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**RCUES, Mumbai**  
Enabling better cities...

Information Bulletin

# Urban Environ Vision



**RCUES**

**Regional Centre for Urban & Environmental Studies  
All India Institute of Local Self-Government, Mumbai**

Established in the year 1968, is fully supported by Ministry of Urban Development, Government of India

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***Urban Environ Vision aims to take its readers through the journey of RCUES, Mumbai while providing encouragement and inspiration. It offers a platform to display the efforts undertaken by RCUES, Mumbai and showcase its achievements.***

## Water Supply Management, 24X7 Water Supply, Leak Detection, Waste Water Management, Reuse & Recycling in Urban Areas

18<sup>th</sup> & 19<sup>th</sup> October 2016, Surat, Gujarat



**This programme was very effective in terms of group work and field visit. Participants observed waste water treatment plant in Surat city and could take back key points in replicating the water management system in their cities. They could also apply this knowledge in making action plan on 24 X 7 in their own cities.**

### Introduction

A massive urban transformation is accompanying India's rapid economic growth, posing unprecedented challenges to India's growing cities and towns particularly in the provision of infrastructure such as water, sanitation and sewerage. One of the major challenges in every Urban Local Body is improving the efficiency of Urban Water Supply and Sanitation Services (UWSS). In this regard, these rapidly developing cities and towns also need huge capital and O&M investment in urban infrastructure, as highlighted by various Finance Commissions and expert bodies.

Effective 'supply management' and 'demand management' is evident in a few cities in India which have implemented 24x7 water supply services. Along with water supply management, it is also very essential to address the issues related to adequate wastewater management facilities to prevent environmental degradation. Achieving good services of water supply and sanitation requires the roles and responsibilities of the various stakeholders directly involved in service delivery, focusing on processes that will deliver sustainable, efficient, and affordable services to the citizens. Against this background the Regional Centre for Urban and Environmental Studies (RCUES) of All India Institute of Local

Self Government (AIILSG), Mumbai organized a Regional Specialized Training Programme on 'Water Supply Management, 24X7 Water Supply, Leak Detection, Waste Water Management, Reuse & Recycling in Urban Areas' on 18th to 19th October, 2016 at Surat, Gujarat. The programme was fully supported by Ministry of Urban Development (MoUD), Government of India (GoI).

### Key Objective

To provide guidance in managing water supply services efficiently and discuss options for effective waste water management.

### Participation

Total 19 participants comprising of President, Elected Representatives, Sanitary Inspectors, Municipal Engineers, Laboratory Incharge and Waste Water Plant operators attended this programme. The first day of the programme started with an introductory session by Ms. Shweta Nagarkar, Research Associate, RCUES of AIILSG, Mumbai by welcoming the participants of Gujarat & Rajasthan state. She highlighted the various activities conducted by RCUES for capacity building of municipal officials and elected representatives along with research as well as technical support to ULBs followed by a brief about the coverage and activities to be conducted in the two day training programme. This was followed by an introduction of the esteemed guests and the inaugural session.

### Inauguration

The specialised training programme was inaugurated by Mr. Rajubhai Desai, Chairman Standing Committee, Surat Municipal Corporation (SMC) in presence of Mr. Shankarlal Cheuvali, Dy. Mayor, SMC, Mrs. Gayatri Jariwala, Assistant Commissioner, SMC & Mrs. Alka Gondaliya, President, Amreli Municipal Council by lighting the traditional lamp of light.

In the key note address, Mr. Desai talked about the current scenario of water supply management in the context of Gujarat. He mentioned the timeline of various urban schemes by the state wherein the Government of Gujarat announced the 'Vibrant Gujarat' programme in the year 2005





**Inauguration of Training Programme by Mr. Rajubhai Desai, Chairman Standing Committee, SMC, Mr. Shankarlal Cheuuali, Dy. Mayor, SMC, Mrs. Gayatri Jariwala, Assistant Commissioner, Surat & Mrs. Alka Gondaliya, President, Amreli Municipal Council by lightening the traditional lamp.**

and launched 'a comprehensive and holistic urban governance vision', coinciding with the launch of JNNURM followed by the 'Nirmal Gujarat Campaign' in 2007 to renew focus on urban environment, particularly sanitation and to develop city-level plans for water and sanitation. He concluded with the mention of the Swarnim Jayanti Mukhya Mantri Shahari Vikas Yojana (SJMMSVY) launched in 2009 with an explicit focus on administrative and governance reforms to improve sustainability of urban investments. Mr. Shankarlal Cheuuali, Dy. Mayor, SMC, focused on the rapid development that Surat has witnessed in a short span of time being commercial capital city and the second largest town of Gujarat state in terms of population & area. Tapi river is the major source of water supply in the city and water is managed through piped water supply network since 1898. He highlighted that over the decades, SMC has invested in its water supply system to cater to its growing population with a gross average daily water supply is about 980 MLD translating to a per capita supply of about 147 LPCD. Five water works at Varachha, Sarthana, Katargam, Rander and Kosad have a treatment capacity of 1300 MLD. SMC has 6 distribution zones, viz. Western, Eastern, Central, North, South, and Southeast. He concluded on an encouraging note stating that in 2015, SMC has started Implementation of new water supply Master Plan under which it expects to cover the entire city and meet water demand up to year 2041. Mrs. Gayatri Jariwala, & Mrs. Alka Gondaliya extended their greetings for the grand success of the training programme.

