

Report on Twinning Programme: Visits to Odisha on State-wide Scale up Strategy of Faecal Sludge and Septage Management (FSSM)

2-3rd September, 2021



National Institute of Urban Affairs
All India Institute of Local-Self Government, Mumbai

Twinning Programme: Visits to Odisha on State-wide Scale up Strategy of Faecal Sludge and Septage Management (FSSM)



Background and Introduction

In recent years, sanitation has been at the forefront of India's development agenda. Recently, the Government of India approved Phase II of Swachh Bharat Mission-Urban (SBM-U 2.0) and Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0. As Jal Jeevan Mission (JJM-U), will be submerged into AMRUT 2.0, SBM-U 2.0 goes beyond the aim of eliminating open defecation in the country, by focusing on ODF+, ODF++ and Water+ protocols as laid down by the Ministry of Housing and Urban Affairs, Government of India. Further, with the recognition of the reliance on onsite disposal systems in Indian cities, the need to formalize and strategically implement faecal sludge and septage management (FSSM) systems has been established.

Odisha has been at the forefront of fulfilling requirements under these protocols, with all cities in the state declared ODF. The state government has initiated steps across the sanitation service chain, including converting insanitary toilets to sanitary toilets, mechanized desludging, safe disposal methods, and adopting sustainable O&M models for treatment plants by partnering with women and transgender SHGs. These steps are specific to the urban context of Odisha, and take into account the complexities at city-level in order to address sanitation challenges.

Through these interventions, Odisha is recognized as a pioneer in the successful implementation of FSSM and non-sewered sanitation systems in the country. **In this regard, Sanitation Capacity Building Platform (SCBP) of the National Institute of Urban Affairs (NIUA), in partnership with All India Institute of Local Self Government (AIIISG), Mumbai and Regional Centre for Urban and Environmental Studies (RCUES), Lucknow organized a 1.5-days twinning programme to Bhubaneswar and Puri in Odisha on 2nd and 3rd September 2021.** The aim of the programme was to facilitate peer-to-peer learning with emphasis to showcase the efforts undertaken in Bhubaneswar and Puri as case-studies to the participants.

Objective of the Twinning Programme

The twinning programme is integrated with the ongoing capacity building activities under the Sanitation Capacity Building Platform. Through experience sharing, participants were expected to:

- Comprehend the state-wide scale up strategy and planning approaches for Faecal Sludge and Septage Management (FSSM) adopted in Odisha
- Understand the regulatory framework and enforcement mechanism to strengthen the implementation of FSSM services
- Understand the treatment technology and financial options for FSSM through site visits and interaction with state officials
- Understand the operation and maintenance model of the treatment plant and allied sanitation services

Target audience

The programme was organised for senior officials from State Urban Development Departments, SBM/AMRUT Mission Directorates and Parastatal Bodies.

Expected outcome

Through this programme, participants were expected to understand the various planning and implementation aspects of FSSM, and take back learnings from Odisha to their respective cities and states to successfully adopt FSSM solutions.

Methodology

The twinning programme was spread across 1.5 days, and including site visits as well as interaction with key government officials and professionals involved in FSSM planning and implementation in the state. The participants were encouraged to interact with the various stakeholders to get a hands-on experience.

Participants

Number of Participants	States participated
13	Uttarakhand, Jharkhand, Chattisgarh, Uttar Pradesh

Agenda

Added as annexure 1

List of Participants

Added as annexure 2

Day 1

- *Introduction to the programme*
 - *Understanding Faecal Sludge and Septage Management (FSSM); Faecal Sludge Treatment Options*
 - *Meeting and interaction with officials of OWSSB, Odisha*
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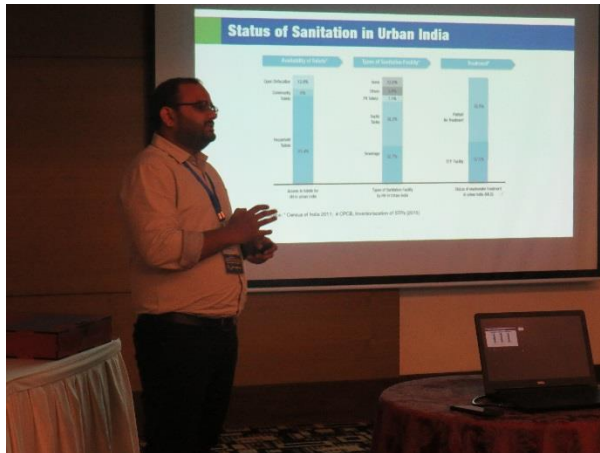
Introduction to the programme

