



RESEARCH - ACTION - LEARNING NOTES

About Project Nirmal

The overall vision of Project Nirmal is the demonstration of appropriate, low-cost, decentralised, inclusive and sustainable sanitation service delivery solutions for two small towns (Angul and Dhenkanal) in Odisha leading to improved sanitation access for all households and integration of FSM in the sanitation value chain, through enabling institutional and financial arrangements and increased private sector participation.

The project is being implemented by Practical Action and Centre for Policy Research with support from Bill and Melinda Gates Foundation; Arghyam; Housing and Urban Development, Government of Odisha; and Municipalities of Angul and Dhenkanal.

The project aims to :

- Demonstrate State Government and ULB commitment towards sanitation service delivery in small towns;
- Capacity development of states and cities for effective sanitation service delivery;
- Increase in number of people in Angul and Dhenkanal with access to better sanitation services;
- Improve city-wide planning approaches for sanitation; and
- Demonstrate models for Faecal Sludge Management (FSM).

STRENGTHENING INSTITUTIONAL ARRANGEMENTS AND CAPACITIES FOR IMPLEMENTING FSM INITIATIVES



Background

Faecal Sludge Management (FSM) has close linkages with a variety of development themes, including but not limited to the environment, health and human rights¹. This expansive sphere of influence necessitates the involvement of a variety of institutions across all three levels of government, that is National, State and Local.

“Sanitation” is listed in the State List of the Constitution of India (Seventh Schedule, List II, Entry 6²) which implies that State governments have been vested with the power to make laws related to this subject. Further, the Constitution of India, by way of the Seventy-Fourth Constitutional Amendment Act, 1992 (74th CAA, 1992), places the responsibility for planning and delivery of urban services, including sanitation (and thus FSM) on Urban Local Bodies (ULBs). Alongside these two provisions, Article 252 of the Constitution of India, empowers the Parliament to legislate on behalf of two or more States, following their consent in the form of resolutions passed by their respective Legislatures. This provision has led to the enactment of laws relating to the environment including the Environment (Protection) Act, 1986 and the Water (Prevention and Control of Pollution) Act, 1974 and manual scavenging including The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993 and Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013).

Institutional Arrangements for Sanitation / FSM – National, State and Local Level

With respect to institutions, at the **national level**, the Ministry of Housing and Urban Affairs (MoHUA); Ministry of Environment, Forest and Climate Change (MoEF&CC); and Ministry of Social Justice and Empowerment (MoSJE) are directly involved in the sanitation / FSM sector. (Figure 1) The MoHUA has set the overall context, priorities and direction for states and cities in the context of FSM by formulating the “*National Policy on Faecal Sludge and Septage Management, 2017*”³. Further,

¹Specifically, the rights of the sanitation workers

²Source: <https://www.mea.gov.in/Images/pdf1/S7.pdf>

³Available at https://smartnet.niua.org/sites/default/files/resources/FSSM%20Policy%20Report_23%20Feb_Artwork.pdf

MoHUA also provides funding and technical support for sanitation related interventions in urban areas through various missions including Swachh Bharat Mission – Urban (SBM-U), Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Smart Cities Mission (SCM). While the MoEF&CC oversees compliance to the relevant environmental laws⁴, the MoSJE is responsible for ensuring compliance to laws aimed at eliminating manual scavenging and ensuring protection of the rights of sanitation workers⁵.

In **Odisha**, a variety of institutions are involved in the sanitation sector. Paramount among them is the Housing and Urban Development Department (H&UDD) which is responsible for “*ensuring proper and planned growth of cities and towns with adequate infrastructure, amenities and services provided to the citizens through ULBs and parastatal agencies*”⁶. Project Nirmal (PN) provided technical support to H&UDD towards creating an enabling environment for FSM in the state. As a result, the Odisha Urban Sanitation Policy, 2017⁷ (OUPS,2017) and the Odisha Urban Sanitation Strategy, 2017⁸ (OUSS,2017) were prepared. Later, the state government also prepared the Urban Septage Management Guidelines, 2016 and the Model Regulations for Sewage and Septage Management for ULBs, 2018.