## Technical Sessions

Dr. Girish Pophali, Principle Scientist, NEERI, Nagpur delivered a lecture on 'Key Components of Waste Water Management' & 'Waste Water Generation, Treatment and Reuse' He focused on the basic design considerations which are essential in waste water management. He talked about population, service area & regulatory control and effluent discharge limits as the primary components of waste water management.



**Mr. Milind Kelkar, Retd. Joint Secretary & Chief Engineer, Water Supply and Sanitation Dept; Maharashtra Jeevan Pradhikaran sharing his views on Importance of Resource Development for Water Supply in Surat Prog on 18th October, 2016.**

Mr. Milind Kelkar, Retd. Joint Secretary & Chief Engineer, Water Supply and Sanitation Dept., Maharashtra Jeevan

Pradhikaran discussed on 'Advance technologies in Water Supply & Waste Water Management' & 'Importance of Resource Development for Water Supply in relation to Quantity and Quality Assessments. He pointed out that many water supply schemes (WSS) in India operate intermittently and provide sub-optimal service to consumers end with 4-6 hours supply in most of the cities in India. He also added that the tremendous growth in population and negligence in operation and maintenance (O & M) of the water supply schemes has resulted in sub-optimal service of water supply in terms of both water quantity and quality. He ended his lecture by stressing on future water demands whereby there should be an increased focus on precautionary approaches such as innovative uses of natural supplies and new technologies.

Mr. Ajit Salvi, Assistant Engineer, Municipal Corporation of Greater Mumbai discussed about 'Optimum Uses of Pipes, Measurement of Flow in Water Supply Distribution System' & 'Operation and Maintenance, of Sewerage System including Pumping Station, Treatment Unit & Safety Equipments'. He focused on wastewater treatment plant (WTP) assets including primary, secondary, and tertiary treatment units, disinfection equipment pumps, blowers, buildings Electronic components, equipment and materials which may be required for maintenance, health and safety, and upkeep.

He stated that operation, maintenance and repair of pump stations requires special electrical, hydraulic and mechanical knowledge, proper design, construction and operator training. Mr. Salvi conveyed the technical aspects in an interactive manner which helped the participants understand the concepts and their relevance in their respective cities.

### Group Work



First day of the programme concluded with ULB presentations and group work by the representatives of the participating ULBs. Mr. Vishal R. Dalal, Assistant Engineer Water Supply Department, SMC presented on the status of Water Supply System of Surat City. He stated that 94% of SMC's population is covered with piped water supply & achieved its goal of universal coverage of water supply in areas within its jurisdiction. He also informed that under the SLB framework, the existing NNRW is 20.4% and efforts are

being made by SMC to minimize the same.



The objective of the group work session was the knowledge sharing among the participants through participatory learning techniques. The participants were divided in three groups and a case was developed and presented to them. Each group consisting of 4 to 5 participants across the states had to develop a plan of action to develop fish design plan for waste water recycling with the help of innovative interventions. The best performance group was awarded.

### Site Visit

A site visit was organized on the second day of the programme to Bamroli Waste Water Treatment Plant of 200 MLD capacity developed by Surat Municipal Corporation (SMC).

Site visit to this acclaimed treatment plant was an essential part of this capacity building programme which offered practical knowledge to the participants on different techniques used for management, waste water recycling and reuse. Another key learning was ways in which SMC augments this resource as a revenue by generation of electricity.



## Glimpses of site visit





## Municipal Acts & Administration

9<sup>th</sup> & 10<sup>th</sup> November 2016, Mount Abu, Rajasthan



The training programme was highlighted on municipal acts, policies etc. This was the specialised programme specially for Municipal Secretaries to understand them about municipal administration.

### Introduction

Cities are growing at a rapid pace with increasing population in urban areas and their effective management requires multi-pronged partnerships and the involvement of many stakeholders. The key stakeholders in the urban context include municipal elected officials and non-officials, Councils and Committees, employees and their trade unions, Government departments, resident welfare groups, NGOs, CBOs, neighbourhood committees, self-help groups, professional organisations, media, etc. The key to effective municipal governance depends on managing the interaction between various stakeholders to produce the desired goals of providing urban infrastructure and services to the citizens in a transparent and accountable manner.

The effectiveness of municipal governance also depends on a wide range of political, social and economic factors. The duties and functions of the urban local bodies are extremely wide and diversified which include formulation of rules and bye laws, budgeting, financial control, vigilance, investigation and discussion of civic issues. In order to promote effective municipal governance with transparency and accountability, municipal administration needs to focus on development of quality personnel, upgradation of knowledge and skills, designing incentives and disincentives, facilitating orientation and attitude changes, motivation, etc.

Against this background the Regional Centre for Urban and Environmental Studies (RCUES) of All India Institute of Local Self Government (AIILSG), Mumbai organized a specialized training programme on **Municipal Acts & Administration** on **9th and 10th November, 2016 at Mount Abu, Rajasthan.**

The programme was fully supported by Ministry of Urban Development (MoUD), Government of India (GoI).

### Key Objective

To enhance capacities of municipal secretaries and public relation officers for effective performance of their role in municipal governance.

### Participation

Total 27 participants comprising of Municipal Secretaries, Presidents, Vice Presidents, Chairman of various Municipal Committees, Elected Representatives, Chief Executive Officers, Administrative Officers, Fire Inspectors and Municipal Engineers attended this programme.

