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RCUES, Mumbai
Enabling better cities...



Urban Environ Vision

An Information Bulletin



RCUES
Mumbai

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

Established by the Ministry of Housing and Urban Affairs, Government of India, in the year 1968.



Urban Environ Vision aims to take its readers through the Web-Based / Face to Face training programmes of RCUES, Mumbai while providing encouragement and knowledge to its participants and displays the efforts undertaken by RCUES, Mumbai.



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Section

01

Regional Seminar on **City Wide Inclusive Sanitation (CWIS)** 28th September, 2022 at Mumbai, Maharashtra.

BACKGROUND

The urban sanitation challenge is intensified by unregulated rapid urbanization. Estimates show that around 70% of the world's population will be urbanized by 2050. This increasing urbanization surpasses the development and availability of sanitation infrastructure in developing cities. Further, the top-down approach of sanitation planning without consideration of local knowledge and stakeholder preferences is neither successful nor sustainable. There is a need for an innovative and holistic approach for sanitation. Furthermore, the Sustainable Development Goals also emphasize for cities to be inclusive, safe, and resilient, to ensure citizens' health and wellbeing, and to provide access to sustainable water and sanitation services to all.

Swachh Bharat Mission 2.0 has launched SBM-U 2.0 envisions to make all cities 'Garbage Free' and ensure grey and black water management in all cities other than those covered under AMRUT, make all urban local bodies (ULBs) as ODF+ and those with a population of less than 1 lakh as ODF++, thereby achieving the vision of safe sanitation in urban areas. City Wide Inclusive Sanitation (CWIS), is an approach to urban sanitation that involves collaboration among multiple stakeholders to ensure that everyone benefits from adequate sanitation service delivery outcomes. CWIS aims to support

cities develop comprehensive approaches to sanitation improvement that encompass long-term planning, technical innovation, institutional reforms, and financial mobilization. However, the Sustainable Development Goals provide new impetus to ensure access to sustainable water and sanitation services, to keep cities safe and resilient, and to ensure citizens' health and well-being.

With an aim to discuss various approaches for City Wide Inclusive Sanitation, the Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self Government (AIILSG), Mumbai conducted a Regional Seminar on 'City Wide Inclusive Sanitation (CWIS)' on 28th September 2022 at Mumbai. This Seminar was supported by the Ministry of Housing & Urban Affairs (MoHUA), Government of India (GoI). The Seminar was conducted in collaboration with Messe Munchen India (MMI) under IFAT India, a leading environmental technology trade fair to provide sustainable environmental solutions.

In all, 54 delegates comprising Municipal Engineers, Junior Overseers, Sewage Operation Inspectors, WASH Specialists, Sr. Research Officers, Project Managers, Research Associates, from Maharashtra attended this Seminar.



Delegates during the Seminar.

At the outset Ms. Neha Hardikar, Sr. Research Officer, RCUES, AILSG, Mumbai introduced the Seminar followed by welcoming address by Ms. Utkarsha Kavadi, Director, RCUES, AILSG, Mumbai.



Ms. Neha Hardikar, Sr. Research Officer, RCUES, AILSG, Mumbai addressing the delegates.



Ms. Utkarsha Kavadi, Director, RCUES, AILSG, Mumbai addressing the delegates.

Ms. Utkarsha Kavadi gave the background of RCUES and its functioning and talked about importance of CWIS to ensure adequate sanitation service delivery by elaborating six basic principles of CWIS. She also emphasized on RCUES's efforts in bringing together various stakeholders through this seminar for discussing a way forward for CWIS in cities of India. She further extended thanks to MMI for taking forward this event as a joint venture.

The Seminar was inaugurated by Dr. Jairaj Phatak, IAS (Retd.), Director General, AILSG, India by lighting the lamp. Mr. Yusuf Kabir, WASH CCES Specialist, DRR-Emergency Focal Point, UNICEF, Maharashtra, Dr. Ajit Salvi, Dy. Chief Engineer (SO), Brihanmumbai Municipal Corporation (BMC), Mumbai, Mr. Robin Fernandes, Business Unit Head-Capital Goods, MMI, Mumbai and Ms. Utkarsha Kavadi graced the event by their valued presence during the inauguration. Ms. Kavadi felicitated the Guests on the dais by presenting a memento after the inauguration.



Dr. Jairaj Phatak, IAS (Retd.), Director General, AIILSG, India inaugurated the seminar by lighting the lamp. (L to R) Mr. Yusuf Kabir, WASH CCES Specialist, DRR-Emergency Focal Point, UNICEF, Maharashtra, Dr. Ajit Salvi, Dy. Chief Engineer (SO), BMC, Mumbai, Mr. Robin Fernandes, Business Unit Head-Capital Goods, MMI, Mumbai and Ms. Utkarsha Kavadi, Director, RCUES, AIILSG, Mumbai.

Mr. Robin Fernandes, Business Unit Head-Capital Goods, MMI, Mumbai, Maharashtra expressed gratitude towards RCUES of AIILSG, Mumbai for valuable collaboration with MMI, Mumbai.



Mr. Robin Fernandes, Business Unit Head-Capital Goods, MMI, Mumbai, Maharashtra addressing the delegates.

He encouraged the participants to get to know new technologies exhibited at the event and through other sources.

Mr. Yusuf Kabir, WASH CCES Specialist, DRR-Emergency Focal Point, UNICEF, Maharashtra in his address, deeply appreciated IFAT, India for their immense efforts in organizing this huge event/exhibition on wastewater theme.



Mr. Yusuf Kabir, WASH CCES Specialist, DRR-Emergency Focal Point, UNICEF, Maharashtra addressing the delegates.

Dr. Ajit Salvi, Dy. Chief Engineer (SO), BMC, Mumbai, Maharashtra appreciated the efforts taken by RCUES, AIILSG, Mumbai for this joint initiative with MMI, Mumbai under IFAT India. He wished looking forward to sustainable collaboration between AIILSG, Mumbai and MMI, Mumbai.

