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

# Urban Environ Vision

An Information Bulletin



**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 Housing and Urban Affairs, Government of India



A large, stylized, dark blue quotation mark icon, consisting of two thick, curved lines forming an opening quote.

**Urban Environ Vision aims to take its readers through the web based 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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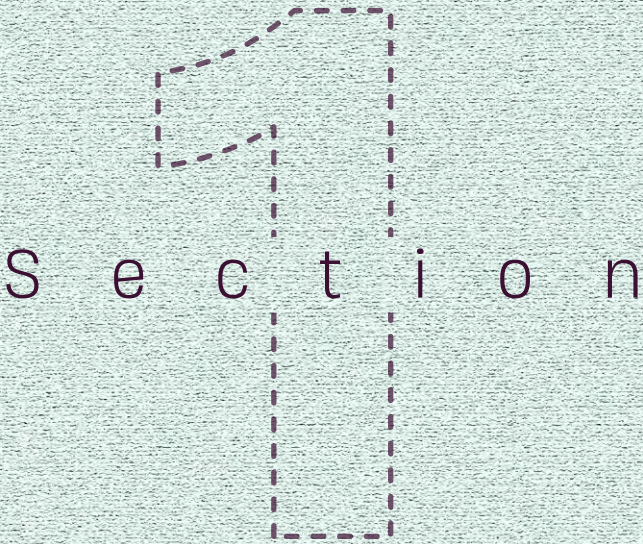
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## Regional Specialized Web-Based Training Programme on **SOLID & LIQUID WASTE MANAGEMENT IN URBAN AREAS**

17<sup>th</sup> and 18<sup>th</sup> November, 2021

### **Key Highlights**

*The key highlights of this web-based training programme were that the participants could acquire the latest updates on solid and liquid waste management measures and know about how to tackle various issues in handling solid and liquid waste at city level.*

### **BACKGROUND**

Waste management is becoming one of the key focuses of sustainable development principles, which are based on policies and practices that are resource-conserving, by following the standards that which would go a long way and help establishing hygienic levels across communities and households. Managing solid and liquid waste as per the prescribed norms of new Solid Waste Rules, 2016, notified by the Ministry of Environment and Forests is essential for building sustainable and liveable cities. However, it remains a challenge for several cities with the emerging concern on a large quantity of the waste being generated in solid and liquid form. Fact is that effective waste management is expensive and there is wide gap between desirable goals and affordable ones. Similarly small and medium towns are facing difficulties to achieve positive results due to a lack of capacity in terms of financial, technical, social, and institutional aspects.

In 2014, Swachh Bharat Mission (SBM) was launched and is being implemented by the Ministry of Housing and Urban Development, Government of India in urban areas. The Mission concerns itself with implementing the essential services for maintaining the quality of life of people in urban areas for ensuring better standards of health, sanitation and environment. Maintaining cleanliness is a life mantra and lifestyle as the focus of Swachh Bharat Mission-Urban (2) is to make the cities completely garbage free and free from open defecation and achieving 100% scientific management of municipal solid waste in 4,041 statutory towns in the country, which is continuation of efforts started in 2014 for five more years. The SBM-U (2) was inaugurated by the Hon'ble PM on 1st October 2021.

Considering this, **Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self Government (AIILSG), Mumbai conducted a web-based training programme on 'Solid & Liquid Waste Management in**



**Urban Areas' on 17<sup>th</sup> & 18<sup>th</sup> November 2021. This training programme is supported by the Ministry of Housing & Urban Affairs (MoHUA), Government of India (GoI).**

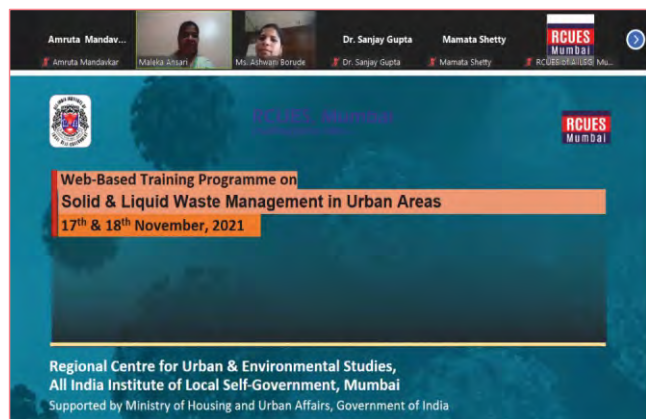
## KEY OBJECTIVE

The key objective of this web based training programme was to discuss the issues and adopt innovative measures at ULB level to ensure safe and hygienic environment at city level.

## PARTICIPATION

In all, 53 participants comprising Elected Representatives, Chief Officers, Municipal Engineers, City Project Officers, City Coordinators, Jr. Overseers, Assistant Health Supervisors and Representatives of NGOs from the States of Maharashtra, Gujarat, Rajasthan, Assam and Tripura attended this training programme.

## INTRODUCTION

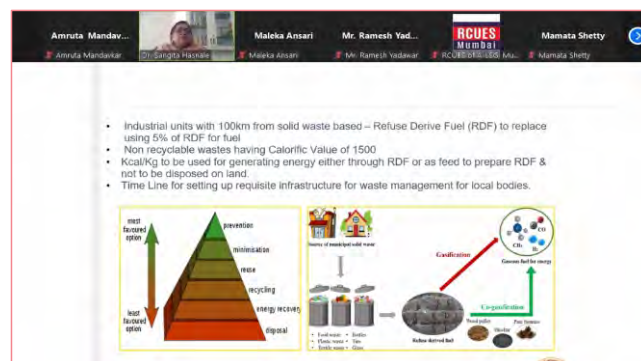


**Ms. Maleka Ansari, Sr. Research Officer, RCUES of AIILSG, Mumbai addressing the participants.**

Ms. Maleka Ansari, Sr. Research Officer, RCUES, AIILSG, Mumbai started this training programme by welcoming the distinguished trainers and the participants. She explained the

objective of the training programme. She added that Government of India has launched SBM – U (2). The need for relaunch the Mission for another five years is found necessary to maintain the sustainability of what has been achieved in the first phase of SBM – (U). This platform will certainly be useful to ULBs for discussing issues and adopt innovative measures at ULB level to ensure safe and hygienic environment, she said. She then requested the expert trainers to start technical sessions.

## TECHNICAL SESSIONS



**Dr. Sangita Hasnale, Dy. Municipal Commissioner (SWM), MCGM, Mumbai addressing the participants.**

The first technical session on 'Introduction to Waste Management, its Regulatory Framework and Key Components, was conducted by Dr. Sangita Hasnale, Dy. Municipal Commissioner (SWM), MCGM, Mumbai. She started her session by briefly mentioning legal provisions in Solid Waste Management (SWM). She further explained many of the measures to be taken for achieving sustainable solid waste management and sanitation and treatment of used water. She added that, sustainability can be achieved by awareness creation through citizens' participation as if to create 'Jan Andolan' and institutionalize a culture of cleanliness across the city, ultimately to bring a behavioural change. She requested

ULBs to create institutional capacity to effectively achieve mission objectives. She also talked about mandatory, essential and desirable parameters to be implemented to achieve the status of Garbage Free Cities through Star Ratings. She concluded her session by mentioning that, Garbage Free Cities status can be achieved by acquiring higher star ratings by implementing given parameters under SBM –U (2).



