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Ministry of Housing and Urban Affairs  
Government of India

# SC-IAP

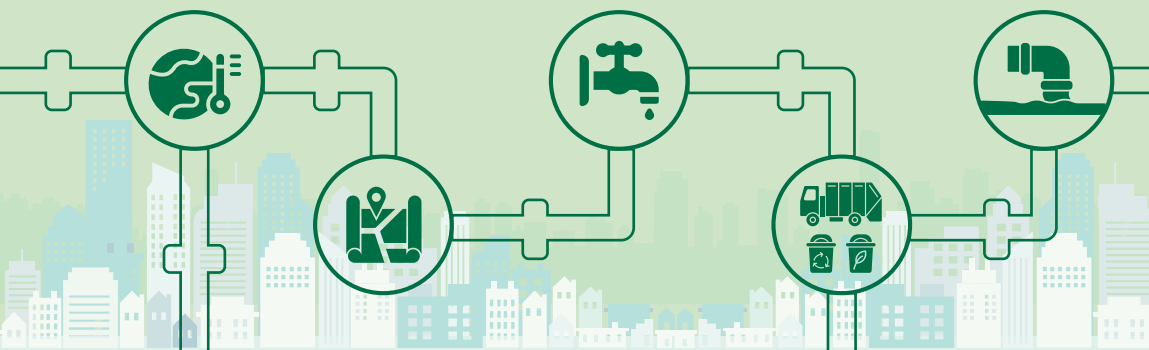
SUSTAINABLE CITIES  
INTEGRATED APPROACH PILOT IN INDIA



REPORT ON

# Capacity Building Workshop For Urban Local Body Officials

Mysuru, Karnataka  
October 2022



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION



National Institute of Urban Affairs





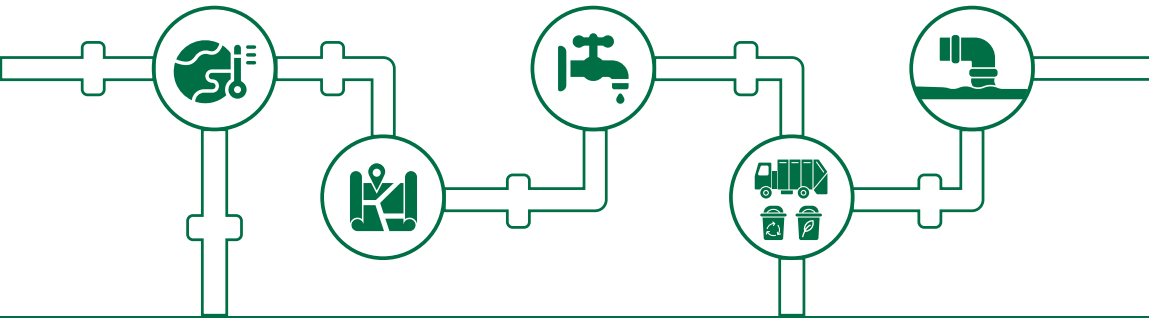
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Government of India

REPORT ON

# Capacity Building Workshop

## For Urban Local Body Officials

Mysuru, Karnataka  
October 2022





Submitted to  
**United Nations Industrial Development Organization**

Task:  
**Conducting Capacity Building Workshop for 5 Pilot Cities  
For Senior officials, Mid officials and Ground Functionaries  
of Mysuru**

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## List of Abbreviations and Acronyms

CSR	Corporate Social Responsibility
C&D	Construction and Demolition
DPR	Detailed Project Report
EPF	Employee Provident Fund
ESI	Employees' State Insurance
FSSM	Faecal Sludge and Septage Management
FSTP	Faecal Sludge Treatment Plant
GEF	Global Environment Facility
GHG	Greenhouse gas
IUWM	Integrated Urban Water Management
MCC	Mysuru City Corporation
NGO	Non-Governmental Organization
NIUA	National Institute of Urban Affairs
NSKFDC	National Safai Karamcharis Finance and Development Corporation
O&M	Operations and Maintenance
PHC	Primary Health Centre
PPE	Personal protective equipment
SC-IAP	Sustainable Cities Integrated Approach Pilot
SWAPT	Solid Waste – Appropriate Technologies
SWM	Solid Waste Management
TANA	Training and Assistance Need Analysis
TOT	Training of Trainers
ULB	Urban Local Body
UNIDO	United Nations Industrial Development Organization
WASH	Water, Sanitation and Hygiene
WSUD	Water Sensitive Urban Design

*Capacity Building Workshop for*  
**ULB Officials**  
*of*  
**Mysuru, Karnataka**

Senior and Mid Level Officials

*24<sup>th</sup> - 26<sup>th</sup> August, 2022*

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# Quick Overview



**13**  
Sessions



**11**  
Speakers



**72**  
Participants

Venue  
Administrative  
Training Institute  
(ATI), Mysuru

# Introduction



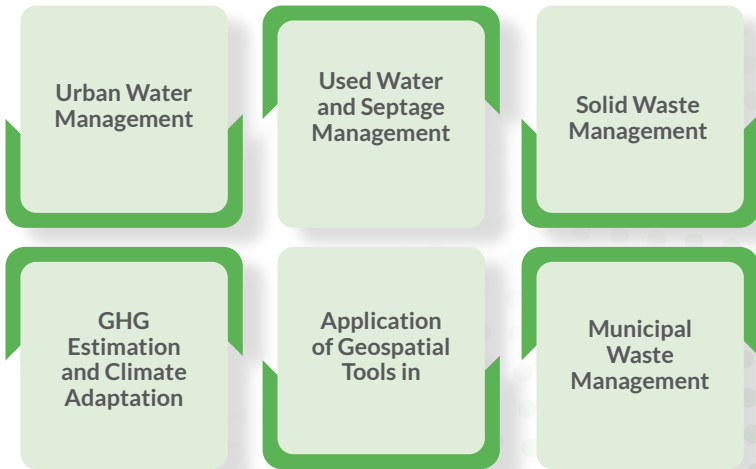
# Overview

The Global Environment Facility (GEF) launched the Sustainable Cities Integrated Approach Pilot (SC-IAP) to help cities address the challenges posed by mega-trends (urbanization, rising middle class and population growth) of global environmental degradation in an integrated manner. UNIDO is one of the specialized agencies assisting countries in accessing GEF SC-IAP set aside funds, primarily building on the country allocations the focal areas of climate change and chemicals and waste. The SC-IAP programme currently engages 28 cities in 11 developing nations. UNIDO-GEF projects under this initiative include the Sustainable Cities Integrated Approach Pilot in India.

The United Nations Industrial Development Organization (UNIDO) implements the SC-IAP programme in India along with the Ministry of Housing and Urban Affairs (MoHUA). The core objective is to build resilience in five pilot cities – Jaipur, Bhopal, Mysuru, Vijayawada and Guntur. Three main components for implementation of the project are integrating sustainable urban planning and management strategies, identification of investment projects and technology demonstrations that encourage the development of low carbon urban infrastructure and partnerships and knowledge management platform.

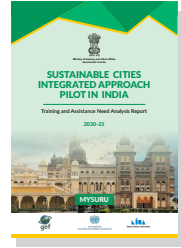
## Role of NIUA

The primary role of NIUA is to undertake the implementation of Component 3– Partnerships, Knowledge Management and Capacity Building. Under Component 3, NIUA has developed training modules for capacity building of officials from the urban local bodies (ULB's) of the five pilot project cities. Five training modules have been developed based on the results of the Training and Needs Assessment (TANA) conducted from February 2020 to August 2020:



## Training and Assistance Need Analysis (TANA)

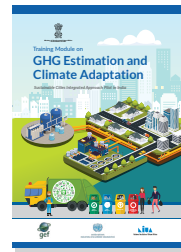
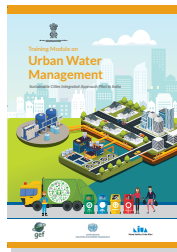
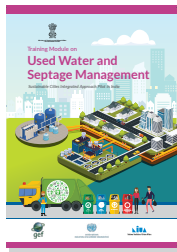
The Training and Assistance Need Analysis (TANA) is designed and developed in coordination with UNHABITAT and UNIDO. The TANA assessed the current status of the five cities in the field of sustainability, with particular reference to water, sanitation and solid waste management. The results were shared with UNIDO and UNHABITAT for review, approval and finalization.



In most of the cities, out of the three sectors, decision makers rendered more priority to solid waste management followed by used water and water management. This is primarily because they feel that the system is able to provide regular supply to all residents to fulfil their daily needs. When asked about areas of concern, they stressed on the need to build capacity to operate and maintain existing systems. However, on deeper probing, they agreed that training on better management and conservation focusing on integrated urban water management will be of value.

## Training Modules

Training modules for senior and mid officials of ULBs (Jaipur, Vijayawada, Guntur, Mysuru and Bhopal) have been developed. These are on the following topics - Solid Waste Management, Used Water and Septage Management, Urban Water Management, Climate Adaptation and Application of Geospatial Tools in Municipal Waste Management. They have been developed by NIUA in close coordination with UNIDO and UNHABITAT, and are based on the results of TANA. NIUA has synergized the experience of practitioners and subject experts to develop the pedagogy and the modules for relevant stakeholders. These modules have been finalized in coordination with experts and officials from cities.





A set of Training of Trainers (TOT) Modules and Handbook are developed based on the findings of Training and Assistance Need Analysis that was conducted for the ground functionaries. Based on the TOT's, workshop for ground functionaries were designed and delivered in each city.



The soft copies can be accessed at <https://niu.in/resources-and-waste/project/sciap>

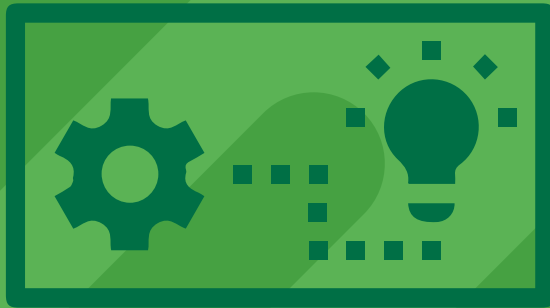
## Capacity Building Workshops

Based on the training modules developed, capacity building workshops were organized in all the five cities under this project. Trainings were given to officials of the Urban Local bodies (ULB's) in different sectors viz., solid waste management, used water management and urban water management. Training programs were organized in two groups, one for mid and senior level ULB officials and other ground functionaries. Experts from different fields delivered presentations on various topics based on the knowledge requirements as per the training need analysis.

