

Training on Preparation of Detailed Project Report for usedwater and faecal sludge management

Kohima, Nagaland

19-21
March 2025



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Background

The Urban Development Department (UDD), Nagaland, serves as the nodal institution to roll out Swachh Bharat Mission-Urban (SBM-U) 2.0 in the state. However, the department has made limited progress to date in the wastewater and Faecal Sludge Management (FSM) components of SBM-U 2.0. Key UDD officials who attended the Parvat Manthan Regional Conclave in December 2025 approached the National Institute of Urban Affairs (NIUA) to support capacity-building programs for the state's engineers and planners involved in rolling out Urban Water Management (UWM) and FSM under SBM-U 2.0, aiming to accelerate project implementation. Thus, under the Parvat Manthan initiative, the Sanitation and Capacity Building Platform (SCBP) of National Institute of Urban Affairs (NIUA), in collaboration with the Urban Development Department, Government of Nagaland,

conducted a three-day capacity-building training. The training was designed for officials from Urban Local Bodies (ULBs), the Public Health Engineering Department (PHED), municipal councils, and the Urban Development Directorate. The participants were the engineers and planners from the respective departments responsible for the implementations of SBM (Urban) 2.0 at the city-wide scale in the state.

The objective was to enhance engineers' understanding of the steps required to prepare Detailed Project Reports (DPRs) for Faecal Sludge Treatment Plants (FSTPs) and co-treatment projects. The training aimed to impart knowledge to participants by sharing best practices to date and guiding them on how to plan context-specific Urban Water Management (UWM) and Faecal Sludge Management (FSM) systems tailored to local conditions.

Need for Capacity Building Programme

Many of the Indian Himalayan states, faces unique challenges in urban sanitation due to difficult terrain, dispersed settlements, and limited sewer networks. As per the [rapid assessment report published by NIUA](#), 92% households have individual household toilets, around 80% of the IHR is dependent on OSS. The dependence on on-site sanitation systems makes the proper management of faecal sludge and septage critical. However, challenges such as inadequate desludging services, lack of treatment infrastructure, and insufficient financial planning hinder effective sanitation service delivery. Furthermore, the preparation of Feasibility Evaluation Reports and Detailed Project Reports (DPRs) is a crucial step in securing funding and approvals for FSTP and co-treatment projects. Many ULBs and state agencies require technical capacity to conduct feasibility assessments, align projects with national policies, and ensure financial sustainability. Addressing these gaps requires a structured capacity-building approach that not only enhances technical knowledge but also equips officials with tools for better decision-making and policy formulation.

Nagaland, a hilly state with distinct geographical and infrastructural challenges, ranked 24th in Swachh Survekshan 2023 among states with urban areas. The state has 39 Urban Local Bodies (ULBs)/cities and set a target of 23,427 Individual Household Latrines (IHHLs), achieving 87.28% coverage. While 37 ULBs have been declared Open Defecation Free (ODF), only 2 ULBs have achieved ODF+ status, underscoring the need for further

improvements in liquid waste management.

According to the National Inventory of Sewage Treatment Plants, Nagaland generates approximately 135 MLD of sewage, with only 25 MLD of sewage treatment capacity and a 13 KLD Faecal Sludge Treatment Plant (FSTP) for faecal sludge management. A critical gap exists in the sanitation infrastructure, impacting both onsite and offsite sanitation systems—from faecal sludge management to sewage conveyance and treatment. These challenges primarily arise due to limitations in selecting appropriate treatment technologies and the formulation of Detailed Project Reports (DPRs) that do not align with implementation feasibility, often leading to project rejections and delays.

To address these issues, capacity-building initiatives are essential to strengthen the technical understanding of officials and stakeholders, ensuring informed decision-making, appropriate technology selection, and the effective implementation of sanitation solutions tailored to the state's needs. The training is aimed to bridge these gaps by strengthening the capacities of state and municipal officials to:

- Understand the concept of integrated used water and faecal sludge management strategies for improved sanitation planning.
- Able to conduct technical and financial feasibility assessments for FSTP and co-treatment projects.
- Develop technical documents to prepare the DPRs and Sanitation Action Plans that meet regulatory and funding requirements for project implementation.



