

Strategic Plan for Capacity Building on Non-Sewered Sanitation in Uttarakhand

Learning Impact Assessment Study



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CONTACT

National Institute of Urban Affairs

1st and 2nd Floor Core 4B,

India Habitat Centre, Lodhi Road,

New Delhi 110003, India

Website: www.niua.org, scbp.niua.org

E-Mail: scbp@niua.org

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01



State Engagement in Uttarakhand: An Overview





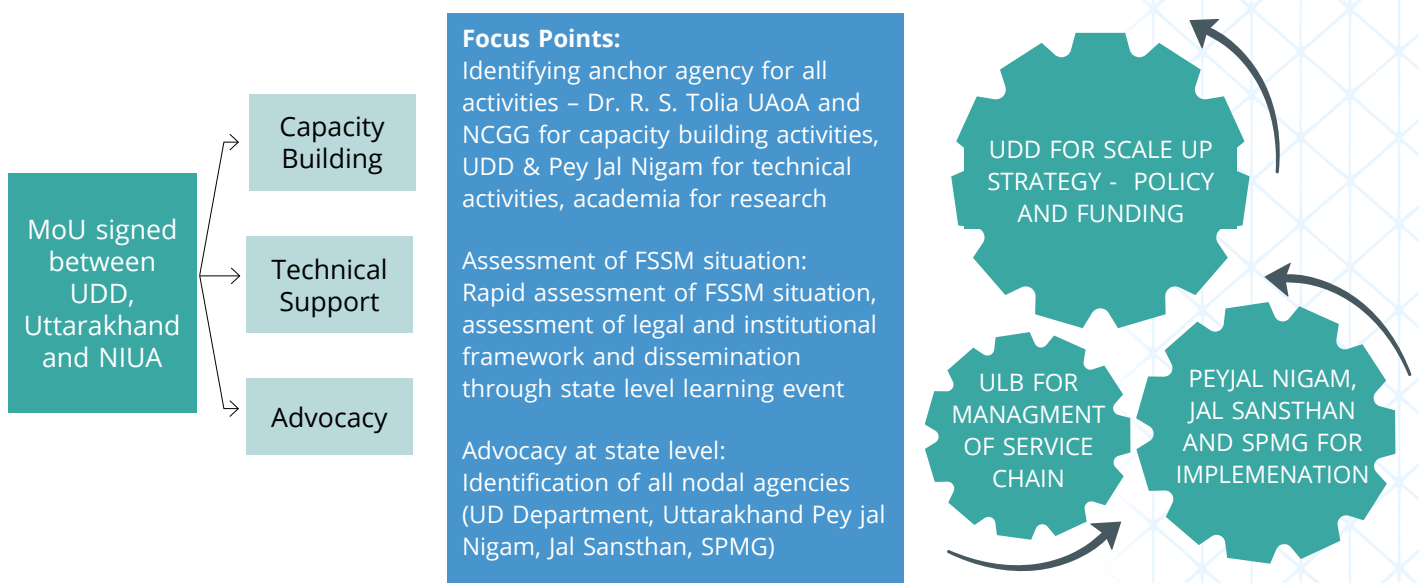
State Engagement in Uttarakhand: An Overview

1.1 About Sanitation Capacity Building Platform

Sanitation Capacity Building Platform (SCBP) is an initiative of the National Institute of Urban Affairs (NIUA).

NIUA's SCBP team is supporting Urban Development Department (UDD), Government of Uttarakhand in implementing and scaling effective septage management through building capacities of state and city officials. A dedicated team based in Dehradun is helping state in septage management through technical assistance, capacity development and policy and advisory support in the state.

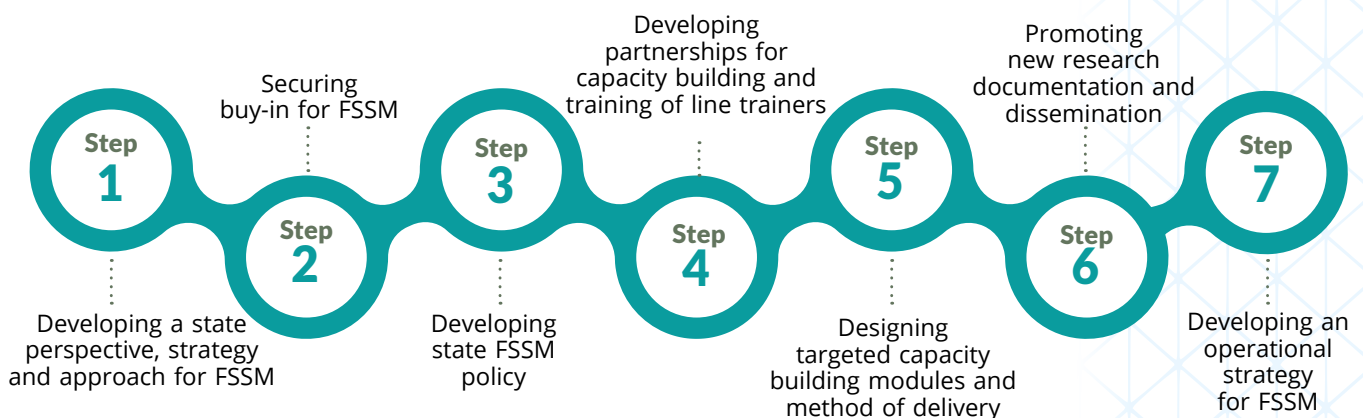
Figure 1: NIUA's engagement in Uttarakhand



1.2 State Normative Framework

SCBP has developed a State Normative Framework for capacity building of states in the area of sanitation and in particular Faecal Sludge And Septage Management (FSSM). This is a non-prescriptive framework where a series of approaches have been suggested for supporting states in adopting non-sewered sanitation and also to help support organizations decide where intervention is required. Figure 2 gives an overview of this framework.

Figure 2: State Normative Framework



1.3 Applying the State Normative Framework in Uttarakhand

SCBP's engagement in Uttarakhand follows the State Normative Framework. The NIUA team partnered with Urban Development Department, Government of Uttarakhand in mainstreaming effective septage management and in supporting scaling up of appropriate solutions.

1.3.1. Developing State Perspective and Securing Buy-in for FSSM

- a. Two studies were conducted covering 13 cities to understand the existing sanitation scenario in the state. The studies helped understand the context specific issues and challenges for sanitation. The reports highlighted the need for mainstreaming safe faecal sludge and septage management.

Figure 3: Reports prepared by NIUA team to analyze the existing situation of Uttarakhand

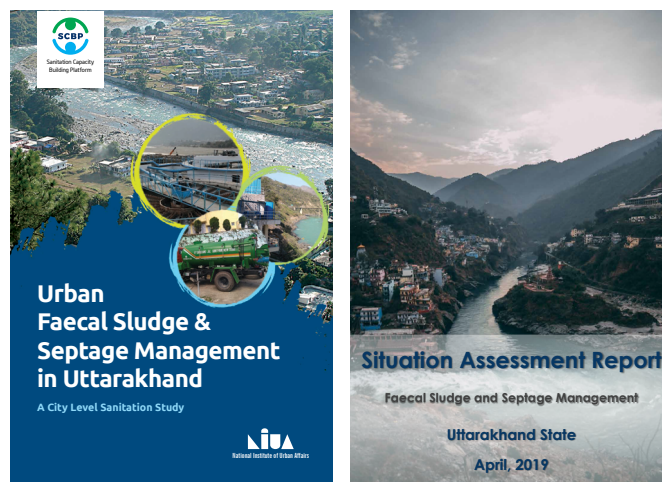


Figure 4: Images showing FSSM situation of Uttarakhand, 2020



- b. Consultation meeting and exposure visits were conducted for key decision makers in the state. These engagements helped prioritize FSSM at the state-level and develop an understanding on the kind of solutions needed for mainstreaming FSSM.

Figure 5: Consultation meets and exposure visits conducted by NIUA

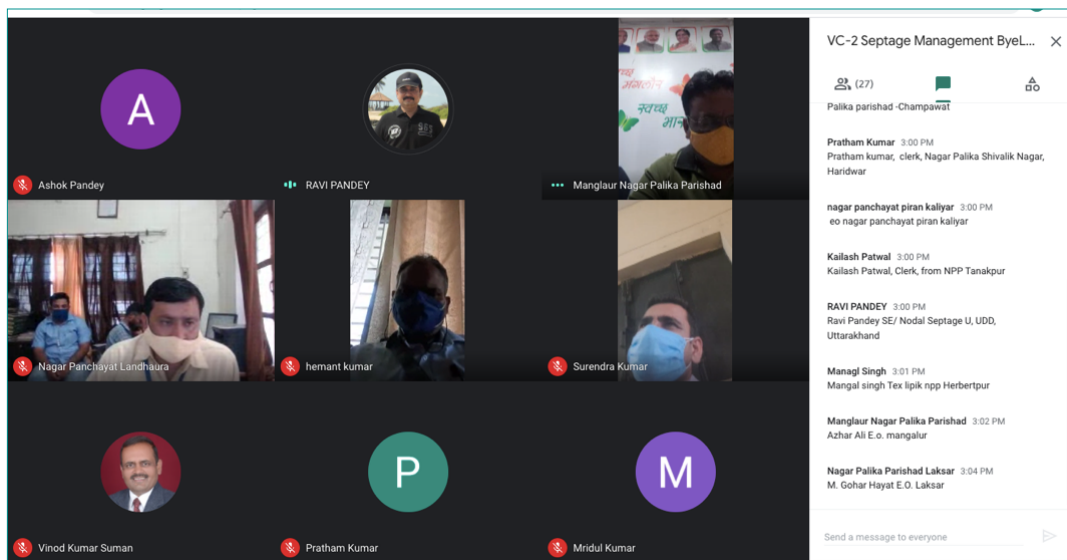


1.3.2. Developing State Policy

Uttarakhand had issued a State Septage Management Protocol in 2017 which provided a framework for Urban Local Bodies (ULBs) for implementing FSSM. The protocol covers the entire sanitation value chain and provides solutions for each part of the chain.

The state further issued an advisory for operationalizing the septage management protocol which provides a guide for ULBs in implementing FSSM. Virtual meetings were conducted with ULBs to monitor and assess the septage management progress in different cities.