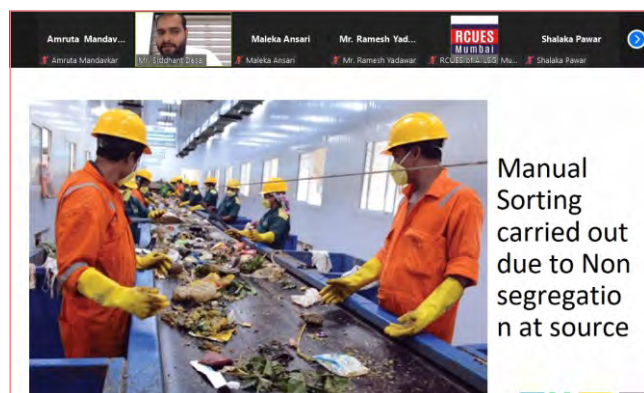
***Dr Ajit Salvi, Executive Engineer, MSDP, MCGM, Mumbai addressing the participants.***

The next session on 'Issues and Challenges in Implementation of Solid & Liquid Waste Management' was taken by Dr. Ajit Salvi, Executive Engineer, MSDP, MCGM, Mumbai. He started his session by depicting pictures of developed land into waste land to highlight the magnitude of solid waste issues at ULB level. He said that ULBs have limited resources though urbanisation increases at high pace and resources and funding do not increase in spite of urbanisation acquiring huge dimensions. He added that natural resources get depleted and waste land created by dumping waste causes pollution. He also depicted pictures showing developing dump sites. In his presentation, he laid emphasis on management of liquid waste which requires to be run through underground sewer lines or septic lines. He further mentioned that the system is in place but due to poor

maintenance, often it does not work properly. Among other hazards, it leads to water contamination increasing water borne diseases. He then explained the consequences of water borne diseases by saying that as per India Water Portal of September 2019, around 33 million Indians are affected by water borne diseases, 1.5 million children die of diarrhea and 73 million working days are lost leading to an economic burden of Rs.36500 million a year. While explaining the current status of Waste Water Management in India he said that, ULBs play a vital role in liquid waste management, where Faecal Sludge Treatment Plant (FSTP) is essential. Liquid waste maintenance is responsibility of Solid Liquid Waste Management (SLWM)), which is its obligatory duty as per legal provisions. He further explained that ULBs acts as a nodal agency and responsible for liquid waste management and its safe disposal. He added that penalty can be levied to ULBs, if they do not manage it properly. He concluded his session by speaking on the challenges faced in handling solid & liquid waste during pandemic as it was totally new life threatening infection. In spite of inadequate knowledge about this infection (in the beginning), limited resources, limited workforce, ULBs rose to the occasion and handled SLW during pandemic. He lastly said that on accounts of level of population and other relevant factors differing from ULB to ULB, they have to select suitable technology of liquid waste management for their city, and in order to maintain sustainability.

The next session on 'Management of Solid Waste' was taken by Mr. Sidhant Desai, Engineer (SWM), Goa Waste Management Corporation, Panaji, Goa. He started his session by mentioning how solid waste is managed at Goa city. He added that in earlier days, the quantity of generating solid waste was limited, which has now increased hugely on account of various factors including fast food outlets that have come up. While describing the waste management cycle, he explained four ways

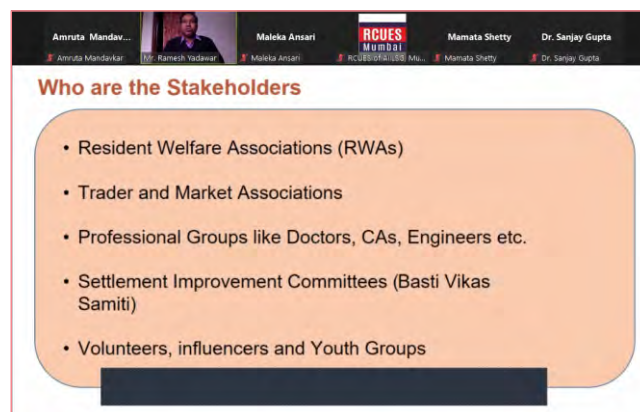




**Mr. Sidhant Desai, Engineer (SWM), Goa Waste Management Corporation, Panaji, Goa addressing the participants.**

segregation undertaken at residential level which includes setting up of recycling stations as dry waste collection point in Panaji city and transporting non-recyclable waste to the plant. Further, Panaji city has developed composting pits at residential colonies, which leads to reduction of load on centralised facility. Importance of segregation is spread through dissemination of information of waste segregation process. He further explained the systematic process of manual sorting of mixed waste through manual sorting station through a diagram. He further spoke on baling of non-recyclable waste and wet waste line system in Panaji. He concluded his session by explaining how Goa Waste Management Corporation (GWMC) put efforts in operating through SCADA system from central control station in waste management.

On the second day, the session on 'Importance of IEC and Participation of various Stakeholders' was taken by Mr. Ramesh Yadawar, Citizen Engagement & SBM Expert, Ajmer, Rajasthan. He started his session by explaining the need for stakeholders' participation in waste management as such a participation is necessary to achieve goals of SBM (Urban), AMRUT and Smart City Mission and other programmes, and for sustaining the achieved results through community participation.



**Mr. Ramesh Yadawar, Citizen Engagement & SBM Expert, Ajmer, Rajasthan addressing the participants.**

Stakeholders' participation inculcates the feeling of belongingness and working for betterment of the city among citizens through behavioural change creating a sense of responsibility among them. He said that stakeholders' participation helps to promote collective action through participatory planning and increased participation, effective implementation and monitoring of programmes. The stakeholders comprise of religious groups like Temple Committees, Dargah Committees, common interest groups and caste based associations, NGOs and Community Based Organizations (CBOs), institutions like schools and colleges, senior citizen groups and retired personnel groups etc. He then explained the significance of IEC which makes for sensitization and awareness among citizens, and disseminating information about new rules and programs, which can be promoted through this medium. The IEC also helps in adopting new behavior, increasing access to government schemes and programmes. He concluded his session by explaining the significance of stakeholders' participation in waste management.