The H&UDD is responsible for implementing the OUSS. It functions through three Directorates, namely, Directorate of Municipal Administration (DMA), Directorate of Town Planning (DoTP) and Chief Engineer, Public Health Engineering Organization (PHEO) – Urban, all of which are actively involved in the sanitation sector. (Table 1, Figure 1) The H&UDD also has, under its administrative control, a host of subsidiary organisations⁹ through which it seeks to achieve its mandate –

⁴Including the Environment (Protection) Act, 1986 and the Water (Prevention and Control of Pollution) Act, 1974

⁵Including the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993 and Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013

⁶Source: <http://www.urbanodisha.gov.in/About.aspx>

⁷Available at <https://odxpress.com/wp-content/uploads/Odisha-Urban-Sanitations-Policy-2017.pdf>

⁸Replacing the Odisha Urban Sanitation Strategy, 2011

⁹Including Odisha State Housing Board (OSHB), State Urban Development Agency (SUDA), Odisha Urban Infrastructure Development Fund (OUIDF), Valuation Organization and NIHM

key among these in the sanitation sector are the State Urban Development Agency (SUDA) and Odisha Urban Infrastructure Development Fund (OUIDF) (Table 1, Figure 1).

Other state institutions which are involved in the sanitation sector include Odisha Water Supply and Sewerage Board¹⁰ (OWSSB), Odisha State Pollution Control Board (OSPCB) and the Odisha State Commission for *Safai Karamcharis* (OSCSK). OWSSB serves as the State Level Nodal Agency (SLNA) for Government of India's (GoI's) missions and projects related to sanitation including SBM-U and AMRUT¹¹. Further, while the OSPCB is responsible for ensuring compliance to the national environmental laws¹², the OSCSK is responsible for ensuring compliance to national laws that have banned dry latrines, employment of persons for manually carrying human excreta as well as "hazardous cleaning" in relation to sewers and septic tanks¹³.

At the **local level**, Urban Local Bodies (ULBs) are responsible for implementing sanitation related initiatives. All ULBs in Odisha have passed FSSM bye laws based on the Model Faecal Sludge and Septage Management Regulations, 2018 developed by the state government. ULBs are also responsible for providing desludging services for OSS systems (either on their own or through private service providers), undertaking O&M of treatment facilities (including Sewage Treatment Plants and Faecal Sludge Treatment Plants), implementation of pollution abatement schemes under National River Conservation Plan (NRCP), implementation of sanitation and FSM related initiatives under the GoI's mission and programs (including SBM-U

and AMRUT), and ensuring safety of sanitation workers. Other actors at the local level, involved through PN, are Non-Governmental Organisations (NGOs) (including Practical Action, Bhubaneswar and Centre for Policy Research, New Delhi) and funding organisations (including Bill and Melinda Gates Foundation and Arghyam Trust).

Institutional Assessments

In the initial stages of PN, institutional assessments were carried out at the state level and for ULBs where the Project is being implemented, namely, Angul and Dhenkanal Municipality, in order to ascertain their capacities to manage and deliver urban sanitation services including FSM. These assessments brought to light that there was:

- absence of institutional mechanisms for effective co-ordination and collaboration among the various government departments across state, district and local levels;
- low level of awareness among government institutions regarding their roles and responsibilities related to FSM¹⁴;
- limited capacities, in terms of technical and managerial skills, related to FSM among officials at state, district and local level; and
- absence of community structures that could facilitate community engagement at the slum and ward level.