Dr. Jairaj Phatak, IAS (Retd.), Director General, AIILSG in the inaugural address, spoke on how ULBs have evolved over the years in implementing Sanitation and Solid Waste Management (SWM) at city level. He further said that SBM Urban 2.0 guidelines have provided comprehensive directions to ULBs

towards becoming Garbage Free Cities (GFC). He concluded the address by wishing a great success to the Seminar.



Dr. Jairaj Phatak, IAS (Retd.), Director General, AIILSG, India addressing the delegates.

The inauguration was followed by the presentations. The distinguished speakers presented the work under City Wide Inclusive Sanitation (CWIS).

The first presentation on 'Maha Urban WASH-ES Coalition & its Initiatives' was delivered by Ms. Utkarsha Kavadi, Director, RCUES, AIILSG, Mumbai. She initiated the presentation by briefing the overview of RCUES, which is anchored at AIILSG, Mumbai since 1968 through research, trainings, advisory, policy/strategy formulation planning IEC activities, technical/handholding support in implementation of projects and documentation. Focusing on key highlights of activities under RCUES, Mumbai, she talked on Maharashtra-Urban WASH and Environmental Sanitation (ES) Coalition essentially to encourage partnerships and support local governments in urban WASH-ES. It is a joint initiative of the RCUES of AIILSG,

Mumbai and UNICEF Maharashtra. She added that the Coalition brings together local organizations, think-tank institutions, and sector experts to strengthen municipal capacities and encourage collaborative action to enhance service delivery in WASH (Water, Sanitation and Hygiene) in urban Maharashtra for cohesive and comprehensive implementation of the initiatives.

The focus areas of Coalition is sanitation, solid waste management, water, environment and climate change. It aims to bring together government departments, development partners, grassroots organizations and communities in the State. It was further stated that coalition initiatives drive collaborative change by facilitating multiple stakeholders' engagement. The Coalition recognizes the importance of engaging a gamut of stakeholders for operations and maintenance, and professionalization of WASH service delivery with a focus on ensuring sustainability in urban areas. The Coalition facilitates joint action research with government and partner organizations to identify gaps and local challenges and assist with long-term strategic interventions.

She explained that the Maharashtra Urban WASH-ES Coalition provides handholding support to ULBs and development partners with a view to providing cutting-edge and integrated solutions to urban Maharashtra's emerging challenges in WASH and Environmental Sanitation. Through its implementation initiatives, the Coalition aims to support State and Local Governments through a coordinated approach with a focus on cross-learning and minimizing overlaps of individual efforts. She highlighted the support provided in implementation of Urban Rural Linkages in Faecal Sludge and Septage Management at Indapur and Junnar; and Cluster Level Dry Waste Management at Bhiwandi.

She talked on Maha Urban INNO -Wash Challenge for infection prevention and control that supports the implementation of innovative ideas for ULBs through development organizations. Currently, RCUES of AILSG, Mumbai is supporting implementation of this project at Sangli-Miraj-Kupwad City Municipal Corporation (SMKMC) through Maha Urban WASH-ES Coalition platform. She further added that the Coalition particularly engages with small and medium towns that are in need of support in order to achieve the goals as mandated under various missions and programmes related to IHHL and community sanitation, FSSM and wastewater management, water supply and solid waste management.

She further stated that WASH-Action4Change is a platform for promotion and dissemination of local good practices under the urban Water, Sanitation and Hygiene (WASH) and Environmental Sanitation (ES) sector in Maharashtra. The presentation was concluded by explaining the impact of Coalition initiatives at ground level by driving change through multi stakeholders' engagement.

The next presentation on 'Co-treatment of Faecal Sludge / Septage at Sewage Treatment Plant at Sangli-Miraj-Kupwad City Municipal Corporation' was presented by Mr. Saurabh Kale, Sr. Project Manager, Ecosan Services Foundation (ESF), Pune, Maharashtra. This activity is being undertaken under MAHA Urban WASH and Environmental Sanitation Coalition, a joint initiative by RCUES of AILSG Mumbai and UNICEF Maharashtra. Maha-UWES-C has launched the Maharashtra Urban INNO- WASH challenge for infection, prevention and control that supports the implementation of innovative ideas for ULBs through development organizations. One of the winning proposal under the challenge is Co-treatment of septage at sewage treatment plant for Sangli Miraj Kupwad

with support from Ecosan Services Foundation, Pune. Under the project, a scientific septage receiving station shall be constructed and commenced at the STP to avert the risks of unscientific methods of sludge disposal.



Mr. Saurabh Kale, Sr. Project Manager, ESF, Pune, Maharashtra addressing the delegates.

The presentation included planning & treatment of Faecal Sludge and Septage Management (FSSM) through quantification and characterization of sludge, selecting appropriate approach for treatment and creating enabling environment. The approach for FSSM depends on the quantity and quality of the sludge to be handled. For the ULBs with sufficient finance and generating smaller quantity of sludge to be handled, scientific land application such as Deep Row Entrenchment (DRE) is recommended. Co-treatment of sludge can be achieved either at Sewage Treatment Plant (STP) or Municipal Solid Waste (MSW) Management Plant. He further added that co-treating faecal sludge and septage (FSS) with sewage is recommended as expenses involved are low. Co-treatment at MSW plant can be done either at the composting stage or incineration stage. Composting is beneficial as the

sludge contains nutrients which are necessary for composting. Incineration is only recommended when the energy required for drying of sludge is less than to the energy produced by incineration.