On first day, Mr. Atul Khare, Research Associate, RCUES of AIILSG, Mumbai welcomed participants of Gujarat & Rajasthan state through an introductory session which highlighted on the activities conducted by RCUES Mumbai in training and research followed by a brief about the coverage and activities to be conducted in the training programme. The inaugural session began after the completion of introduction and the guests were felicitated by presenting books as a token of appreciation.



### Inauguration

The training programme started with an inauguration by Mr. Chandresahwar Prasad, Chief Executive Officer, Mount Abu Municipal Council and Mr. Suresh Sindal, Chairman Abu Road Municipal Council in presence of Mr. Umarbhai Musani,



Chairman Standing Committee, Mr. Rajeshbhai Usadiya, Dy. President, Jetpur Municipal Council, and Mr. Vinod Paliwal, Regional Director, AIILSG, Jodhpur by lightening the traditional lamp of light.

In the key note address, Mr. Chandreshwar Prasad discussed about the current status of local government system in India. He stated that local governments have been gradually empowered in the post-Independence era and presently there is a growing awareness of the need and importance of local self-government as that of a provider of services to citizens and as a mechanism for democratic self-government. He also added that the current system also needs adequate quality control monitoring and capacity building mechanisms as well as additional reforms for effective municipal governance.

Mr. Rajeshbhai Usadiya, Dy. President, Jetpur Municipal Council, Gujarat, discussed that municipal administration is incomplete without achieving good governance ensuring a satisfactory livelihood for all. He also addressed corruption as a major obstacle to the achievement of the good governance. Further he stressed that good governance relates to political and institutional processes and outcomes that are necessary to achieve the goals of development.

## Technical Sessions



**Mr. Prakash Orpe, Course Coordinator, LSGD, AIILSG, Mumbai discussing on 'Municipal Acts and Related Provisions in Various Municipal Acts'**

Mr. Prakash Orpe, Course Coordinator, LSGD, AIILSG, Mumbai discussed on "Municipal Acts and Related Provisions in various Municipal Acts concerning deliberative wing of

Municipalities". He elaborated on the respective. Municipal Acts of the concerned states and also covered the amendments of 74th Constitutional Acts. He also focussed on 'Framework of Municipal Election' where he referred to the need of effective Governance in urban areas to avoid differences between the municipal elected representatives and administration and ways in which elected representatives can work for the citizens.



**Mr. P.C. Pisolkar, Retd. Municipal Chief Auditor Municipal Corporation of Greater Mumbai (MCGM) sharing his views on experiences on 'Reform Agenda in Urban Sector'**

Mr. P.C. Pisolkar, Retd. Municipal Chief Auditor Municipal Corporation of Greater Mumbai (MCGM) delivered a lecture on 'Reform Agendas in Urban Sector'. According to him, the various reforms introduced by Government of India are the key to achieving development objectives and an efficient service delivery mechanism in ULBs. He briefly talked about AMRUT covering incentive reforms like e-Governance. He also talked about Urban Infrastructure & Financial Management in ULBs. Later he covered a session on Public Disclosure Law & Right to Information (RTI) where he discussed the importance of RTI to promote transparency and accountability by keeping the citizens informed about the activities and decisions of the Government.

Mr. Harish Patil, Retd. Municipal Secretary, Mira-Bhayander Municipal Corporation shared his views on 'Roles & Responsibilities of Municipal Secretaries' by conducting a mock exercise of Law of Meetings in which the participants role-played the posts of municipal commissioner, mayor, chairman standing committee, municipal secretary and other members representing the house. Various arguments related

to finance and budgeting were discussed which led to peer learning and increased the interaction between the participants.

Mr. S. V. Gadvi, HRD expert, District Panchayat Ahmedabad, Gujarat delivered a lecture on 'Communication Strategies in Urban Governance & Management' where he discussed the hindrances that can be caused by the lack of effective communication skills. He also shared his experiences on 'Motivational Techniques & Personality Development' where he talked about the importance of communication skills and the role that they play in municipal governance and management. He also discussed the importance of effective time management in the workplace.

### Group Work



The first day of the training programme concluded with presentations by the representatives of the participating ULBs on municipal administration leading to good governance.

1. Mr. Arun Pandya, Municipal Secretary, Ahmedabad Municipal Corporation, Gujarat discussed about 'Good Governance and Role of Municipal Secretaries'
2. Mr. Batukbhai Sakariya, Elected Representative Jetpur Municipal Council, Gujarat talked about 'Co-ordination between Deliberative & Executive Wing'



The aim of conducting group work in the training programme was knowledge sharing and assessing the understanding of the subjects covered in technical sessions by creating a platform for sharing of ideas by every individual. Participants were divided into groups comprising of 5 to 6 persons from different ULBs across the states of Gujarat and Rajasthan. Each group had to develop an action plan on how good governance will lead a city towards development and give a short presentation. The best performing group was awarded with a token of appreciation by the experts.

The training programme ended with the Vote of Thanks by Mrs. Maleka Ansari, Research Associate, RCUES, AILSG, Mumbai.

## Capacity Building for Municipal Elected Representatives

29<sup>th</sup> & 30<sup>th</sup> November 2016, Rajkot, Gujarat



**The participation for this programme was very good. Participants showed their interest in gaining the knowledge. The sessions were interactive. Ice breaking session before technical sessions created a rapport amongst the participants.**

### Introduction

Local Governments in India were introduced in the year 1687 with the formation of Madras Municipal Corporation followed by Calcutta and Bombay Municipal Corporation in 1726. In 1919, Government of India Act incorporated the needs of the resolution and powers of democratically elected government were formulated. Cities as agencies through which development objectives can be met was realised post the 74th Constitutional Amendment. Numerous initiatives have been undertaken to strengthen local governments and to improve service levels in urban areas.