Strengthening Institutional Arrangements and Building Capacities on FSM

Strengthening Institutional Mechanisms to ensure effective co-ordination and collaboration

The institutional assessments, undertaken as a part of PN, revealed that while there were multiple institutions engaged in the sanitation/FSM sector, institutional structures and mechanisms for ensuring effective co-ordination and collaboration among these institutions were absent. This was recognised as a potential impediment for effective implementation of FSM in the state and the OUSS, 2017 sought to address the same by recommending an elaborate institutional struc-

¹⁰ Odisha Water Supply & Sewerage Board (OWSSB) was established in 1991 as per the Odisha Water Supply & Sewerage Board Act, 1991 for the rapid development and proper regulation of water supply and sewerage services in the state.

¹¹ The Mission is being implemented in 9 cities and towns of Odisha, i.e. Bhubaneswar, Cuttack, Berhampur, Sambalpur, Rourkela, Puri, Balasore, Baripada and Bhadrak. Source: <http://www.urbanodisha.gov.in/Amrut.aspx>

¹² Including, the Environment (Protection) Act, 1986, the Water (Prevention and Control of Pollution) Act, 1974 and the Solid Waste Management (SWM) Rules, 2016 under the Environment (Protection) Act, 1986

¹³ Including the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993 and Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013

¹⁴ Institutional roles clearly defined and capacity building" is one of the guiding principles of the OUSP, 2017



Table 1: State Level Institutions involved in the sanitation / FSM sector in Odisha¹⁴

Institutions	Functions
Housing and Urban Development Department (H&UDD)	<ul style="list-style-type: none"> ◆ Nodal department for ensuring proper and planned growth of cities and towns with adequate infrastructure, amenities and services provided to the citizens through ULBs and para-statal agencies ◆ Responsible for effective implementation of GoI missions and programs including AMRUT¹⁵ and SBM-U¹⁶ ◆ In order to create an enabling policy framework for the implementation of FSM the Department formulated the OUSP, 2017; OUSS, 2017; Urban Septage Management Guidelines, 2016; and Model Regulations for Sewage and Septage Management for ULBs, 2018 ◆ Provides finance, human resources and technical support to ULBs along with assistance of its subsidiary organisations (SUDA, PHEO, OSHB and Development Authorities)

The following institutions work under the administrative control of the H&UDD

Directorate of Municipal Administration (DMA)	<ul style="list-style-type: none"> ◆ Apex administrative organization that regulates functioning of all ULBs in the state¹⁷. ◆ Oversees ULBs performing their regulatory, enforcement and developmental functions in line with the policies, procedures and guidelines provided by the State government.
Directorate of Town Planning¹⁸ (DoTP)	<ul style="list-style-type: none"> ◆ Responsible for preparing Master Plans, monitoring of programmes, providing technical assistance, and regulation of the work of Development Authorities related to the themes of urban planning and development control
Public Health Engineering Organisation – Urban (PHEO - U)	<ul style="list-style-type: none"> ◆ Operation and Maintenance (O&M) of sewerage projects as well as pollution abatement schemes under the National River Conservation Plan (NRCP)¹⁹ ◆ Monitoring of water supply and sewerage systems of all ULBs and Census Towns in the State through the Chief Engineer, PHEO – Urban²⁰ ◆ Collection of water and sewerage charges (user charges) from consumers
Orissa Urban Infrastructure Development Fund (OUIDF)	<ul style="list-style-type: none"> ◆ Development and financing of infrastructure projects undertaken by ULBs, statutory bodies, public sector undertakings and private investors
Development Authorities, Regional Improvement Trusts and Special Development Authorities	<ul style="list-style-type: none"> ◆ Implementation of the Orissa Development Authorities Act, 1982