He then explained procedure of co-treatment of FSS at STP through its project approach and stakeholders engagement. The project approach includes feasibility assessment for addition of FSS in existing STP, conceptualizing and designing of co treatment system for scientific addition of FSS in STP, implementation, monitoring and evaluation of co-treatment system at STP and capacity building of multiple stakeholders. Later, he talked on existing situation of wastewater and septage management and the proposed co-treatment approach in Hanuman Nagar STP, SMKMC. The potential social financial, health and environmental impacts were explained by him saying that co-treatment system increases life of equipment at STP without imposing any re-commission charges. Co-treatment system is also advantageous to regulate desludging. Moreover, co-composting is useful to farmers and gardens of the city. This system is also helpful in controlling disease outbreak like Gastro, Cholera during flood situations.

At the end, he summarized the presentation by stating that the session had reflections on feasible approach of scientific management of faecal sludge/septage in sewage treatment plants and opportunities to the ULBs in Maharashtra where they have STPs and non-sewered sanitation practices. The integrated approach of wastewater and septage management is the key of CWIS.

The next presentation on 'Use of Bioremediation Technology for Effective Implementation of City-Wide Inclusive Sanitation'

was presented by Dr. Ajit Salvi, Dy. Chief Engineer (SO), BMC, Mumbai, Maharashtra. He began the presentation by presenting an overview of sanitation scenario in Indian cities and said that India is committed to achieving the 2030 global agenda in sanitation sector through Sustainable Development Goal no. 6 on clean water and sanitation for all. The conventional sewerage and wastewater treatment system will not help in achieving the new SDG target of safely managed sanitation for all. Hence, CWIS is the desired shift in urban sanitation paradigm.



Dr. Ajit Salvi, Dy. Chief Engineer (SO), BMC, Mumbai, Maharashtra addressing the delegates.

He explained that in non-sewer network sanitation system, septic tank is important part of sanitation value chain. Fecal sludge generated in the septic tank is needed to be digested properly as it is a host for many disease causing organisms. Nevertheless, in many cases Septic tank is used as a large containment tank with overflow to the drains, which causes increase in foul odor and increases frequency of emptying of septic tank, reduction in breakdown of organic matter, increase in sludge deposition and increase in bad bacteria and pathogens. These problems arise as modern cleaning

products e.g. disinfectants, bleaches and detergents, are designed to kill the bugs i.e. bacteria. Regular use of these chemicals can upset the biological balance of the septic tank by killing off the micro-organisms that do the work. The bioremediation technology is an effective solution to address these problems. Bioremediation employs the use of living organisms like microbes and bacteria in the removal of contaminants, pollutants and toxins from soil, water and other locations. This technology can be used for digestion of sludge in septic tank effectively. It helps in reducing BOD, COD, TSS, fecal coliform etc. The presentation was concluded by stating the significance of this technology. It is easy to apply as there is no major capital expenditure, no electricity required and it is easy for operation and maintenance.

The next presentation on 'City Wide Inclusive Sanitation' approach for small towns in Maharashtra' was delivered by Ms. Arwa Bharmal, Programme Lead, Centre for Water & Sanitation (CWAS), CRDF, CEPT University, Ahmedabad, Gujarat. The presentation began by stating seven principles of City Wide Inclusive Sanitation, where all members of the city have access to adequate and affordable sanitation services through appropriate centralized and decentralized systems, without any contamination to the environment along the sanitation value chain. She presented the case of Wai, one of the eight global cities under CWIS programme, moving towards universal access to sanitation. She then presented the sanitation situation of Wai before the inception of CWIS programme. The City has moved beyond toilets and now become ODF++ City. Wai is the first City in India to pass resolution through Council to implement FSSM plan in their City. This resolution covers City Wide FSSM, involvement of private sector, scheduled cleaning, land for treatment facility, and levy of taxes.



Ms. Arwa Bharmal, Programme Lead, CWAS, CRDF, CEPT University, Ahmedabad, Gujarat addressing the delegates.

She then explained how scheduled services are advantageous as compared to 'on demand services'. In the 'on demand basis', the cleaning services of the ULB are treated as a complaint redressal system for overflowing septic tanks rather than as a regular cleaning and maintenance service. In the scheduled practices, septic tanks are cleaned on a pre-determined schedule, which has resulted into improvement in groundwater and river water quality due to scheduled desludging. Regulations and penalties will be set in place to ensure periodic cleaning. Moreover, awareness generation activities will educate households about the need for regular cleaning.

City Wide FSSM is achieved at Wai Municipal Council (WMC) as WMC has initiated the tender process for 2nd round of service after successful completion of first 3-Year Scheduled desludging cycle covering the entire city. The operating system for scheduled desludging was fully mechanized and monitored through SaniTab / SaniTrack. It is now been mandated as a part of ODF++ protocol and Swachh Survekshan under SBM 2.0 as it shows improvement

in groundwater and river water quality. After implementing FSSM in Wai, sanitation workers now wear safety gear regularly and households pay sanitation tax instead of high user charges for desludging.

Later, the focus was given on empowering women for inclusive sanitation service delivery through SHG engagement for Individual House Hold Toilets (IHHT), assessment of Community Toilets (CTs) with respect to gender inclusivity, Menstrual Hygiene Management (MHM) facilities to be installed in all CTs/PTs. She stated that WMC regularly submits various data required for, Service Level Benchmarks (SLBs), Swachh Bharat Mission (SBM) and Swachh Survekshan (SS) to the state and Central government. Furthermore, Adhava reporting system has been developed to scale up in other cities of Maharashtra as it is a monthly performance of different activities performed by the sanitation department. This system helps in strengthening sanitation activities at ULB level. She ended the presentation by explaining the current status of WMC and stating that WMC has attained ODF status and sustained the same through management of full sanitation service chain resulted in safe sanitation for all by 2022.

The next presentation on 'Inclusive & Sustainable Solid Waste Management Systems' was delivered by Mr. Vijay Sapkal, Assistant Project Coordinator, CARPE, Ecosattav, Aurangabad, Maharashtra. The presentation highlighted upon solid waste management services through BOTRAM Process. BOTRAM is the innovative, cost-effective, equitable and replicable SWM transformation process. It is a six-step process that overhauls, fortifies and enables the city's MSW machinery effective to make the waste management system reliable, safe and sustainable.