This report elaborates on the three-day capacity building workshop conducted from 24<sup>th</sup> to 26<sup>th</sup> August 2022, at Mysuru for mid and senior level officials of the Mysuru City Corporation (MCC). It includes the format of the workshops, profile of participants from different departments, profile of the resource persons, group activities, and the consolidated feedback from participants regarding the workshop along with impact evaluation.

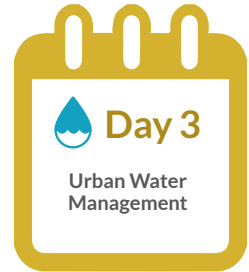
Similar workshops have been conducted for the ULB officials of Vijayawada, Guntur, Bhopal and Jaipur in the respective cities. The training programme outcomes from all these cities will be scaled up to 25 Indian cities, which share similar scale and complexity of issues in implementing sustainable strategies.

# 1 Workshop Sessions



# Workshop Sessions

The workshop for the officials of Mysuru City Corporation was conducted over a period of three days at the Administrative Training Institute, Mysuru. Technical sessions based on the training modules developed by NIUA were delivered for Urban Water Management, Solid Waste Management and Used Water and Septage Management. The day wise schedule for the workshop was:



## Day 1: Solid Waste Management



Figure 1: The MCC Mayor Delivering the Keynote Address

The first day of the capacity building workshop covered sessions on Solid Waste Management. A total of 32 participants attended Day 1 of the workshop. The attendees included health inspectors and environment engineers of the MCC.

The workshop was opened by Ms. Paramita Dutta Dey (Head, Resources and Waste Team, NIUA and Team Lead, SCIAP Project) with a brief orientation session on the SCIAP project in India and the capacity building activities under the component 3 of the project. She also welcomed the participants on behalf of NIUA and UNIDO.

The key note address was delivered by Smt. Sunanda Palanetra (Mayor and Commissioner, MCC), who introduced the city of Mysuru City, highlighted the features of MCC and talked about the city's active participation in the Swachh Bharat Mission. She further encouraged the MCC officials to make the best use of the training sessions that were to be held. This was followed by Vote of Thanks by Mr. Sameer Saraswat, Urban Technology and Investment Specialist, representative from UNIDO. He detailed out the various components of the project and explained the need for integrated planning approach.



Figure 2: Vote of Thanks by UNIDO Representative

The inaugural session set the tone for the workshop, which was followed by the technical sessions delivered by experts from the solid waste management sector. The technical sessions were based on the topics covered in the training module on Solid Waste Management, developed by NIUA. This module is part of a series of modules meant to supplement the training activities.

The first technical session was on 'City-wide Strategy and Planning for SWM'. The session as well as the group exercise was conducted by Ms. Zigisha Mhaskar, solid waste management expert and the NIUA team. It covered in detail the importance of long term planning for SWM at the city scale, baseline assessment, visioning and target setting, strategy formulation and selection of technologies, and lastly the framing of the strategy plan. Stakeholder involvement was emphasised as a crucial, cross-cutting component of the planning process.



Figure 3: Training Session on City-Wide Strategy and Planning for SWM



Figure 4: Group Exercise- City-Wide Strategy and Planning for SWM

The second session was on 'Circular Economy in dry waste management and business models', conducted by Ms. Sunitha Jayaram – Program Director, Saahas. The session elaborated on the types of dry waste, dry waste value chain, dry waste processing, and the challenges of recycling. Various dry waste management interventions and business models were also discussed. The following session was on 'Integrating waste pickers for sustainable solid waste management'. In this session, the current scenario regarding waste pickers in the SWM system and the key requirements for their integration were discussed. Various case studies showcasing successful models of integration of waste pickers in the SWM value chain were also presented.



Figure 5: Training Session on Circular Economy and Integrating Waste Pickers

The next session was on 'E-waste management, Plastic waste management – Innovative practices in India', conducted by Ms. P. Bineesha, Executive Director, IIWM. The session began with a basic overview of plastic waste generation in India, the effects it has on biodiversity, the challenges of recycling, and the responsibilities as well as legal requirements ULBs have concerning plastic waste. Through the session it was emphasised that raising awareness about plastic waste is one of the ULB's primary responsibilities. The latter part of the session concentrated on management systems such as plastic waste segregation, storage, upcycling, recycling, and reprocessing, the concept of waste-to-energy, and adopting sustainable consumption practises. The second part of the session by Ms. P. Bineesha was on the topic of E-waste Management and its innovative practices in India. An introduction to E-waste- classification and composition, its effects on the environment and the advantages of recycling it were covered. Lastly, the need to adopt formal recycling of E-waste instead of informal methods was highlighted.



Figure 6: Session on E-Waste Management & Plastic Waste Management

The following session was on 'Management of legacy waste – challenges, solutions and case studies', conducted by Mr. Pravinjith KP, Managing Director – Ecoparadigm Environmental Strategies. The challenges in management of legacy waste, the total solid waste generated, sources of waste, SWM process followed, and technologies adopted was explained. Solutions such as bio-mining, bio-remediation, and leachate & land fill management were discussed too.

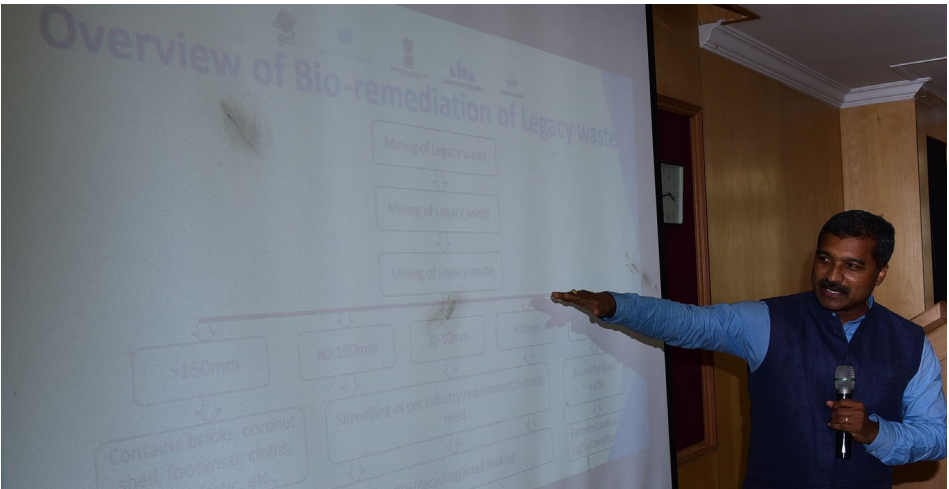


Figure 7: Session on Legacy Waste Management

The last two technical sessions for the day were held by Mr. Pradeep Khandelwal, Chief Engineer (Retd.), EDMC. The session titled 'Construction and Demolition (C&D) Waste Management', started with introducing the composition of C&D waste, and its estimation and processing. The key policies and guidance documents available for C&D wastes with reference to India were also discussed. Furthermore, a case study of the C&D waste scenario in Delhi was elaborated, highlighting the experience and discussing the challenges encountered while setting up and operating C&D waste plants throughout the city.



Figure 8: Session on C&D Waste Management

The day concluded with collecting post workshop assessments and felicitating the participants. The certificates were given by Dr. DG Nagaraj, Health Officer, MCC.



Figure 9: Certificate Distribution to the Participants



## Day 2: Used Water Management

The second day of the capacity building workshop covered sessions on Used Water & Septage Management. A total of 13 participants attended the workshops, which included assistant and junior engineers from the Water and Sewerage department off MCC.

Day 2 started with an introduction to the SC-IAP project by Ms. Paramita D Dey, NIUA, and a brief interaction with the participants. It was followed by technical presentations made by WASH sector specialists. The technical sessions were based on the topics covered in the training module on Used Water & Septage Management developed by NIUA.

The first set of sessions were conducted by Dr. Swapan Kumar Sinha, Director, DRITU Research and Tech. LLP. The session began with an informal interaction on waste water management, followed by the technical presentation on the characteristics of used water, institutional setup in water supply & sanitation services, standards and guidelines related to waste water and detailed explanation on components of wastewater management systems. Further, the session covered sewage treatment systems like centralised and decentralised as well as on-site and off-site.

The next part of the session covered the concept of Upflow Anaerobic Sludge Blanket (UASB) in detail, its different forms and how UASB is helpful in contributing to the sustainable development goals (SDGs).

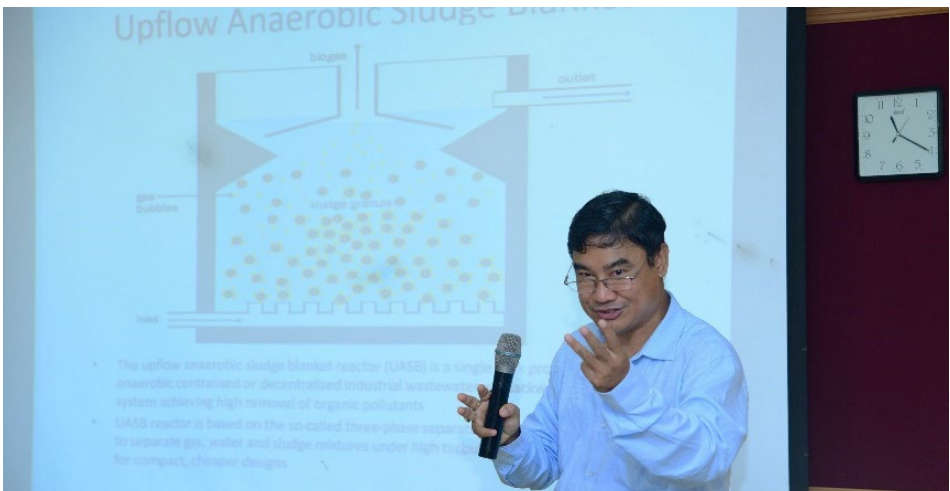


Figure 10: Session on Used Water Management

The next session was conducted on ‘Innovative Wastewater Management through Nature Based Solutions’ by Mr. Andrews Jacob, Project Manager, CDD Society. It covered the key principles and approaches to waste water treatment technologies and nature based solutions that can be adopted. A detailed overview of nature based waste water treatment (DEWATS) was given wherein each step was explained. Lastly, Reuse opportunities of waste water and other nature based solutions were explained through case studies.



Figure 11: Session on Innovative Wastewater Management through Nature Based Solutions

The last set of sessions were conducted by Mr. Praveen Nagaraja, Programme Manager at WASH Institute. These were interactive sessions on ‘Business Ecosystem Models’ for used water reuse and across ‘Faecal Sludge and Septage Management’. The session on business models for used water reuse started with giving the participants a brief overview of the current status of reuse of waste water in India and its untapped potential. Further, a few case studies showing successful business models for used water reuse in different sectors were presented.