Various laws and urban governance programmes, introduced reforms in cities through policy intervention such as JNNURM, AMRUT, Swachh Bharat Mission, Service Level Benchmarking, Smart Cities, PMAY etc. Elected representatives play a major role to accelerate the implementation of urban development projects and programmes.

Thus with a view to enhance the capacities of municipal elected representatives towards good urban governance, urban service delivery and decision making at the city level, the Regional Centre for Urban and Environmental Studies (RCUES) of All India Institute of Local Self Government (AIILSG), Mumbai organized a Regional Specialized Training Programme on '**Capacity Building for Municipal Elected Representatives**' on 29th to 30th November, 2016 at Rajkot.

**The programme was fully supported by Ministry of Urban Development (MoUD), Government of India (GoI).**

### Key Objective

To enhance capacities of municipal elected members towards urban good governance, urban service delivery and decision making at city level.

### Participation

Total 60 participants of Gujarat and Rajasthan state, comprising of Mayor, Chairpersons,, President and Elected Representatives of various Municipal Committees attended this programme.

On first day Ms. Amruta Paranjape, Research Associate, RCUES of AIILSG, Mumbai welcomed all the participants and dignitaries to the two day training programme. In the introductory session she briefed the participants about the activities conducted by RCUES of AIILSG, Mumbai in training and research areas which is supported by Ministry of Urban Development (MoUD) Government of India (GoI). She discussed about the aim and objectives of the training programme along with programme coverage and activities to be conducted in the training programme.

### Inauguration

The inaugural session began after the completion of introduction of the guests.

The training programme was inaugurated by Dr. Jaiman Upadhyay, Hon'ble Mayor, Rajkot Municipal Corporation (RMC) in presence of Mr. Varsharambhai Sagathiya - Leader, Opposition Party (RMC), Dr. Darshitaben Shah - Dy. Mayor, (RMC) Mrs. Nainaben Rajguru, President, Morbi Municipal Council, Mrs. Reena Bhojani, President, Gondal Municipal Council, Dr. Chandan Karkare, Regional Director, AIILSG, Rajkot by lightening the traditional lamp of light.

In the key note address, Dr. Jaiman Upadhyay pointed out that to increase effectiveness of public policy it is necessary to provide feedback to policy makers through citizen feedback. He discussed how such forums can play a role in developing



mechanisms to extract accountability of elected representatives and local officials by providing a platform for citizens to critically evaluate their performances. He further discussed how these outcomes can help contribute to larger goal of improving democratic legitimacy. The key note address was followed by an interactive session between dignitaries and participants.

All the dignitaries wished grand success to the two days training programme.

## Technical Sessions



*Mr. S. V. Asgaonkar, senior consultant sharing his views on Municipal Acts & its implementation in different states*

Mr. S. V. Asgaonkar, senior consultant and faculty, AILSG, Mumbai, delivered a lecture on 'Municipal Acts and Related Provisions in Various Acts'. In his session he covered important provisions and sections of Maharashtra, Gujarat and Rajasthan Municipal Acts which are mainly required by elected representatives in their day to day work related to administration, finance and laws of meeting in municipal governance. In the interactive session which followed the lecture he answered the questions raised by participants by stating examples and cases of different urban local bodies.

Mr. P. C. Pisolkar, Retd. Municipal Chief Auditor, Municipal Corporation of Greater Mumbai in his lecture 'Different Aspects of Municipal Finance and Resource Mobilisation' & 'Municipal Budget: Planning Implementation and Monitoring Gender Budgeting / P Budget' explained important provisions and sections under which municipal budgets are prepared.



*Mr. P.C. Pisolkar, Retd. Municipal Chief Auditor Municipal Corporation of Greater Mumbai (MCGM) sharing his views on experiences on 'Reform Agenda in Urban Sector'*

He focussed on different aspects of municipal finance and resource mobilisation at ULBs level by citing examples of innovative approaches adopted for resource mobilisation at different city level by ULBs in Gujarat and Maharashtra. Further Mr. Pisolkar highlighted on the important roles and responsibilities of the municipal elected members in budget planning, its implementation and overall monitoring process. He pointed out that efficient financial planning will assist in finding best possible ways to use available funds for city development.

Mrs. Maleka Ansari, Research Officer, RCUES of AILSG, Mumbai shared her views on 'Swachh Bharat Mission (SBM) & Needed Measures'. She explained the objectives of the mission while discussing the relevance and importance of the mission in urban areas. She pointed out that for successful implementation of the mission, elected representatives should take efforts to bring in behaviour change by maximising citizen participation.

Mr. S. V. Gadvi, HRD Expert, District Panchayat Ahmedabad, Gujarat delivered a lecture on 'Communication Skill and Leadership Development' & 'Motivation Techniques, Personality Development & Interface with Citizens and Participatory Governance.' According to him effective use of communication mechanisms, can influence opinion, attitude, and behaviour change among stakeholders toward supporting governance reform objectives. An understanding



*Mr. S. V. Gadvi, HRD, Expert, District Panchayat Ahmedabad, Gujarat delivering lecture on 'Communication Strategies in Urban Governance & Management'*

of communication processes can help reveal the contextual factors involved in bringing about positive change.