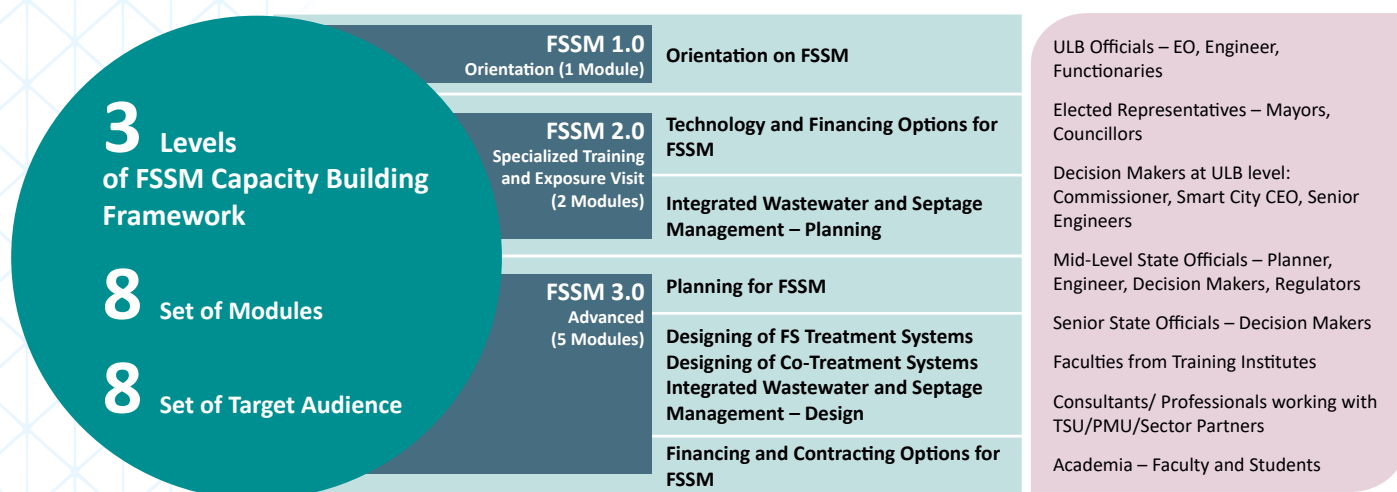
Figure 6: Video Conference organized by NIUA to assess the progress of ULBs in Uttarakhand



1.3.3. Designing targeted Capacity Building plan in Uttarakhand

NIUA partnered with the state nodal training institute, i.e., Dr R S Tolia Uttarakhand Academy of Administration (UAoA). A training calendar based on the priorities of the state was prepared and finalized in consultation with state officials. The training strategy targeted all major stakeholders in the state.

Figure 7: Targeted Capacity Building Plan for Uttarakhand



Orientation module of FSSM for city-level officials and advanced training for co-treatment of septage in existing STPs were the priority modules for the state. This is due to the fact that the majority of the cities are in the process of operationalizing the recommendations of the Septage Management Protocol (2017) and would benefit from the orientation module. Considering the state has more than 60 operational STPs covering a substantial portion of the urban population, co-treatment of septage in STPs is a priority for the state and hence the advanced module on co-treatment of septage in STP has been prioritized in the state. The details of the trainings conducted by NIUA in Uttarakhand is provided in Chapter 2.

The status of the trainings conducted in Uttarakhand is provided in the table below:

Table 1: Uttarakhand Trainings Status

Planned Activity	Status until April 2021	Modifications
1 National and 1 State- level learning event on decentralized sanitation solutions for Uttarakhand	✓	-
5 Orientation trainings for all 91 ULBs	✓	1 classroom and 6 online trainings conducted
1 Advance Design (classroom)	✓	Conducted online due to COVID-19
2 Co-treatment (classroom)	✓	1 Online and 1 Classroom
3 Exposure Visits	✓	1 conducted, 2 Exposure visit delayed due to COVID-19
Academia consultation	✓	Yet to conduct

Considering the priorities in the state to align with the new national missions, NIUA plans to promote the Integrated Wastewater and Septage Management (IWSM) module. The module focuses on greywater management in addition to septage management. Basic and advanced level courses would be targeted towards relevant stakeholders to help the state achieve targets under the national missions.

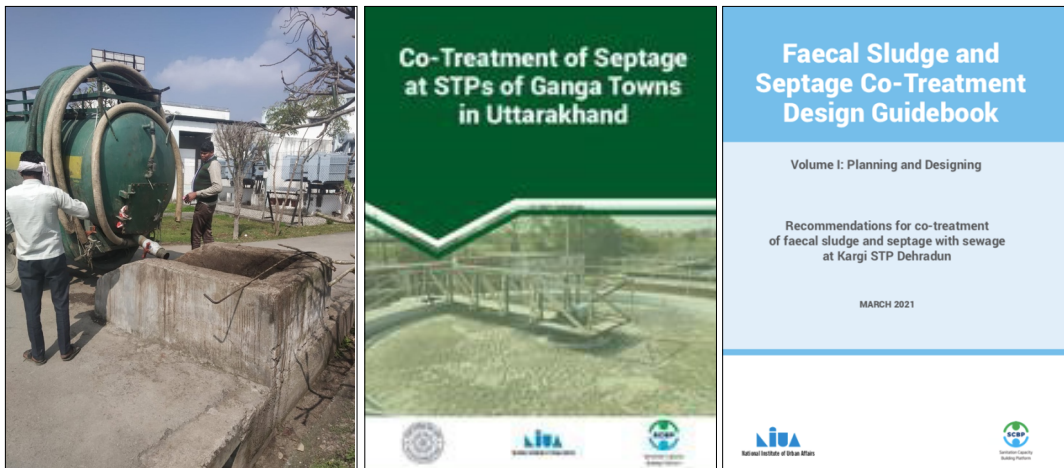
1.3.4. Promoting research and documentation

Considering that co-treatment of septage in STPs is a priority in Uttarakhand, NIUA's focus on research was to study how addition of septage impacts the performance of the STPs and how septage can be safely disposed of in an STP.

In partnership with IIT Roorkee, research studies were conducted to understand the impact of co-treatment of faecal sludge in STPs in Ganga cities of the state. The report was cited by the state in finalizing the co-treatment strategy in the state.

NIUA team further conducted a detailed technical assessment of the 68 MLD STP in Dehradun for co-treatment of faecal sludge and recommended co-treatment approach for the STP. Based on this study, a guidebook has been prepared by NIUA team to help and guide engineers in the state in effectively co-treating septage in STPs.

Figure 8: Research and documentation work conducted by NIUA

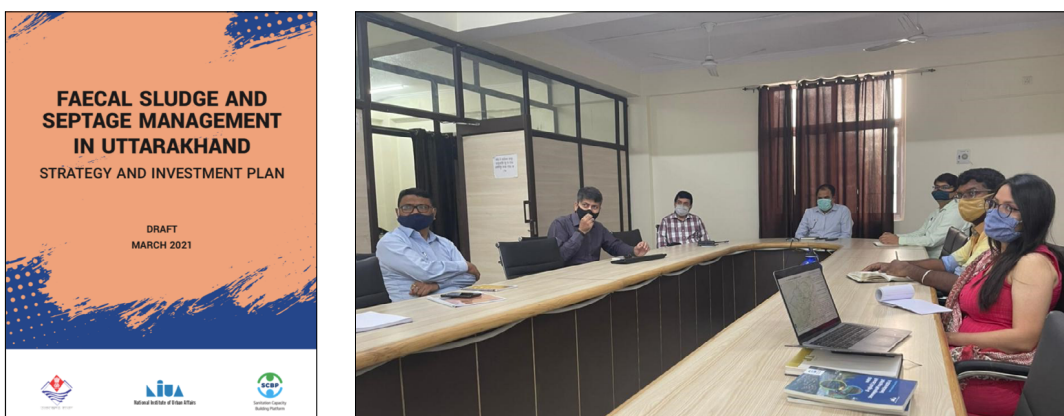


1.3.5. Developing FSSM operational strategy in the state

The SCBP team helped develop an operational strategy and investment plan for FSSM in the state. The strategy prioritizes co-treatment of faecal sludge in STPs since Uttarakhand, being a Ganga state, has a significant number of STPs being constructed under the Namami Gange Mission. The strategy proposes clustering for optimal utilization of proposed and existing facilities. Further, Deep Row Entrenchment (DRE) has been considered as an interim solution for disposal of septage till a treatment facility is available for the city.