Figure 12: Session on Business Ecosystem Models

This was followed by a group activity. The participants were divided into 7 groups and each group was assigned one of the following areas – Agriculture, Aquaculture, Industrial use, on-site waste water reuse, CSR Model, and inter-sectoral water exchange. The group activity required each group to develop a business model for waste water reuse in their assigned area. The groups identified different cost components – such as O&M costs, infrastructure, etc. and developed a revenue generation flow chart for their respective areas. Finally, the total expenditure and revenue for each group was calculated to determine the feasibility of the business models.

The session on business ecosystem models across FSSM involved a role play activity, where a group of participants were assigned different roles (commissioner, sanitary inspector, etc.). Following this, the participants collectively identified the problems posed in a given situation – such as improper disposal, increased load on FSTP, profit margin of private trucks, delay in service delivery to households, etc. Solutions for each of these problems were then discussed along with examples.



Figure 13: Group Exercise on Business Ecosystem Models Across FSSM

The second day concluded with collecting post session assessments and felicitation of the participants Ms. Paramita D. Dey, NIUA.



Figure 14: Certificate Distribution to the Participants

### Day 3: Urban Water Management

The third day of the capacity building workshop covered sessions on Solid Waste Management. A total of 25 participants attended Day 3 of the workshop. This included engineers from the Water Supply and Underground Drainage Department, MCC.

Day 3 started with a brief orientation session on the SC-IAP project by Ms. Paramita D Dey, NIUA, and a brief interaction with the participants. It was followed by technical presentations made by experts from the urban water management sector. The technical sessions were based on the topics covered in the training module on Urban Water Management developed by NIUA.

The first technical session on ‘Water Management and Climate Adaptation’ was led by Ms. Mary Abraham, Senior Consultant for Mu Gamma Consultants Private Limited. It gave insight on the concepts of climate change, mitigation, adaptation, resilience, vulnerability, greenhouse gases (GHGs), and why they are all relevant today. It also discussed the effects as well as risks of rising temperatures and climate change on ecosystems, humans and cities in general. Further, the impact of climate change on the water sector, the issue of water scarcity and adaptation measures that can be adopted, were stressed upon, with support of Indian city case studies.



Figure 15: Session on Water Management and Climate Adaptation

The second session was on ‘Drinking Water Security in Urban Odisha’, conducted by Mr. Chinmaya Tripathi, Environmental Engineer, Water Corporation of Odisha. The session elaborated on the current drinking water scenario and challenges, questions that ULBs should address, and changes in water policy that have positively impacted the drinking water situation in Odisha. The importance of enabling policies, institutional reforms, and

programmes like 'Jalasathi' was also emphasised during the session. The latter part of the session was on 'Drink from Tap Mission (24x7 basis)', wherein the need for 24x7 water supply, the steps cities can take to ensure the same and the significance of smart water management was highlighted. The case of Puri, showcasing a successful model of India's first city drinking straight from tap was also discussed.



Figure 16: Session on Drinking Water Security and Drink from Tap Mission

The last session of the day was conducted on 'Framework for an Urban River Management Plan' by Mr. Rahul Sachdeva, Sr. Program Manager, NIUA. The session focused on the elements of a river management plan, vision components, objectives necessary to achieve the vision, plan financing, and how cities can combine their existing master planning and water management measures with the River Management Plan. The importance of a URMP for a city was emphasised, followed by examples of interventions that cities can use to achieve their goals.



Figure 17: Session on Urban River Management Plan

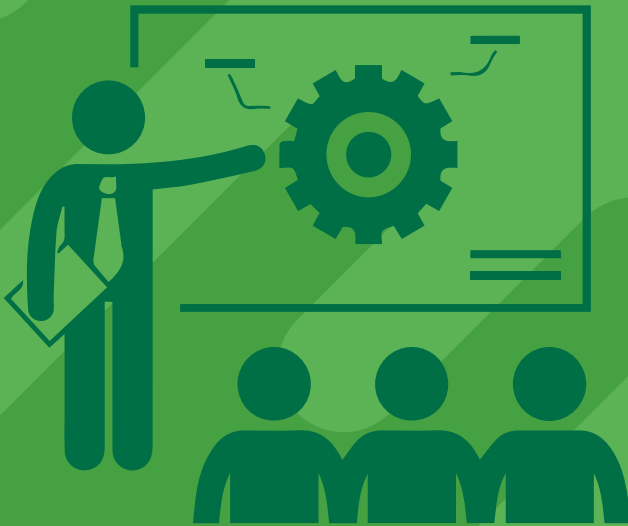
The last day concluded with collection of post session assessments, feedback for the workshop and felicitation of the participants by Mr. Sameer Saraswat, UNIDO and Ms. Paramita D. Dey, NIUA.



Figure 18: Certificate Distribution to the Participants

# 2

## Participants of the Workshop





# Participants of the Workshop

Around 72 participants attended the workshop over the duration of three days. The participants were mid and senior level officials from the water, waste water and solid waste management departments of Mysuru City Corporation (MCC). The list for the participants is attached in Annexure 2.

For the day 1 of the workshop around 34 people attended from the solid waste management department of MCC. On the second day, around 13 participants from used water management department and on the third day, around 25 officials from the water department attended the training.

Table 1 Number of participants attended

Mysuru City Corporation	Day 1: Solid Waste Management	Day 2: Used Water and Septage Management	Day 3: Urban Water Management
Male	25	13	19
Female	9	0	6
Total	34	13	25



Figure 19: Group Photograph- Participants & Resource Persons

# 3

## Resource Persons for the Workshop



## Resource Persons for the Workshop

Resource persons who were invited to deliver lectures and conduct technical sessions at the workshop were practitioners from the WASH sector with hands on experience in the field. This included consultants, experts from government organizations, companies and NGOs. The sessions included both theoretical as well as practical examples, demonstrations, exhibited videos, group exercises and discussions. Detailed profiles of the resource persons are enclosed in Annexure 3.



Zigisha Mhaskar



Sunitha Jayaram



P. Bineesha



Pradeep Khandelwal



Pravinjith KP



Swapan Kumar Sinha



Praveen Nagaraja



Andrews Jacob



Mary Abraham



Chinmaya Tripathi



Rahul Sachdeva



Paramita D Dey

4

# Workshop Outcome



# Workshop Outcome

Feedback forms were filled out by the participants on all three days of the workshop. They answered questions regarding various workshop components - technical sessions, course contents, lecture delivery, and the application/implementation of gained knowledge. The following graphs depict the overall feedback received for said components over the three-day capacity building programme.

The aim of the training program was to enhance the knowledge level of the officials in the sectors of solid waste management, used water management and urban water management. To evaluate and understand the impact of the three-day workshop, forms were distributed among the participant's viz., one feedback form and two learning progress evaluation forms.



Figure 20: Participants Filling Out Workshop Assessment Forms

## Feedback Form

The participants were asked to provide their feedback on the workshop. This was done with the help of a standardized feedback form across all workshops. The goal of this exercise was to understand the overall experience of the attendees as well as to assess the quality of the sessions delivered.

As per the feedback received, more than 90% of the participants found the sessions useful. Around 70% of them found the training extremely useful.

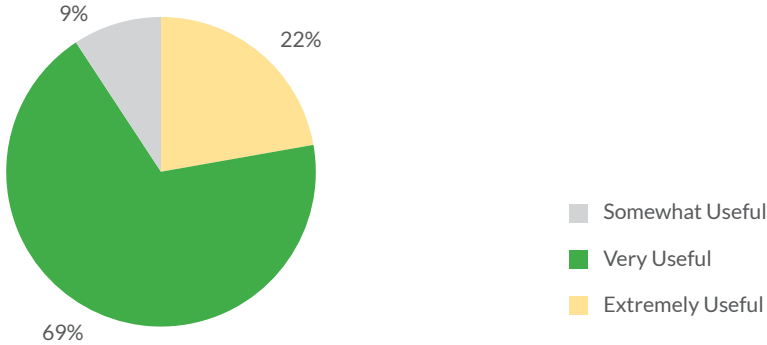


Figure 21: Overall Usefulness of the Workshop

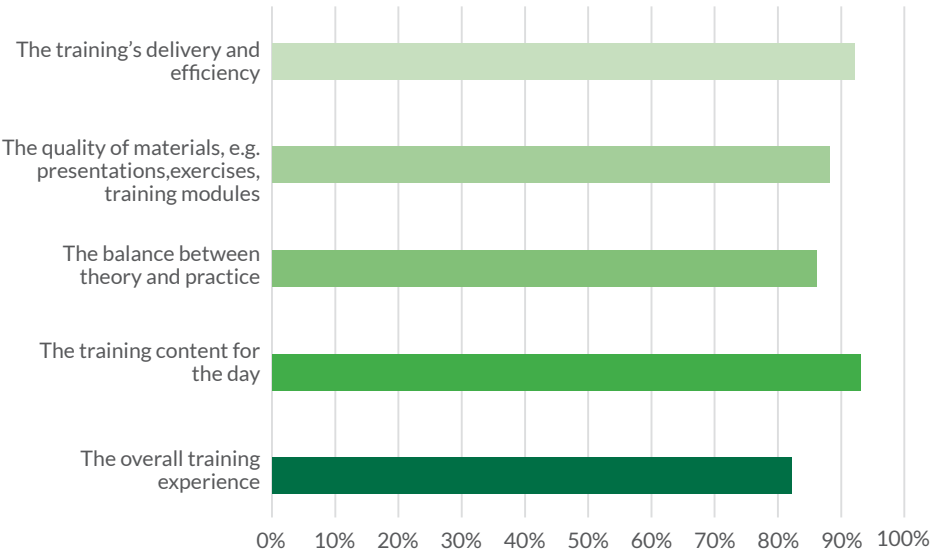


Figure 22: Analysis of Participants' Feedback for Various Components of the Training Workshop

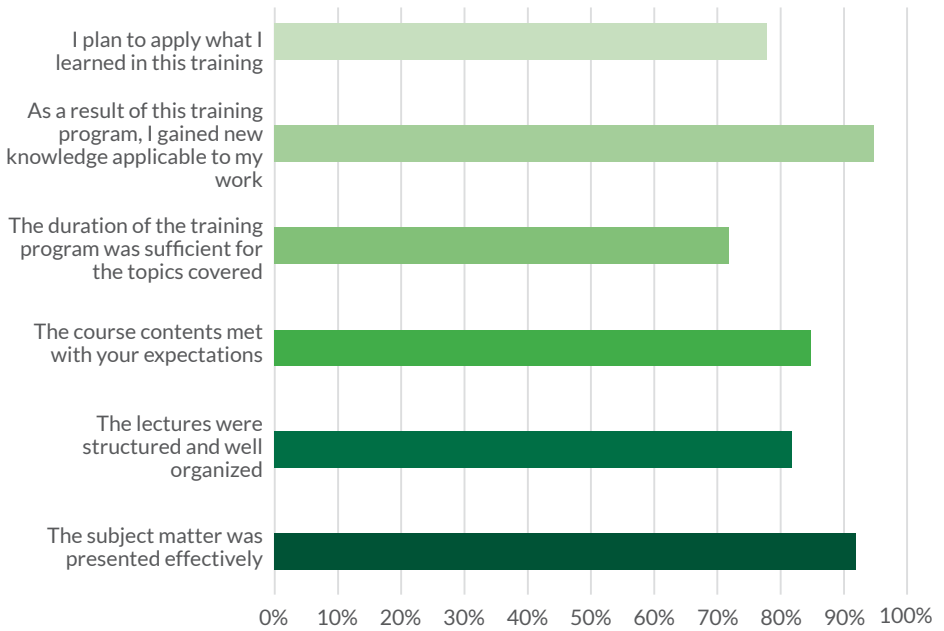


Figure 23: Analysis of Participants' Feedback for Material and Content of the Workshop

## Learning Progress Evaluation Form

The pre and post workshop questionnaires were designed to assess how the training improved the participants' knowledge on various topics covered during the three-day sessions. The analysis of this showed there was a positive change in the knowledge level of participants in all the sectors.