Mr. Vijay Sapkal, Assistant Project Coordinator, CARPE, Ecosattav, Aurangabad, Maharashtra addressing the delegates.

He presented scenario of SWM in Indian context by stating that 77% of solid waste is not processed and instead, transported to open dumps. Hence, the working conditions at dump sites are hazardous and undignified. The implementation of BOTRAM process achieves access to regular doorstep waste disposal system to all households, 90% of waste is diverted from landfills, and 100% of the formal and informal waste workers inducted in the systems and given access to enhanced and dignified livelihoods. He further explained that in the BOTRAM system, baseline assessment is essential as it is a data driven and research extensive system to understand the context of SWM for the particular geography, capture Garbage Vulnerable Points (GVPs), understand and map existing SWM practices, and get an insight into available resources (land, equipment, human resources, community influencers, dry waste management facility etc.). This assessment is done through web based application. This process guides the overall planning exercises and decision making in the project. The next step is 'on boarding' and orientation, which aim to bring the political and bureaucratic

leadership, residents and other stakeholders of a location together to arrive at a common goal. The key goal of this step is to suggest and implement policies and byelaws to enable streamlining of existing infrastructure and resources based on the baseline report. Besides, these two steps, training and route mapping, resource recovery, awareness campaign, monitoring and maintenance are also important steps in the BOTRAM process. Material Recovery Facilities are the cornerstone of the BOTRAM process. These are structures for the effective treatment of the diverse streams of waste.

He then explained that Geo-tagging of GVPs, vehicular routes, plastic pollution entry points of water bodies are significant components in adopting inclusive and sustainable SWM. He focused on children's involvement in waste segregation. In Paithan as children have become the ambassadors of waste segregation and encourage their families to keep the wastes separate. In conclusion, the emphasis was given on effective implementation of BOTRAM system for inclusive and sustainable SWM.

The last presentation on 'Community Engagement in Improving Sanitation – Mumbai' was delivered by Mr. Anand Jagtap, former Officer on Special Duty, BMC and Sanitation Expert, Mumbai, Maharashtra. The presentation was commenced by emphasizing on importance of community engagement in addressing issues at community level. He elaborated that community engagement is essential for people centric service delivery and helps building a resilient and inclusive system of development. It also helps in developing initiatives for project implementation at local level as active community participation in project planning and implementation may improve project design through the use of indigenous knowledge, which increases project acceptability. This ensures the sustainability of the project through resource mobilization.



Mr. Anand Jagtap, former Officer on Special Duty, BMC and Sanitation Expert, Mumbai, Maharashtra addressing the delegates.

He talked on genesis of slum adoption programme by stating that after realization about inadequacy of present services, lack of community involvement in public issues, the need for slum adoption programme arose. The functioning of slum adoption programme was explained in detail including the role and responsibilities of Community Based Organizations (CBOs) for effective implementation of slum sanitation. Furthermore, sustainability of the sanitation facilities and its management arrangements is ensured by making arrangements for generating adequate revenue through autonomy to the CBOs in fixing suitable user charges for defraying O&M expenses, providing training to the CBOs on the upkeep and operation and maintenance of the sanitation facilities etc. The presentation was concluded by depicting glimpses of success stories of slum sanitation at city level.

At the end of the Seminar, Ms. Neha Hardikar, Sr. Research Officer, RCUES, AILSG, Mumbai felicitated the eminent speakers. She concluded the Seminar by proposing a Vote of Thanks to the speakers and delegates.

GLIMPSES OF THE SEMINAR



Section

02

Regional Specialized Web-Based Training Programme on Urban Environment and Climate Change

13th - 14th October, 2022

Key Highlight

In this web-based training programme, the participants were acquainted with the causes and impacts of climate change along with the adaptation and mitigation strategies. Discussions in the programme were focused on climate action plan at city level to align with various national schemes and programmes across various development sectors.

BACKGROUND

It is expected that by 2030 about half of the Indian population will be residing in urban areas. The pace of urbanization is accompanied by problems of water supply, sewage disposal, municipal waste, the lack of open landscaped spaces, air & water pollution, and public transport etc. The sustainability of the cities is threatened under pressure of environmental burdens and climate change.

Climate change is the most significant aspect for a sustainable environment. It reduces green cover and increases the consumption of fossil fuels and greenhouse gases emissions, and leads global phenomenon but with local consequences. There are external and domestic dimensions to India's climate change policy which has been articulated through National Action Plan on Climate Change (NAPCC) adopted in June, 2008 and India's updated Nationally Determined Contribution (NDC) submitted to the UN Framework Convention on Climate Change (UNFCCC) in August, 2022 intending to promote

sustainable life styles and climate justice to protect the poor and vulnerable from adverse impacts of climate change. The deterioration of urban environmental quality can be effectively monitored and assessed by using geo-spatial tools. The administrative, technical, and managerial capacity of the staff of the urban local bodies needs to be strengthened in order to enable them to understand and handle climate science. The officials of various government departments should be given thorough knowledge and training on GIS application and implementation in the urban environment.

Considering this background, the Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self Government (AIILSG), Mumbai organized a **Regional Specialized Web-Based Training Programme on 'Urban Environment and Climate Change' on 13th - 14th October 2022**. This training programme was supported by the Ministry of Housing & Urban Affairs (MoHUA), Government of India (GoI).

KEY OBJECTIVE

The key objective of this web-based training programme was to understand the role of ULBs in addressing climate change challenges in order to ensure environmental resilience, mitigation and adaptation practices at city level.

PARTICIPATION

Total 36 participants including Mayors, Municipal Engineers, Executive Officers on Special Duty, City Coordinators, Public Health Supervisors, Sanitary Inspectors, Project Associates, Representatives of NGOs and concerned officials from the States of Maharashtra, Gujarat and Rajasthan attended this training programme.