Agenda of the training programme:

Training I: Preparation of Detailed Project Report for Used Water and Faecal Sludge Management Under Swachh Bharat Mission (Urban) 2.0

Venue: Hotel Vivor, Kohima

Date: 19/03/25 to 21/03/25

Program Schedule

Day 1- 19 th March 2025		
Time	Contents	Resource Person
09:30 – 10:00 am	Registration	UDD, Kohima, Nagaland
10:00 – 10:20 am	Introduction to the training program	UDD, Kohima
10:20 – 10:30am	Context setting of the training: Round of Introduction; Setting ground rules; Understanding expectations, aims & objective, Pre-Assessment Test via web based Socrative tool	Mr. Shantanu Kumar Padhi, NIUA
<i>10:30 – 10:45 pm (Tea break)</i>		
10:45 – 11:15 am	Session 1: Sustainable Sanitation & Water Management - Environmental Sanitation and challenges. - Waste Characteristic - Introduction to integrated used water management- including Co-treatment of Faecal sludge with sewage - Exercise: F Diagram	Mr. Sachin Sahani, NIUA
11:15 – 11:45 pm	Session 2: Mission and Programs - SBM 2.0 - AMRUT 2.0 15th Finance commission - Swachh Survekshan - Regulation & Advisories	Mr. Sachin Sahani, NIUA
11:45 – 12:45 pm	Session 3: Sanitation Systems - Types of Sanitation systems - Sanitation value chain - Case Study (Video Documentary: FSM journey of New Delhi, CSE)	Mr. Shantanu Kumar Padhi, NIUA
<i>12:45 – 1:30 pm (Lunch break)</i>		
01:30 – 02:15 pm	Session 4: Planning approach for City wide Inclusive Sanitation Introduction to Shit flow diagram, SFD of Urban India - Approach and Methodology flowchart - Centralised vs Decentralised Approach - Odisha Case Study (Video Documentary: Dasra)	Mr Karthik Ravichandran, WASHI
02:15 – 03:30 pm	Session 5: FSM and Used water Planning - Septage and used water generation - Population Projection Methods (spreadsheet), Estimation of faecal sludge generation and used water generation	Mr. Sachin Sahani, NIUA
<i>03:30 – 03:45 pm (Short Tea break)</i>		
03:45 – 04:30 pm	Q&A Discussion	Mr. Shantanu Kumar Padhi, NIUA

Day 2- 20 th March 2025		
09:30 – 9:45 am	Session recap of Day 1	NIUA
9:45 – 10:30 am	Session 6: SBM guidelines and criteria for Zoning under SBM 2.0. • Zoning Plan • City Sanitation Action Plan	Mr Karthik Ravichandran, WASHI
10:30 – 11:15 am	Session 7: Stakeholders engagement for mainstreaming used water and faecal sludge management. • Exercise on Influence vs interest matrix	Mr. Sachin Sahani, NIUA
<i>11:15 – 11:30 am (Tea break)</i>		
11:30 – 12:45pm	Session 8:Used water and faecal sludge treatment technologies: • Mechanism of used water treatment • Different stages of treatment, mechanized and non-mechanized treatment technologies • Nature based and mechanised systems • Co-treatment of Faecal Sludge and Septage • Case Studies (Video documentary)	Mr Karthik Ravichandran, WASHI
<i>12:45 – 01:30 pm (Lunch break)</i>		
01:30 – 2:30 pm	Session 9: Planning for faecal sludge treatment/ STPcumFSTP • Steps involved in planning • Case Studies (Video documentary)	Mr. Shantanu Kumar Padhi, NIUA
02:30 –03:15 pm	Session 10: FS Treatment facility components: Septage Receiving station Introduce thecomponents of planted and unplanted sludge drying beds	Mr Karthik Ravichandran, WASHI
<i>03:15 – 03:30 pm Tea Break</i>		
03:30– 04:30 pm	Q&A Session	Mr. Shantanu Kumar Padhi, NIUA
Day 3- 21 st March 2025		
09:30 – 09:45 am	Session recall: Day 2	NIUA
09:45 – 10:30am	Session 11: Feasibility check exercise for Co-treatment of septage with sewage at STPs	Mr. Sachin Sahani, NIUA
10:30 – 11:30 pm	Session 12: Financial modelling in used water management • Life cycle-cost analysis • Net Present value. • Service and business models (EPC, PPP, hybrid annuity) Calculation based exercise	Mr. Shantanu Kumar Padhi, NIUA
<i>11:30 – 11:45 am (Tea break)</i>		
11:45 – 12:45 pm	Session 13: Operation and Maintenance and Sustainability: • Standardization of O & M of used water management systems -	Mr. Sachin Sahani, NIUA
<i>12:45 – 01:30 pm (Lunch)</i>		
01:30 – 02:30 pm	Feedback Session and Valedictory	UDD, Kohima

Trainers

Training Co-ordinator

- Ms. Kezhochole Rhestso, Mission Director, SBM (U)
- Ms Medosenuo, Asst. Director, UDD

Resource Persons:

- Mr Shantanu Kumar Padhi, Sr Programme manager, NIUA
- Mr Karthik Ravichandran, Project Manager, WASH Institute
- Mr Sachin Sahani, Programme Officer, NIUA

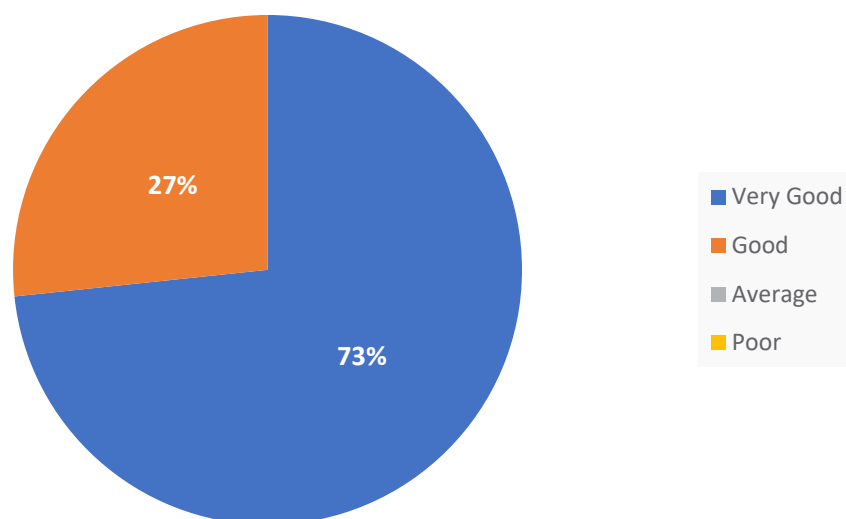
List of participants:

Participant's Attendance Sheet					
Training on Preparation of Detailed Project Report for Used water and Faecal sludge Management under SBM (U) 2.0					
Date: 19 th to 21 st March, 2025					
Venue: Hotel Vivor, Kohima: Nagaland					
Sl. No	Full Name in Block Letters (to be mentioned on Certificate)	Designation	19.03.2025 Signature	20.03.2025 Signature	21.03.2025 Signature
1	OLEMONG LONGKUMER	SDO, PHED			
2	MARTEM SU T IMCHEN	SDO, PHED			
3	RANGAM NYUMI	SDO, PHED			
4	ROKOVIZO ZHOTSO	SDO, PHED			
5	IMCHUNGWATI IMCHEN	SDO, PHED			
6	KALISA KONYAK	JE, PHED			
7	Imkisanen Zami	Concillor, mone			
8	Shilujongshi	Field Assistant			
9	ROVINUD KEHIE	AUDO, Mokokchung			
10	Imdikumzok Kichu	Urban Planner			

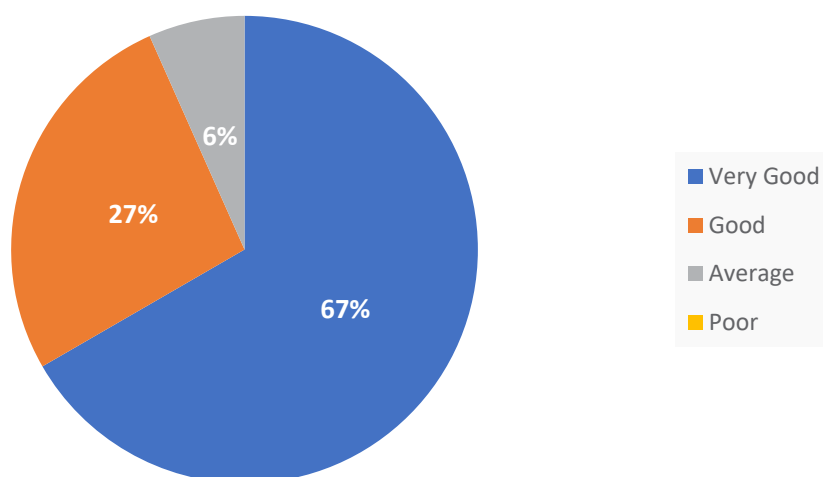
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11	VIKIENYU ZUTSO	EE (PHED)			
12	MEZHUVOLIE USON	ASST. D.D. UD			
13	KERILE TE PEMEYIZ	URBAN PLANNER			
14	VINI HOLO	URBAN PLANNER			
15	MHASHERAL TSÖKRÜ	SBM-PMU			
16	SACHIN SAHANI	NIVA-SCBP			
17	KARTHIK RAVICHANDRAN	WASH INSTITUTE			
18	ERKENISEVI MEYASE	SDO (PHED)			
19	VIZOSHIED SABI	LOA (KMC)			
20	KEDUVOLIE MERE	JE (KMC)			