The session on 'Solid Waste Management - Public Private Partnerships Prospects & Entrepreneurship in India' was



***Dr. Sanjay Gupta, Senior Advisor, SBM (U), Government of Assam and Director, CARE North East Foundation, Assam addressing the participants.***

delivered by Dr. Sanjay Gupta, Senior Advisor, SBM (U), Government of Assam and Director, CARE North East Foundation, Assam. He started his session by giving emphasis on need of Public-Private-Partnership (PPP) and entrepreneurship in solid waste management. He said that, in spite of regulations being in place for SWM, majority of the cities do not segregate the waste at source, which leads to entering of many enterprises in waste management sector. He gave the example of Public Private Partnership through enterprises in door-to-door collection, sorting and trading, composting, vermin composting, recycling, up-cycling of discarded materials etc. This partnership creates several job opportunities in waste management sector. He further explained that cities are striving to work in waste management activities through PPP. He mentioned that Ambikapur, Mysore, Ujjain, New Delhi, Ahmedabad, Navi Mumbai, Rajkot cities have created 100 -120 additional jobs through PPP. He also stated several opportunities in consultancies & services through PPP. He added that, consultancy services such as Feasibility Report, Detailed Project Report (DPR), Economic Report, Projects

Evaluation & Monitoring, Risk Assessment Studies, Environmental Certification, Transaction Advisory, Socio-Economic Surveys and Project Consultancy Management can be undertaken through PPP in waste management. He concluded his session by mentioning the significance of PPP and its prospects for effective implementation of services in waste management.



***Ms. Ashvini Borude, Chairperson, Shree Aastha Mahila Bachat Gat, Mumbai addressing the participants.***

The last session on 'Best Practices in Waste Management' was delivered by Ms. Ashvini Borude, Chairperson, Shree Aastha Mahila Bachat Gat, Mumbai. In her presentation she laid emphasis on composting of wet waste. She narrated her experience of the citizens of western suburb having been encouraged to segregate the waste and compost wet waste, initially showed resistant to segregate the waste. Shree Aastha Mahila Bachat Gat with support from MCGM, Mumbai succeeded in encouraging the citizens to segregate the waste at source and converting wet waste in to composting. She concluded her session by explaining the efforts taken in western suburb areas of Mumbai city to create compost and develop greenery around by using this compost. This process reduces the burden on ULBs in waste management.




## SUMMING UP

The training programme was concluded by Ms. Maleka Ansari, Sr. Research Officer, RCUES, AILSG, Mumbai by proposing a Vote of Thanks to the distinguished trainers and the participants after the feedback session.

## GLIMPSES OF THE WEB BASED TRAINING PROGRAMME

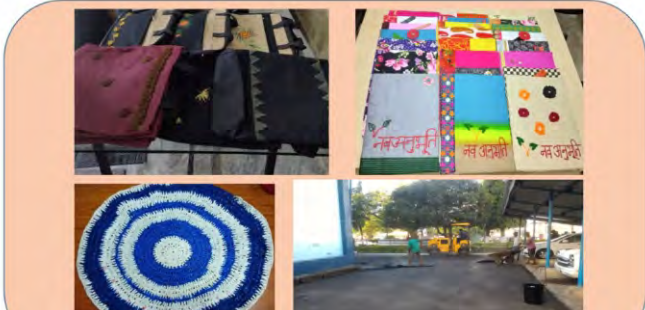
Amruta Mandav... Maleka Ansari Mr. Ramesh Yad... RCUES Mumbai Shalaka Pawar

Complete facility to have automatic operation and a PLC/Scada control from a central control station



Amruta Mandav... Maleka Ansari Mr. Ramesh Yad... RCUES Mumbai Mamata Shetty


Enterprise Opportunities - Upcycling of Discarded Materials



Amruta Mandav... Maleka Ansari Mr. Ramesh Yad... RCUES Mumbai Mamata Shetty

Biomedical Waste Management Rules, 2016: Key highlights

- Rules have made the treatment and disposal of Bio Medical wastes mandatory for all the institutions generating them.
- Every occupier should set up adequate treatment facilities like:
  - Autoclave/microwave/incinerator / hydroclave, shredder prior to commencement of its operation
  - Ensure that the wastes are treated at a common bio medical waste treatment facility or an authorized waste treatment facility.



Amruta Mandav... Maleka Ansari Ms. Ashwini Borude Dr. Sanjay Gupta Mamata Shetty RCUES Mumbai

बृहन्मुंबई महानगरपालिका - आर / दक्षिण  
श्री आस्था महिला बचत गट  
“स्वच्छ मुंबई प्रबोधन अभियान”  
सर्वेक्षण 2019

कचरा वर्गीकरण प्रबोधन उपक्रम

ओला कचरा	ओला कचरा स्वतंत्रनिर्मितसाठी वापरा	सुका कचरा मंगारवाच्याना विका	सुका कचरा
कोडी, प्लास्टिक, पानी बाग्या	सिमेंटचे अड्डे व कचरा पट्टी	ग्रीन बिन	पेन्सिली बाग, पत्र, कागद
सहज्याचे पट्टी, टावर, काचवर्षी वगैरे		ब्लू बिन	प्लास्टिकी विकाय, विपरीती विकाय
			काचपत्र, पॉपी, सुट, लुगट, मॉर्बिड ई.
ओला कचरा स्वतंत्रनिर्मितसाठी वापरा		GREEN BIN for WET Waste	सुका कचरा मंगारवाच्याना विका

स्वच्छता - मनापासून शहरापर्यंत







## Regional Specialized Web-Based Training Programme on

# DISASTER MANAGEMENT – ROLE OF ULBs

25<sup>th</sup> and 26<sup>th</sup> November, 2021

### Key Highlight

*The key highlight of this web-based training programme was that the participants exchanged their experiences, updated their knowledge and were acquainted about niceties, in preparation of disaster reduction and preparedness plan at city level, in order to ensure safety of citizens and minimize damage to properties .*

### BACKGROUND

The Disaster Management Act, 2005 (DM Act 2005) inter alia, lays down institutional and coordination mechanism for effective disaster management (DM) at the national, state, district and local levels. As mandated by this Act, the Government of India created a multi-tiered institutional system consisting of the National Disaster Management Authority (NDMA) headed by the Hon'ble Prime Minister of India. In every ULB, there is supposed to be one nodal agency, for coordination of disaster management, which is referred to in the plan as 'Disaster Management Department' (DMD). The institutional arrangements have been set up consistent with the paradigm shift from the relief-centric approach of the past to a proactive, holistic and integrated approach for Disaster Risk Reduction (DRR) by way of strengthening disaster preparedness, mitigation and emergency responses. It is imperative to build and strengthen the resilience of the urban populace, particularly the vulnerable groups, to reduce disaster risk.

ULBs needs to play a significant role in strengthening the resilience in disaster management

Considering this background, a **Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self Government (AIILSG), Mumbai** conducted a web-based training programme on 'Disaster Management – Role of ULBs' on 25<sup>th</sup> & 26<sup>th</sup> November 2021. This training programme is supported by the **Ministry of Housing & Urban Affairs (MoHUA), Government of India (GoI)**.