Last session of the first day of the training programme was 'Open Forum for Discussion and Overview on Project Implementation Constraints & Achievements' in which participants were enthusiastically involved and contributed in discussion which revolved around initial stage of project guidelines, preparation of action plans, implementation plans, project sustainability follow-up plans.

## Site Visit

On second day, study visit was organized to e-governance project developed by Rajkot Municipal Corporation. Rajkot Municipal Corporation is acclaimed to have first visible approach in Gujarat state towards e-governance service, wherein innovative initiatives are implemented and are sustained. During the site visit, e-governance team of Rajkot Municipal Corporation explained how the project was developed with an aim to provide quality services to the citizens of Rajkot.

**Innovative Initiatives introduced through this project are**

### 1. Multi-Utility Services

- Transaction Kiosk for Dues Collection.
- Payment of Property Tax / Water Charges through mobile/IVRS.

- On field dues / penalty collection by hand held computer / PDA

### 2. Citizen Friendly Website

- Birth and Death Certificates
- RTI Status
- Namavali (Names of born baby)
- Citizen Forum on Web (Both Gujarathi and English)

Last session of the training programme was conducted as a mock exercise on laws of meeting by Mr. S. V. Asgaonkar, senior consultant and faculty AIILSG, Mumbai. In the mock exercise participants role-played different posts of the house and participated in the debate raised on various topics. This session gave an insight to the participants about the laws of conduct of the meetings and nature and scope of different posts of the house. In the discussion which followed the mock exercise, Mr. Asgaonkar resolved all the queries and doubts of the participants.

Mrs. Maleka Ansari concluded the training programme with a vote of thanks to chief guest, special invitees, resource persons and participants.



## Solid Waste Management under Swachh Bharat Mission – Best Cities

16th December 2016, Lonavala, Maharashtra



**The Seminar comprised of numerous technologies in solid waste management. The participants got to know the strategies to make the cities clean. They also obtained perspective in using technologies converting solid waste into energy & waste into compost.**

### Introduction

With the growth of urbanization and progress in developing countries, the use of resources, both natural and man-made is increasing. Due to rapid increase in the production and consumption processes, societies generate as well as reject solid waste materials regularly from various sectors – agricultural, commercial, domestic, industrial and institutional. This inevitably places an enormous strain on natural resources and seriously undermines efficient and sustainable development. One of the ways to salvage the situation is through efficient management of solid wastes. Due to the absence of segregation norms or multiple bins concept, this waste is not recycled, and utilized effectively.

With considering this background in solid waste management in cities. The Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self Government (AIILSG), Mumbai conducted Seminar on “Solid Waste Management under Swachh Bharat Mission–Best Cities” on 16th December 2016 at Lonavala, Maharashtra. This Seminar was fully supported by Ministry of Urban Development (MoUD), Government of India (GoI).

### Key Objective

The seminar intends to provide a platform for all stakeholders to discuss challenges in managing the solid waste in urban areas and how to address them by using appropriate technologies and strategies. It aims to provide an overview of

progress witnessed in solid waste management under Swachh Bharat Mission in Urban Areas and suggesting a way forward to achieve the targets envisaged.

### Participation

Total 26 participants comprising of Mayors, Elected Representatives, Municipal Engineers, Sanitary Inspectors, Office Superintendent, Programme Manager- Information Communication Technology (ICT), and Head Clerks attended this training programme. Out of the total 26 participants 12 were from the state of Maharashtra and 7 from Gujarat and Rajasthan each.

### Inauguration

The seminar started with a welcome to the participants by Mrs. Neha Hardikar, Research Officer, RCUES, AIILSG, Mumbai. She introduced the participants with the subjects to be covered in the Seminar and the ways in which the topic could be useful to them. She also briefed participants and guests about the coverage of Seminar which would include presentations and participatory activities.

The Seminar was inaugurated by Mr. Sameer Rege, CEO, Mailhem Ikos Environment Pvt. Ltd. Ms. Utkarsha Kavadi, Director RCUES of AIILSG, Mumbai in her welcome address, explained in brief the components of Municipal Solid Waste like segregation, collection, transportation, processing, recovery and disposal of waste.

### Technical Sessions

The technical sessions started after inauguration. The first session was conducted by Mr. Saurabh Agashe on Solid Waste Management in Swachh Bharat Mission. He discussed the objectives of municipal solid waste management and factors like collection of waste, transportation, recycling, formalization of SWM system and capacity building and rag pickers prioritizing. Based on the statistics of waste generated, collected, treated and not treated he explained the need of MSWM. Later, he explained the existing condition of SWM for residential and non residential areas and the factors like collection of waste, transportation, segregation, treatment and disposal of solid waste. He then pointed out that the most important aspect of planning for





**Mr. Saurabh Agashe, Research Faculty, RCUES of AILSG, Mumbai addressing the participants**

SWM is selection of appropriate action and the need of inclusive approach for management including preparation of draft MSWM plan. The session then discussed the contents of MSWM Plan, SWOT analysis of cities, level of urbanization, transport infrastructure assessment, capital cost requirement, technological options, technology selection, inclusion of rag pickers in management, incentive based model of operation and capacity building of informal sectors.



**Mr. V.K Rao, Sr. Faculty, AILSG, Mumbai & ret'd. Chief Executive Engineer (SWM), MCGM, Mumbai addressing the participants**

The second session of the seminar was on SWM Rules 2016 & Legal Framework of SWM taken by Mr. V K Rao, Former Chief

Executive Engineer, (SWM) & Sr. Faculty, AILSG, Mumbai. He discussed the reason for the need of Solid Waste Management rules. Based on the present waste generated and the gap in treatment of waste, the session made the participants understand the need of processing of waste.