Other Institutions that work independent of the H&UDD

Odisha Water Supply and Sewerage Board (OWSSB)	<ul style="list-style-type: none"> ◆ Execution of water and sewerage projects and pollution abatement schemes under the NRCP in urban areas. Post completion the projects are handed over to the PHEO for O&M ◆ State Level Nodal Agency (SLNA) for the implementation of missions and programs related to urban sanitation (including AMRUT and SBM-U) in the State ◆ Functions as the State Sanitation Nodal Agency (SSNA) for the implementation of the OUSS and OUSP, 2017
Odisha State Pollution Control Board²¹ (OSPCB)	<ul style="list-style-type: none"> ◆ Monitoring and enforcement of environmental laws enacted by National and State governments ◆ Prevention and control of environmental pollution during the FSM process (desludging, treatment and disposal)
Odisha State Commission for Safai Karamcharis	<ul style="list-style-type: none"> ◆ Protection of the rights of the sanitation workers in the state

¹⁵Commissioner-cum-Secretary, H&UDD is the Chairman of the State Level Technical Committee for AMRUT

¹⁶H&UDD serves as the State Mission Directorate for SBM (Urban)

¹⁷There are 114 ULBs in the state including 5 Municipal Corporations, 48 Municipalities and 61 Notified Area Councils (NACs).

¹⁸Includes Development Authorities (Bhubaneswar Development Authority, Cuttack Development Authority, Rourkela Development Authority, Talcher Anugul Meramunduli Development Authority, Brahmapur Development Authority, Sambalpur Development Authority, Puri Konark Development Authority, Kalinga Nagar Development Authority and Paradeep Development Authority), Regional Improvement Trusts and Special Planning Authorities

¹⁹These schemes are executed by the OWSSB

²⁰The Chief Engineer, PHEO Urban works under the administrative control of the H&UDD. Under the Chief Engineer PHEO-U there are 5 Public Health (PH Circles), 19 PH Divisions and 56 PH Sub-divisions

²¹Head Office and Central Laboratory are located in Bhubaneswar and 12 Regional Offices (RO) at Angul, Balasore, Ganjam, Bhubaneswar, Cuttack, Keonjhar, Rayagada, Rourkela, Sambalpur, Jharsuguda, Japjpur and Jagatsinghpur. Angul RO is responsible for both Angul and Dhenkanal Municipalities.