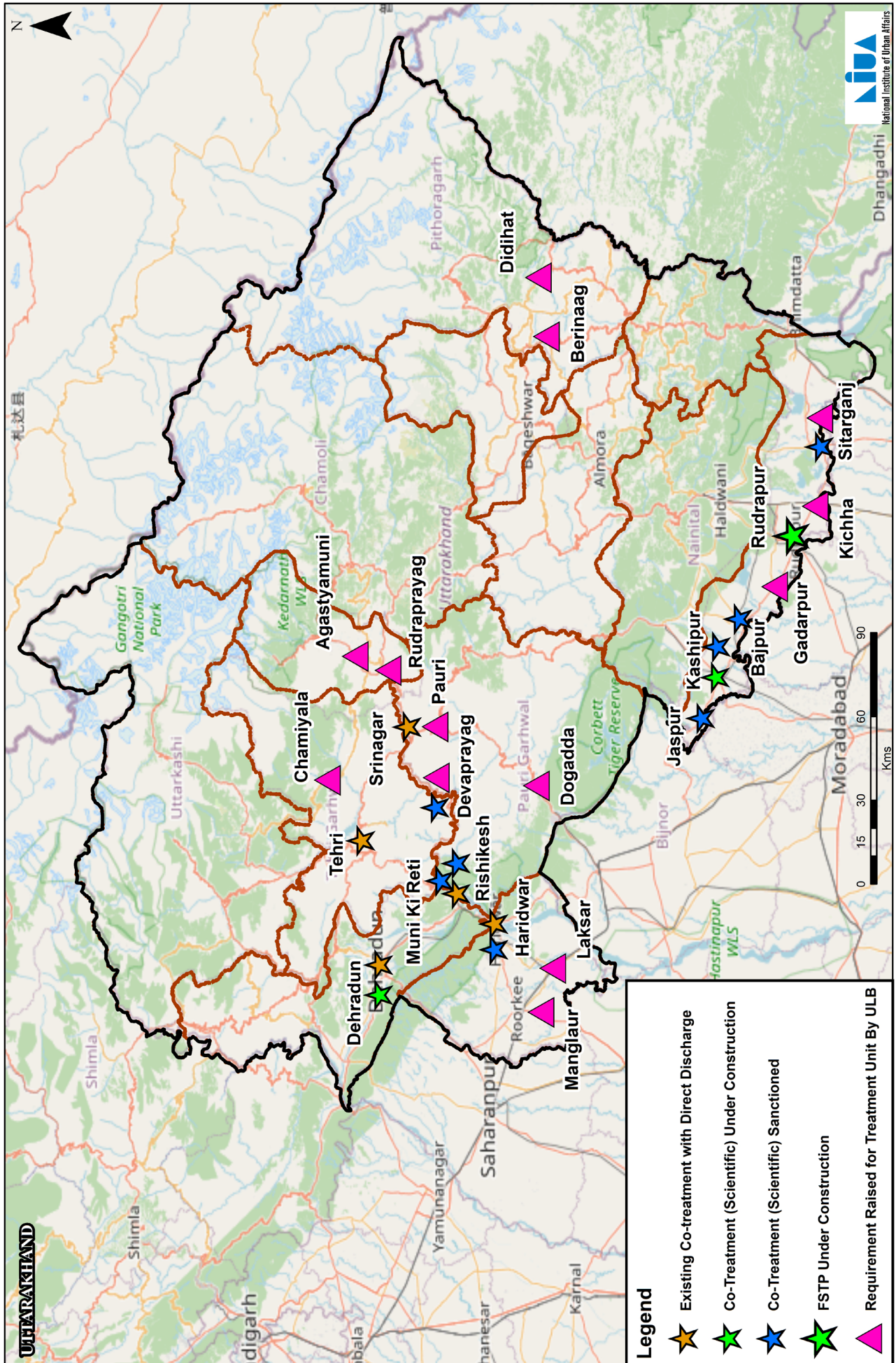
A consultation has been conducted with UDD, Uttarakhand to align the FSSM strategy and leverage it with the national missions including SBM (2.0) and Jal Jeevan Mission (Urban) as well as using funds available from 15th Finance Commission to ensure scaling up of septage management in the state.

Figure 9: State FSSM operational strategy developed by NIUA with UDD, Uttarakhand

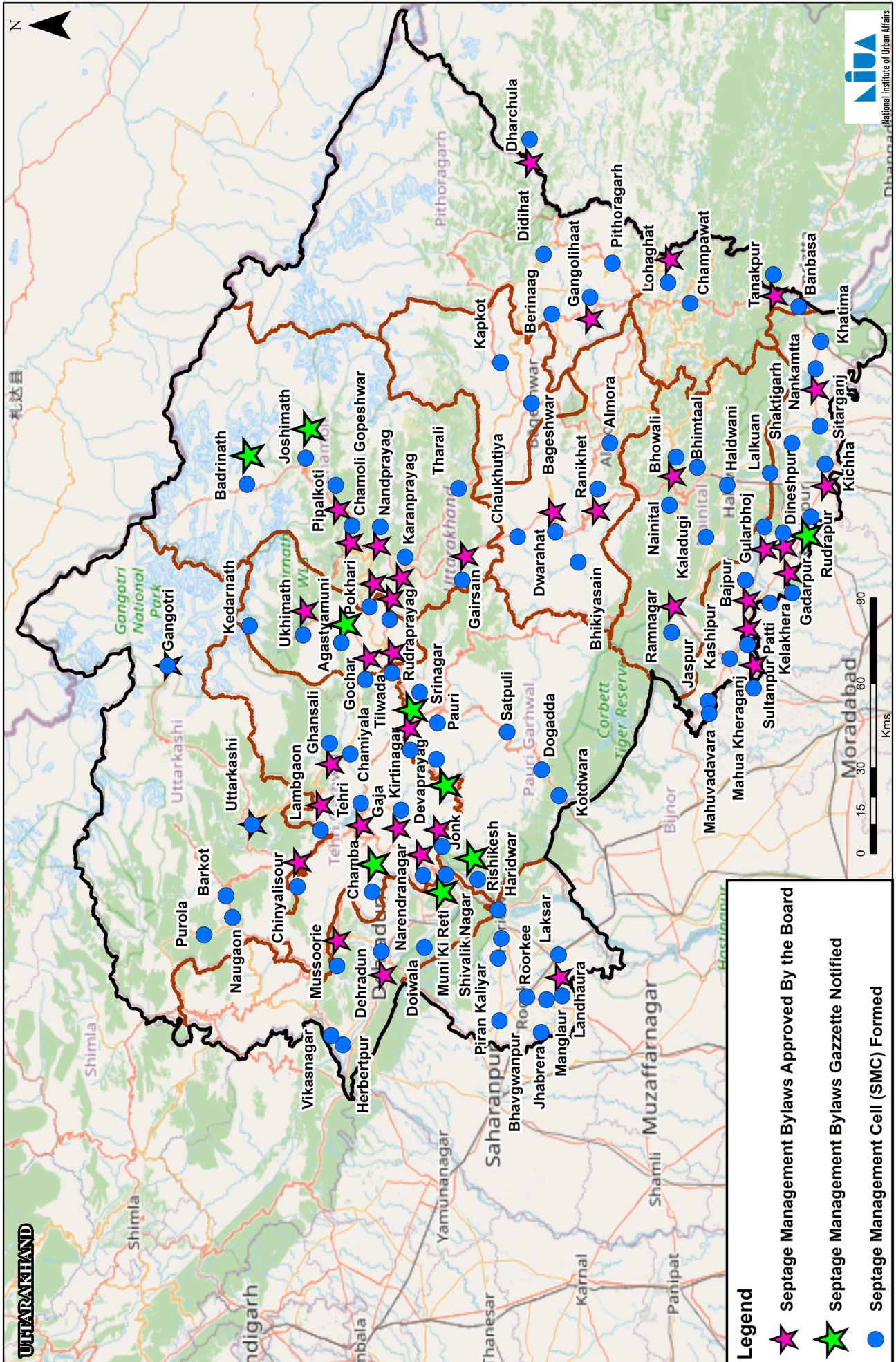


As of June 2021, a total of 281 officials from 81 cities from various departments have completed training programmes conducted by NIUA in Uttarakhand. These training programmes include basic level FSSM orientation trainings, advanced trainings for designing of co-treatment facility and dedicated FSTP and exposure visits cum training.

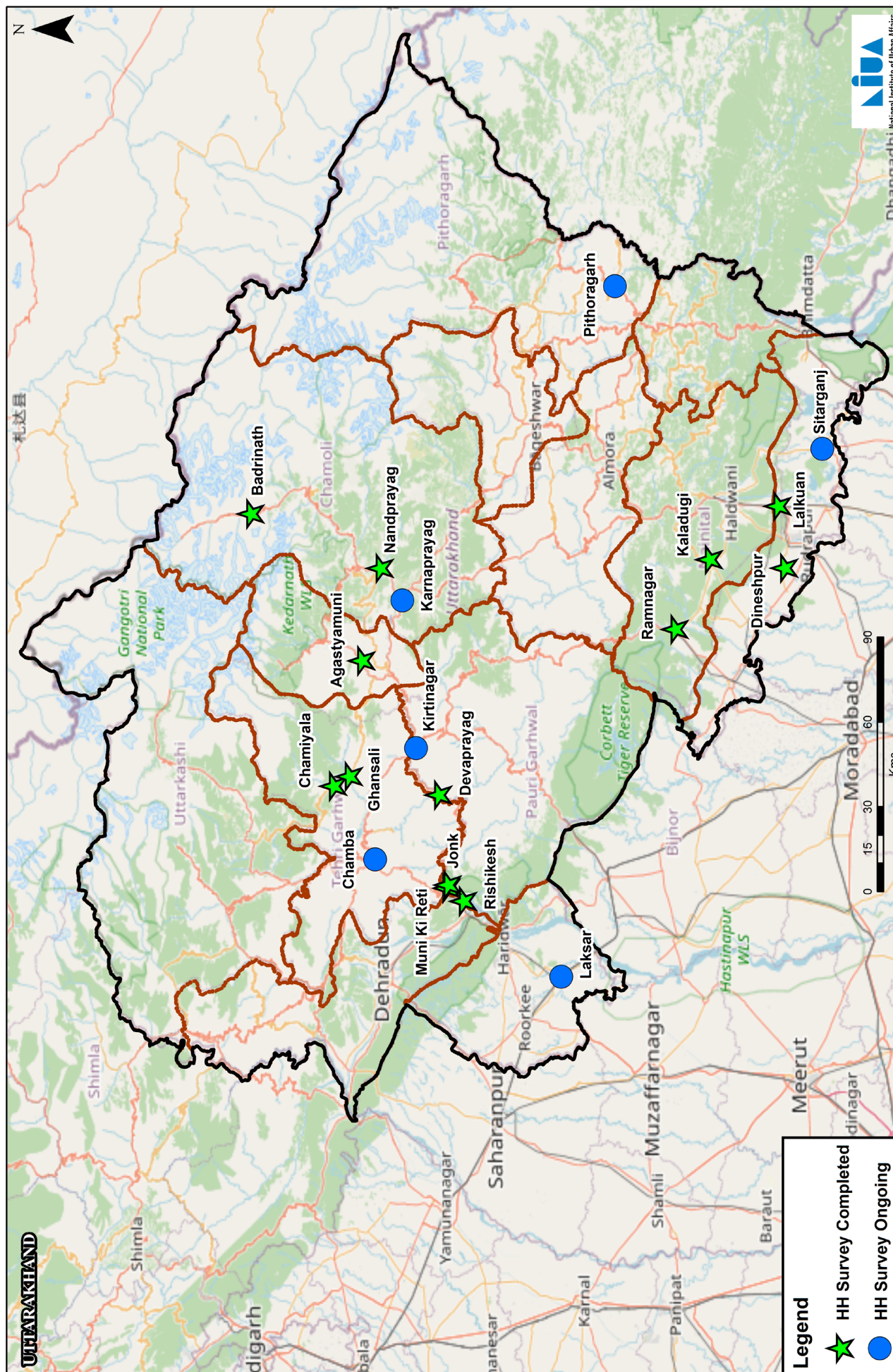
Map 1: Projects Under Implementation, Uttarakhand 2021