INTRODUCTION

The web-based training programme was commenced by Ms. Maleka Ansari, Sr. Research Officer, RCUES, AILSG, Mumbai by welcoming the distinguished trainers and the participants. She explained the objectives of the training programme and started the introductory session by stating that climate change poses serious issues in the present scenario which directly and indirectly impact the development process of the nation. Being center of the economic system, cities are growing rapidly. Impact of climate change on urban populations leads to an unbalanced continuity on account of factors like degradation of eco systems and infrastructure, rising sea level water, heat waves, water and sanitation, spreading diseases, increasing mortality rate, impact on food availability, etc.

INAUGURATION

The web based training programme was inaugurated by Dr. Jairaj Phatak, IAS (Retd.), Director General, AILSG, Mumbai.

In his inaugural speech, he focused on climate change by stating the global temperature which has risen 1.1 Celsius above the pre-industrial level, with glaciers melting and sea level rising. He highlighted the other adverse impacts associated with climate change including flooding and droughts, displacing millions of people from their homes, sinking them into poverty and hunger, denying them access to basic services, such as health and education, expanding inequalities, fluctuating economic growth and sometimes raising conflicts. Further he extended his session by highlighting the forthcoming concerning situation which predicted that in 2030, an estimated 700 million people will be at risk of displacement by drought alone.



Dr. Jairaj Phatak, IAS (Retd.), Director General, AILSG, Mumbai addressing the participants.

He also informed about the possibilities of increasing adverse situations due to climate change. He advised the ULBs to implement programmes to contribute environmental protection by implementing climate friendly policies which reduce air and water pollution and practice measures for

abating reverend air pollution and other measures for lessening greenhouse emission. He cited the examples of Netherland where dietary shifts were adopted to mitigate climate and water crises. In the concluding session, he advocated on implementation of national and international action and policy changes are the priority for tackling with climate change at global level.

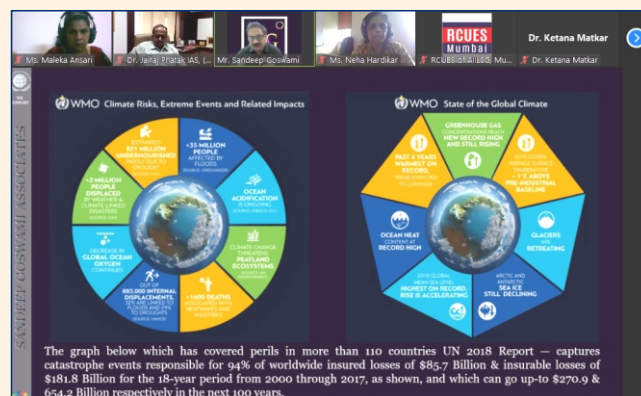
TECHNICAL SESSIONS

First session on 'Overview of Climate Change' was addressed by Mr. Sandip Goswami, Consultant – UN Sustainable Development Goals by highlighting the important aspects of climate change, climate change and its adverse impact on environment globally as well as in India.

The session focused on causes and the subsequent effects of climate change on environment. While explaining the causes, he talked on atmospheric and ocean circulation. According to Intergovernmental Panel on Climate Change (IPCC) Assessment Report, changes in Ocean and Cryosphere increased over the past 30 Communities living in close connection with polar, mountain, and coastal environments are particularly exposed to the current and future hazards of ocean and cryosphere change. These changes effects on sustainable development which needs robust assessments, the development of context-specific governance and response options by utilizing and strengthening the knowledge and adaptation planning. Later, he spoke on extreme weather changes and its economic impact.

Furthermore, the discussion was held on climate risk, extreme global events and its related impact by stating that more than 35 million people are affected by flood, estimated 821 million undernourished partly due to drought, more than 1600 deaths

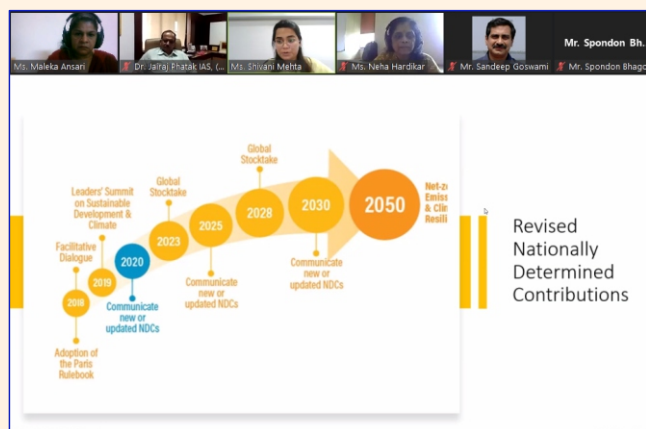
occurred due to heat wave and wild fires, more than 2 million people are displaced by weather and climate linked disasters. He further mentioned that the UN report on Disaster Risk Reduction (UNISDR) has listed India among top five countries in the world that endure absolute economic loss due to disasters. A recent international analysis showed Mumbai and Kolkata, India's largest metropolises have been identified as high risk cities. He stated that temperature and precipitation variability, drought and asset management programme (amp), soil fertility loss, flooding and extreme rainfall, cyclone and storm-surge, sea-level rise, and linked health risks are six major climate change-related risk groups identified based on Indian climatic conditions. At the end, he spoke on hazard, vulnerability, exposure which adapts to risk and strategic actions to reduce them by citing examples. These strategic actions will indeed reduce the impact on environment and health.



Mr. Sandeep Goswami, Consultant – UN Sustainable Development Goals, Government of Maharashtra, Mumbai addressing the participants.

