-stakeholder dialogue needs to be carried out in order to build public confidence on the selected mode of SWM treatment and handling system.	
Soil characteristics, topography, geology of the city; groundwater tables in different seasons, Environmental and Social Impact Assessment of the project		
Waste management components such as transportation, treatment and land filling have direct and important connections with soil, groundwater etc resources. Also, the project planning phase should		Environmental impact assessment of the project should be carried out, to assess what environmental components will have impacts from the project. These need to be assessed and taken corrective steps to protect. Public consultation should be carried out, on the project planning

[‡] The document by the title of DPR with the study team does not contain this information

Importance of the component	If the DPR contains the relevant aspects, what are the steps required to ensure their effectiveness?	If not [†] , steps needed to compensate for such shortcoming of the DPR
consider the impacts the project will have on its surroundings		document, to build a primary base for the impact assessment study. The technical impact assessment should be based on the comments and views expressed in the consultation, to establish the findings and the way forward.
Analysis of options possible for waste management and selection of appropriate alternative; justification of the mechanism and machinery required for waste management; Detailed design and drawings of various waste management components		
This is also a part of the transparency and accountability in the decision making process.		Entry level public participation should be carried out to justify the mechanism proposed in the DPR and ways to mitigate the possible concerns arising out of the implementation of the recommendations of the DPR.
Benchmark-based justification for land requirement for treatment/ segregation facilities		
Important as a part of mechanism to ensure accountability towards the land provision by state government for SWM projects.		In Chiplun, the land allotment to the treatment and disposal facility for SWM has been a topic of contention. The multiple aspects of the same, i.e. approval process, whether options were studied for the same, whether impact assessment was carried out or not for allotment of the particular land piece need to be understood through a participatory process. A well chalked out mechanism with clear responsibility allocation to the local administration, with state support if necessary, is required for effectiveness of the same.
Detailed plans for operation of the project, treatment of leachate, public awareness measures, issues for capacity building, community participation etc		
Apart from a competitive establishment of the project, sustainable operations and management of the project is an equally important thing. Well thought out decisions are needed to ensure that.	The practicability and necessity of the options and measures proposed in the DPR should be verified through a multi-stakeholder dialogue.	

Table 7 Comparison of Chiplun's DPR to the stipulated requirements

5 CHARTER OF DEMANDS WITH MULTI-STAKEHOLDER DIALOGUE (MSD)

Based on the options for achieving the desired results, and the opportunities and threats posed by the on-going or proposed project or reforms initiatives, a multi-stakeholder dialogue should be carried out. Such a dialogue would enable:

- a. Selection of the options to be implemented; these would include:
 - i. The options to solve the problems, as per Table 4,
 - ii. The steps to be taken to ensure the recommendations in the project DPR are effective, as per Table 7, and
 - iii. The steps to be taken to enhance the opportunities and mitigate the threats arising out of reforms, as discussed in Table 6

It should be noted here that the above-mentioned aspects of solving the problems in the town's SWM sector are based on a study carried out over a short duration, and may not be absolute or exclusive. These points should serve as a starting point for discussion, involving a larger set of stakeholders of the town's SWM sector.

- b. Action plan and clear responsibility allocation along with an agreed and accepted time frame for implementation, to various entities that would participate in the option implementation. This would be based on the analysis of the strengths and weaknesses of various stakeholder entities, as summarized in Table 5.

At the same time, there would be issues at a very broad level that would form what may be referred to as the 'maladies' affecting the SWM sector in Chiplun. Alleviation of such malady-level issues would form the long term action plan, to be systematically devised based on the deliberations in the multi-stakeholder dialogue.

At the same time, the analysis carried out by the study team has raised two broad classes of aspects: the burning issues to be taken up immediately at the MSD, and the near-immediate actions required, largely irrespective of the outcome of the MSD. However, the MSD needs to focus on the steps needed to be taken to advance in the positive direction to solve the issues in Chiplun's SWM sector.

5.1 Burning Issues for the MSD

The following table summarizes the burning issues that have been observed, and need elaborate discussion during the MSD.

No.	Issue	Source
1.	A total of over Rs. 1 crore has been spent on solid waste management over last couple of years. Was this expenditure justified? Has anything positive happened for the SWM sector of Chiplun?	The documents, recording the expenses incurred on the SWM system in Chiplun.
2.	Why was there no participation or public disclosure while selecting the site for the SWM treatment and disposal facility? The location	Interactions with various informants and system officials revealed that in fact there was some kind of an option

No.	Issue	Source
	atop the hill has been much contended, causing not only groundwater pollution and land pollution, but also nuisance to the surrounding inhabitants.	assessment involved in the selection of the facility site, but in actual the site was finally established at a location unsuited for the same.
3.	If there is such a shortage of staff in the SWM system, especially collection, why is there informal and illicit transfer of workers from the SWM department to other departments of the CMC?	The actual number of workers working for collection was reported to be less than those on the payroll. Informal worker transfer between departments was reported to be an issue.
4.	What does the term 'solid waste management as per 1999 rules' in the expense heads of the CMC mean? Why are there no details?	The expense statements from the annual reports with the budgets of the CMC have this head with sizeable expenditure mentioned against those.
5.	Why is there no information or discussion on the time required for repairing the damaged SWM plant in Chiplun?	As a reason for the non-operational SW treatment plant, various system staff members reported that there was a serious damage to the plant because of a recent storm. The construction work to restore the plant to its original state was reported to be in progress.
6.	Why is there no measure proposed to control the amount of waste dumped by the residents, into Chiplun's SWM system? Why are there no quantified and strict recycling directives to be adhered to by Chiplun's residents?	No document or system input analyzed by the study team has ever dealt with waste generation control as a mechanism to ease the load from the SWM system in Chiplun. Especially in light of the lack of efficient disposal mechanism and the inhabitation around the facility leading to grave issues, this measure should have been included on a priority basis in the documentation.