### KEY OBJECTIVE

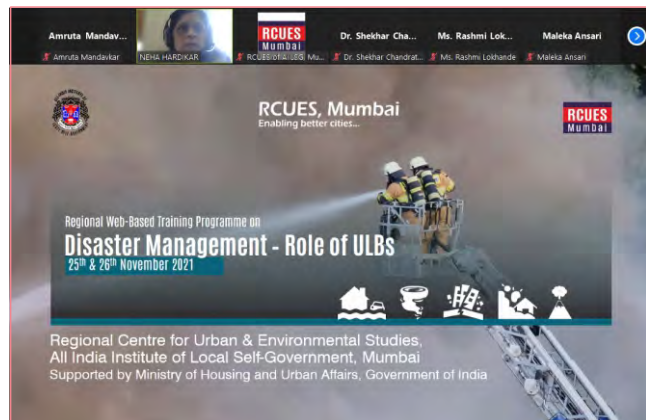
The key objective of this web-based training programme was to understand the role of ULBs in developing Disaster Management Plan to ensure safe cities.

### PARTICIPATION

In all, 42 participants comprising District Disaster Management Officers, Fire Officers, Fire Fighters, Safety Officers, Station

officers and Disaster Management Staff from the State of Maharashtra, attended this training programme.

## INTRODUCTION



**Ms. Neha Hardikar, Sr. Research Officer, RCUES, AIILSG, Mumbai addressing the participants.**

This web-based training programme was started by welcoming the distinguished trainers and the participants by Ms. Neha Hardikar, Sr. Research Officer, RCUES, AIILSG, Mumbai. She explained the purpose of conducting this training programme by saying that every city is prone to various disasters. As directed by the Central Government, every state has to make it mandatory for all ULBs to prepare a Disaster Management Plan for their city. She further said that ULBs needs to keep the mitigation and preventive measures in a state of readiness and alertness in order to cope with several disasters like flooding, earthquake, cyclone, fire etc. She encouraged the participants to discuss and share Plan of Action (PoA) to tackle the disasters in cities.

## TECHNICAL SESSIONS

The technical session was followed by introduction of the training programme. The first technical session on 'Overview of



**Ms. Rashmi Lokhande, Chief Officer, Disaster Management Department, MCGM, Mumbai addressing the participants.**

Disaster Management at State/City Level' was delivered by Ms. Rashmi Lokhande, Chief Officer, Disaster Management Department, MCGM, Mumbai. She commenced her session by highlighting the legal and regulatory provisions and potential hazards in Mumbai. She further highlighted vulnerabilities of Mumbai by depicting pictures of disaster prone areas and incidences. She explained non-structural measures for disaster risk reduction by stating functioning of Emergency Operation Centre (EOC). She added that this EOC has been established at Disaster Management Department of MCGM, Mumbai. This Centre is functional 24x7 equipped with the latest communication systems and early warning system. The control room contains 52 hot lines connected with various stakeholders, VHF network with 58 various stakeholders and Ward Control Room are operational round the clock, 24x7 with dedicated man power. She also emphasized on importance of coordination meetings with several stakeholders like police, fire brigade, civic authorities, NGOs etc. for effective functioning of EOCs. She also explained the Emergency Support Functions (ESFs), in which transport is a crucial part. She further spoke on Disaster Recovery Site at Parel which is a replica of the main



Emergency Operations Center (EOC) situated at MCGM, Fort, Mumbai. She concluded her session by stating that community participation is significant feature in disaster management. She that Information Technology (IT) in Disaster Management works instant communications. In this respect she gave example of Automatic Weather Stations for early warning. She further mentioned that in all 60 Automatic weather stations have been installed throughout Mumbai to get real time weather parameters. Rainfall data is transmitted every 15 minutes. Besides this, the data is monitored, analyzed and the warnings are issued on that basis. She also explained about flow level sensors which are installed to monitor the flood level in rivers and lakes. It gives real time data at EOC. She added that installation of sensors help to initiate early evacuation in low lying areas. She also mentioned that Garware Institute of Management, in collaboration with university of Mumbai, conducts Post Graduation Diploma in Disaster, Fire & Industrial Safety Management is for Disaster Management, which aims at enhancing knowledge, capacities and skills and perspective on disasters. She concluded her session by saying that IT enabled system is very effective in disaster management. The information related to disasters can be disseminated through Face Book, Twitter and other social platforms to undertake effective preventive measures.

The next session on 'Urban Flooding in Indian Cities' was delivered by Dr. Shekhar Chandratre, Coordinator, Post Graduate Diploma in Disaster Fire Safety Management (PGDDFISM), University of Mumbai. He started his session by citing examples of urban flooding in cities since 2005. He explained the impact of urban flooding in terms of loss of human lives and livestock and property. He added that flooding damages Infrastructural facilities such as transportation, communication, electricity supply, contaminates water etc. The flooding completely disrupts day to day life of people. Water gets saturated in low lying areas due to flooding, which leads to spread of water borne diseases. This entire impact results into

The screenshot shows a presentation slide titled "SOPs of Urban Flooding". At the top, there is a header bar with names and logos: Amruta Mandavkar, Dr. Shekhar Chandratre, Nisha Hardkar, RCUES, Mr. Rajendra, and Maleka Ansari. The slide content includes a definition of SOP and a list of three bullet points.

**SOPs of Urban Flooding**

- In terms of Disaster Management, a Standard Operating Procedure (SOP) is a set of written instructions that is to be followed by an organization to mitigate and manage any disastrous event.
- To avoid or mitigate the disastrous effects of Urban Flooding, we must develop and execute a suitable, event/ location specific clear-cut SOPs.
- This SOP lays down, in a comprehensive manner, the specific actions required to be undertaken by various departments and agencies in a city/town including organizations under the district administration as well as the State Government when responding to urban flooding/disaster of any magnitude

***Dr. Shekhar Chandratre, Coordinator, Post Graduate Diploma in Disaster Fire Safety Management (PGDDFISM), University of Mumbai addressing the participants.***

overall setback to residences, work places and hard earned economic development. He further emphasized on factors causing urban flooding. The natural factors causing flooding are heavy rainfall, cyclonic storms, thunderstorms, high tides overflowing drainage system, changes in rainfall pattern due to climate change like cloud burst and flash flood. Besides, sometimes flooding occurs due to human intervention such as unplanned urbanization, poor waste management system, indiscriminate encroachment of water ways and wetland, unauthorized colonies and excessive construction, inadequate and poorly maintained drainage system, neglect of pre disaster planning, lack of community participation and reducing seepage etc. Later, he explained the significance of Standard Operating Procedures (SoPs) to be used in flooding situation. The SoPs are to be followed by an organization to avoid or mitigate and tackle any disastrous situation or mitigate the disastrous effects of urban flooding. He further said that the SoPs have to be executed without modifications in order to ensure the probable outcome. The SoPs have to be thoroughly tried with recording their results so that before documentation they are well tried and tested before application. With

experience they can be modified, if found necessary. He also said that, the SoPs should be in place for all quality systems including specific operations. Moreover, individual SoPs and SoP systems must be properly integrated. Multiple SoPs may lead to collapse of the SoP System. He further explained that SoPs are needed to minimize the loss of life and damages to property and to ensure proper post disaster restoration and rehabilitation. The SoPs also help to ensure effective integration of tasks/events of each department at every stage of the disaster management process and enable continuous coordination of all actions. They also enable reporting of actions taken by each agency / department for further review and updating of the existing SoPs from past learning. He also explained pre monsoon, during monsoon and post monsoon mitigation strategies. He concluded his session by explaining how to develop city level action plan by establishing Emergency Operations Centre (EOC) with support from multiple stakeholders at city level.