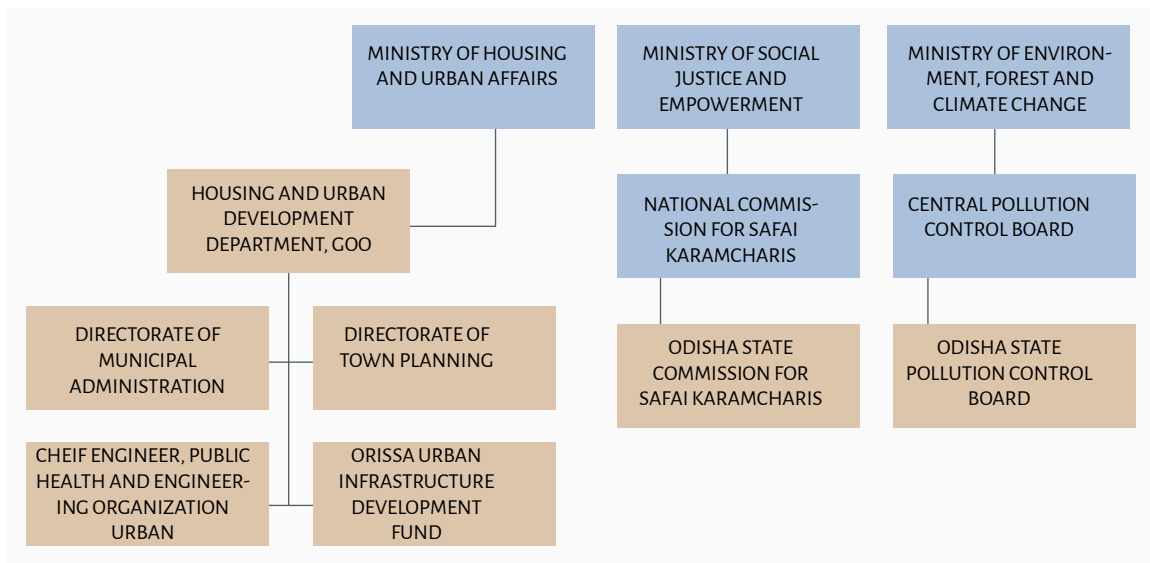


Figure 1: Institutions involved in Sanitation / FSM – National and State Level

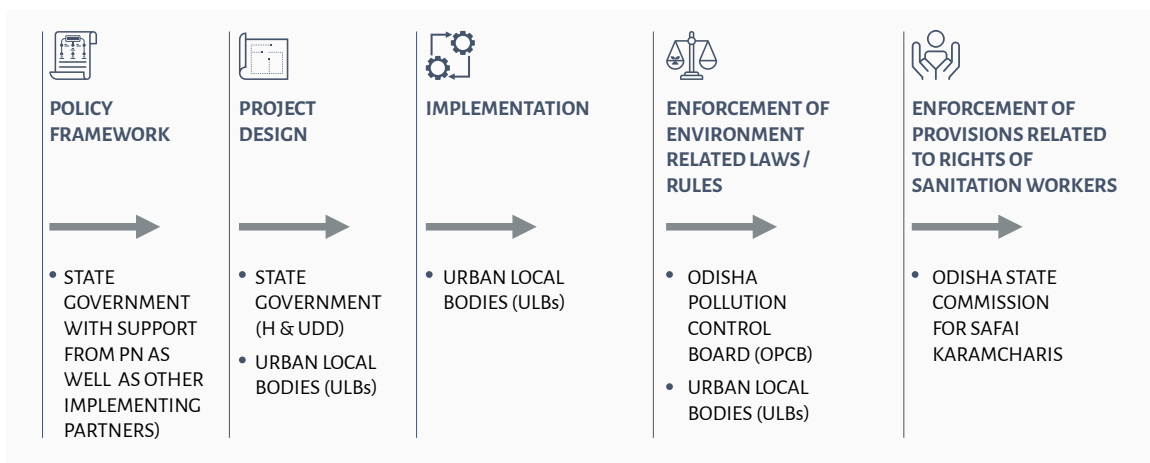


Figure 2: Functions related to FSM and the institutions responsible for these functions

STATE	<p>High Powered Committee (HPC) Chair: Chief Secretary, Odisha; Member-Convenor: Secretary-cum-Commissioner, H&UDD</p> <p>State Mission Directorate (SMD) Mission Director supported by Project Management Unit (PMU), reporting to Commissioner-cum-Secretary, H&UDD</p>
DISTRICT	<p>District-level Review & Monitoring Committee (DLMRC) Chaired by Member of Parliament</p> <p>District Urban Sanitation Committee (DUSC) Chaired by District Collector; supported by Programme Implementation Unit (PIU)</p>
CITY / TOWN	<p>City Sanitation Task Force (CSTF) headed by Commissioner/Executive Officer</p> <p>City Mission Directorate (CMD) – headed by Commissioner/Executive Officer; supported by PIU</p>

Figure 3: Institutional Mechanisms for Coordination and collaboration among different agencies at the state, district and local level



ture for effective coordination and collaboration. (Figure 3)

As per the provisions of the OUSS, 2017 the institutional structure has three tiers with a High-Powered Committee (HPC) as the apex body at the state level. Chaired by the Chief Secretary, Government of Odisha, the HPC is responsible for providing overall guidance and direction to urban sanitation initiatives in the state, and overseeing the implementation of the OUSP, 2017. The HPC is also responsible for “ensuring convergence of action for urban sanitation in the State, and to bring about inter-departmental coordination and cooperation”. The HPC is supported by the State Mission Directorate (SMD), a core H&UDD line agency, set up to provide support to the HPC for the implementation of the OUSP and to undertake periodic review of progress across all line agencies. The Director, SSD is supported by a Project Management Unit (PMU) which has sector experts (covering the verticals of project management, IEC and media, information technology, and monitoring & evaluation) and support staff on an outsourced basis.