Ms. Shivani Mehta, Consultant, Climate Change and Resilience, UNICEF, Maharashtra discussed 'Various aspects of Climate Change Mitigation Initiatives'. She is also involved in various climate change mitigation and adaptation initiatives

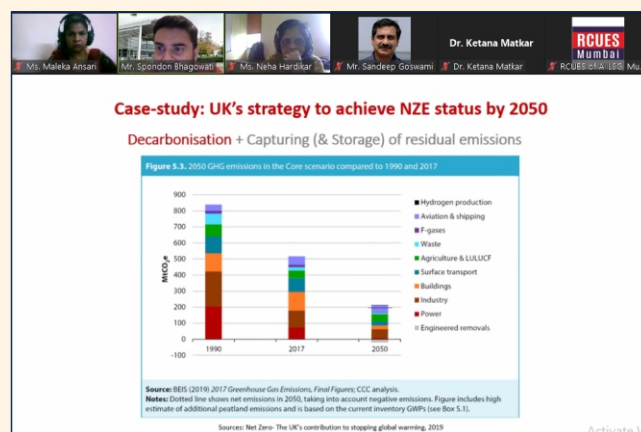
designed to implement in Maharashtra state. In the beginning, she explained the difference between mitigation and adaptation; she said that mitigation is a long-term climate action plan to reduce emissions that cause climate change, whereas adaptation is a short-term climate action plan to manage the risk occurring as impacts of climate change. She mentioned the impacts of climate change in the environment by briefly enumerating them which include sea level rise which has risen upto 3.7 mm from 2006 to 2018, storms and cyclones like Tauktae, Nisarga, Kyarr and Phyan, extreme rainfall events due to increased rate of evaporation and formation of dark heavy clouds, urban flooding due to poor management of drainage and urban heat island effects which raises temperature, air pollution, decreasing water resources and urban green cover etc. She discussed the Paris Agreement which is a legally binding international treaty on climate change adopted by 196 countries and entered into force on 4th November 2016, with its goal to limit global warming preferably to 1.5 degrees Celsius as compared to pre-industrial level on a 5-year cycle and how these changes made it imperative to implement climate action with urgency. She further added need to enhance the provision of financial, technical and capacity building support.



Ms. Shivani Mehta, Consultant, Climate Change and Resilience, UNICEF, Maharashtra, Mumbai addressing the participants.

In this context she further discussed the efforts taken by our country for implementing climate action by revising National Determined Contributions (NDC) which was submitted in the Leaders' Summit on Sustainable Development and Climate. While concluding the session, she talked about India's Panchmrit - a set of measures, through which net zero emission targeted to achieve by 2070.

Mr. Spondon Bhagowati, Engagement Manager Impact Consulting, Wales, United Kingdom discussed on 'Net Zero - India's New Climate Target'. He commenced his session by highlighting the risk for environment and social and economic well beings of the citizens due to changes in climate directly and indirectly affected on their life. He revised the reasons of commitment of Net Zero Emission (NZE) Target by pointing to the climate change and global warming, Green House Gases, the Paris Agreement and Global NZE targets and commitments.



Mr. Spondon Bhagowati, Engagement Manager, Impact Consulting, Wales, United Kingdom addressing the participants.

Further he explained about the NZE by stating that NZE implies "a state where the level of CO₂ and equivalent emissions released into the atmosphere is balanced by that being removed or

securely stored". He informed the participants about the commitments of Hon'ble Prime Minister of India at the 26th Conference of the Parties (COP26) at Glasgow. Further he briefly discussed on India's new "Net Zero" target by highlighting the targets of achievements by 2030 including non-fossil fuel energy capacity to 500GW, 50% of its energy requirements from renewable energy, reduction of the total projected carbon-emissions by 1 billion tonnes, reduction of the carbon intensity of its economy more than 45% and by the year 2070, India will achieve the target of Net Zero. In concluding session, he discussed a case-study of UK's roadmap to achieve NZE status by 2050.

On the second day, Dr. Ketana Matkar, Founder & Managing Director, Cipher Environmental Solutions LLP conducted her session on 'City Climate Action Plan (CCAP)'. She discussed India's changing climate scenario by highlighting occurrences of floods, storms, cloud bursting etc. She said that global warming is a greenhouse effect due to climate change which is the long-term warming of earth's surface observed over the period from the pre-industrial times between 1850 and 1900 caused due to human activities, particularly fossil fuel burning, industrial activities etc., which affects the earth's atmosphere by increasing heat trapping greenhouse gas levels.

Further, she described the observations as reported by the Ministry of Earth Sciences (MoES) which described climate change impacts in India manifested through a number of natural occurrences of increasing cyclone events, storm surges, extreme rainfall, drought heat wave, vector borne diseases, increase in surface air temperature by about 0.7°C, increase in atmospheric moisture content, sea surface temperatures in the tropical, temperature of the Indian Ocean increasing by about 1°C. She mentioned several initiatives taken at global level agencies including Conference of the Parties (COP) - Paris

Agreement, Intergovernmental Panel on Climate Change (IPCC) as also contained in the Report on Sustainable Development Goals (SDGs). She said that almost all cities are taking efforts to make the cities climate resilient by formulating strategies to combat adverse impacts on environment. She took an overview by mentioning various issues like chronic water scarcity, lack of affordable housing, poor air quality, high unemployment, homelessness, changing demographics, inefficient public transportation system, crime and violence etc.



Dr. Ketana Matkar, Founder & Managing Director, Cipher Environmental Solutions LLP, Thane, Maharashtra addressing the participants.