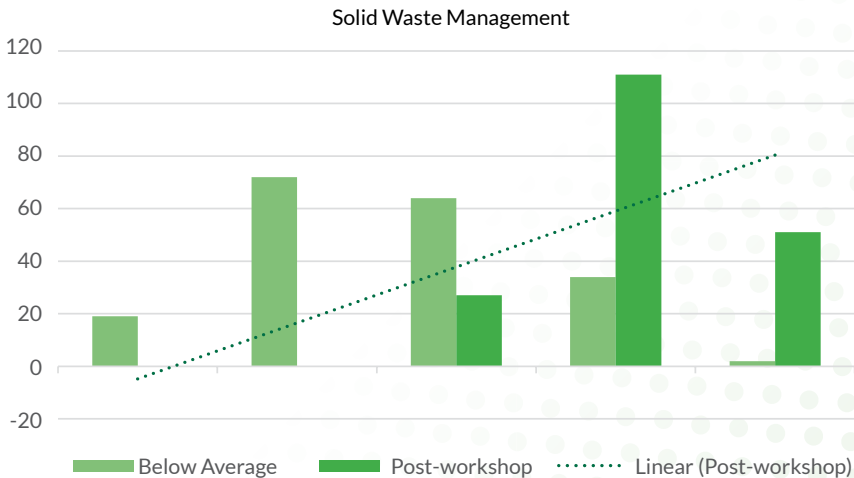


Figure 24: Evaluation of Pre and Post Workshop Learnings for Day 1

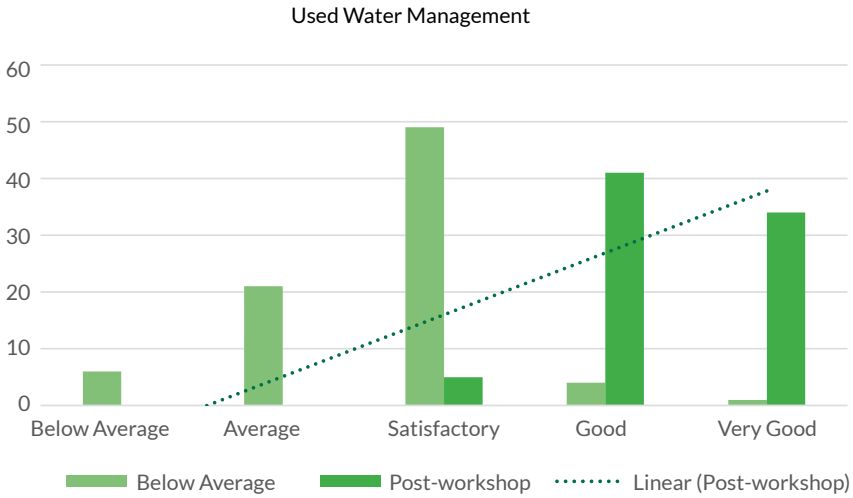


Figure 25: Evaluation of Pre and Post Workshop Learnings for Day 2

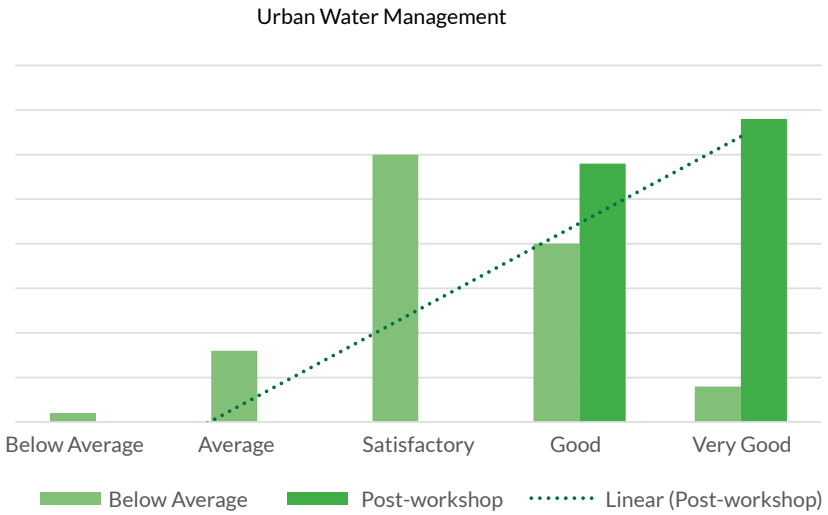
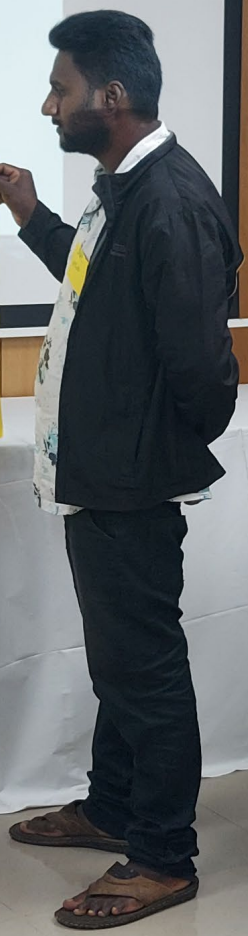
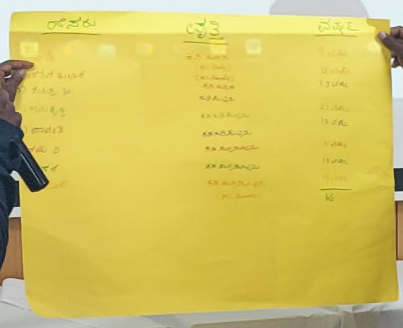
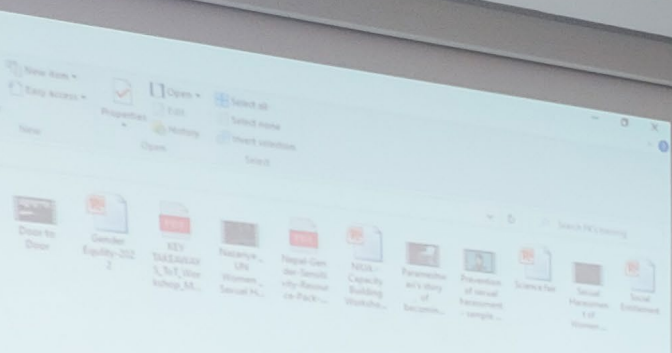


Figure 26: Evaluation of Pre and Post Workshop Learnings for Day 3





# 5 Wayforward

The next step would be to provide technical assistance. This will be given based on the requirements in various sectors viz., used water and septage management, solid waste management and urban water management.





*Capacity Building Workshop for*  
**ULB Officials**  
*of*  
**Mysuru, Karnataka**

Ground Functionaries

6<sup>th</sup> - 8<sup>th</sup> July, 2022

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# Quick Overview



9

Sessions



3

Speakers



Venue

Administrative  
Training Institute  
(ATI), Mysuru

41

Participants

# Introduction



# Overview

The Workshop for the Ground functionaries under the “Sustainable Cities Integrated Approach Pilot Project in India (SCIAP) was organized by the National Institute of Urban Affairs in partnership with the Hasiru Dala. The workshop was held from 6<sup>th</sup> -8<sup>th</sup> July 2022 at Administrative Training Institute in Mysuru, Karnataka, India.

37 sanitation workers (frontline workers) attended the workshop from Mysuru Municipal Corporation. Of these 37 participants, 29 were male staff working as door-to-door helpers and 8 were female staff working as waste pickers and sweepers at Mysuru City Corporation (MCC). The workshop registration details are attached in Annexure – 1.

## Details of Participants

As per the guidance of NIUA, we had requested Mysore City Cooperation to nominate ground level functionaries for the participation in the workshop. These functionaries were from water, solid waste and waste management departments of the municipal corporation.

Table 1: Number of participants attended

Date	Number of female participants	Number of male participants	Total
06 <sup>th</sup> July 2022	03	34	37
07 <sup>th</sup> July 2022	08	32	40
08 <sup>th</sup> July 2022	08	33	41

The workshop began with a welcome note by the trainer, Ms. Archana. She briefly explained the goal of the workshop and the expectations from the participants. Later, an introductory session was held where all the resource persons, participants, the NIUA team, and other fellow participants introduced themselves.



Figure 1: Workshop Inauguration Ceremony

## Expectation Mapping

The trainer asked the sanitation workers about their expectations from the workshop. Some of the expectations that participants mentioned were as follows:

- Awareness Regarding Various Provisions and Laws
- Safety precautions to be followed at the workplace
- Grievance redressal mechanism i.e. procedure to find solutions to their problems.

Overall, the workshop schedule was in-line with the expectations of the participants.

Then the schedule of the three days' workshop was briefed and all the participants were requested to be present on all three days of the workshop.

After the participants communicated their expectations, the trainer discussed the purpose of the workshop. The main objectives of the workshop were provided to the participants and the objective of each day was clearly explained to the participants.