Map 2: Status of SMC and FSSM Bylaws, Uttarakhand as on August 2021



Map 3: Status of Household Surveys, Uttarakhand as on August 2021



Some key on-ground work implementation/progress status:

- The state has made significant progress in implementation of Septage Management Protocol 2017. **Total 91 urban local bodies in the state have formed Septage Management Cells (SMC)**. This committee headed by SDM / Municipal Commissioner has representatives from Pey Jal Nigam and Pey Jal Sansthan. The ULBs have been actively engaging in planning septage management solutions through SMCs.
- **87 ULBs have initiated the process of drafting and notifying Septage Management Byelaws** to ensure city-level regulations for enforcing effective septage management across the state. **In 9 cities the Septage Management Byelaws have been notified and in 26 cities the same has been approved by the board.**
- **13 ULBs have completed door-to-door household surveys** to maintain the records of onsite containment systems and their typology. This is ongoing in 6 more ULBs.
- **DPRs have been prepared by Pey Jal Nigam/Jal Sansthan for co-treatment of faecal sludge in Dehradun, Rishikesh, Haridwar and Muni-ki-Reti and has received approval by NMCG for funding.**
- **A 125 KLD capacity Faecal Sludge Treatment Plant (FSTP) as a pilot project in Rudrapur is under-construction with AMRUT funding.** This plant will additionally cater to the cluster of nearby cities within 20-25 km road distance.
- **A 130 KLD co-treatment facility has received funding to be implemented at the 68 MLD STP at Kargi Chowk Dehradun.** The STP currently serves 25-30 cesspool vehicles from domestic and non-domestic settlements every day.
- **Lalkuan Municipality in Nainital district of Kumaon division took its own initiative to use 14th Finance Commission funds for implementing a Faecal Sludge Treatment Plant.** The plant has not been commissioned as of June 2021. NIUA conducted field visits and provided technical recommendations for operationalizing the plant.

02



NIUA Trainings Conducted in Uttarakhand





Training Programs Conducted in Uttarakhand

2.1 Process followed for the training programs

This section discusses the processes followed while implementing SCBP training programs in Uttarakhand. The main steps involved are explained in the tables below. The table lists out steps typically followed during face-to-face trainings conducted by NIUA. Some processes might not be applicable for online training.

Table 2: Steps involved in Initiation of a training

S. No.	Steps Involved	Process followed
1	Finalization of training calendar	NIUA in consultation with Urban Development Department (UDD), finalizes the training calendar and has partnered with the state nodal training institute, Dr. R. S. Tolia UAoA, Nainital, for conducting these trainings with an objective of institutionalizing the same in the state.
2	Calling nominations for the year/ quarter covered	Urban Development Directorate writes to all the Urban Local Bodies after request from UAoA and NIUA.
3	Designing schedules/ modules	EcoSan Services Foundation, Pune was the technical partner for implementation of these trainings in partnership with NIUA. The schedules and modules were finalized through a consultative process as part of the TMRC process which includes partner agencies from across the country.
4	Finalization of program schedule	NIUA and UAoA mutually finalize the dates for training calendar in consultation with UDD.
5	Inviting resource persons for different sessions	NIUA and UAoA write to resource persons/trainers for the session delivery.
6	Requesting for boarding and lodging	UAoA/other partner organizations look after all the boarding and lodging arrangements.
7	Preparation of reading material	NIUA prepares the reading material for the event.
8	Preparation of field visits (if required)	NIUA and partner organizations look after the necessary field visit arrangements.

Table 3: Steps involved in Conduction of a training

S. No.	Steps Involved	Process followed
1	Registration of participants	UAoA follows-up with nominated officials via email/phone for registration of participants.
2	Briefing about course	NIUA and UAoA brief about the training and overall agenda.
3	Session delivery	Sessions are delivered by resource persons from NIUA or partner organizations.
4	Getting feedback from participants everyday	Feedback forms are shared with participants during the last session of the training.
5	Generating certificates and reading materials	Certificates and further reading material are provided to the participants at the end of the training.

Table 4: Steps involved in collecting post training feedback

S. No.	Steps Involved	Process followed
1	Follow-up after atleast 2 months post the completion of training	NIUA team reaches out to a sample number of training participants through email.
2	Taking written feedback	Follow-up with respondents to complete the form online.
3	Taking verbal feedback	Telephonic feedback of select respondents.

2.2 Summary of NIUA trainings conducted

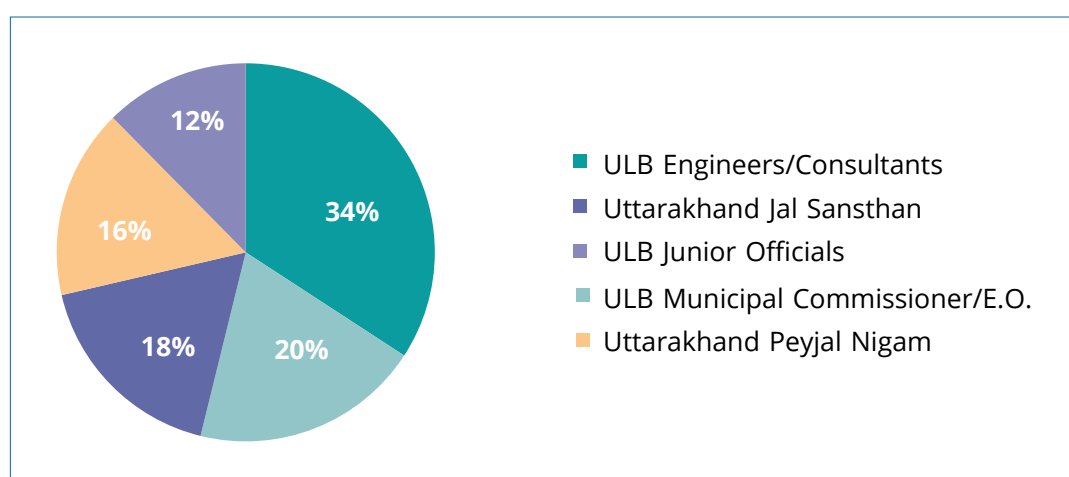
As of June 2021, a total of 281 officials from 81 cities from various departments have completed training programmes conducted by NIUA in Uttarakhand. These training programmes include basic level FSSM orientation trainings, advanced trainings and exposure visits.

The details of the trainings, including profile of participants are mentioned in the sections below.

1. Orientation trainings on FSSM

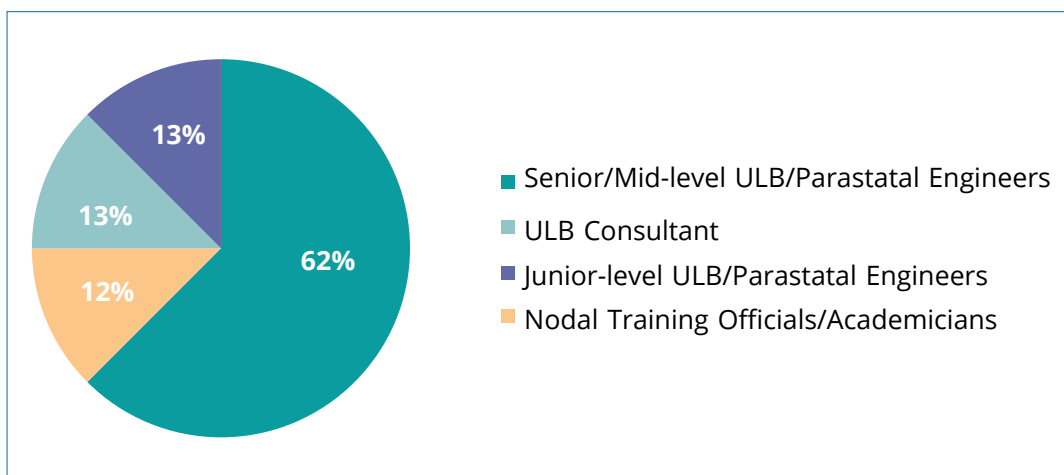
- **Brief training description:** A basic level course with the objective of providing participants with an introductory level understanding of issues, challenges and solutions for effective Faecal Sludge and Septage Management.
- **Number and mode of trainings:** 6 trainings conducted in online mode and 1 in face to face mode.
- **Profile of participants:** Being a basic level module, the focus was to include officials from all levels working in Urban Local Bodies which include Executive Officers, Junior and Mid-Level engineers, Sanitary Inspectors, SBM and AMRUT nodal officers. Uttarakhand Jal Sansthan and Pey Jal Nigam being the nodal agencies for planning and implementing Faecal Sludge and Septage Treatment Facilities (i.e., FSTP / SeTP) were also included in these trainings.

Figure 10: Participation Summary: Orientation Trainings



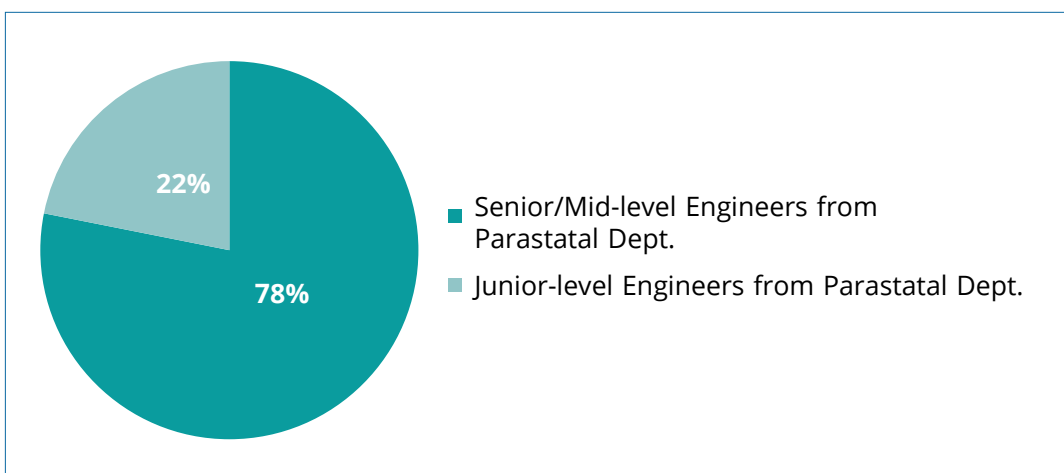
One online advance training on Design of Treatment Systems for FSSM was organized for professionals/ engineers who deal with planning, designing, operating or managing faecal sludge and septage treatment systems – Engineers from parastatal agencies/ Urban Local Bodies, consultants working with state level Technical Support Units.