Thereafter, she discussed the national policy framework designed to implement set of schemes to abate the impacts of climate change. The National Mission on Sustainable Habitat launched "Climate Smart Cities Assessment Framework (CSCAF)" in February 2019 under the Ministry of Housing and Urban Affairs to address the adverse impacts of climate change. The objective of this framework is to provide a roadmap for Indian cities in combating climate change. She also highlighted the CCAP which plays the most important role in overall climate change scenario by framework for identifying

and implementing climate actions - mitigation as well as adaptation, which a city could undertake in conjunction with its developmental plans and policies to reduce its greenhouse gas emissions and increase climate resilience. The components of the Climate Action Plan are energy, transportation and land use, urban forest and open space, water and waste, public involvement and municipal operations. She briefed about two committees are required to be formed in the process of climate action planning. ULB Level Climate Coordination Cell and City Level Stakeholders Committee. The ULB level climate coordination cell associates 'representatives from departments related to energy use, pollution, waste, food security, water supply, public health, drainage and sanitation, local economic development, infrastructure, mitigation actions in transportation, and development planning. The City Level Stakeholders Committee involves Government agencies, local NGOs, community leaders, university partners and private sector organizations. Both the city level committees Identify and prioritizes actions and develops implementation plans. Climate Smart Cities Self-Assessment tool (CSC'SA tool) is an emissions assessment tool that uses activity data, as being collated in the framework to estimate greenhouse gas emissions for activities mentioned under indicators across the five sectors. It gives cities focused action targets to prioritize categories and indicators.

In the concluding session based on MoES data, she informed the participants that 33 States /Union Territories have prepared their State Action Plan on Climate Change (SAPCC) in line with NAPCC taking into account the State's specific issues relating to climate change.

The last session was taken by Ms. Neha Singh, Founder & Director, Forest Regeneration and Environmental Sustainability Trust (FORREST) on 'Green Initiatives – Solutions to Climate Change'.

She started her session with UNDP quote 'Sustainable development cannot be achieved without significantly transforming the way we build and manage our urban spaces'. She recommended restoration of habitat, water and biodiversity conservation, agro-forestry and sustainable living options as effective measures to tackle climate change. She said that cities are a key contributor to climate change and responsible for about 75 percent of global CO₂ emissions. She spoke on various mitigation activities of climate change including waste management, promotion of sustainable production of goods, preferring local food, building sustainable infrastructure, conservation and protection of wetlands, green spaces/ urban forests, and encouragement of public transport etc. She stressed on restoration of natural resources including forest, river, ponds etc. She was confident that individual action encourages collective actions and small changes lead to major positive outcomes.



Ms. Neha Singh, Founder & Director, FORREST, Pune addressing the participants.

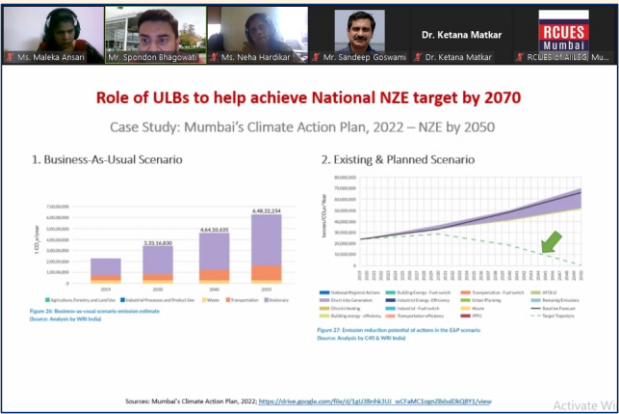
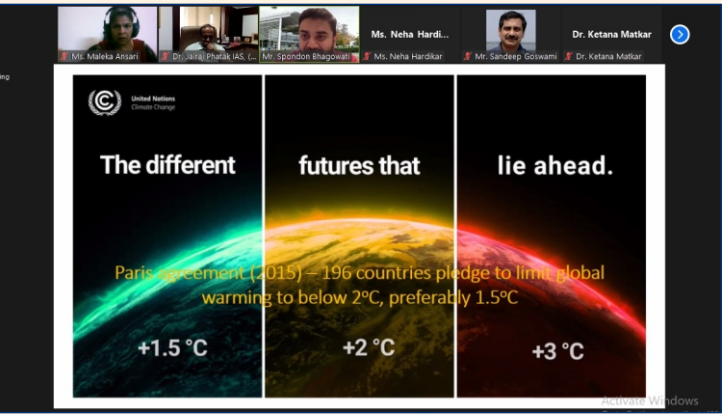
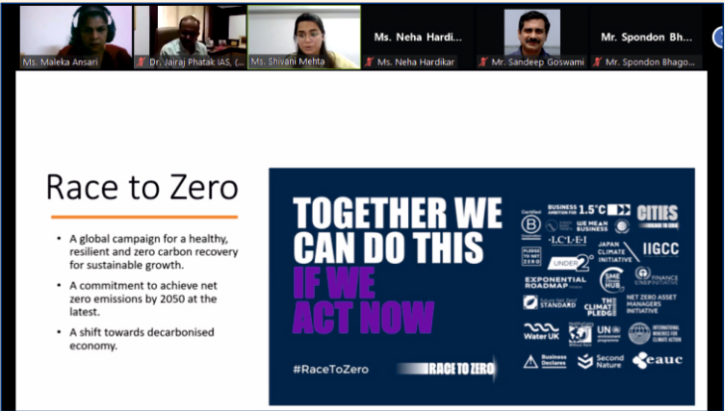
She added that sustainable development includes health, quality of life and wellbeing which are now in concerning curve of climate change. For combating the existing situation, various supports are necessary at grass root level to lessen the

heat island effect and air pollution. Further in concluding session she highlighted on suggested measures by stating about implementation of betterment drives to change microclimatic conditions, supporting biodiversity, restoring ground water, restoration of soil and land development and encouraging creation of aesthetically pleasing surroundings.

SUMMING UP

After taking the feedback and Question & Answer session, the training programme was concluded by proposing a Vote of Thanks to the trainers and the participants by Ms. Maleka Ansari, Sr. Research Officer, RCUES of AILSG, Mumbai.

GLIMPSES OF THE WEB-BASED TRAINING PROGRAMME



Section

03

Celebration of Vachan Prerana Din

15th October, 2022

The Government of Maharashtra declared 15th October, the birth anniversary day of the Late Dr. A. P. J. Kalam, the former President of India as 'Vachan Prerana Din' (Reading Inspiration Day), inter alia, to promote interest in reading books and to organize functions for this purpose.