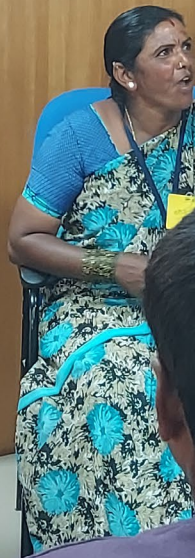
Figure 2: Setting the Expectation from the Workshop





ಬೆಂಗಳೂರು ಮುದ್ರಣಾಲಯ

31	3	10	17	24
4	11	18	25	
5	12	19	26	
6	13	20	27	
7	14	21	28	
1	8	15	22	29
2	9	16	23	30



# 1

## Enhancing Leadership for Frontline Workers to Create an Inclusive Workplace



# Workshop Sessions

## Session 1: Importance of Self-Identification

The session was headed by the expert, Ms. Archana V and Ms. Meenakshi. The session began with an ice breaker activity which included self-introduction. The participants were divided into four groups for the group activities and discussion during the workshop. Each participant had to share their name, work, and how long they had been working in their sector. The trainer asked the participants about their contribution and challenges they face during their work in the city.

Most of the participants stated that they are proud to work as a sanitation worker. However, female workers highlighted the day-to-day issues they face during the course of their work such as difficulty in access to toilets; difficulty in getting leaves even if they work overtime, access to drinking water, and in some cases, there is delayed payment of wages.

The trainer further briefed about the importance of leadership, and self-motivation in everyday life's. They emphasised on the fact that how we conceptualise our work and our identity can have far-ranging effects. They believe leaders must have the ability to lead by example. In addition, it helps

- To be more efficient and productive
- Keeps motivated and accountable at work
- Builds stronger relationships with co-workers
- Inspires others to follow the leader.



Figure 3: Session on Self-Identification

## Session 2: Awareness – building regarding various provisions and laws

The expert began the session asking the participants about their awareness of the benefits, if any, that they had been receiving from their employers. To this question, most of the sanitation workers, said that they do not have complete information about the Provisions, Acts and Schemes available to them, and the women especially asked questions about how to approach a POSH committee as municipal workers. They also enquired about loan facilities from the NSKFDC, which is specifically for Safai Karamcharis – that is, sanitation workers and ground functionaries. The UGD workers wanted to learn more about work loans for desludging machines, which would ease the burden of their work. She initially clarified to the participants who are considered frontline workers and enlighten them about the Laws and Provisions that are available to them.

The session covered the following topics:

- Solid and Plastic Waste Management Rules 2016.
- Swachh Bharat Abhiyaan, National Urban
- Livelihood Mission and National Urban Health Mission and Liquid Waste Management Guidelines
- The Code on Social Security 2020 and The Occupational Safety Health Code 2020
- Programmes of National Safai Karamcharis Finance & Development Corporation (NSKFDC)
- Scheduled Caste/Scheduled Tribe (Prevention of Atrocities), Act 1989
- The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.



Figure 4: Session on Building Awareness on Various Provisions, Schemes and Laws

### Session 3: Enhancing Communication Skills for Social Mobilization and Community Engagement

Having explored the qualities of a leader, and their rights and privileges and benefits as workers, the third session was an opportunity to see how leadership could lead to community engagement and mobilisation to advocate for their rights.

The session was headed by Ms Archana and she showed the participants a video “We, Swachh” about the SWaCH Cooperative in Pimpri Chinchwad, Maharashtra, India. <https://www.youtube.com/watch?v=bMvU5bOHpTU> and the video of Parameswari, a woman who worked to become a de-sludger in Tamil Nadu (this is primarily a work done by men). <https://www.youtube.com/watch?v=rzsYyZ99qCs>

During that time, the Pourakarmika were on strike in Bengaluru and Karnataka, and the expert began the session by brief discussion about the strike situation and what made it so powerful. The Pourakarmikas on strike were working together, and raising their voice together, and thus advocating for themselves in a group, rather than being single voices of discontent. The discussion touched on their issues and how they could be solved by collectively working with the municipalities.



Figure 5: Session on Enhancing Communication Skills for Social Mobilization and Community Engagement

## Session 4: Gender Sensitization

Ms Meenakshi began the session on Gender Sensitization, to help participants to realize the personal bias of gender roles. The discussion aimed at being considerate of gender diversity at the workplace.

The trainer did a group activity with the participants to make them understand the differences between men and women's labour. The participants were asked to list down the activities that men and women do on day-to-day basis. Further, an interactive discussion was initiated between the participants, where the men believed they help more in the household chores and the distribution of work at household is equal. For women, they said that the primary chores were child care, care of the home, cooking and the men also contributed to household chores and helped with the shopping.

The trainer showed a video about Raniamma, a waste picker in Chintamani who stood for local elections and was voted in as Councillor. As an elected representative, she was responsible for her ward development, and has formed a Women's voluntary association involving 15 women waste pickers. In doing so, she was not only providing jobs to women and empowering them economically, but also acting as a role model for others to empower her community.

Further, two more videos were shown to the participants about gender bias to start a discussion. The participants shared that the MCC had trained 10 women as drivers for door-to-door collection of waste but not given any of those women jobs as drivers. They talked about work equality and decided to make a request to the commissioner to give more women jobs in "male" roles. Finally, the trainer showed a video about sexual harassment in the work place and initiated a group discussion on the lack of awareness of whom to reach out to for help.



Figure 6: Session on Gender Sensitization

## Session 5: Stress Management

The session began with a body movement exercise to relax and bring the participants back into an alert and relaxed state.

Ms Archana began a session on stress management, which helped the participants to understand different stress management methods and identify what methods works for them to reduce stress. Most of the male sanitation workers said that they spend their free time by watching TV, playing videos and, games on smartphones. At workplace, the male workers said that they usually gossip with their fellow workers.

Most of the female workers replied that they usually do not get much free time either at home, as they are engaged in daily household chores or in taking care of their children. They further added that doing it generally relieves their stress and they find happiness out of this.

Further, substance abuse was touched upon but the participants did not enter into the subject very deeply. The discussion lightly touched on drinking or smoking habits without calling out each other.



Figure 7: Session on Building Awareness on Various Provisions, Schemes and Laws

# 2

## Social Security Provisions and Schemes





# Workshop Sessions

## Session 1: Introduction, Quiz

The session was headed by Ms Sridevi P and Mr. Harish. The session started with a warm up exercise and passing a ball game with the participants. Then, then they were divided into two groups for group activity.

First, they were asked what social security schemes, identifications and provisions did they know about? Mostly the group was unaware of anything besides Voter ID cards and Aadhar identification cards. They were aware that they needed their voter ID card to vote, and the Aadhar card for KYC and other times when they needed to show proof of ID or address. Not every participant had an Aadhar or other ID.

The two teams were each asked to enact a process of applying for an Aadhar card and a voter ID card. Team 1 showed the story of person who needed to get a seat for their child in school – but when the registration was ongoing, a mistake was found in the Aadhar card. The “parents” had to apply for corrections. Team 2 showed the story of person who was about to step out to go to vote in the local elections, but had not kept their Voter ID card safely. They were unable to cast their vote and lost their moment to have their voice heard.



Figure 8: Session on Social Security Schemes and Provisions

## Session 2: Snapshots of Social security schemes – EPF

Mr. Harish headed this session and explained about PF and ESI – benefits and simple procedures to access them through online portals. The benefits of a PF, the process of filing a nominee, was explained from the scratch. The participants had not heard of the schemes that the trainer took them through the acts, which led to the establishment of the Provident Fund scheme. The teams in their groups played a simple game with balls to show how setting aside some balls now would mean they were accessible later – as a metaphor for how the “deduction” of the PF was actually a saving for the future.



Figure 9: Session on Social Security

## Session 3: Application Process

In this session, Ms Sridevi briefed the participants about the social security schemes and provisions. She explained that anyone could apply for the social security benefits through a step-by-step process in the Umang App. Mr Basavaraj, a pourakarmika, discussed with the participants on how to apply for the PF and other benefits. Trainer informed the participants to try the Umang app and discuss in the next day of the workshop.



Figure 10: Session briefing the Application process of PF



# 3

## Occupational Health and Safety



# Workshop Sessions

## Session 1: Familiarising with Personal Protective Equipment (PPE) and Introduction & Group Building

The second day started with a brief revision of the activities and discussions conducted on day one. Several participants shared their experience of the Umang app and they recapped their learnings for the past two days.

The trainer did an icebreaker game of dividing the participants into groups based on picking a chit with a fruit name (pineapple, chikoo, orange, banana).

Ms Nirmala headed the session, presenting various pictures of wounds (cuts, burns etc). She then asked the participants – can you name an animal with a protective armour? The participants gave several examples before they all came to the tortoise. The trainer explained that the tortoise is one of the longest-lived animals in the world, in part because it can retreat into its protective shell when in danger, and be safe that way. Humans don't have that armour!

It becomes very important on the part of waste workers/PK to wear PPE during solid waste management operations, which are:

- Hazardous in nature involving high risks.
- Mortality and morbidity increases
- Productivity comes down

However, there is huge reluctance to use the PPE even if provided by the city or Contractor. The effort was made to enlighten and influence them to use PPEs appropriately.

During the session, the trainer kept different kinds of PPE on a table, so that the participants could touch, feel and wear different PPE that is appropriate to the role they play in Sanitation work. Further, the trainer had displayed the common personal protective equipment for workers involved in waste management:

- Head protection – Safety hats, helmets, hoods and caps
- Hearing protection – Ear muffs, plugs
- Respiratory protection – Respirators, dust masks
- Body protection - Safety coveralls, long sleeved clothes, aprons.
- Hand protection – Safety gloves.
- Foot protection – Shoes, boots
- Eye protection – Spectacles, goggles.



Figure 11: Session on Familiarising with Personal Protective Equipment (PPE)

## Session 2: Why Workers Do Not Like to Use PPE

Ms Nirmala started the session asking the participants to look at the PPEs placed on the table, and pick up any to wear during the session. The objective was to get the participants comfortable with the PPEs. The trainer asked the participants, why you don't wear PPEs?

In the discussion, following are the reasons for their reluctance to PPEs:

- Not used to wearing them.
- Feel uncomfortable.
- Work will be slow.
- It's very loose and will have no grip.
- It's torn.
- I sweat.
- It is compulsory, otherwise I would not wear it.

Broadly the only people who used their PPE regularly were the UGD workers, and even they would take off their gloves if they needed manual dexterity for some work. Some of the participants shared that they would wear PPE if they received them regularly, but they only receive PPE kit once, and once it wore out (within a couple of months) they did not receive another set.



Figure 12: Session on the Use of PPEs

### Session 3: Informing Workers About the Usage of PPE

In the last session the trainer had a discussion on the use of PPEs and on the hygiene and health. In the discussion, the participants shared how often they visited a doctor, and their lack of leaves for illness and health care provisions. The trainer did exercises on washing hands to showcase how this activity should not be done in a hurry.

The participants were very amused by the exercise to see the shape of their foot arch where they dipped their feet in water and then made a foot print to see the shape of their foot. They delved into how to care for flat feet, or feet with overly high arches.