Figure 11: Participation Summary: Advanced Training on Design of Treatment Systems



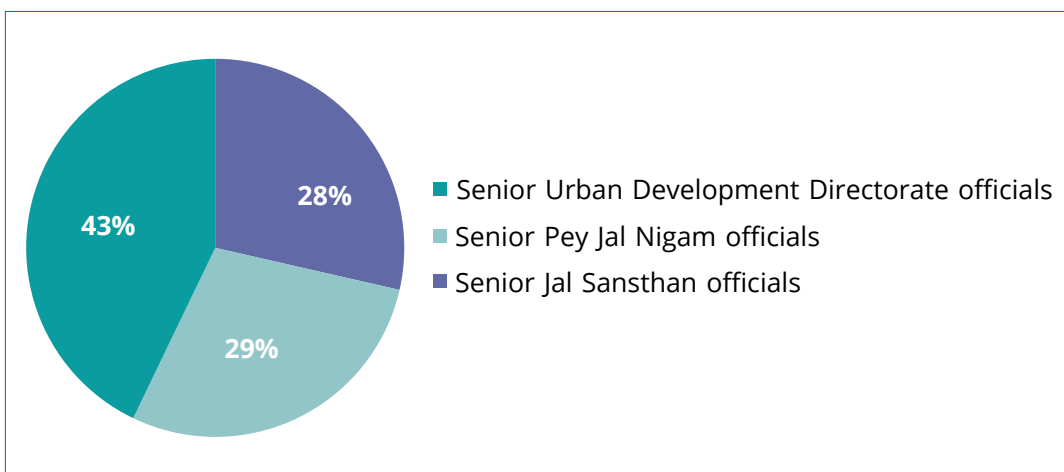
2. An advance training program on co-treatment of FSS in STPs of Uttarakhand was organized for engineers from Pey Jal Nigam and Jal Sansthan who are involved in planning and implementation of STP projects. Two trainings were conducted which included one face-to-face training and one through online mode.

Figure 12: Participation Summary- Advanced Training on Co-Treatment of FSS in STPs



3. A two-day Exposure Visit on Faecal Sludge and Septage Management was organized for senior officials from various deparats of Uttarakhand. 7 senior officials from UDD, Pey Jal Nigam and Uttarakhand Jal Sansthan participated in this exposure visit.

Figure 13: Participation Summary- Exposure Visit

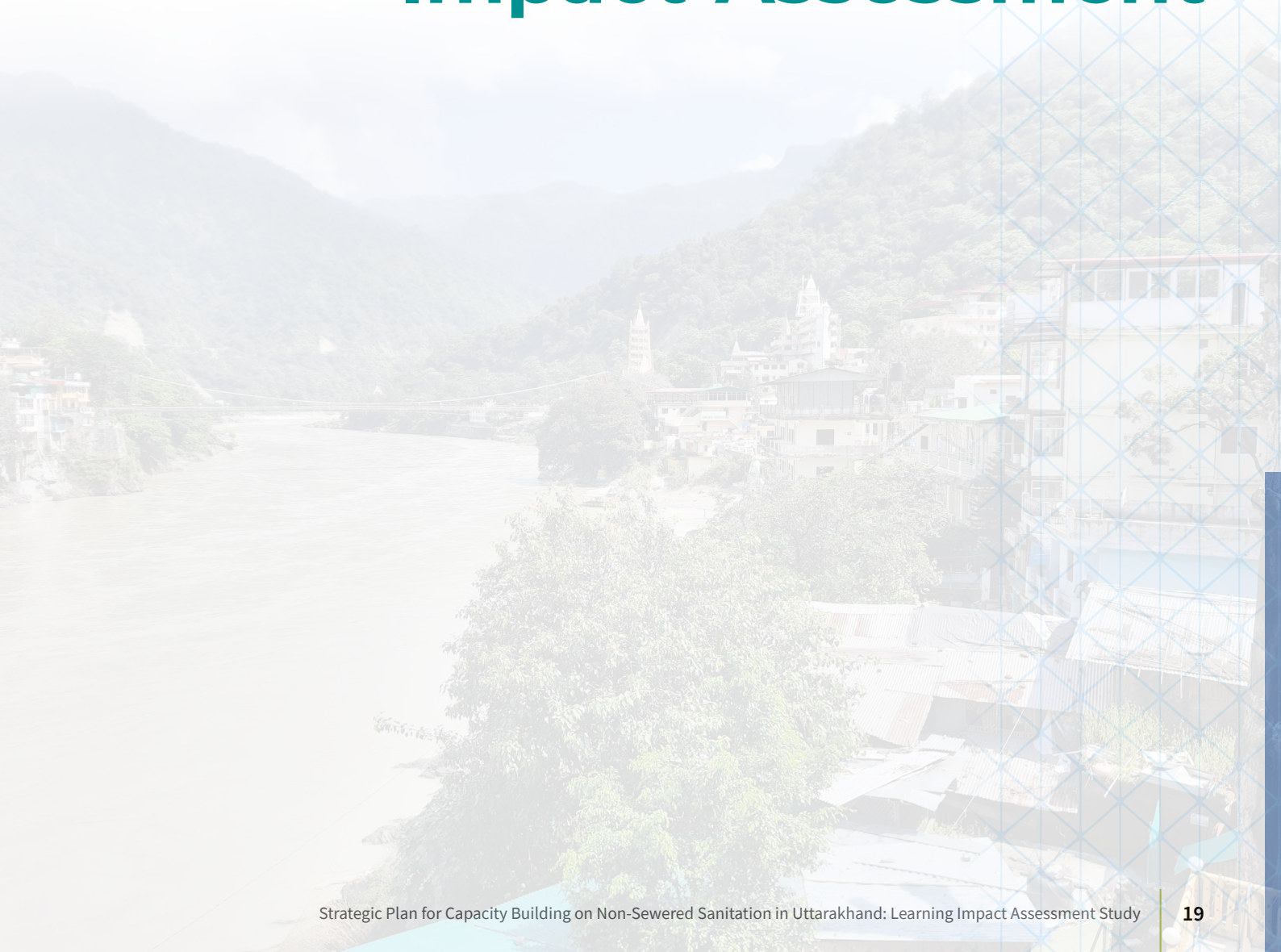




03



Approach and Methodology for Learning Impact Assessment





Approach and Methodology for Learning Impact Assessment

3.1 Aim and objective of the study

The capacity of state and city officials have a direct bearing on the lives of people in terms of program implementation as well as delivery of benefits. The trainings conducted as part of NIUA has a direct effect on the knowledge, skill and attitude of the officials. In order to help institutionalize these trainings and roll-out more such activities, it was found necessary to evaluate the impact of these trainings with a view to reflect upon as well as to initiate improvement for future programs.

This assessment aims to study how the trainings conducted by NIUA in Uttarakhand helped participants in their area of work and contributed towards the progress of implementation of Faecal Sludge and Septage Management in Uttarakhand. The assessment is based upon the following responses from the training participants.

1. Feedback during training closing session: Forms filled as well as verbal feedback during the closing session of the training and subsequent post training survey of selected sample of participants.

2. Post training impact survey: Based on representative sample of participants

The specific objectives of the post-training sample study are:

- i. To study the feedback on trainings conducted by NIUA, in Uttarakhand to examine how these trainings have helped the participants in their area of work.
- ii. Review the design of training courses, content and delivery methodology for training and possible course corrections.
- iii. To strategize upon the next phase of capacity building initiative in the state.