Reading helps everyone to grow mentally, emotionally and psychologically, and open the doors of new knowledge to enlighten the mind.

To encourage this activity, Library of the All India Institute of Local Self-Government (AIILSG) at its Mumbai's Bandra office celebrated the Day by –

- (i) Displaying various newspaper cuttings, images, inspirational quotes, etc. in a display board in the library.
- (ii) Keeping a number of periodicals, magazines, bound volumes, subject wise newspaper clippings etc. on various subjects for display on the tables, including books by Late Dr. A. P. J. Kalam.
- (iii) Displaying other fiction and non-fiction books, and category wise inspirational biographies of eminent and historical personalities, etc.

On this important occasion, Dr. Jairaj Phatak, IAS (Retd.), Director General of our Institute visited the library and gave his valuable review on this display. Ms. Utkarsha Kavadi, Director, RCUES of AIILSG, Mumbai also visited the library and gave her valuable suggestions and review.



Dr. Jairaj Phatak, IAS (Retd.), Director-General, AIILSG giving his valuable review.

The officers and staff of the Institute also visited the library to explore the displayed items and books. They appreciated the wide range of books/periodicals, recorded their remarks.

In this way, the message of the 'Vachan Prerana Din' (Reading Inspiration Day) was conveyed in the Institute. The display of the items and books was kept for a week for the students and visitors.

Section

04

Celebration of Global Handwashing Day

15th October, 2022

October 15 marks the celebration of the Global Handwashing Day, presented as a platform for global advocacy, dedicated to increasing awareness and understanding the importance of handwashing with soap as an effective and affordable way to prevent diseases and save lives. This year, the theme of the day, "Unite for Universal Hand Hygiene", called for coordinated action from global citizens, to actively work towards and promote universal hand hygiene. As the world overcomes and moves past the effects of the pandemic, it is critical to lay emphasis on maintenance of hand hygiene.

The Global Handwashing Day 2022 was celebrated across Maharashtra in rural and urban areas with communities, sanitation workers, schools, teachers, Community Based Organizations (CBOs), Anganwadi Workers (AWWs), tribal groups etc. through on ground outreach and digital campaigns. Various activities and campaigns were undertaken by State Water & Sanitation Mission (SWSM), Water Supply & Sanitation Department (WSSD), Government of Maharashtra in collaboration with UNICEF Maharashtra, the Secretariat Maharashtra Urban WASH and Environmental Sanitation Coalition (Maha-UWES-C), Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self-Government (AIILSG) Mumbai, CBOs under Swachhata Sanwardhan Sanstha Mahasangh (SSSM) in Mumbai and NGO partners Citizens Association for Child Rights (CACR), Ecosan Services Foundation (ESF) and Centre for Youth Development & Activities (CYDA), with support of UNICEF Maharashtra across the state to advocate the benefits of good hand hygiene maintenance.

Around 18 million stakeholders (direct + indirect) reached in Maharashtra through these campaigns & initiatives which is approximately 14.5 % of the state population.

Operationalizing Flagship Government Missions & UN SDG 6 through promotion of Global Handwashing Day (GHD)

Equitable sanitation for all is a thrust area for various government flagship schemes and missions in India. The overarching goals and objectives of central missions such as Swachh Bharat Mission (SBM) - 2.0, Atal Mission for Rejuvenation and Urban Transformation (AMRUT) - 2.0, Jal Jeevan Mission and state missions such as Swachh Maharashtra Abhiyan are overlapping with the UN SDG 6 to ensure access to water and sanitation for all.



Through promotion of GHD, collective efforts are made towards creating awareness for maintaining hand hygiene and practicing safe sanitation, which also aids in implementation of the government programmes more effectively.

The organizations and departments conducted activities for a week, to spread the behaviour on the importance of handwashing and to lay emphasis on the health implications of it. Key stakeholder groups were mapped as an initial process to effectively share the message with relevant audiences, followed by the planning of contemplative interventions, to suit the sensibilities of the beneficiary groups. The messages were contextualized and shared in colloquial languages to make the sessions captivating. Various activities and exercises were planned for the stakeholders, which were not only theoretical but conducted demonstratively, such as street plays, competitions, rallies, mass awareness campaigns, soap distribution, collection, etc. The focus was on experiential and immersive learning of the groups, especially the children and school students leading the campaign.



Shifting perspective through immersive learning: Various engaging activities, catch word phrases, and immersive learning exercises, led the participants to introspect upon their own past actions and apply positive behavioural change in their everyday lives.



As the theme of the year suggested 'Uniting for Universal Hand Hygiene', so was executed through all these campaigns across Maharashtra. Multiple agencies and stakeholders collaborated to lead the campaign and dedicated a week to advocate for the benefits of maintaining good hand hygiene. This year's campaigns were particularly critical, as it was a time post COVID-19 pandemic, and the citizens were attuned to understanding the benefits of handwashing with soap. This receptive behaviour escalated the reach of the campaign in the state.



Community Based Organizations



Slum Dwellers & Anganwadi workers



Sanitation workers

Glimpses of the activities planned for the celebration of Global Handwashing Day.

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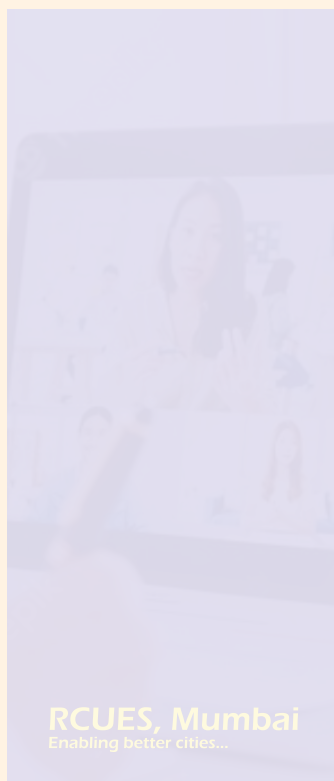
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