Given that most ULBs and especially the small and medium sized ULBs, had considerable deficits in terms of capacities to plan, implement and monitor urban sanitation programs, a district level mechanism was considered to be an appropriate institution for guiding and assisting ULBs on urban sanitation, till such time that ULBs build their own capacities. Thus, as per the provisions of the OUSP, 2017 the District Collector (or an officer nominated by the District Collector) has been designated as the nodal officer for urban sanitation related programs. Further, District Urban Sanitation Committee (DUSC) has been created at District Urban Development Agency (DUDA) as the District-level monitoring and implementing agency for all urban sanitation programmes, schemes and strategies. Chaired by the District Collector, the DUSC has as its members Mayors/ Chairpersons and Commissioners/Executive Officers of ULBs, heads of line departments, and representatives from local industries associations, NGOs, etc. The DUSC remains in constant contact with the SSD (at the state level) to ensure effective coordination and flow of information between all ULBs in a particular district and the State government. The DUSC also assists ULBs in carrying out

their tasks as outlined by the City Sanitation Task Force (CSTF). In addition, the District-level Review & Monitoring Committee (DLRMC), under the Chairpersonship of a Member of Parliament (MP), ensures satisfactory monitoring of projects.

At the city / town level, a City Sanitation Task Force (CSTF) is to be created in all ULBs under the leadership of the Commissioner/Executive Officer. Under PN, CSTFs were set up in Angul and Dhenkanal Municipalities. The CSTF has been entrusted with the responsibility of designing, implementing and monitoring all sanitation related programs in their respective city/town. The CSTF is assisted by a city level Project Implementation Unit (PIU), headed by the Commissioner/Executive Officer. The PIU is responsible for conducting baseline survey, providing inputs on the City Sanitation Plan (CSP), conducting city-wide communication campaign, ensuring citizen engagement for sanitation service delivery and developing Detailed Project Reports (DPRs) for urban sanitation under various national and state government programmes/schemes.

Under PN, a need was felt to create sub-city level (slum and ward) engagement structures in order to enable meaningful participation of all households, especially those residing in slums, in the planning and management of sanitation service delivery. Thus, in Angul and Dhenkanal Municipalities, Slum Sanitation Committees (SSCs) have been constituted at the slum level while Ward Sanitation Committees (WSCs) have been constituted at the ward level. While Angul has 27 SSCs and 23 WSCs, Dhenkanal has 18 SSCs and 23 WSCs. Through their representation in WSCs and CSTF, the SSCs participate in the ward and city level planning and implementation processes.

Building awareness on roles and responsibilities and capacities among institutions on FSM

PN, has accorded a lot of importance on building awareness among institutions and functionaries on their roles and responsibilities related to FSM as well as strengthening their capacities to implement FSM related initiatives. Another key feature of PN has been that awareness and capacity building programs have not been visualised as a one-time input but more as an ongoing process through the life cycle of the project. The



An exposure visit to Indah Water Konsortium, Malaysia



Officials from H&UDD during an exposure visit to Devanahalli FSTP in September 2017

awareness generation and capacity building initiatives under PN have been a mix of orientation programs, exposure visits, and trainings, and have had state, district and town officials as their target audiences.

In January 2016, an exposure visit was organised for officials to Indah Water Konsortium (IWA), the national sewerage company of Malaysia. A key outcome of the exposure visit was that the H&UDD prepared an “Investment Plan for Septage Management” which was later approved by the State government. A sum of INR 213.75 crores was allocated for septage management for the period 2016-17 to 2019-20. Further, in an attempt to strengthen the institutional structure of OWSSB, a Septage Management Division (SMD) was proposed to be created for implementation of septage related initiatives in ULBs.