Thus, he discussed the contents of the SWM Rules 2016, its applicability, and its main aim. He discussed the need of segregation of waste at source, PPP inclusion for SWM, use of recyclable materials, area for waste collection, management of industrial waste, integration of rag pickers at different stages of SWM, Location of Land fillsite, and all other details related to solid waste management. The session ended with a detailed video on management of a Land Fill site.

The third session of the seminar was by Mr. Sameer Rege, CEO, Mailhem Ikos Environment Pvt. Ltd. on waste to energy. He discussed the expertise of Mailhem in the solid waste management.



**Mr. Samir Rege, CEO, Mailhem IKOS addressing the participants**

It made the participants understand the present scenario of solid waste and the capability of creating energy from wet waste, combustible waste and even plastic waste. He explained the various waste management techniques and the machinery required for it and also discussed the possibilities of collaboration with ULBs for solid waste management.

Next, Mr. Subhash Dalvi, OSD, MCGM & Chief Nodal Officer in Swachh Mumbai Abhiyan, Mumbai took a session on community participation in SWM. He quoted the example of



**Mr. Subhash Dalvi, OSD and Chief Nodal Officer in Swachh Mumbai Abhiyan addressing the participants**

swachh Dharavi Model created under his supervision by the swachh sarvekshan team. This National Youth Award winning project was created for cleaning up of the slums. The cleaning was done by the participants without the help of MCGM. Around 70 to 74 lakh of population of slum participated in the project where only one BMC employee was posted. The cleaning was done by people participating under his leadership. Around 750 local groups through their 10 thousand volunteers had made this possible. He also discussed the significance of individual efforts of people towards the curbing of the use of polythene.

Mr. Nathuram Mundhe, Chief Manager, Excel Industries Ltd. talked on Decentralized Waste Management. He explained the advantages of management of waste at source at small scale. He created an understanding on municipal solid waste, details of centralized plant, schematic process flow of treatment and processing and APMC market model. He concluded the session by coating various examples of ongoing projects.

Ms. Kishori Gadre, Advisor, Janwani, Pune spoke on "Zero Garbage Concept in Communities". She further added that, they have implemented Zero Garbage Concept in Katraj area in part of Pune. She emphasized on segregation of waste at source.

Mr. Sanjay Kamble, President, Janadhar, Latur talked on "Role of waste pickers and their value addition in SWM". He



**Ms. Kishori Gadre, Advisor, Janwani, Pune addressing the participants**

explained the role of waste pickers in reducing waste at disposal point. Waste pickers play very crucial role in waste reduction & disposal. Waste picking is their livelihood which essentially adds value in Indian economy. He concluded by citing examples of waste pickers played significant role in waste management. He suggested focusing on their health issues by municipal authorities.



**Mr. Sanjay Kamble, President, Janadhar, Latur addressing the participants**

The Seminar was concluded by proposing vote of thanks to the subject experts and participants attended across the states.

## Septage Management for Cities & Towns

21st & 22nd December, 2016, Jaipur Rajasthan



**The key highlight of the programme was understanding importance of Faecal Sludge Management (FSM). Participants apply their acquired knowledge in preparation of septage management plan effectively during group work.**

### Introduction

India on the verge of urban transformation with Central Government driven initiatives like AMRUT, Swachh Bharat Mission, Smart Cities and HRUDAY, there is a huge work that is demanded on the sanitation infrastructure to make our cities healthy & clean. Septage management though being an important aspect is always either less prioritized or is mixed with the infrastructure services for centralized sewerage systems.

Septage management can be defined in four processes – collection, conveyance, treatment & disposal or reuse. Considering the hazardous impact septage can cause from its unscientific exposure to the environment and the human beings in particular, there is a need for scientific treatment & disposal of the septage along with proper methodology for the management conducted by the Water Aid, India in 2015 found that only around 32% of urban households having access to sanitation are connected to sewerage network and 48 % dependent on the onsite facilities and remaining 20 % is using septic tanks and pit latrines. But current trend shows that what cities opt for is the sewerage network as a universal solution thus leading to treatment of only 30 % of the sewage generated & neglecting the partial fecal content which needs to be treated in a different manner.

In view of above, Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self Government (AIILSG), Mumbai had organized the Specialised Training

Programme on “Septage Management for Cities & Towns” on 21st & 22nd December 2016 at Jaipur, Rajasthan. This training programme was fully supported by Ministry of Urban Development, (MoUD), Government of India (GoI).

### Key Objective

The key objective of this programme was to discuss the need of septage management in Indian cities & provide guidance on preparation and implementation of septage management plans at city level.

### Participation

Total 32 participants participated comprising of Dy. Mayor, vice president, elected representatives, ward officers & concerned officials.

### Inauguration

Mr. Yogesh Patel, Dy. Mayor, Vadodara Municipal Corporation, Vadodara inaugurated this training programme. He explained the status of septage management at Vadodara city and wished a success to the programme.

Dr. Jigneshaben Sheth, Chairperson, Vadodara Municipal Corporation during her special address explained correlation between septage management & health issues, importance of septage management in entire service chain. She explained the need for septage management. It will reduce the health issues.