Day one started with registration and introduction of participants and organizers followed by a brief introduction to the Sanitation Capacity Building Platform (SCBP) and the work undertaken under the platform by Ms. Jyoti Dash, Senior Program Manager, SCBP, NIUA. This was followed by an overview of the status of urbanization in India, key national missions and programmes and need for sanitation planning by Ms. Mahreen Matto, Program Manager, SCBP, NIUA.



Understanding Faecal Sludge and Septage Management (FSSM); Faecal Sludge Treatment Options

The overview of national missions and programmes was followed by a session on ‘Understanding Faecal Sludge and Septage Management (FSSM); Faecal Sludge Treatment Options by Mr. Saurabh Kale, Senior Project Manager, Ecosan Services Foundation. This session gave an overview of the status of sanitation in urban India, the type of sanitation facilities – on site/septic tanks and off site/sewerage systems and status of treatment. It further covered the need for FSSM, and the components of sanitation value chain and their importance in the sanitation value chain and importance to address all the components for achieving sustainable sanitation in cities. Further the type of faecal sludge treatment options were explained in detail. Opportunities like co-treatment at existing STPs and establishment of independent FSTPs and technology options for treatment and their operation and maintenance were discussed. This was followed by an interaction with the participants. The session ended with demonstration of a board game developed for understanding of Integrated Wastewater and Septage Management systems, by NIUA and Office of Design and Development, to introduce hands-on approach to learning.



Meeting and interaction with officials of OWSSB, Odisha

The second half of the day was dedicated to meeting and interaction with senior officials of Odisha State Government and Orissa Water Supply & Sewerage Board (OWSSB). The session started with a documentary on the FSSM journey of Odisha. This was followed by a presentation by Shri Sangramjit Nayak, IAS, DMA & ex-officio Additional Secretary & Mission Director, SBM Urban who gave an overview of the sanitation scenario in Odisha in the past decade and strategies adopted for for the scale-up of FSSM solutions at the state level. He spoke on the conscious decision of the state to implement FSSM, given the high operation and maintenance of conventional sewers. He talked on learnings from the state on planning and implementation of FSSM, the innovative technologies adopted and financial models for the same. The O&M model of the treatment plants were discussed with state wide scale up strategy. This was followed by a detailed discussion on the treatment models adopted by the cities by Shri Prashant Mohapatra, Chief Engineer, OWSSB, Odisha. The treatment systems of Bhubaneswar septage plant and co-treatment facility at Puri city were explained in detail. This was followed by an interactive Q and A session with the participants, on the implementation and regulatory challenges and learnings which can be beneficial in other states.



Day 2

- Visit to Bhubaneswar Septage Treatment Plant
- Visit to Co-treatment facility at Puri STP

Visit to Bhubaneswar septage treatment plant

The day 2 of the programme started with visit to Bhubaneswar septage treatment plant, to understand the functioning of the SeTP through firsthand experience. The treatment plant in Bhubaneswar is first of its kind septage treatment plant in India which treats both solids and liquids parts of septage in an integrated manner. All the components of the treatment plant were visited and explained by the site engineer in detail. The technical and financial aspects and process of treatment were also discussed, along with on ground operation and maintenance challenges and potential solutions.



Visit to Puri Sewage Treatment Plant with Co-treatment Facility

The visit to Bhubaneswar SeTP was followed by visit to the Sewage Treatment Plant in Puri which has a co-treatment facility wherein a co-treatment method is deployed for treatment of septage where solids are treated through drying beds and the liquid fraction is treated in Sewerage Treatment Plant (STP) co-located with SeTP. The components and process of treatment and operation and maintenance of the plant were discussed.