**Mr. Rajendra Lokhande, Shift In-Charge, Disaster Management Department, MCGM, Mumbai addressing the participants.**

The next session on 'Disaster Prevention, Preparedness and Mitigation' was delivered by Mr. Rajendra Lokhande, Shift In-Charge, Disaster Management Department, MCGM, Mumbai. He

started his session by saying that community is a first respondent in the disaster situations and community resources are the key in forming community's resilience. He explained the difference between hazard and vulnerability and also described risk triangle by saying that risk is a combination of the interaction of hazard, exposure, and vulnerability, which can be represented by the three sides of triangle. He further mentioned that presence of any of these elements increases risk. He said that disaster management is required to save lives, minimize damages and bring normalcy. He further discussed disaster management cycle and role of government authorities in disaster management in order to build a proactive and technology driven strategy for effective response to disasters. He explained prevention and mitigation strategies which increases resilience. He concluded his session by highlighting importance of community resilience which includes awareness of vulnerabilities and explaining contents and use of survival kit which has to be always kept ready.

On second day, the session on 'Fire Prevention & Safety' was delivered by Mr. Nilesh Verlekar, Dy. General Manager, K Raheja Corp, Mumbai. He started his session by mentioning the number of deaths occur daily due to fire. He added that, 35 people die every day in fire incidents as per the National Crime Records Bureau (NCRB). He added that according to statistics mentioned in NCRB report of 2018 fire victims are mostly women. Out of 12,748 fire deaths in 2018, 7,244 were women. 56% of the deaths were caused due to home fires. He also mentioned that homes are also increasingly becoming unsafe, which pose a huge fire threat due to numerous inflammable items like upholstery, decorative material, electrical gadgets and LPG connections etc. He mentioned recently occurred fire incidences in hire rise buildings. He explained that the need for fire safety has increased manifold whereas the development of Fire Service has not made needed headway. He further explained that setting up of industrial plants at a fast pace with extensive use of hazardous materials and the construction of



**National Building Code of India**

- National Building Code of India covers the detailed guidelines for construction, maintenance and fire safety of the structures.
- National Building Code of India is published by Bureau of Indian Standards and it is recommendatory document.
- Guidelines were issued to the States to incorporate to incorporate and implement the latest National Building Code of India 2016 Part – IV “Fire & Life Safety” in their building bye-laws.

**Mr. Nilesh Verlekar, Dy. General Manager, K Raheja Corp, Mumbai addressing the participants.**

high rise buildings have multiplied the problems of firefighting. Furthermore, huge quantities of hazardous commodities are daily moved by different modes of transport all across the country, posing complicated fire rescue problems. The fire services need to be organized properly with adequate infrastructure and equipments so as to keep pace with advancement of technology and economic growth. He then explained the role of Fire Service in cities. Fire Service role has changed considerably in the last few years. It is essential that districts and States should have their own provisions for carrying out search and rescue operations immediately after a disaster, in order to save lives after the fire incidences. He further explained that the fire service now responds to hazardous material incidents, effectively handles advanced emergency medical situations, conducts high angle rescue and confined space rescue incidents, trench and collapse operations, underwater rescue etc. He explained the financial outlay for fire services by saying that the Ministry of Home Affairs has been assisting the State Governments to increase the firefighting facilities. The 10th and 11th Finance Commissions had allocated substantial funds for the development of Fire Services in the States, which helped in the creation and establishment of basic firefighting facilities in the

States. He concluded his session by explaining the guidelines for fire drill and evacuation procedures for high rise buildings given in Part IV of Annexure D of National Building Code (NBC).

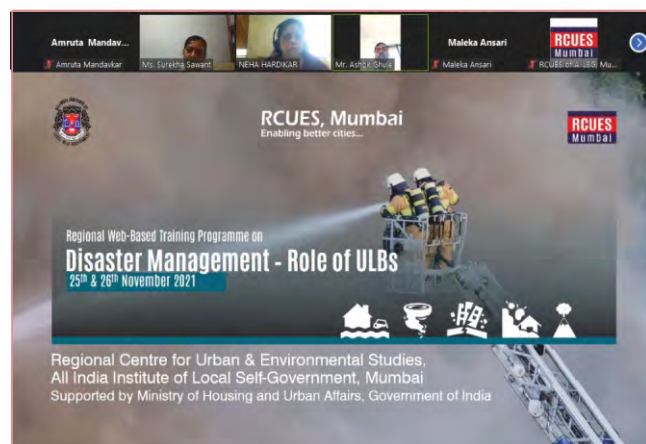
**Characteristics of disasters**

- Size (Scope, intensity, duration)
  - Dose-response relationship
  - Greater scope, intensity, duration
  - more traumatic impact and serious psychological consequences
- Cause (Natural, human, Na-tech, Public health emergencies)
- Expected or unexpected
- Timing (time of the day, day of the week, season)

**Ms. Surekha Sawant, Visiting Faculty, Post Graduate Diploma in Fire, Industrial Safety Management (GDDFISM), University of Mumbai addressing the participants.**

The next session on 'Disaster Management and its Impact on Mental Health' was delivered by Ms. Surekha Sawant, Visiting Faculty, Post Graduate Diploma in Fire, Industrial Safety Management (GDDFISM), University of Mumbai. She started her session by laying emphasis on role of mental health professionals in disaster management to mitigate Post-Disaster Traumatic Crisis. She explained that the impact of disasters vary from individual to individual. She added that reactions evolve over time and are influenced by the disaster life cycle. The range of possible reactions makes for early assessment challenges and emphasizes the importance of establishing a positive and supportive environment services with convergence of aid. She then explained psychological reactions to disasters. Many people survive disasters without showing any significant psychological symptoms. Most people pull together and function during and after a disaster, but their abilities get diminished. She also explained life cycle of disaster reactions which occur in stages/phases. She also spoke on

Post Traumatic Stress Disorder (PTSD), which is an extreme reaction to disasters. She added that early intervention can mitigate need for long term care of addressing immediate reactions to distressing events, while treating PTSD. She explained First Line Psychosocial support in Psychological First Aid (PFA). PFA is humane, supportive and practical assistance to other human beings who recently suffered serious stressors. It is non-intrusive, practical care and support, which assess needs and concerns, by helping with basic needs, listening, but not pressuring people to talk is comforting, helping protecting. She added that appropriate interventions during disasters promote resilience and recovery. When communities involve themselves in recovery efforts, individuals can regain their sense of control and well-being. Victims and communities can successfully move on with their lives after the experience of a disaster. She concluded her session by mentioning the significance of the role of mental health professionals in mitigating the mental health of victims.