Ms. Utkarsha Kavadi, Director, RCUES, AIILSG, Mumbai explained the objective of the training programme &





## Technical Sessions

Mr. Alok Gogate, Research Associate, RCUES, AILSG, Mumbai created platform for gaining insight for septage management by explaining its need at city level. Examples explaining the current scenario for various cities and trying to foresee the condition in case if we don't intervene were the main highlights of the session. Session concluded by introducing the components of the septage management value chain.

Mr. Dhruv Bhavsar, Research Associate, CEPT University, Ahmedabad took this further by adding provisions in advisory & guidelines. He explained characteristics of septage management, end to end septage management solutions, on site sanitation. He focused on processes in structuring in private structure participation in septage management. He concluded by explaining sources of revenue in FSM services.

Mr. Aasim Mansuri, Research Associate, CEPT University, Ahmedabad, in his focused on integrated faecal sludge management by citing good work at Wai & Sinner from Maharashtra State. He explained the procedure in accessing gap.

Mr. Nogesh Bhardwaj, Sr. Regional Manager, CDD & Mr. Amrish Sinha, Sr. Technical Expert, CDD explained the good practice on integrated faecal sludge management implemented at Devenahalli from Karnataka State. Mr. Amrish Sinha explained the efforts taken to adapt it into good practice in FSM.

Dr. D. R. Jangid, Engineer, RUIDP, Rajasthan talked on Septage Management and its approach at Rajasthan state. He explained onsite technologies of Faecal Sludge Management (FSM). He also cited various case studies across the countries. He also stated state wise guidelines for septage management for Maharashtra, Tamil Nadu. He also explained sewerage status in Jaipur & other cities across Rajasthan state. He focused on costing of sanitation. He also explained the importance of Faecal Sludge Management (FSM) and its entire service chain. He concluded by explaining various technologies to be used in FSM.

## Group work

Mixed groups involving two to three cities in each group was prepared and given a task of preparing the septage



management plan for a hypothetical city with a population of 80,000. Cities were asked to assume other variable like area, ground water table and geographical character. The output of exercise was very much a compound summary extract from the previous day sessions which involved the crucial points like data requirements for the planning of SMP, inventory calculation, stakeholder involvement and technology provisions that can fit in context to particular city. There were total of 6 groups formed. Each group presented their case well concluding with open discussion with the other groups about various aspects of SMP.

Following are the important highlights that can be seen as positive outcomes from the conducted group work:

- ◎ Considering the participation from the four states of Rajasthan, Gujarat, Maharashtra and Goa with varied geographical and social character, the discussions on mentality of the people to adopt scheduled cleaning and options available for treating waste came very well.
- ◎ Stakeholders involvement right from active citizens for awareness generation to private partners providing involved in the activities along the value chain were seen as the important aspect for the implementation of the SMP.
- ◎ Cities also stated the need for technical assistance to strategies and implement the septage management plan.
- ◎ Questions were raised upon the durability and sustainability for the treatment plants for smaller cities and towns.

The training programme was concluded by vote of thanks to all experts and participants attended the programme.

## Solid Waste Management in Cities & Swachh Bharat Mission (SBM)

27th & 28th December 2016, Panaji, Goa



**The key highlight of the programme was the field visit which was very beneficial to the participants. Participants witnessed various solid waste management projects implemented by Panaji Municipal Corporation. They can think for replication of such waste management projects in their respective cities.**

### Introduction

The Swachh Bharat Mission (SBM) emanates from the vision of the Government articulated in the address of the Hon'ble Prime Minister in his address to the Joint Session of Parliament on 9th June 2014, "We must not tolerate the indignity of homes without toilets and public spaces littered with garbage. For ensuring hygiene, waste management and sanitation across the nation, a "Swachh Bharat Mission" will be launched. This will be our tribute to Mahatma Gandhi on his 150th birth anniversary to be celebrated in the year 2019". With this background SBM was launched on 2nd October, 2014 and is being implemented by the Ministry of Urban Development in urban areas.

Municipal Solid Waste Management (MSWM) is an important component of this Mission and the most essential service for maintaining the quality of life of people in the urban areas for ensuring better standard of health, sanitation and environment. With the increasing population, MSWM in the country has emerged as a severe problem not only because of environmental and aesthetic concerns but also because of sheer quantities generated every day. According to Central Pollution Control Board 144,165 TPD of MSW was

generated in India during 2013-14. Of the total waste generated, approximately 115,742 TPD (80%) of MSW was collected and only 32,871 TPD (22.8%) was treated. SBM offers an opportunity to address the issues linked with this situation.

In view of the above background, the Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self Government (AIILSG), Mumbai conducted Regional Specialised Training Programme on "Solid Waste Management in Cities & Swachh Bharat Mission (SBM) on 27th & 28th December, 2016 at Panaji, Goa,. This training programme was fully supported by Ministry of Urban Development, (MoUD), Government of India (GoI).

### Key Objective

The key objective of this training programme was to strengthen capacities of ULBs in achieving solid waste management related goals envisaged under Swachh Bharat Mission.

### Participation

Total 81 participants comprising of Presidents, Vice Presidents, Chairman of various Municipal Committees, Elected Representatives, Assistant Commissioners, Chief Officers, Dy. Chief Officers, Health Officers, Administrative Officers, Municipal Engineers, Chief Sanitary Inspectors attended this programme.

### Technical Sessions

The training programme began with the theme introduction. Mr. Atul Khare, Research Associate, RCUES of AIILSG, Mumbai welcomed to all the participants and briefed about the objectives of the training programme. The programme was divided into technical sessions, ULB presentations, group activities and site visit.