An orientation program on FSSM practices was organised for government officials in which representatives from Faridpur town, Bangladesh

shared their experiences related to FSM. The participants were oriented about the planning process for setting up a Faecal Sludge Treatment Plant (FSTP)²². This orientation kindled interest among the government officials and they wanted to gain practical knowledge by visiting a functional FSM facility. In July 2016 an exposure visit was organised to Devanahalli FSTP in Karnataka for officials from H&UDD, Angul and Dhenkanal Municipalities and PN team members. The visit enabled the participants to understand the technology as well as the operation of the FSTP. In September 2017 another visit was organised for Secretary, H&UDD to Devanahalli to assess the O&M practices and strategies for putting an end to manual scavenging. After the exposure visits, a video on the Devanahalli FSTP was shown to communities in Angul and Dhenkanal to orient them and to build their acceptance for an FSTP.

Aimed at deepening the understanding on FSM among all key stakeholders, Centre for Policy

²² Including how to calculate the capacity of the plant based on the population to be served, costs, Investment models, role of climatic conditions in the functioning of FSTPs, factors that result in acceptance by the community, reuse of faecal sludge reuse (energy production, agriculture), advantages and disadvantages of this type of treatment facility in comparison to others, and impact assessment based on existing operational facilities.



Research (CPR) under PN prepared a “*Training Manual on Non-Sewered Urban Sanitation*”. The Training Manual is divided into eleven modules. While the first four modules provide a conceptual background on sanitation, its relevance, wastewater management systems and institutional and policy framework for wastewater and sanitation, the remaining modules cover various aspects of FSM services and infrastructure including technology, financing, community engagement, O&M, monitoring, etc. A one-day training program for Master Trainers was organized on “Non-Sewered Urban Sanitation in Odisha” across 11 towns and for Project Manage-

ment Units (PMUs) and Project Implementation Units (PIUs). Further, district level triggering workshops were organized with help from the Technical Support Unit (TSU). Trainings on O&M related to FSM were also conducted at ULB level in Angul and Dhenkanal. The aim of these training programs was to create a conducive environment for FSM across all ULBs in the state.

The advocacy initiatives around the need for capacity building on urban sanitation and FSM for state, district and local level officials has resulted in the institutionalization of urban sanitation related training programs as a part of the ongoing training for the urban cadre.



Photograph of officials from Angul and Dhenkanal Municipalities during an exposure visit to Devanahalli FSTP in July 2016



Training program for Master Trainers on “Non-Sewered Urban Sanitation in Odisha”