By the end of the session, the participants committed to wear PPE. They all took a pledge to wear PPEs.



Figure 13: Session on Informing Workers About the Usage of PPE

# Learnings from the Workshop





Working seven days a week without proper leaves or holidays, social security benefits and basic safety equipment leaves these workers susceptible to several occupational hazards leading to acute and long term issues affecting their physical and mental health.

Following was some of the concerns shared by the participants.

- Pourakarmikas are generally overworked. They take no leaves because they do not know whether it will be paid or not.
- They have to deal with harsh and difficult work conditions – with no PPEs.
- Women workers lack sanitary facilities. They don't have access to the washrooms.
- Contribution is not valued in the society
- They lack storage space for their belongings
- Women lack maternity benefits
- They are exposed to skin allergies



Figure 14: Group Photograph of the Participants

Senior and Mid Level Officials

# Annexures



## Annexure 1: Agenda of Workshop

Time	Details
<b>DAY – 1 Solid Waste Management (24<sup>th</sup> August, 2022)</b>	
9:00 – 9:10 AM	Registration
9:10AM – 9:20AM	Welcome Note and Context setting <i>Paramita Datta Dey</i>
9:20AM – 9:50AM	Address by Mayor, Mysuru City Corporation <i>Smt. Sunanda Palanetra</i>
9:50AM – 10:00AM	Address by Representative from UNIDO <i>Sameer Saraswat</i>
10:00AM – 11:30AM	Technical Session I – City-wide strategy and planning for SWM (Group Exercise) <i>Zigisha Mhaskar &amp; NIUA Team</i>
<b>11:30AM – 11:45AM</b>	<b>TEA BREAK</b>
11:45PM – 1:00PM	Technical Session II Integrating Waste pickers for Sustainable Solid Waste Management - Case Studies Circular Economy in dry waste management & business models <i>Sunitha Jayaram</i>
<b>1:00PM – 2:00PM</b>	<b>LUNCH</b>
2:00PM – 3:00PM	Technical Session III - E-waste management, Plastic waste management – Innovative practices in India <i>P. Bineesha</i>
3:00PM – 3:30PM	Technical Session IV - Construction and Demolition Waste Management <i>Pradeep Khandelwal</i>
<b>3:30PM – 3:45PM</b>	<b>TEA BREAK</b>
3:45PM – 4:15PM	Technical Session V - Construction and Demolition Waste Management <i>Pradeep Khandelwal</i>
4:15PM – 5:30PM	Technical Session VI – <ul style="list-style-type: none"> <li>• Management of legacy waste – Challenges, Solutions and Case Studies</li> <li>• SW-APT tool for GHG estimation</li> </ul> <i>Pravinjith KP</i>
5:30PM – 5:45PM	Feedback and Certificate distribution

Time	Details
<b>DAY – 2 Used Water Management (25<sup>th</sup> August, 2022)</b>	
9:00 – 9:15	Registration
9:15AM – 9:30AM	Recap and Context setting <i>Paramita Datta Dey</i>
9:30AM – 11:30AM	Technical Session I – Used water Management <ul style="list-style-type: none"> <li>• Brief overview of value chain components</li> <li>• Used water management Upflow Anaerobic Sludge Blanket Technology</li> <li>• City Sanitation Action plan and DPR preparation as per SBM 2.0</li> </ul> <i>Dr. Swapan Kumar Sinha</i>
<b>11:30AM – 11:45AM</b>	<b>TEA BREAK</b>
11:45PM – 1:00PM	Technical Session II – Innovative Technologies in Waste Water Management Nature Based Solution – Case Studies <i>Andrews Jacob</i>
<b>1:00PM – 2:00PM</b>	<b>LUNCH</b>
2:00PM – 3:30PM	Technical Session III - Business Ecosystem Models for Used Water Reuse - Case Studies (Interactive session) <i>Praveen Nagaraja</i>
<b>3:30PM – 3:45PM</b>	<b>TEA BREAK</b>
3:45PM – 5:00PM	Technical Session IV – Discussion on Preparing and Appraising DPRs O&M related Challenges <i>Praveen Nagaraja</i>
5:00PM – 5:15PM	Feedback and Certificate distribution

Time	Details
<b>DAY – 3 Urban Water Management (26<sup>th</sup> August, 2022)</b>	
9:30 – 9:45 AM	Registration
9:45AM – 10:00AM	<b>Recap and Context setting</b> <i>Paramita Datta Dey</i>
10:00AM – 11:30AM	<b>Technical Session I – Water Management and Climate Adaptation</b> <i>Mary Abraham</i>
<b>11:30AM – 11:45AM</b>	<b>TEA BREAK</b>
11:45PM – 1:00PM	<b>Technical Session II – Drink from Tap Mission – Quality Piped Drinking Water to Citizens (24x7 basis)</b> <i>Chinmaya Tripathy</i>
<b>1:00PM – 2:00PM</b>	<b>LUNCH</b>
2:00PM – 3:30PM	<b>Technical Session III - Drink from Tap Mission – Quality Piped Drinking Water to Citizens (24x7 basis)</b> <i>Chinmaya Tripathy</i>
<b>3:30PM – 3:45PM</b>	<b>TEA BREAK</b>
3:45PM – 5:15PM	<b>Technical Session IV – Framework for an Urban River Management Plan (URMP)</b> <i>Rahul Sachdeva</i>
5:15PM – 5:30PM	Feedback and Certificate distribution

## Annexure 2: List of participants

The list of participants who attended the training on Solid Waste Management on 24th August 2022

Sl. No	Name of the Person (Sri/Smt./Ms./Dr.)	Designation
1	Sahana M	Health Inspector
2	Shreedevi	Environment Engineer
3	Mahadevi Nagraj	Environment Engineer
4	Yuvaraja Seleru	Health Inspector
5	Harish Kumar T.d	Health Inspector
6	M.sheela	Health Inspector
7	Naveen.mn	Environment Engineer
8	Mohana Kumara Pk	Asst. Exec. Engg. (Env.)
9	Parkasha	S.h.i
10	K.v.muruges	S.h.i
11	Shashi Kumar Gr	S.h.i
12	Darshan S.s	S.h.i
13	Ashwath K.	S.h.i
14	Rajeshwari Bai.v	J.h.i
15	Geethan. M	J.h.i
16	Chethana. H.n	Environment Engineer
17	Dr. Harsha Hh	H.o
18	Shivaprasadh.m	S.h.i
19	Suguna. B.a	H.i
20	Ashoka N.r	J.h.i
21	Shrinidhi. G	H.i
22	C Raishi	H. I
23	Madhukar M	Aee
24	Dr. Hemantharj	H.o
25	Tm Dhananjaya Gowda	S.h.i
26	Basavaraju	S.h.i
27	Karthik L	S.h.i
28	Preethi P	J.h.i
29	Tejaswini S.p	J.h.i
30	Manjukumar.s	S.h.i

Sl. No	Name of the Person (Sri/Smt./Ms./Dr.)	Designation
31	Shilpashree A	Environment Engineer
32	Dr. Nagaraj D.g	Chief Health Officer
33	C Ravishankar	S.h.i
34	Mrythyunjaya K S	Asst. Exec. Engg. (Env.)

The list of participants who attended the training on Used Water Management on 25th August 2022

Sl. No	Name Of The Person (Sri/Smt./Ms./Dr.)	Designation
1	B. Manjunatha	Asst. Engineer
2	R. Jagadeesha	Junior engineer
3	Sindhu. K. J.	Executive engineer
4	Mahesh. M.s.	Asst. Exec. Engg.
5	Ravikumar s.l.	Junior engineer
6	Girish b.l.	Asst. Engineer
7	Muddumalll Is gowda	Asst. Engineer
8	Prasanna kumar. N	Junior engineer
9	Madhukar.n.s	Asst. Exec. Engg.
10	Nagaraje gowda. T.g	Junior engineer
11	Dhanush m.l	Junior engineer
12	G.d.shankar	Junior engineer
13	Pradeep.g	Asst. Engineer

The list of participants who attended the training on Used Water Management on 25th August 2022

Sl. No	Name of the Person (Sri/Smt./Ms./Dr.)	Designation
1	Suvarna.g	Executive Engineer
2	Kruthika.s.	Assistant Engineer
3	D.venkatesha	W.i
4	Dilip Kumar Sr	W.i
5	Mahadeva Swamy. L	W.i
6	M. Shanthapagh	W.i
7	M.ganga	W.i
8	Muddumalle Gowda	Engineer
9	K. Krishna	W.i
10	Gopala B.n	W.i
11	N.mohana	W.i
12	K.manju	W.i
13	Mahendra. C	W.i
14	Suresh. Ms	W.i
15	N.somalhuna	W.i
16	Umesh B	W.i
17	Madhusudhan	W.i
18	Ravi Shankar	W.i
19	Mohammed Musthafa Am	A.e.e
20	Pradeep.g	A.e
21	Thammannahc	W.i
22	M. Mallikarjun Swamy	W.i
23	Channegowda	W.i
24	Kiran Kumar.p	W.i
25	B.l.girish	Assistant Engineer