**Mr. Ashok Ghule, Dy. Registrar, University of Mumbai addressing the participants.**

The last session on 'Good Initiatives taken by ULBs in Disaster Management' was delivered by Mr. Ashok Ghule, Dy. Registrar, University of Mumbai. He started his session by explaining the

efforts taken by Thane Municipal Corporation by forming Thane Disaster Response Force (TDRF) for emergencies. He also explained how this TDRF proved to be a good initiative, which can be replicated by other cities in tackling disasters. He further explained that, Thane Municipal Corporation has developed Thane Disaster Response Force (TDRF) for emergencies and need not rely on National Disaster Response Force (NDRF). This session mainly focused on questions raised by the participants and Mr. Ghule replying to those questions.

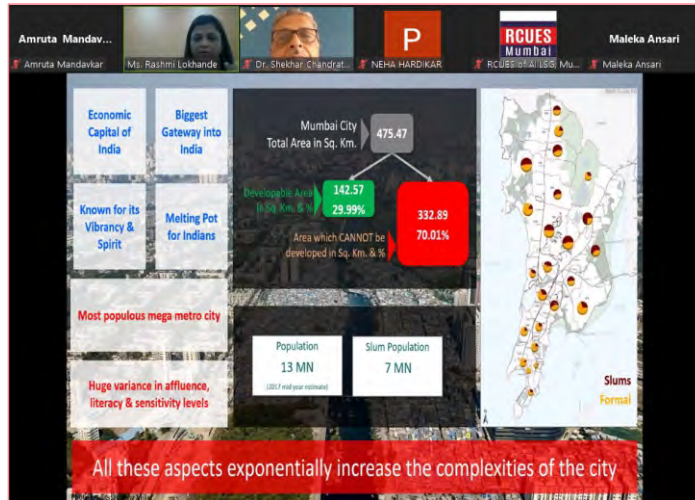
The Question and Answer session was conducted after the technical sessions. The participants asked questions on formation of TDRF for their cities. The feedback form was displayed on the screen to get feedback by the participants.

## SUMMING UP

After the Question and Answer session and feedback session, Ms. Neha Hardikar, Sr. Research Officer, RCUES, AILSG, Mumbai concluded this web-based training programme by proposing a Vote of Thanks to the distinguished subject-experts and the participants.



## GLIMPSES OF THE WEB BASED TRAINING PROGRAMME









## Regional Specialized Web-Based Training Programme on **PRADHAN MANTRI AWAS YOJANA – ADDRESSING CHALLENGES AT LOCAL LEVEL**

29<sup>th</sup> and 30<sup>th</sup> November, 2021

### **Key Highlight**

*The key highlight of this web-based training programme was that the participants gained knowledge/updated themselves on MIS system under PMAY which is useful, to fill-up the gaps in survey data under PMAY.*

### **BACKGROUND**

The World Urbanisation Prospects report 2018 by the UN Department of Economic and Social Affairs estimated that 55 per cent of the world's population is now living in urban areas and that this proportion is expected to increase to 68 per cent by 2050. Similarly, according to a recent report by the National Commission on Population, there has been 57 per cent increment in the size of urban population in our country. Pradhan Mantri Awas Yojana (Urban) Mission launched on 25th June 2015 which aims at provide housing for all in urban areas by year 2022. The scheme is a major step towards ensuring that people can get a house within their financial capability. The major objective of the scheme is ensure provision of pucca house for every family with facilities of basic services including water connection, toilet facilities, 24X7 electricity supply.. In pursuance of the vision of Government of India to facilitate "Housing for All by 2022", the Ministry of Housing and Urban Affairs (MoHUA), State Governments and ULBs have taken several measures to implement the housing projects under PMAY (Urban) during & post COVID -19. In this regard,

knowledge in various thematic areas, such as housing technologies, innovative designs, housing finances, development, policies, comparative analysis etc.is being imparted to all the concerned authorities. Efforts are being made towards planning and formulation of policy documents, tender documents, Housing for All Plan of Action. Detailed Project Reports (DPRs), innovative housing designs and Public Private Partnership projects are have been worked out. At the same time, capacities of concerned municipal officials have to be enhanced for effective and timely implementation of housing projects in order to achieve the mission objective in stipulated time-frame.

Considering this background, **Regional Centre for Urban & Environmental Studies (RCUES) of All India Institute of Local Self Government (AIILSG), Mumbai conducted a Regional Specialised Web-Based Training Programme on 'Pradhan Mantri Awas Yojana – Addressing Challenges at Local Level' on 29<sup>th</sup> & 30<sup>th</sup> November, 2021. This training programme is supported by the Ministry of Housing & Urban Affairs (MoHUA), Government of India (GoI).**

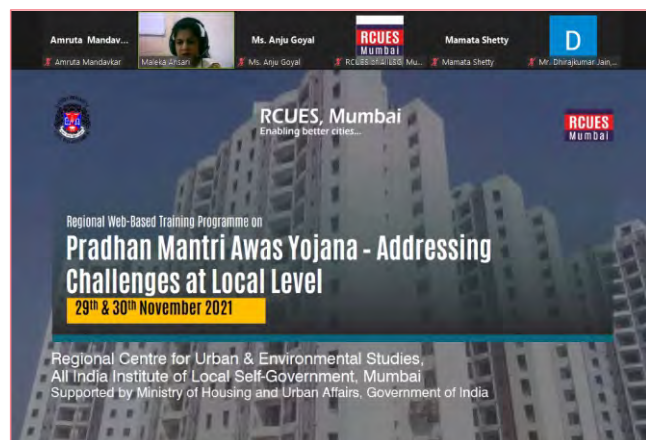
## KEY OBJECTIVE

The key objective of this web-based training programme was to assess the role of ULBs in implementation of projects to ensure quality control and address the challenges at local level.

## PARTICIPATION

In all, 31 participants comprising Mayors, Municipal Engineers, Urban Planners, MIS Specialists, District Managers, City Project Officers, and Town Planning Specialists from the States of Maharashtra, Goa, Gujarat, Rajasthan and Assam attended this training programme.

## INTRODUCTION



**Ms. Maleka Ansari, Sr. Research Officer, RCUES, AIILSG, Mumbai addressing the participants.**

This web-based training programme was commenced with by welcoming the distinguished trainers and the participants by Ms. Maleka Ansari, Sr. Research Officer, RCUES, AIILSG, Mumbai. She explained the objective of conducting this training programme by stating that ULBs play a vital role in effective implementation of PMAY with other stakeholders. She encouraged the participants to note down the requirements of implementation process to ensure the quality of constructing

houses under verticals of PMAY. She requested the subject trainers to commence the technical sessions.