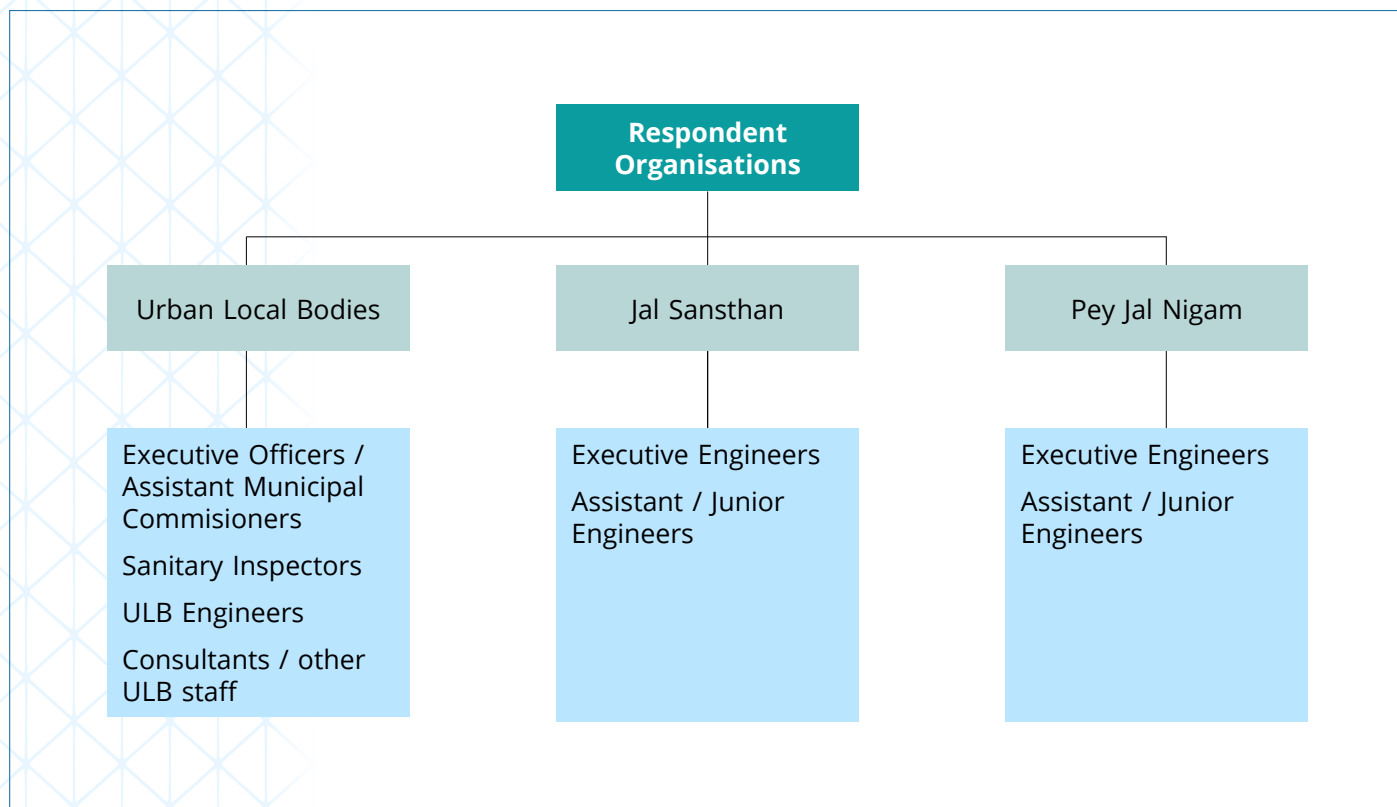
3.2 Scope of the study

The study covers all the face to face and offline trainings organized by NIUA. These trainings covered majority of the cities in the state and included officials from Urban Local Bodies, Jal Sansthan, Pey Jal Nigam, consultants working in the city as well as state level officials.

Table 5: Uttarakhand capacity building initiative: Coverage of the study

S. No.	Training Name	No. of trainings	No. of participants	No. of participating ULBs
1	Exposure visit for FSSM in Odisha	1	7	-
2	FSSM Orientation Training (face-to-face)	1	19	8
3	FSSM Orientation Training (online mode)	6	215	81
4	Advanced Training for Co-Treatment of Faecal Sludge in STPs	1	40	18

Figure 14: Respondents Covered in the Study



3.3 Sample size

- 1. Feedback during closing session of the training:** This includes forms circulated during the closing session of the training. All participants who have successfully completed the training are required to complete the feedback before certificates are issued to them.
- 2. Post-training impact survey:** This survey is conducted after 2 months from the completion of the training. Respondents in the sample are those who were part of the NIUA trainings in Uttarakhand. The participants included officials from Urban Local Bodies, Jal Sansthan, Pey Jal Nigam and state level officials from the Urban Development Department, Uttarakhand.

Sample size kept was 10% of the total participants. While selecting survey respondents, representation was ensured from all districts and all categories and levels of participants.

3.4 Method of sampling for post-training impact survey

Multiple Stratified Random Sampling technique was adopted for the selection of participant sample. In this, the entire list of participants was subdivided into various strata based on different criteria like location, designation, organization and the training attended. The selection is done keeping the sizes of the sample from different strata proportional to the size of the strata.

Random sampling follows the Law of Statistical Regularity which states that if on an average the sample chosen is a random one, the sample will have the same composition and characteristics as of the universe. Under the various designations selected, Municipal/Assistant Commissioner/Executive Officer/General Manager, Engineers from ULBs and parastatal, Sanitary Inspector/Supervisors who are mostly enrolled for on-ground operations and any other official from ULB are broadly categorized to showcase the percentage of respondents.

Table 6: Percentage distribution of respondents for post training impact survey

S. No.	Category	
1	Municipal Commissioner / Assistant Municipal Commissioners, Executive Officer	35%
2	Executive Engineer (Pey Jal Nigam / Jal Sansthan)	38%
3	Sanitary Inspectors	9%
4	Other officials including consultants from Urban Local Bodies	18%
	Total	100%

3.5 Survey method for post training impact survey

A state-wide survey was conducted using online survey forms. Online mode was preferred since face-to-face interaction was not possible due to COVID-19 restrictions.

All participants selected through sampling were contacted through email and phone. It was ensured that all participants had completed the training atleast 2 months back. Participants were encouraged to fill the forms in addition to the verbal feedback received over the phone. The survey format included subjective and descriptive feedback related to how the trainings have helped participants in their area of work.

04



Analysis of Participant Feedback and Impact Assessment Survey





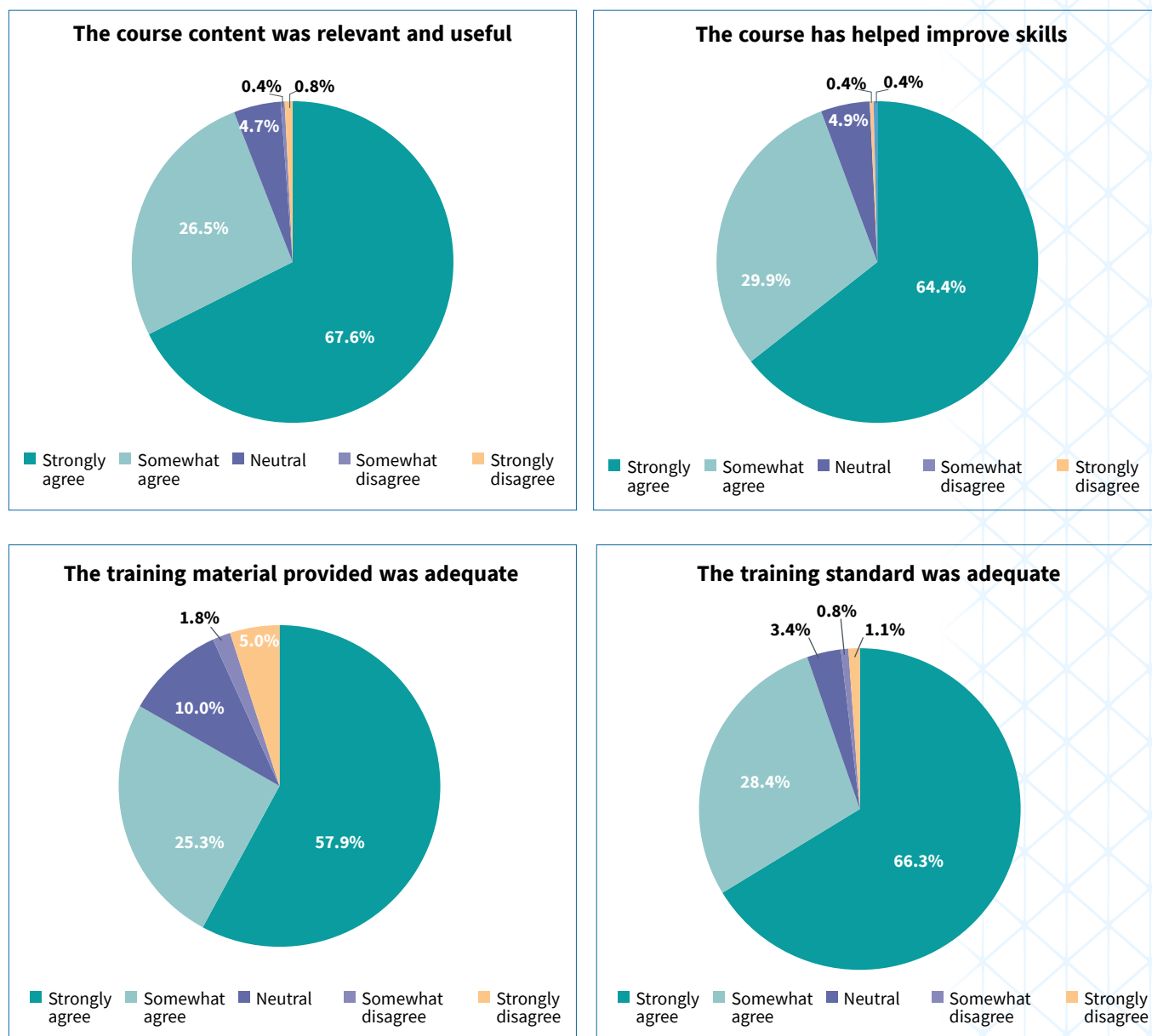
Analysis of Participant Feedback and Impact Assessment Survey

This section analyses the responses from training participants and assesses how beneficial the training has been for the participants. The section also looks at some of the challenges faced by the participants and how these can be addressed in the subsequent phase of the trainings.