## Annexure 3: Profile of Resource Persons


<p><b>Zigisha Mhaskar</b> Solid Waste Management Expert</p>	<p><b>Ms. Zigisha Mhaskar</b> is a Masters in Planning, undergraduate in architecture, with twenty three years of experience in diverse sectors of urban issues. She has over 12 years of experience of working in solid waste management in urban areas. She has extensively worked in government sector, primarily in water and sanitation, environment, housing, city development plans, and urban policy. As a Program Manager of an International NGO, she has successfully managed programs in solid waste management, community participation, affordable housing, community sanitation, health of waste pickers and micro-planning in Pune. She has worked with US government organizations on housing and environment projects for four years, and has exposure to international projects.</p>
<p><b>Pradeep Khandelwal</b> Chief Engineer (Retd.), EDMC</p>	<p><b>Mr. Pradeep Khandelwal</b> has 38 years of professional experience. He has recently retired as Chief Engineer in East Delhi Municipal Corporation (erstwhile Municipal Corporation of Delhi), where he has worked for more than 35 years. He did his B. Tech in Civil Engineering from REC Kurukshetra in 1983 and post-graduations in the field of Environmental Engineering &amp; Science from IIT Delhi in the year 2003. He has worked in various fields like planning, monitoring, execution, and management of various projects. He has been proactively involved in projects associated with the development and management of urban facilities, including solid waste management, in various capacities. He has been to Japan, Denmark, Malaysia, Singapore, Thailand, Brazil, Colombia, and the USA for technical visits.</p>
<p><b>Sunitha Jayaram</b> Program Director, Saahas</p>	<p><b>Sunitha Jayaram</b> is a Program Director at Saahas, a not for profit organization which works in the field of solid waste management on the principles of Circular Economy. Sunitha Jayaram is a computer science graduate from University of Madras and holds a Master's degree in Software Systems from BITS, Pilani. She has worked in Telecom domain for more than 12 years. With a keen interest to work in sustainability and solid waste management sector, she moved to Saahas in 2016 and has been working on design and execution of many rural and urban projects in the southern region. She manages multiple project teams and stakeholders for seamless program execution on the ground. Sunitha also has been involved in building capacities of Urban Local Body and Rural Local Body officials to streamline the SWM systems in their respective areas.</p>
<p><b>P. Bineesha</b> Executive Director IIWM</p>	<p><b>P. Bineesha</b> is the Executive Director of International Institute of Waste Management (IIWM) and Executive Member of the Technology Development Board, Ministry of Science &amp; Technology, Government of India. She is also the Advisor to the Office of the Principal Scientific Adviser to the Government of India's - Delhi Research Implementation and Innovation (DRII), IIT Delhi; and Consultant to Invest India - Ministry of Commerce and Industry, Government of India's Waste to Wealth Mission under the Prime Minister's Science, Technology and Innovation Advisory Council (PM-STIAC). She is the Chairperson of Circular Economy Committee of India, constituted under Material Recycling Association of India (MRAI), since July 2022.</p>
<p><b>Pravinjith K P</b> Managing Director Paradigm Environmental Strategies P Ltd.</p>	<p><b>Pravinjith K P</b> has over 30 years' and 500+ project experience in Environmental Infrastructure, Waste Management, Renewable Energy, Climate Change and allied fields. He has been the lead and Project Management Head for waste management projects for 70+ cities of India (including Bangalore, Nashik, Varanasi, Rajkot, Shimla, Meghalaya, Pune, Jammu, Kochi, Coimbatore, Gwalior, Raipur, Sawai Madhopur, Sambhalpur, etc., spanning across India). His expertise ranges from concept to commissioning including planning and design of infrastructure for various projects of Recycling &amp; Recovery facilities, sewage management, solid waste management (municipal, hazwaste, e-waste), rainwater harvesting, renewable energy (Wind, Hydel, and Solar energy), and environmental impact assessment related projects. He was the Senior Technical Expert for policy making for Govt. of India and various other UN and Bilateral/ Multilateral agencies. He was responsible for the development of Data Base framework and Structure for CPCB and GSPCB (for Hazardous Waste) MoHUA (for Solid Waste). He was consultant for the planning and implementation of India's first informal to formal E-waste recycling enterprise in 2006.</p>

<p><b>Praveen Nagaraja</b> Program Manager, WASH Institute</p>	<p><b>Praveen Nagaraja</b> currently works as a program manager at WASH Institute. As part of the role, he is responsible for delivering infrastructural solutions to sanitation problems. He brings in experience of designing nature based and mechanized treatment plants for fecal sludge. He has experience working with international NGOs, multilateral development agencies, development banks and with various levels of Government. He is currently developing a learning portal for scaling up capacity building for FSM in India. Praveen holds a bachelor's degree in mechanical engineering and a masters in management. Some of the marquee projects designed by him are: Planted drying bed with anaerobic filter in Jhansi, Uttar Pradesh, India; Anaerobic reactor with drying beds and solar heater in Dhenkanal, Orissa, India; High rate anaerobic digester with volute press and constructed wetland in Unnao, Uttar Pradesh, India; Biogas digester with greenhouse drying beds and constructed wetland in Kathmandu, Nepal.</p>
<p><b>Dr Swapan Kumar Sinha</b> Director, DRITU Research and Technology LLP</p>	<p><b>Dr Swapan Kumar Sinha</b>, PhD in Biotechnology from Gauhati University in 2000 having 27 years of experience in Forestry, redox biology, phytoremediation and waste management. Dr Sinha has worked at various capacities in National Afforestation and Eco-Development Board, Government of India; State Forest Research institute, Tanager; Manipur University and The Energy and Resources Institute (TERI), Delhi. Dr Sinha has recently taken voluntary retirement from TERI after serving 20 years at the capacity of Senior Fellow and Area Convener or in Environmental and Industrial Biotechnology Division to initiate the Dritu Research and Technology LLP for customized research solution to the potential clients in the field for academics, Research and Development organization, health care and government departments. Dr. Sinha is now Director (Technical) DRT. Dr. Sinha has implemented Anaerobic Bio digester in 100 sites of Northeast India in diverse agro climate from foot hills of Kanchenjunga to Bordering areas of Myanmar. During Covid 19 pandemic situation Dr. Sinha and his team has designed, fabricated and commissioned Covid 19 testing laboratory effluent treatment plant in 3 BSL Laboratories of Nagaland. He has expertise in constructed wetland technology and advanced oxidation process. He is preparing City Sanitation Action Plan and Detailed project report for Used water management for 21 Municipal bodies of Manipur.</p>
<p><b>Andrews Jacob</b> Project Manager, CDD Society</p>	<p><b>Andrews Jacob</b> has more than 20 years of experience in water sector with proven abilities in project management, business development, project conceptualization and design, people-centric (bottom-up) approaches, social innovation, research and development, monitoring, and evaluation. In his professional journey, he has specifically focused on planning and implementing nature-based solutions in wastewater management, fecal sludge management, water body rejuvenation, integrated urban water &amp; natural resources management with expertise in sustainability and with focus on Climate Change. His technical and managerial skills include planning technically sustainable solutions for integrated and innovative water management system and sanitation solutions. His key expertise includes building strategies, development of business and operational models, program and project design, monitoring and evaluation, stakeholder consultation and management, and capacity building. He has extensive exposure in the water sector both within and outside India.</p>

<p><b>Chinmaya Tripathy</b> Environmental Engineer</p>	<p><b>Chinmaya Tripathy</b> is an Environmental Engineer with more than 20 Years of experience in Water Sector with significant national and international exposure. He has been working closely with the Govt. of India, various State Governments in India, (Government of Odisha in Particular since last 10 years) and many bilateral agencies. He is the Project Manager for JICA assisted "Orissa Integrated Sanitation Improvement Project" in Cuttack and Bhubaneswar city which have a project cost of approx. INR 4000 Cr to strengthen the waste water collection, treatment and disposal system in both cities. Currently, Mr. Tripathy is working as the Resident Project Manager at WATCO. He is one of the Governing Board Member of Odisha Water Academy as a Sectoral Expert. Mr. Tripathy and has been a key member of the Mission in the project management from the Concept to the Commissioning of the Mission in Odisha. He will take us through the Odisha's water sector Journey from the Water Scarcity to Water Security in Urban Odisha.</p>
<p><b>Rahul Sachdeva</b> Sr. Program Manager, NIUA</p>	<p><b>Rahul Sachdeva</b>, is an environmental scientist by education and urban environment planner by practice with over 19+ years of experience across countries like India, Bhutan, Bangladesh, Afghanistan and Tanzania. His area of expertise includes citywide planning for urban sanitation, wastewater and solid waste management with focus on integrating decentralized approaches for service delivery with mainstream sanitation planning in urban and peri-urban areas. He has worked at various levels on professional assignments with rich field experience blended with macro level planning projects. He was actively engaged in preparing couple of earliest City Sanitation Plans prepared in India after the launch of National Urban Sanitation Policy in 2008. In this project, Rahul brings on board expertise in non-sewered sanitation for developing the training content and training delivery for capacity building of various urban stakeholders. Prior to joining NIUA, Rahul worked at Consortium for DEWATS Dissemination (CDD) Society (Bengaluru), where he worked with state governments, academic institutes and private sector on aspects of decentralized sanitation planning for urban areas. He has a Masters in Environmental Science and a Bachelors in Bio-chemistry, both from Gujarat University, Ahmedabad. He is fond of music and an avid cricket lover.</p>
<p><b>Mary Abraham</b> Senior Consultant for Mu Gamma Consultants Private Limited</p>	<p><b>Mary Abraham</b> is a qualified professional in the development sector with more than 23 years of experience in India's water and sanitation field. She is currently a senior consultant for Mu Gamma Consultants Private Limited, Gurugram, India after working with The Energy and Resources Institute (TERI) for over 22 years. She is pursuing a Ph.D. in development studies, holds a master's degree in development economics, and has extensive experience in research and advocacy, policy analysis and action plans, impact assessments, monitoring and evaluation, stakeholder consultation and outreach, the development of knowledge products, and capacity building for clients and implementation agencies. In addition to having designed and implemented over 60 research and implementation programs for clients that include corporates, government agencies, and bilateral organizations, her research, and communication skills have also been extensively utilized in the dissemination of scientific evidence through a wide range of mediums, as evidenced by her publications. Over twenty years of involvement in WASH and sanitation, she has designed, implemented, and facilitated capacity enhancement programs and enabled stakeholder engagement for several national and corporate WASH programs across the country.</p>

## Annexure 4: Feedback from Participants

Feedback forms were distributed among the participants to assess the outcome of workshop.



**Sustainable Cities Integrated Approach Pilot in India (SCIAP)**  
Component 3: Partnerships, Knowledge Management & Capacity Building

**Capacity Building Workshop for ULB Officials**  
Mysuru

on

# URBAN WATER MANAGEMENT

Date: \_\_\_\_\_

### FEEDBACK FORM

Name of the Participant \_\_\_\_\_ (Optional)

Name of the Municipal Corporation \_\_\_\_\_ (Mandatory)

**1. How useful was the workshop for you?**


Extremely Useful  
 Very Useful  
 Somewhat Useful  
 Not so Useful

**2. How would you rate the following workshop components from 1-5? (where 1 is Average and 5 is Excellent)**

Workshop Components	1 Average	2 Satisfactory	3 Good	4 Very Good	5 Excellent
The overall training experience					
The training content for the day					
The balance between theory and practice					
The quality of materials, e.g. presentations, exercises, training modules					
The training's delivery and efficiency					

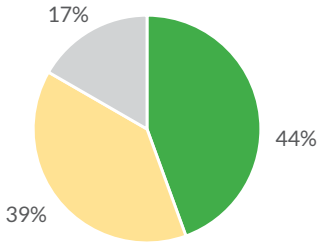
  

To what extent do you agree to the following:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The subject matter was presented effectively					
The lectures were structured and well organized					
The course contents met with your expectations					
The duration of the training program was sufficient for the topics covered					
As a result of this training program, I gained new knowledge applicable to my work					
I plan to apply what I learned in this training					



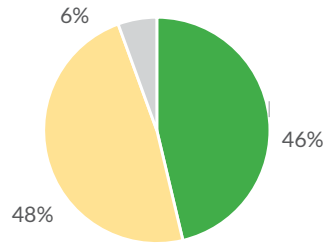
Feedback forms were filled out by the participants and they have answered questions regarding various workshop components - technical sessions, course contents, lecture delivery, and the application/implementation of gained knowledge. The following graphs depict the overall feedback received for said components over the three-day capacity building program.