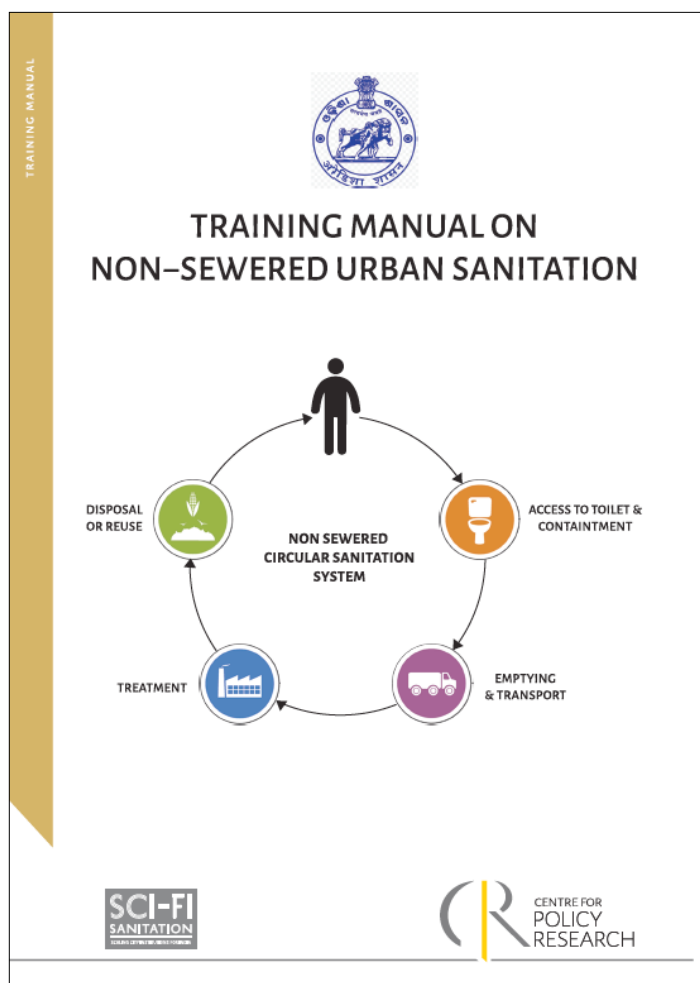
MODULE 1	Sanitation and its relevance
MODULE 2	Sanitation Flow Diagram
MODULE 3	Institutional and Policy Framework for waste water management
MODULE 4	Urban Waste water Management systems
MODULE 5	Introduction to Faecal Sludge Management
MODULE 6	Containment and Handling of Faecal Sludge
MODULE 7	Treatment and Re-use/ Disposal
MODULE 8	Operation and maintenance
MODULE 9	Financial Management
MODULE 10	Community Engagement in FSM
MODULE 11	Faecal Sludge Management Planning

Lessons Learnt

- ◆ FSSM has close linkages with a variety of development themes thereby necessitating the involvement of a variety of institutions across all levels of government (National, State, District and Local). However, there was an absence of structures or mechanisms to ensure effective coordination and collaboration among these institutions. Recognizing this as a potential impediment for effective implementation of FSM in the state, the OUSP (2017) proposed an elaborate three-tiered institutional structure at the state, district and local level which has been put in place by the Government of Odisha.
- ◆ Placing the responsibility on officials who are at the helm, namely, the Chief Secretary, Government of Odisha at the State level, the District Collector at the District level and the Commissioner/Executive Officer at the ULB level has ensured (a) speedy implementation of urban sanitation / FSM related programs, (b) effective implementation of OUSP and OUSS and (c) ensured coordination and collaboration between line departments across different levels of government (state, district and local). The reporting mechanisms created between the district and state level, with the DUSC reporting to SSD, has ensured smooth flow of information.
- ◆ The Government of Odisha has been pragmatic in acknowledging that ULBs, especially the ones in small and medium urban centres, were deficient in terms of capacities to plan, implement and monitor urban sanitation / FSM related programs. Rather than burdening them, which would have resulted in sub optimal results for the sector, the Government of Odisha chose to entrust the responsibility of guiding and assisting ULBs to the district level institutions till such time that the ULBs are capable of taking on these roles. This has gone a long way in ensuring smooth and speedy implementation of FSM programs.
- ◆ In order to create a buy in for FSM a need was felt to create awareness among key government stakeholders about their roles and responsibilities along with building their capacities to be able to take on the envisaged roles. A mix of orientation programs, exposure visits and training programs have worked well to create awareness and build capacities among state, district and local level institutions.
- ◆ Of all the capacity building programs, exposure visits were found to be the most successful as the participants (officials of H&UDD, districts, Angul and Dhenkanal Municipalities) were able to see first-hand the operations of FSTPs and also got an opportunity to interact with the operators of the plants. These visits went a long way in ensuring setting up of FSTPs, not just in Angul and Dhenkanal Municipalities, but also in many other towns across the state. Further, as an outcome of the exposure visit to Malaysia the H&UDD finalised the “Investment Plan for Septage Management” which was subsequently approved by the state government. In addition, a Septage Management Division has been proposed as a part of the OWSSB for facilitating implementation of FSSM initiatives in the ULBs.



Project
NIRMAL



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