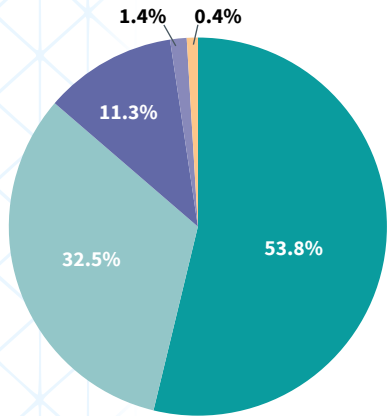
4.1 Analysis of feedback during training closing session

This section summarizes feedback from participants who had participated in the trainings conducted under NIUA state engagement upto April 2021. This feedback was taken during the final session of the training. Overall, a total of 281 participants, including municipal functionaries/technical/practitioners participated across all capacity building trainings and their responses are illustrated below:

Figure 15: End of Training Feedback

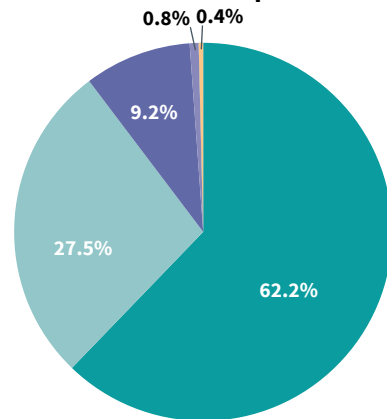


The level of exercises was adequate



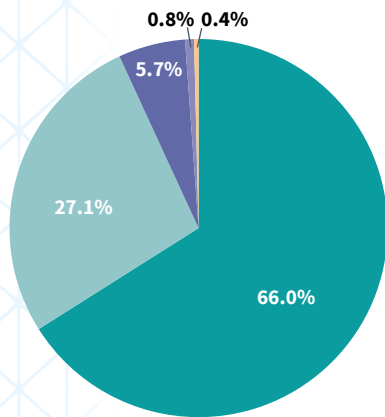
Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree

The overall support provided during the training was adequate



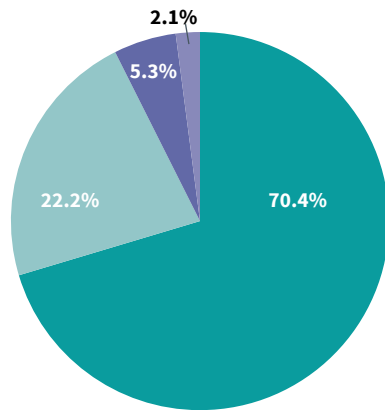
Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree

The training resulted in improved understanding of FSSM



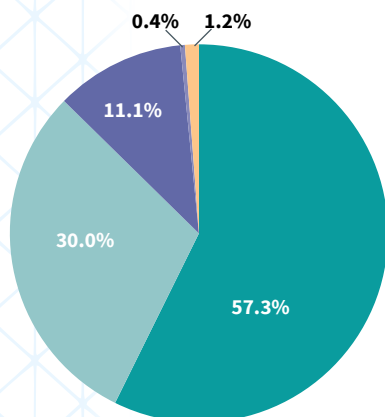
Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree

The quality of content was adequate



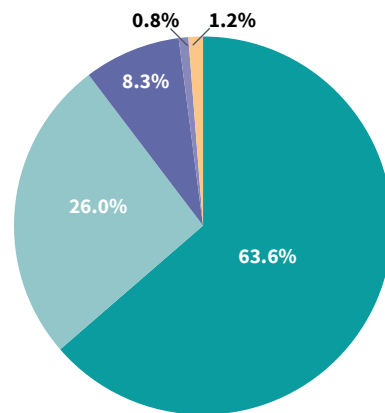
Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree

The sessions were interactive and engaging

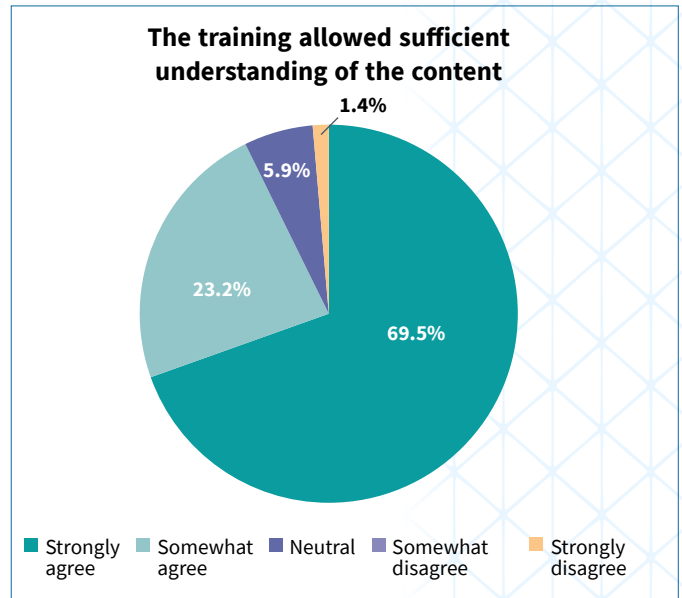
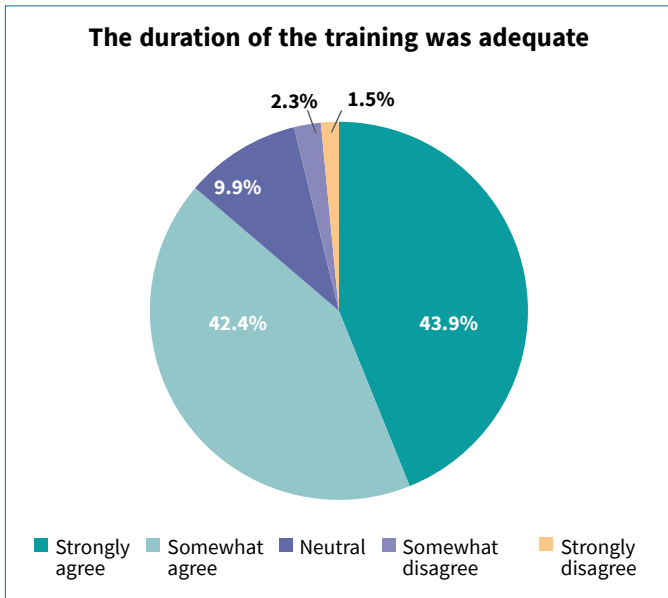


Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree

The format of the training was sufficient for government officials



Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree



Overall the majority of the participants were satisfied by the training programs and improved their learnings on FSSM. While analyzing the responses it was found that there were some participants who submitted a low rating. Around 5% (11 participants) participants in the online orientation trainings submitted low rating for the adequacy of the training material provided. Upon further enquiry it was found that most of these participants were mid/senior technical officials from parastatal departments who were primarily interested with detailed design and costing related information. The links of all DPRs and technical studies as part of SCBP have been provided to these participants and are now a regular feature of our orientation trainings. Many such engineers were also considered for participation in the advanced training course relating to design of treatment facilities.

Another survey was conducted after a minimum of 2 to 3 months from completion of the training course to understand how the learnings contributed towards the participant's work. The analysis of the survey is presented in the next section.

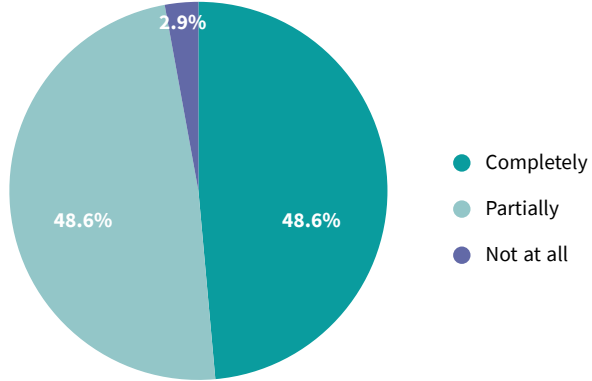
4.2 Analysis of post-training impact survey

Post training impact assessment was done through an online survey. With an intention to cover at least 10% of the total trainee participation, 34 trainees (approximately 12.14% of 281 trainees) were interviewed in the process after at least two months from completion of their respective trainings. All trainings conducted till June 2021 were included in the survey. The responses from each participant were recorded with the help of Google Forms.

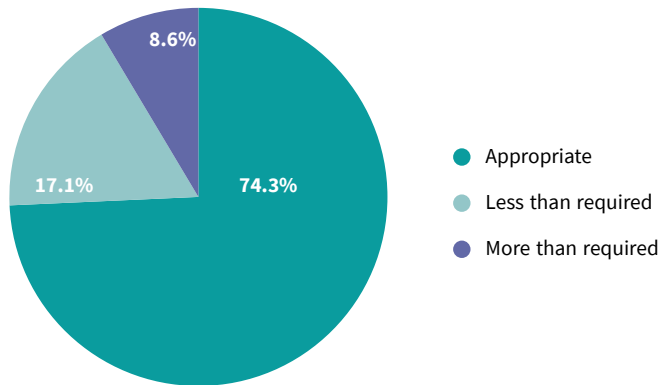
The survey particularly captured participants' skill development, changes in behavior and the overall results which represents the actual work done by the participants post completion of the training.

As per the survey, almost 48.6% of participants confirmed that they completely remember the content of the training module and 48.6% said that they remember the content partially. Only less than 2.9% (1 person) participant don't remember the module content at all.

How well do you remember the content of the training?

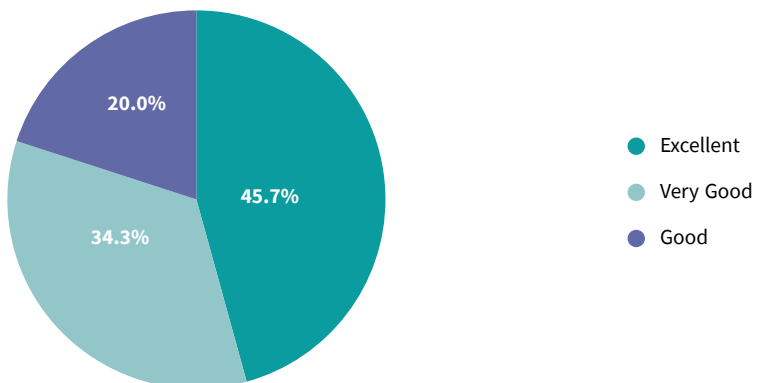


What do you think about the duration of the training?

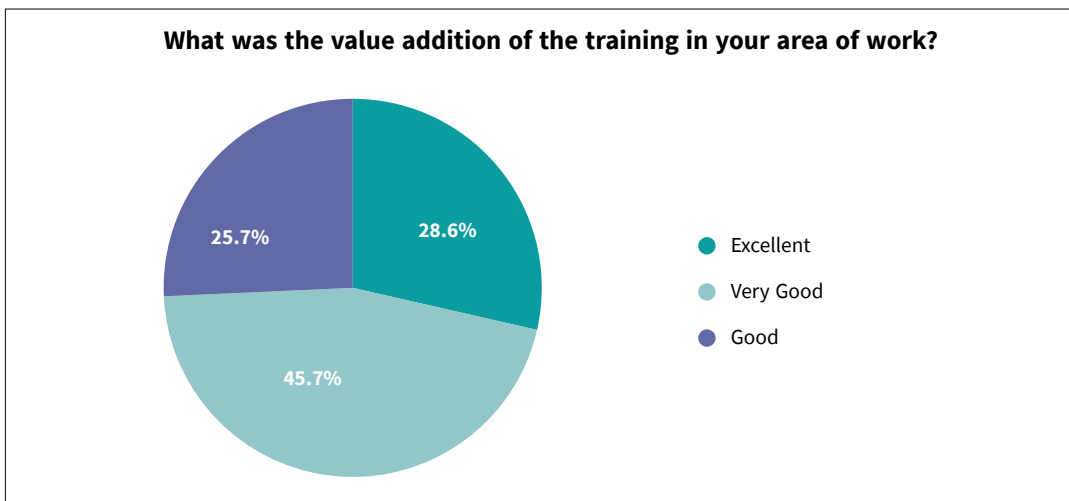


100% participants responded that the relevance of the training module was according to the needs of their job role and responsibilities. 45.7% said the module was excellent to meet the requirements of their job nature which was one of the key objective while designing the module.