## TECHNICAL SESSIONS

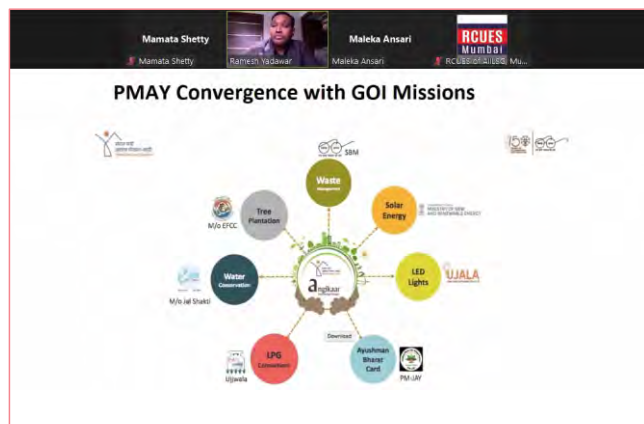
AHP at Bedwas Udaipur	UIT Udaipur
No. of Houses (G+3)	848 EWS & 584 LIG
Completion Date	June -2019
Project Cost	Rs 7676.63 Lacs
Possession Given	798 EWS & 533 LIG

**Ms. Anju Goyal, General Manager, Rajasthan, Urban Drinking Water Sewerage & Infrastructure Corporation Limited (RUDSICO), Rajasthan addressing the participants.**

The first technical session on 'Pradhan Mantri Awas Yojana (PMAY) and its implementation in India' was delivered by Ms. Anju Goyal, General Manager, Rajasthan, Urban Drinking Water Sewerage & Infrastructure Corporation Limited (RUDSICO), Rajasthan. She started her session by mentioning implementation process under PMAY in Rajasthan state. She explained the components of PMAY and its functioning at state level. She added that in Beneficiary led Construction (BLC) component, Government of India (GoI) is providing subsidy of Rs.1.5 lakh in 3 instalments on individual house construction (up to 30 Sq. Mt.) for kachha house having land title. She further said that in Affordable Housing in Partnership (AHP) under which houses are constructed on Government Land. In this case, the land cost and external development charges are borne by ULBs. Government of India (GoI) is providing subsidy of Rs.1.5 lakh in 3 instalments per house to Economically Weaker Section (EWS). She also stated that under Affordable



Housing in Partnership (AHP) on Private Land, 100% fee waiver is given by State Government in land conversion charges, land use charges, building plan approval charges and relaxation in building by-laws. She highlighted that Government of Rajasthan has targeted to construct 4 lakhs houses under various verticals of PMAY up to 2022. She gave information on how many houses constructions are sanctioned and how much subsidy is received to the state. She further depicted the pictures of successfully constructed houses at Jaipur city under PMAY. She also said that Government of Rajasthan (GoR) amended the act for removing the mandatory clause of zonal development plan. This amendment helped the beneficiaries under BLC. She also added that beneficiaries are not able to start their construction work under BLC component due to financial constraints during COVID crisis. She concluded her session by saying that state governments should intervene to release the subsidy through central government.



**Mr. Ramesh Yadawar, Citizen Engagement & SBM Expert, Ajmer, Rajasthan addressing the participants.**

The next session on 'Urban Sector overview with reference to PMAY' was delivered by Mr. Ramesh Yadawar, Citizen Engagement & SBM Expert, Ajmer, Rajasthan. He commenced his session by speaking on rapid urbanization happening in cities. He added that well executed spatial development plans,

planning for affordable housing, layered plans at municipal and ward level, digital GIS base maps of cities and uniform urban standard designs for urban utilities such as roads and footpaths are required to tackle the challenges due to urbanization. He further discussed the issues in SWM, faecal sludge and septage management service delivery etc. He gave emphasis on urban housing in which he discussed policy planning and regulation deficiencies, proliferation of slums/informal settlements, weak finances of ULBs and service providers and building regulations that impact upon urban density. He also explained the significance of convergence of other government missions with PMAY (U). He concluded his session by giving recommendations on strengthening city systems, developing institutional reforms in spatial planning, decentralized fiscal system, sustainable construction processes, smooth and systematic urban mobility for everyone as also need for integrated planning for effective implementation of PMAY (U) in cities.

The next session on 'Components and Verticals of PMAY - Mission Mode Application' was delivered by Mr. Dhirajkumar Jain, Dy. Engineer, Konkan Housing Board, Maharashtra Housing and Area Development Authority (MHADA), Mumbai. He commenced his session by speaking about PMAY mission, its components and implementation process. He highlighted that aim is to provide every family with a pucca house with water connection, toilet facilities, and 24x7 electricity supply under PMAY. He mentioned that PMAY mission priorities and further explained district wise targets to be achieved and progress of the sanctioned projects under PMAY at the State level. He then explained the stages involved in sanctioning of Detailed Project Report (DPR) under PMAY mission, which comprises various stages in the process including survey to understand the need of houses at city level, submission of DPR for approval from State Level Nodal office (SLNO) to State Level Appraisal Committee (SLAC), submission of DPR for approval from State Level Appraisal Committee (SLAC) to State Level Sanctioning and Monitoring Committee (SLSMC), submission

of DPR for approval from State Level Sanctioning and Monitoring Committee (SLSMC) to Central Sanctioning and Monitoring Committee (CSMC), etc.

**PMAY Components:**

- 1. "In Situ" Slum Redevelopment**
  - Using land as a resource - With private participation - Extra FSI/TDR/FAR if required to make projects financially viable for EWS category
  - GOI Assistance Rs. 1.0 Lakh per House.
  - GOM assistance Rs. 1.0 lakh
  - SLNA MHADA
- 2. Affordable Housing through Credit Linked Subsidy**
  - A. Interest subsidy for EWS and LIG: - EWS: Annual Household Income up to Rs.3,00,000 and house sizes upto 30 sq.m. - LIG: Annual Household Income from Rs.3,00,001 to Rs.6,00,000 and house sizes upto 60 sq.m. - B. Interest subsidy for MIG: - MIG E: Annual Household Income from Rs. 6,00,001 to Rs. 12,00,000 and house sizes upto 160 sq.m. - MIG II: Annual Household Income from Rs.12,00,001 and 18,00,000 and house sizes upto 200 sq.m.
- 3. Affordable Housing in Partnership**
  - With private sector or public sector including Parastatal agencies - Central Assistance per EWS house in affordable housing projects where 35% of constructed houses are for EWS category - GOI Assistance Rs.1.5 Lakh per House. - GOM assistance Rs. 1.0 lakh - SLNA MHADA
- 4. Beneficiary Led Construction**
  - For individuals of EWS category requiring individual house - State to prepare a separate project for such beneficiaries - No isolated/ splintered beneficiary to be covered- GOI assistance Rs.1.5 lakh per beneficiary - GOM assistance Rs. 1.00 lakh. - SLNA MHADA

**Mr. Dhirajkumar Jain, Dy. Engineer, Konkan Housing Board, Maharashtra Housing and Area Development Authority (MHADA), Mumbai addressing the participants.**

He also conducted the session on 'Implementation of PMAY in Maharashtra State'. He then explained the current status of PMAY at Maharashtra State by stating that Maharashtra State has housing shortage of about 19.4 lakh houses, which is targeted to be covered by 2022. He gave the implementation status in this respect of Maharashtra till August 2020. He further stated that 1014 total project proposals are under consideration under PMAY (U). He also added that more than 12 lakhs houses were sanctioned out of which, around 3.5 lakhs were completed. He concluded his session by mentioning the figures of financial assistance received from State and Central Government to ULBs for implementation of projects under PMAY (U).