The Introduction session was followed by technical presentations. Mr. Saurabh Agashe, Research Faculty, RCUES of AIILSG, Mumbai delivered lecture on "SWM – Introduction". In his session, he discussed on Municipal Solid Waste (Management & Handling) Rule, 2000 and revised



**Mr. Saurabh Agashe, Research Faculty, RCUES of AILSG, Mumbai addressing the participants**

MSW Rules 2016. He updated on notifications by Ministry of Environment and Forest (MoEF) on Municipal Solid Waste (Management & Handling) Rule, 2000 under the Environment (Protection) Act, 1986. According to this rule there is specific provision for collection, segregation, storage, transportation, treatment and disposal of MSW & it applies to all Municipal Authorities. He further added that, MSW Management and Handling Rules 2000 were revised by MoEF and the draft revised Rules in 2016 are reflected new systems, technology developments and concepts for an integrated MSWM.



**Mr. Dilip Shrotriya, President, Waste to Energy Research & Technology Council, Mumbai addressing the participants**

Mr. Dilip Shrotriya, President, Waste to Energy Research & Technology Council, Mumbai discussed on "SWM related

Technologies". He explained the importance of technologies available for processing, treatment and disposal of SWM including composting, vermi composting, and waste to energy; anaerobic digestion and bio methanation production of refuse derived fuel or pelletization, incineration & sanitary landfill. He concluded by sharing his experience on private sector participation in Solid Waste Management at ULB level.

Mr. Deepak Chabukswar, Dy. President, Janadhar, Latur talked on "Role of waste pickers & their value addition in SWM". He presented his ideas through role play and game. The session was very participatory. He tried to showcase the significant contribution of waste pickers in waste management by citing numerous examples across the state. He concluded by focusing on issues of waste pickers & needed efforts to resolve them.



**Mr. Subhash Dalvi, OSD, MCGM, Mumbai addressing the participants**

Mr. Subhash Dalvi, Officer on Special Duty, MCGM & Chief Nodal Officer, Swachh Mumbai Abhiyan shared his experiences on Swachh Mumbai Abhiyan. He explained Slum Adoption Scheme (SAS) implemented in Mumbai city. He briefly spoke on solid waste generation, segregation at source and disposal through SAS. He further added by emphasizing the importance of people's participation in successful implementation of activities under solid waste management at community level by citing the example of Dharavislum.

Mrs. Deepali Naik, Chief Officer, Mormugao Municipal



Council, Goa, discussed on 'SBM & School Sanitation'. She explained the steps taken & involvement of school children, senior citizens towards the successful implementation of the activities at city level. She also explained the efforts taken at ULB level to make the city clean.

### Site Visit

A site visit was organised to understand the good practices in Solid Waste Management at city level. The project took the participatory efforts to make it effective. Citizens from societies were involved in segregation of waste and successfully done segregation at city level. This reduced the load of carrying waste at disposal sites on Panaji Municipal Corporation.

Participants visited other plants where wet waste is converted into compost. This visit intent to give insight to the participants and can give a thought of replication in their own cities.



### Group Work

The group activity was taken to understand the application skills of the participants after learning the subject. Each group was given exercise to prepare a solid waste management plan at city level. Participants through discussions within group developed solid waste management plan. Each group explained their developed plan and tried to explain the role and responsibilities of involved stakeholders to implement it successfully in their respective cities. The best performing



*Mr. Carlos Almeida, Member of Legislative Assembly, Mormugao (Vasco)*

group was awarded by token of appreciation. Regional Specialised Training Programme was ended with the special address by Mr. Carlos Almeida, Member of Legislative Assembly, Mormugao (Vasco) & Ambassador of SBM for Goa State and Mr. Deepak Naik, Chairperson of Mormugao Municipal Council, who was awarded 'Clean Vasco City award by Governor of Goa State.

At the end of the training programme Mrs. Maleka Ansari, Research Associate, RCUES, AILSG, Mumbai concluded with a vote of thanks to chief guest, special invitees, resource persons and participants.

## Testimonials



**Dr. Gayatri Jariwala, Assistant Municipal Commissioner, Surat Municipal Corporation, Gujarat**

*"The case studies explained by experts gave good insight into the probable solutions that can be implemented in our cities. I appreciate the efforts taken by the organizers in facilitating interactive sessions."*



**Mrs. Nainaben Rajguru, President, Morbi Municipal Council, Gujarat**

*"This was the first RCUES training that I have attended and I am very pleased with the knowledge shared on this platform. I would be more interested to attend such programmes in near future."*



**Mr. Rajesh Usadadiya, Dy. President, Jetpur Municipal Council, Gujarat**

*"It is a great experience attending this programme. The subject coverage was extremely good. The programme had good training material, good coverage, good speakers and good take away points."*



**Mr. Sameer Rege, CEO Mailhem IKOS Environment Pvt. Ltd., Pune, Maharashtra**

*"It was an excellent experience. I am pleased to see the tools used to explain the subject like solid waste management to elected representatives. I am sure that the programme will have a positive impact on improving SWM in cities. Looking forward to attend more such programmes."*



**Mr. Rajendra Pandharpate, Dy. Chief Officer, Khopoli Municipal Council, Maharashtra**

*"The training was very motivational, energising and full of ideas, with substantial and in-depth knowledge of the subject explained through various cases. Participants were very interactive and took interest in the subject."*

## RCUES, Mumbai

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