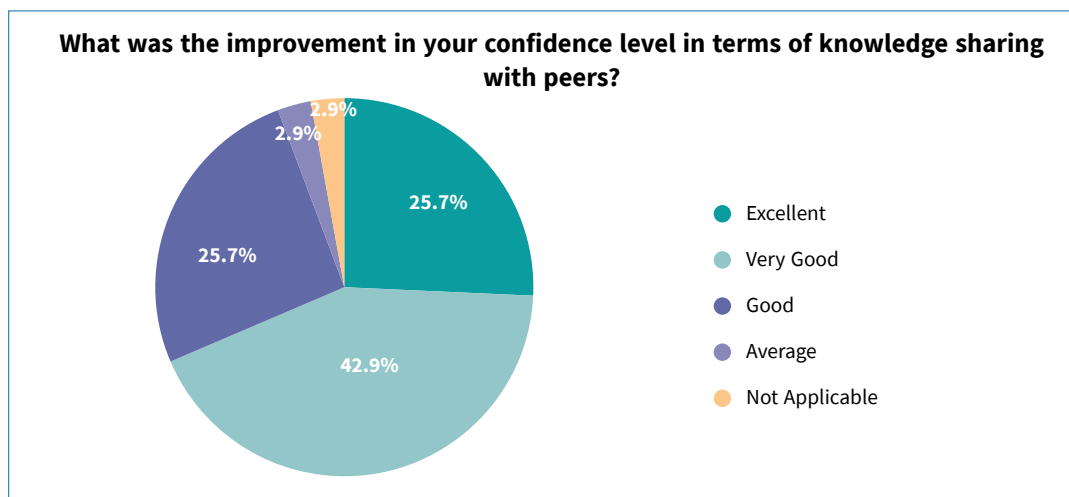
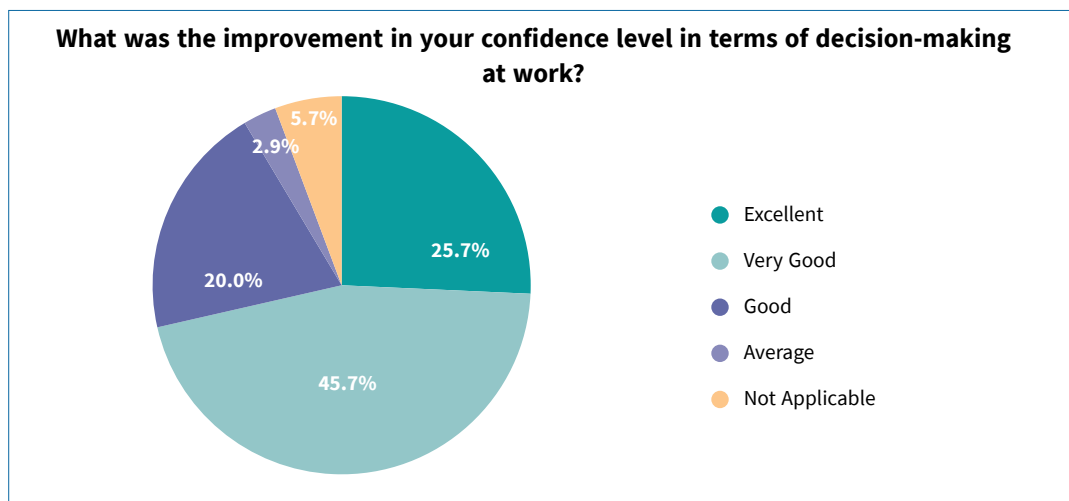
How relevant was the training in your area of work?



Trainees expressed that the course was a real value addition to the the work as they invested working hours to complete the training. When asked about the value addition during the survey, 28.6% said that it was excellent for them, 45.7% responded that it was very good and 25.7% said it was good. So overall, a very positive response was received from the participants.



Survey results also show that the confidence level of the participants has also increased remarkably after taking the trainings in terms of work-related decision making and hold on the subject hence their knowledge sharing ability with anyone.



Overall, based on the survey it was observed that the trainings have benefited the participants and improved their understanding on the subject. The participants are more confident in taking the required actions and decisions in improving septage management in their respective cities.

There have been instances where the participant required more advanced and specific knowledge. In such case the participants have been provided with reference material, been connected with relevant resource person as well as considered for further trainings.



The training was extremely useful for beginners as it involved very basic information about how the septage can be co-treated in the existing STPs and what are the factors affecting that process.

-Diksha Nautiyal, Assistant Engineer, Pey Jal Nigam, Haridwar.



DPR of Rudrapur Septage Treatment plant is prepared with the help of SCBP team of NIUA based on DEWATS system. Now the plant construction has started. It is the first Septage Treatment Plant of Uttarakhand.

- Dinesh Kumar Bansal, Executive Engineer, Pey Jal Nigam, Kashipur



4.3 Overall impact of trainings

This section lists overall enhancement in understanding/ learning of officials across state.

The orientation trainings conducted in Uttarakhand have helped city officials in:

- Gaining basic understanding of FSSM.
- To understand challenges and solutions across the FSSM service chain.
- Clarity on the FSSM issues that need to be resolved at priority and in the long run to many officials who were involved in Septage Management Cells, as recommended by the Uttarakhand Septage Management Protocol (2017)
- Implementation of Septage Management Protocol in cities which were lagging and help them in recognizing the importance of FSSM

The ULBs are now proactively initiating FSSM activities which was reflected during virtual meetings conducted by the Urban Development Directorate. **City officials have actively written to Pey Jal Nigam and Jal Sansthan to raise the requirement for safe septage disposal facilities in case not available or not sufficient in cities.**

Advanced training for designing septage treatment facilities have been useful for the engineers in Pey Jal Nigam and Jal Sansthan. **The participants have been involved in reviewing and finalizing DPRs for co-treatment of faecal sludge in STPs** and found the training helpful in understanding the concepts while finalizing the proposals. The participants had also reached out to NIUA for clarifications regarding the designs. **Dehradun (co-treatment at two STPs), Srinagar and Haridwar finalized their DPRs for co-treatment at STPs with the help of NIUA.**

The exposure visit for FSSM in Odisha along with the knowledge sharing with other state officials has been helpful for senior key officials from UDD, Pey Jal Nigam and Jal Sansthan in planning FSSM interventions in Uttarakhand.

UDD has issued advisories to all ULBs to operationalize septage management protocol with the help of NIUA team to all the ULBs. Pey Jal Nigam and Jal Sansthan have initiated preparing proposals for co-treatment in all the existing STPs where feasible.

4.4 Key challenges in bringing out impact from trainings

During the feedback, some key challenges were highlighted by the participants. This included the dependence of ULB officials on Pey Jal Nigam for setting-up treatment facilities due to lack of technical manpower within the ULB. Dependence upon the national missions for funding these facilities is also a challenge, since for utilization of grants there is pressure to spend on other development projects. Further, due to the shortage of manpower and busy schedule of the senior ULB officials, some ULBs had to depute their computer operators for the trainings who because of their lack of technical qualification have limited understanding on the subject. Upon further questions it was found that it is the computer operators in majority of smaller ULB who undertake day-to-day activities related to the national missions including conducting surveys and sending out periodic reports.

05



Way Forward for Capacity Building in Uttarakhand





Way Forward for NIUA Capacity Building in Uttarakhand

5.1 Learnings for next phase of capacity building in Uttarakhand

Inclusion of other key stakeholders in the capacity building effort is key to sustaining CB efforts and ensuring long term impact. This may include officials involved in decision-making and monitoring such as elected representatives, representatives from Pollution Control Board and service providers like masons, desludger etc. Other learnings include:

- Support in city-level planning for sanitation to achieve the objective of the new national missions, i.e., SBM 2.0 and Jal Jeevan Mission-Urban.
- Field visits including knowledge exchange provides effective learning opportunities and helps validate ideas and solutions.
- Peer learnings are helpful and motivating for officials for taking-up new initiatives in their cities.
- Hands on exercises tend to improve the learning experience.
- Simplified collaterals to help reach a wider audience.

5.2 Strategic plan for capacity building till 2023

Under SBM 2.0 and AMRUT 2.0, FSSM is a priority with focus on wastewater treatment and co-treatment of FSS in STPs.

Integrated Wastewater and Septage Management (IWSM) module developed by NIUA will be prioritized in the coming moment. The module includes a planning module targeting decision makers and officials in-charge of state-level and city-level planning. Training calendar to include planning module and subsequently technologies module will be prepared and executed.

Key activities include:

- IWSM – Planning: City wide IWSM for cities
- IWSM – Design: Designing and implementation of IWSM solutions.
- Orientation trainings for FSSM: to further improve coverage with respect to ULBs and officials covered
- Advance training: designing facilities for treatment of faecal sludge including co-treatment of faecal sludge in STP.
- City-level trainings for elected representatives and other stakeholders (like mason & de-sludgers) using existing modules and simplified collaterals

Launching and operationalizing a national level platform 'Forum for Inclusive and Resilient Sanitation in Hill Cities' for knowledge sharing and developing sanitation solutions for hill states context is also on the agenda.

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National Institute of Urban Affairs

National Institute of Urban Affairs

1st Floor, Core 4B, India Habitat Centre, Lodhi Road, New Delhi - 110003

Phone: 011-24617517, 24617543, 24617595, Fax: 011-24617513

E-mail: niua@niua.org • Website: www.niua.org, scbp.niua.org