On the second day, the technical session on 'Good Practices in PMAY- ULBs Presentation on implementing PMAY' was conducted by Mr. Pravakar Chakraborty, State Project Officer,

**Houses Completed by Beneficiaries for participation in the 100 / 150 Days events**

**Mr. Pravakar Chakraborty, State Project Officer, IEC, PMAY - HFA Urban Assam addressing the participants.**

IEC, PMAY - HFA Urban Assam. He started his session by stating the current status of implementation of PMAY in the State of Assam. He depicted the number of beneficiaries who received first installment under PMAY in Assam State. He mentioned several activities that have been undertaken under PMAY in the State of Assam. He further added that Griha Xilanayash Samarooh vis-a-vis Direct Beneficiary Transfer (DBT) of 1st instalment of subsidy is one of the activities, where beneficiaries are given promise to provide pucca houses with kitchen & toilet to EWS from urban areas. He then explained about Angikaar, a campaign which was implemented for convergence and change management for PMAY-U beneficiaries. He further explained that Angikaar campaign had dual focus of ensuring convergence between PMAY-U and other Government of India (GoI) schemes and missions being implemented by different Ministries, inter alia, working for behavior change among beneficiaries of PMAY-U using information, education and communication (IEC) methodologies. He added that about 11,404 beneficiary houses in 97 ULBs were covered for providing benefits in Government of India's other schemes like Ujjwala, Ujjala, Ayusman Bharat, Jal Jeevan etc. He further discussed issues in implementing PMAY.



The issues are sometimes relate to the cases where land ownership belongs to female beneficiaries. The construction time decided for constructing houses happens to be very less, i.e. only for 6 months. Besides, Beneficiary Led Construction (BLC) of houses poses difficulties to keep track and monitor implement. Due to Direct Benefit Transfer (DBT), it becomes challenging to hold the beneficiaries accountable for the sluggish speed of construction. He concluded his session by portraying pictures of constructed houses under BLC component of PMAY (U).

## Status as on November 2021

Progress of PMAY HFA - Urban, Assam during the period of current Government				
S/No	Department Name	Name of the Mission	Indicator	As on 3 <sup>rd</sup> November 2021
1	Department of Housing & Urban Affairs (DoHUA)	Pradhan Mantri Awas Yojana Housing for All - Urban, Assam	Total Beneficiaries received 1st Installment	78,489
2			Total Houses Grounded	78,489
3			Total Houses Completed	31,125

**Dr. Dibyajyoti Sarma, State Project Officer, MIS, PMAY - HFA Urban Assam addressing the participants.**

The next session on 'Application of MIS in implementation of PMAY' was conducted by Dr. Dibyajyoti Sarma, State Project Officer, MIS, PMAY - HFA Urban Assam. He started his session by stating the significance of MIS in PMAY. He added that a system has been developed to monitor all components of PMAY. In the PMAY MIS there are different stakeholders namely NMMU, ALD, ULB, etc. All the stakeholders have to play different roles in the PMAY MIS. This MIS captures online data from all the stakeholders, which is available 24 X 7 to them. He further emphasized that PMAY (U)-MIS is major tool of monitoring the progress of the Mission of PMAY (U) in which

ULBs and SLNAs enter the data pertaining to beneficiaries and projects approved under the Mission of PMAY (U). He also explained major e- governance initiatives covered under PMAY MIS system through integration with Common Service Centre (CSC), UMANG mobile app etc. He concluded his session by stating that, financial outlay is linked to MIS system of PMAY in Assam state. Thus, the MIS system has to be timely updated.

## SUMMING UP

Ms. Maleka Ansari, Sr. Research Officer, RCUES, AILSG, Mumbai concluded this web-based training programme by proposing a Vote of Thanks to the distinguished subject trainers and the participants after the feedback session.

## GLIMPSES OF THE WEB BASED TRAINING PROGRAMME

Photos of projects under AHP, AHP-PPP AND BLC

### 1. "In Situ" Slum Redevelopment

Private partner for Slum Redevelopment would be selected through open bidding process. State to provide additional FAR/ FSI/ TDR if required, to make slum redevelopment projects financially viable.

State has also agreed to this in G.R by permitting ULBs to get approved proposals for allowing any changes required in prevalent rules/regulations/acts as per the provisions of MRTD.

States/UTs will have the flexibility to deploy the central grant slum redevelopment with private participation, except slums on private land. In Maharashtra, state has excluded Mumbai, Thane, Pune, PCMC and Nagpur where SRA is being implemented and also cities where SRA would be implemented in the future.

### Brief Progress

SN	Vertical	Central Assistance (Rs in Cr.)			Subsidy under process to release by Govt	Physical Progress of Houses			
		Sanctioned (Accrued)	Received	Utilized		Approved	Grounded	Completed	Possession
1	AHP -EWS	227.34	172.02	166.34	55.32	35876	24082	5264	3639
2	AHP -LIG	-	-	-	-	20871	12387	2900	
3	BLC New & Enhancement	201.42	45.24	44.82	156.18	71159	7661	360	360
4	CLSS	1688.74	1688.74	1688.74*	--	82390	82390	82390	82390
	Total	2117.50	1906.00	1899.90	211.50	210296	126520	90914	86389

\*CLSS vertical is being implemented through Banks.

**Initiatives by State Government:-**

- Amendment in Act- "zonal development plan shall not be mandatory for towns having population below one lac", for issuing patta to BLC beneficiaries.
- Provision of EWS plotted development over Govt./Private land as per Provision-3C (CMJAY) amendment, for increasing the availability of EWS plots to avail BLC subsidy
- General Sale price of AHP flats increased to 1764 per sqft to meet out External Development Charges (EDC) borne by ULB (maximum bid price is Rs 1100 per sqft plus 25% land free of cost to developer)

### Solid Waste Management

#### Elements of Solid Waste Management

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graph LR
    A[Green Bin] --> B[Collection Truck]
    B --> C[Transfer Station]
    C --> D[Processing Plant]
    D --> E[Landfill Site]
  
```



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