Feedback:

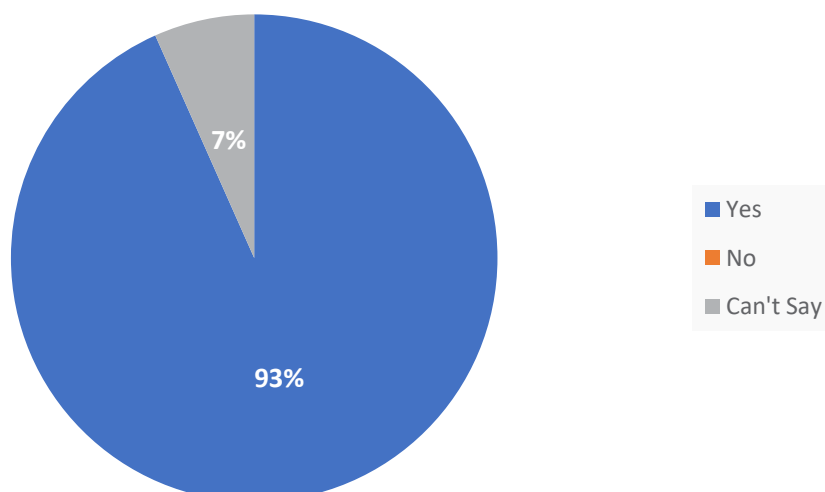
1. How happy are you with the training curriculum and content?



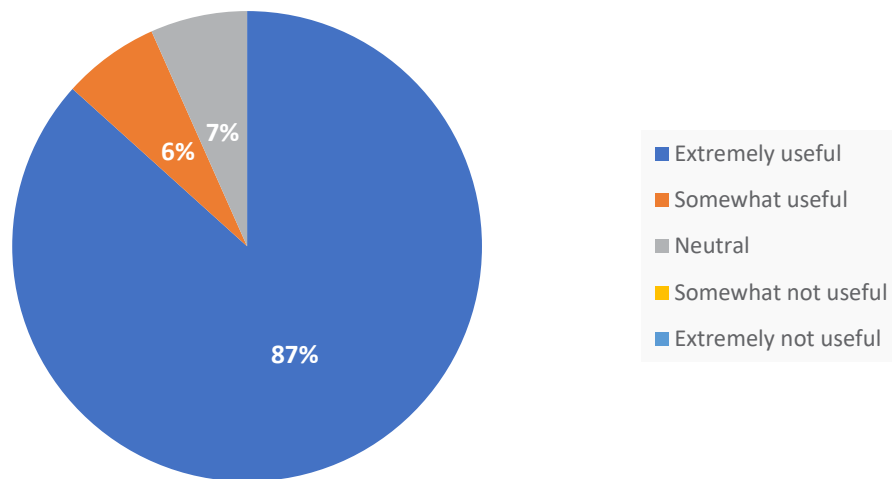
2. How happy are you with regard to the training tools used?



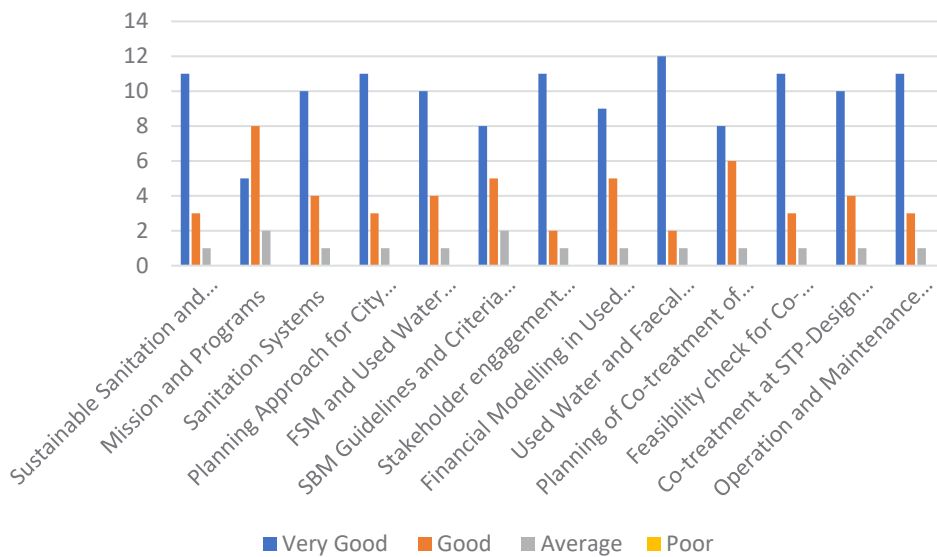
3. Did you enjoy being part of the training