Annexure 1: Agenda

Day 1		
Duration	Session	Content
10.00 – 10.30	Registration and introduction of participants	
10.30 – 10.45	Overview of Sanitation Capacity Building Platform (SCBP), NIUA	
10.45 – 11.20	National Missions and Programmes	
11.20 – 11.30	<i>Tea Break</i>	
11.30 – 13.00	Understanding Faecal Sludge and Septage Management (FSSM); Faecal Sludge Treatment Options	
13.00 -14.00	<i>Lunch</i>	
14.00 -14.30	Travel to meeting venue: 2 nd floor conference hall, Unnati Bhavan	
14.30 – 17.00	<p>Meeting and interaction with OWSSB officials:</p> <p>Shri Sangramjit Nayak, IAS DMA & ex-officio Additional Secretary & Mission Director, SBM Urban</p> <p>Shri Hadibandhu Behera Member Secretary OWSSB, Odisha, Bhubaneswar</p> <p>Shri Prashant Mohapatra Chief Engineer, OWSSB, Odisha, Bhubaneswar</p>	<p><i>Learnings from the state on planning and implementation of FSSM</i></p> <p><i>State-wide scaleup strategy policy and regulatory framework</i></p> <p><i>Technology and financing options</i></p> <p><i>O&M model for the treatment plants</i></p>
17.00 – 17.30	Travel back to hotel	
Day 2		
8.45 – 9.15	Travel to Bhubaneswar Septage Treatment Plant (SeTP)	
9.15 – 11.00	<p>Site Visit</p> <p>Discussion - Q and A with officials and plant operator</p>	<ul style="list-style-type: none"> • Visit to treatment plant to understand the process of treatment, interaction with engineer/staff at plant • Discussion of on-ground implementation challenges and ways to overcome it • O&M model of the plant
11.00 – 12.00	Travel to Puri Co-treatment facility at STP	
12.00 – 12.30	<p>Site Visit</p> <p>Discussion - Q and A with officials and staff</p>	<ul style="list-style-type: none"> • Assessment of STP for adding co-treatment facility • Process of treatment • On-ground implementation challenges and O&M of services
12.30 -13.30	Travel back to hotel	
13.30 – 14.30	<i>Lunch, Closure and Feedback</i>	

Annexure 2: List of Participants

SN	State	Participant Name	Designation	Email Id
1	Chhattisgarh	Ashish Kumar Tikariha	Addl. CEO, SUDA	ashishtikariha85@gmail.com
2	Jharkhand	Garima Singh (IAS)	Municipal Commissioner, Hazaribag Municipal Corporation	municipality_08@rediffmail.com
3	Uttarakhand	Vinod Kumar	Assistant Director, Urban Development Directorate	aryavinodjnv@gmail.com
4		Bharat Tripathi	Executive Officer Municipal Board Ramnagar	eoram-mb-uk@nic.in
5		Sachin Kumar	Project Manager, Peyjal Nigam, Haridwar	sachin231514@gmail.com
6		S K Verma	Project Manager, Peyjal Nigam, Gopeshwar	pmganga.gc@gmail.com
7		Yashbir Mall	Suprentending Engineer, Jal Sansthan, Tehri	yashbirmall@gmail.com
8		Vishal Kumar	Suprentending Engineer, Jal Sansthan, Haldwani	vishalsaxenalect@gmail.com
9		Vipin Tiwari	Project manager, UUSDA	vipinbnh@gmail.com
10		Yudhveer Singh	Dy. Team Leader, UUSDA	yuddhveer_1974@yahoo.co.in
11	Uttar Pradesh	Anwar Khwaja	GM Jalkal, Aligarh Municipal Corporation	gmjalaligarh@gmail.com
12		Anjuli Mishra	Joint Director, RCUES Lucknow	anjuli.rcueslko@gmail.com
13		Himanshu Chandra	Asst. Director, RCUES Lucknow	himanshu.rcueslko@gmail.com
14	NIUA	Jyoti Dash	Senior Program Manager	jdash@niua.org
15		Mahreen Matto	Program Manager	mahreen@niua.org
16		Hari P Haihyvanshi	Senior Program Officer	hari@niua.org
17		Aparna M Unni	Program Officer	aunni@niua.org
18	ESF	Saurabh Kaale	Senior Project Manager	saurabh.kale@ecosanservices.org
19	ODD	Pratik Zaveri	ODD	works@odd.la
20	AIIISG Mumbai	V. V. Lad	Asst. Director, RCUES Mumbai	vvlad@aailsg.org
21		Shailesh M. Chalke	Programme Assistant	shailesh.chalke@aailsg.org