The overall training experience



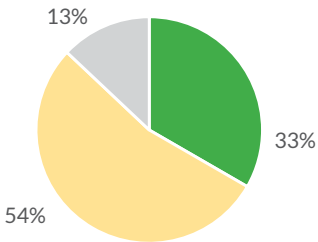
Very Good to Excellent Good Satisfactory

The training content for the day



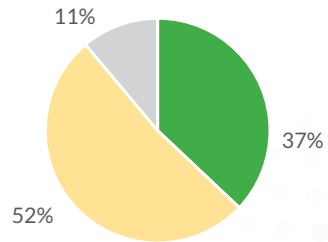
Very Good to Excellent Good Satisfactory

Balance between theory and practice



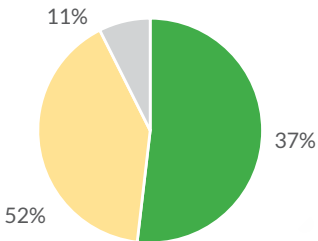
Very Good to Excellent Good Satisfactory

Quality of materials



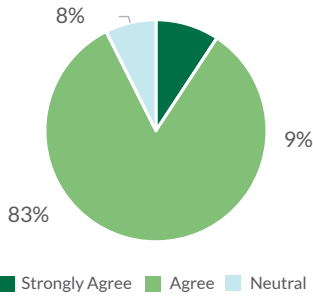
Very Good to Excellent Good Satisfactory

Training delivery and efficiency

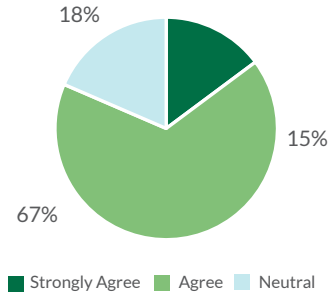


Very Good to Excellent Good Satisfactory

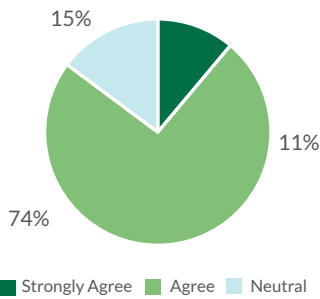
Subject matter was presented effectively



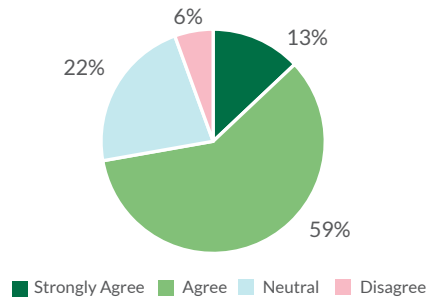
Lectures were structured and well organised



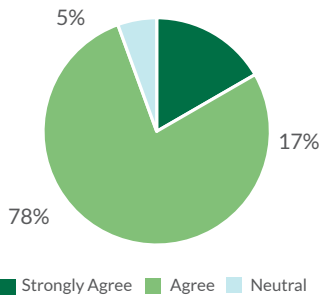
Course contents met with your expectations



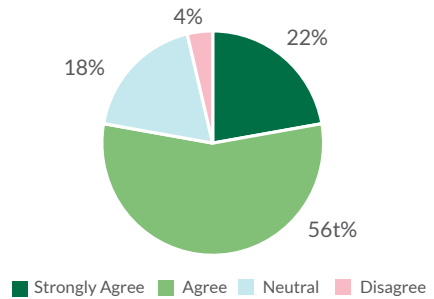
Duration of training program was sufficient



Gained new knowledge



I plan to apply what I learned in this training



## Annexure 5: Learning Progress Evaluation Forms

To evaluate the learning progress, pre-workshop and post-workshop forms were distributed among the participants to assess the impact of training on each topic covered. The learning progress evaluation forms given for solid waste management is shown below.



### Sustainable Cities Integrated Approach Pilot in India (SCIAP) Component 3: Partnerships, Knowledge Management & Capacity Building

### Capacity Building Workshop For ULB Officials Mysuru

### on Solid Waste Management

Dates: 24<sup>th</sup> to 26<sup>th</sup> August, 2022

Venue: Administrative Training Institute (ATI), Mysuru

### Learning Progress Evaluation [Pre-workshop Questionnaire]

Dear participant!

We kindly request you to answer the following questions so that we will be able to measure and report the learning effect of our capacity building program. You will be asked the same questions again after the workshop.

Name : \_\_\_\_\_

Designation: \_\_\_\_\_

Rate your knowledgeable about:	1 Below Average	2 Average	3 Satisfactory	4 Good	5 Very Good
City-wide strategy and planning for SWM (Group Exercise)					
Integrating Waste pickers for Sustainable Solid Waste Management – Case Studies					
Circular Economy in dry waste management & business models					
E-waste management, Plastic waste management – Innovative practices in India					
Construction and Demolition Waste Management					
Construction and Demolition Waste Management					
Management of legacy waste – Challenges, Solutions and Case Studies					
SW-APT tool for GHG estimation					

Thank you for your valuable feedback!





**Sustainable Cities Integrated Approach Pilot in India (SCIAP)**  
 Component 3: Partnerships, Knowledge Management & Capacity Building

**Capacity Building Workshop For ULB Officials**  
**Mysuru**

on

**Solid Waste Management**

Dates: 24<sup>th</sup> to 26<sup>th</sup> August, 2022

Venue: Administrative Training Institute (ATI), Mysuru

**Learning Progress Evaluation [Post-workshop Questionnaire]**

Dear participant!

We kindly request you to answer the following questions so that we will be able to measure and report the learning effect of our capacity building program. You will be asked the same questions again after the workshop.

Name : \_\_\_\_\_

Designation: : \_\_\_\_\_

Rate your knowledgeable about:	1 Below Average	2 Average	3 Satisfactory	4 Good	5 Very Good
City-wide strategy and planning for SWM (Group Exercise)					
Integrating Waste pickers for Sustainable Solid Waste Management - Case Studies					
Circular Economy in dry waste management & business models					
E-waste management, Plastic waste management - Innovative practices in India					
Construction and Demolition Waste Management					
Construction and Demolition Waste Management					
Management of legacy waste - Challenges, Solutions and Case Studies					
SW-APT tool for GHG estimation					

Thank you for your valuable feedback!







# Annexures



## Annexure 6: List of participants

List of participants for Ground Functionaries Workshop

S.no	Name	Designation
1	Srinivas	Door to Door Helper
2	Shivappa B	Sweeper
3	Ragu B	Door to Door Helper
4	Ramchandra	Door to Door Helper
5	Hanumesh B G	Underground Drainage Worker (UGD)
6	Mohan	Driver
7	Arumugham	Door to Door Helper
8	Ravi	Door to Door Helper
9	Rakesh	Door to Door Helper
10	Chethan Kumar	Driver
11	Ganesh M	Underground Drainage Worker (UGD)
12	Mahadeva	Door to Door Helper
13	Ramkrishna	Sweeper
14	Ganesh P	Door to Door Helper
15	Pappamma	Sweeper
16	Ganesh	Door to Door Helper
17	Ravi	Door to Door Helper
18	Manjunath	Door to Door Helper
19	Vekatesh	Driver
20	Shivraj	Door to Door Helper
21	Somu	Driver
22	Parvathi	Sweeper
23	Nagraj HM	Sweeper
24	Krishna	Door to Door Helper
25	Rajamma	Sweeper
26	Babhu	Door to Door Helper
27	Vijay	Door to Door Helper
28	Nagraj	Door to Door Helper
29	Palani N	Sweeper
30	Ramesh	Sweeper
31	Balraj	Driver
32	Prema	Waste Picker
33	Geetha	Waste Picker

S.no	Name	Designation
34	Hemalatha	Waste Picker
35	Bhanumathi	Waste Picker
36	Monika	Waste Picker
37	Subramanya	Underground Drainage Worker (UGD)
38	Ramswamy	Underground Drainage Worker (UGD)
39	Narsimha	Sweeper

## Day - 1

Module 1- Enhancing Leadership for frontline workers to create an inclusive workplace				
S.No	Session	Time	Agenda	Resource Person
1	Registration	9.00-9.30 a.m	Registration	Team
2	Orientation Session	9.30-10.00am	Welcome Note and Introduction	Ms. Archana
3	Session 1	10.00-10.30am	Importance of Self-Identification &	Ms. Archana
	Session 2	10.30am- 11.00 a.m	Awareness Building Regarding Various Provisions and Laws	Ms. Meenakshi
		<b>11.00-11.15am</b>	<b>Tea Break</b>	
4	Session 3	11.15-12.00pm	Enhancing communication skill for social mobilization & community engagement	Ms. Archana
5	Session 4	12.00-1.30pm	Stress Management & activity	
6	Session 5	1.00-1.30 p.m	Gender Sensitization	Ms Meenakshi
		<b>1.30pm</b>	<b>Lunch</b>	

## Day 2

Module 2- Social Security Provisions and Schemes for Ground Functionaries				
S.No	Session	Time	Agenda	Resource Person
1	Registration	9:30-10.00 a.m	Registration and Recap	Team
2	Session 1	10.00-11.00am	Introduction to Social security & Quiz on Social security programmes	Ms. Sridevi
		<b>11.00-11.15am</b>	<b>Tea Break</b>	
3	Session 2	11.15-12.00pm	Snapshots of Social security schemes – EPF	Mr. Harish
4	Session 3	12.00-1.30pm	Application Process and actual filling of application	Ms. Sridevi
		<b>1.30pm</b>	<b>Lunch</b>	

## Day 3

Module 3- Occupational Health and Safety of Ground Functionaries				
S.No	Session	Time	Topics	Speakers
1	Registration	9:30-10.00 a.m	Registration and Recap	Team
2	Session 1	10.00-10.30am	Familiarising with Personal Protective Equipment (PPE)	Ms. Nirmala
3	Session 2	10.30-11.00 a.m	Introduction & Group Building	Ms. Nirmala
		<b>11.00-11.15am</b>	<b>Tea Break</b>	
4	Session 3	11.15-12.00pm	Understanding why Workers Do Not Like to Use PPE	Ms. Nirmala
5	Session 4	12.00-1.00 p.m	Informing Workers about the Usage of PPE and Distribution of PPE kits	Ms. Nirmala
7		1.00-1.30pm	Valedictory	Team
		<b>1.30pm</b>	<b>Lunch</b>	













## Resources and Waste



National Institute of Urban Affairs

### **National Institute of Urban Affairs**

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