Table 8 Burning issues for the multi-stakeholder dialogue, thrown up by the analysis

5.2 Action Points on a Priority Basis

The following table summarizes the action points that need to be taken up in the short- to medium-term, on a near-immediate basis. This will be subject to the discussion in the MSD. Such discussion could result in alteration, revision, modification or refinement of the points mentioned here.

It should be noted that these points arise from the analysis of the current situation⁴ and the reforms, along with the general standing of the CMC, carried out by the study team.

⁴ At the time of carrying out the study (March 2010), and based on the points raised in the meeting held with CMC officials in May 2011

No.	Action point	Brief details	Reforms that support the initiative
1.	Devising a clear community participation and transparency mechanism in the form of either regular interactions, or a continuously available counter at the CMC	It was observed that many grievances of the residents do not reach the CMC, chiefly due to the lack of a grievance redressal mechanism. A real-time interface between the residents and the CMC needs to be established on a priority basis.	Community Participation Law, Public Disclosure Law
2.	Preparation of an indicative regulation to ensure financial and technical sustainability of the SWM system	<p>For an instance, the waste generators could be charged based on the amount and quality of waste they generate.</p> <p>To enhance the tendency to segregate waste at source, incentives could be given to the waste generators who segregate their waste.</p> <p>The charges mechanism could either be slab-based such as in case of water connections, or on the basis of amount of waste generated.</p>	<p>Publication of consumption standards, as a part of the reforms translates directly to specifying how much waste could be generated by each waste generator.</p> <p>Additionally, this initiative could be clubbed with the design of user charge scheme, according to the corresponding reform.</p>
3.	Participatory and regulatory initiative to reduce the burden on Chiplun's solid waste management system, through generation control	<p>A drive should be taken up to reduce the burden on Chiplun's SWM system.</p> <p>Community sensitization through a massive awareness campaign should be launched by the CMC, with the available staff.</p> <p>This should include using the existing media reporter base, holding informal meetings across the town, and issuing informal guidelines on distributed composting of HH waste.</p> <p>For the bulk waste generators, the distributed waste treatment initiative should be especially pressed forward for.</p> <p>The equity issues in this (e.g. for generators who do not have direct</p>	None of the reforms considers waste reduction as a way out from SWM system issues.

No.	Action point	Brief details	Reforms that support the initiative
		<p>access to adequate land for treating waste) need to be resolved by a participatory process.</p> <p>Clear responsibility allocation to the community and other willing entities should be carried out, with definite time line design.</p>	
4.	Holding a close, separate dialogue of the medical establishment owners in the town to devise a sustainable and amenable mechanism to handle the bio-medical waste generated in Chiplun	It was reported that the entity appointed by the CMC to handle BMW was charging the medical establishments an amount not arrived at through confidence building, resulting in a number of dispensaries or hospitals opting out of the system. This is envisaged to have adverse impacts on the environment in Chiplun.	Community Participation and Public Disclosure Laws

Table 9 Action points for short term, on priority basis

6 CLOSURE

The findings of this study show that different stakeholders have different perceptions about solid waste management system in Chiplun. Irrespective of the different ideological positions they subscribe to, their perceptions and beliefs pertaining to the status and issues in the SWM, as well as about its causal analysis, reveal a complex picture. Importantly, many of these issues are neither in the purview of the ULB nor that any individual stakeholder is capable to handle the issues, further highlighting the need for framing policies for participatory decision making. Considering that, this report attempted at staging the perceptions and views of the stakeholders involved, to the extent possible at one place. It was also learnt over the data collection exercise that such an approach was taken by few, if not none, earlier initiatives to resolve the issues in the municipal service provisioning sector. Thus, the report aims to construct a grouted foundation, in order to provide contents for deliberations for seeking prudent first-step solutions towards better service provisioning in the solid waste management sector in the town.

ANNEXURE - LIST OF INFORMATION SOURCES

1. Mr Ganesh Shetye
2. Mr Sawant
3. Mr Shahabuddin Ghote
4. Mr Ramesh Shinde
5. Mr Sunil Mirgar
6. Mr Shripad Sakpal
7. Mr Shaha Nwaz Shaha
8. Mr Shantaram Burate
9. Mr Nishikant Joshi
10. Mr Prakash Deshpande
11. Mr Mukund Kane
12. Dr. Sharangpani
13. Mr Madhukar Kasekar
14. Mr Mohan Ranade
15. Ms Ujjwala Jadhav
16. Mr Vijay Jogalekar
17. Ad. Dhananjay Oak
18. Mr Bhausahab Chikate
19. Mr Gauri Relekar
20. Mr Sandesh Pawar
21. Mr Dheeraj Watekar
22. Mr Vikram Phadake