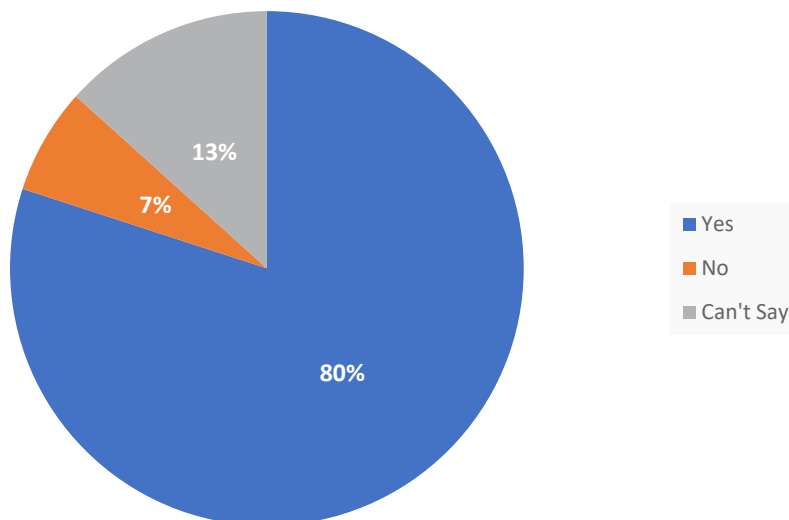
4. How useful do you think the training was in your opinion?



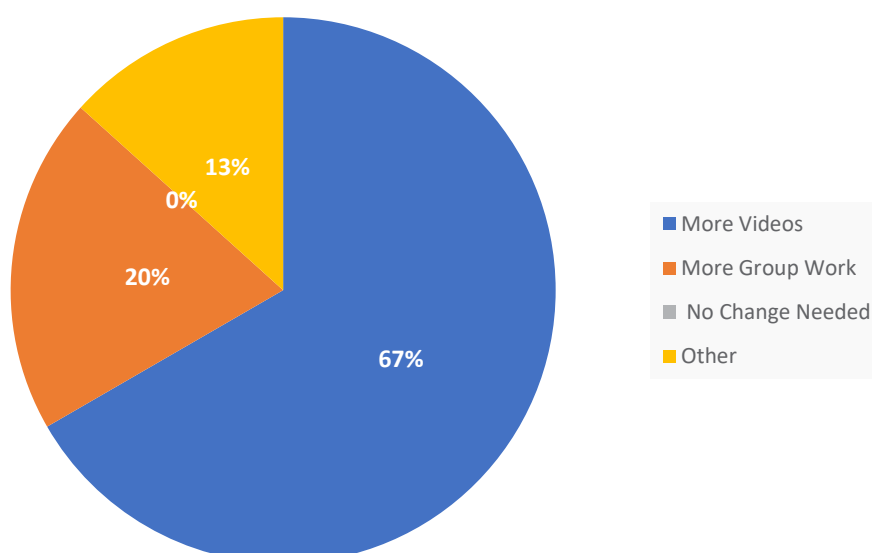
5. Kindly rate each session on a scale of 1 to 5 with respect to its content and delivery



6. Did you feel comfortable sharing your queries and concerns during the training ?



7. What else do you think should be made part of the training which would be useful for you?



Way Forward:

Given the strong engagement and positive feedback from participants, the National Institute of Urban Affairs (NIUA) extends its support to further strengthen the capacity of urban sanitation practitioners in Nagaland.

Based on discussions with the Urban Development Department (UDD), it is imperative to develop a State-Level Usedwater and Faecal Sludge & Septage Management (FSSM) Policy. This policy will play a pivotal role in establishing long-term governance mechanisms, advancing the objectives of national missions (e.g., SBM-U 2.0), and achieving Sustainable Development Goals (SDGs) for improved sanitation services in the state.

Additionally, NIUA recommends the following steps:

Online Training Modules through National Urban Learning Platform: NIUA would encourage that Cohort of Training I shall join online course on the subject to ensure continuous learning, revision of topics covered, and introduction to advanced concepts that will be covered in

detail during Training II: Preparation of Detailed Project Reports (DPRs) for Urban Water Management (UWM) and FSM. (Links given below)

[Integrated Wastewater Septage Management - Design part -I](#)

[Integrated Wastewater Septage Management - Design part -II](#)

Capacity Building: Prioritize Training II to equip engineers and planners with technical skills for drafting context-specific DPRs aligned with Nagaland's geographical and socio-economic needs.



