

### Background

In October 2019, India completed the first phase of Swachh Bharat Mission (SBM), which in 2014 made the commitment to provide access to household sanitation to at least 120 million homes by this date. Odisha, one of the least urbanized states in the country, as the majority of its population resides in rural areas, had heard the clarion call by the Prime Minister, like many others, to make the state open defecation free (ODF) by increasing toilet coverage. Along the way, recognizing that the toilets would eventually require the faecal waste to be removed to ensure the longevity of the toilet's use, Odisha started also focusing on how to establish the entire value chain for sanitation, from safe containment and separate of waste from human to safe disposal and potential re-use of the waste. This called for a concerted investment in faecal sludge management (FSM) practices.

There is a direct link of poor health to poor sanitation. Improved sanitation and FSM in the district will bring down outbreak of water borne diseases such as diarrhoea which is the most important cause of the faecal - oral diseases globally.

The Housing and Urban Development Department (HUDD) in Odisha has been engaged in addressing FSM in cities in the state since 2015, thanks to the launch of the Atal Mission for Rejuvenation and Urban Transformation (AMRUT). Since then, the Odisha government supported nine towns to invest in FSM by constructing faecal sludge treatment plants (FSTPs) in AMRUT-supported towns. Two medium-sized towns in the state, Dhenkanal and Angul, were selected for a pilot named Project Nirmal in 2014, in anticipation of advising the utilization of AMRUT funding in relation to FSM, with support provided to the state and district governments by Centre for Policy Research (CPR) and Practical Action as implementing partners. Funding was provided by Bill and Melinda Gates Foundation, Arghyam, HUDD and the relevant municipalities. In 2016, HUDD released the authorized Urban Sanitation Policy and Strategy, which predated the national FSSM policy. In 2018, after Project Nirmal was completed and had demonstrated the benefits of implementing FSM value chains, the Chief Minister at a national workshop organized by HUDD on faecal sludge and septage management (FSSM) demonstrated his commitment to make Odisha clean and healthy by proclaiming *Swachh Odisha, Sustha Odisha*, or 'Clean Odisha, Health Odisha'. In the workshop, six such facilities in the state, including Dhenkanal FSTP were inaugurated and commissioned by the Chief Minister. Dhenkanal FSTP is one of the first FSTPs in the state for small and medium towns.

However, this left a large question unanswered: What about the large and dense villages (LDVs) and rural areas in Odisha? How can they access a sustainable and fiscally viable FSM system? Therefore, to explore if there is a solution to be found in extending an established urban FSTP's reach to the neighbouring *gram panchayats* (GPs), UNICEF and CPR collaborated on a pilot intervention using the Dhenkanal FSTP as a starting point for conversation.



### About the Intervention

Dhenkanal district in Odisha has a total population of 11.9 lakhs and 2.7 lakh households (Census, 2011). The district had declared all its GPs ODF even before the national deadline of October, 2019. According to the same census, septic tanks were one of the most prevalent on-site systems in rural areas in Dhenkanal. In 2017-18, according to the SBM monitoring database, 96 per cent of all the toilets built, since the start of SBM in 2014 in Dhenkanal, were single pit and in 2018-19

only 40 per cent of toilets were single pits; the remaining for the latter were reported to use the twin pit model. A rapid assessment conducted in the district’s rural areas in 2019 also suggested that there was a varied mix of toilet technologies in use and highlighted the need to explore how these various technologies could be catered to through a central FSM structure, like an FSTP.

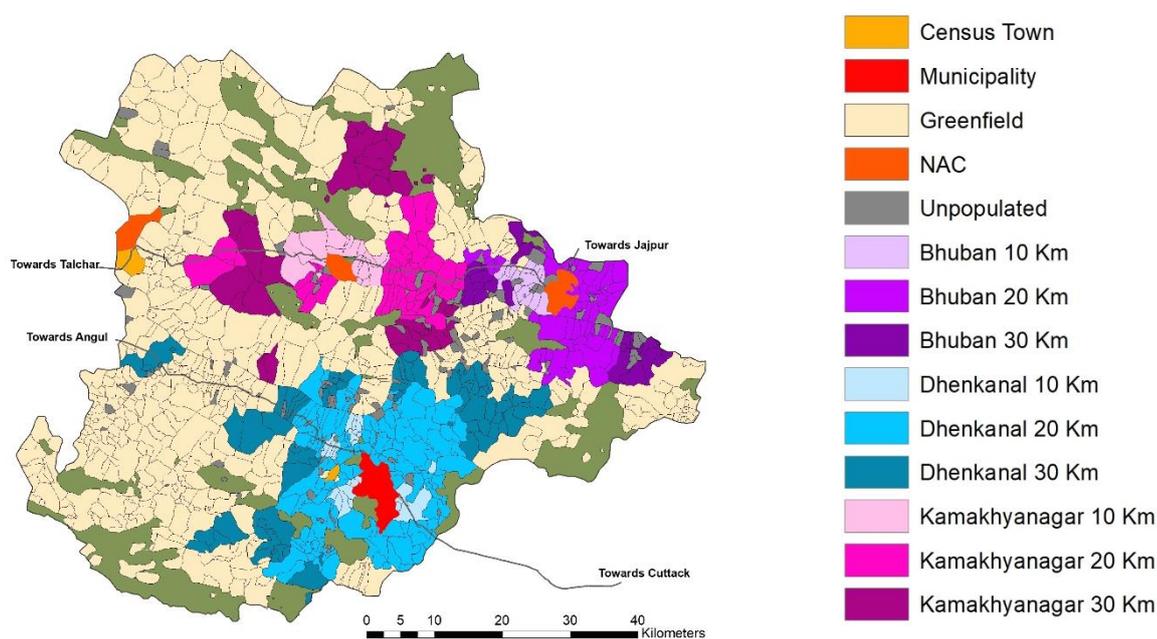
It was initially observed that GPs and small towns were sometimes clustered around urban areas, which led to the idea of testing out whether they could be incorporated in the existing FSTP’s serviceable area. It was also noted, based on the learning from Project Nirmal and AMRUT, the great influence that district-level administrations could have in improving uptake of FSM at the household and community level. UNICEF and CPR therefore were also keen to position the Dhenkanal municipality as a leader in the roll-out of the intervention. Finally, another important question that was raised was how investments in FSM would fit into the larger solid and liquid waste management (SLWM) framework for the district as well as the state.

The Dhenkanal FSTP intervention, designed to be rolled out from 2019 to 2021 therefore aimed to:

1. Leverage the available urban FSTP facility in Dhenkanal to safely manage faecal sludge generated in the neighbouring GPs, census towns and LDVs, through convergence of goals and requirements between the GPs and the municipality.
2. Support SLWM pilots in GPs in identified green field rural locations, which include IEC messaging and campaigns to promote uptake of existing and newly available services

### Project Components

#### i. Plug in GPs and others in ‘cluster’ to available urban facility in the Dhenkanal district:



**Image: GIS mapping of centre of municipalities with FSTPs, and concentric spread of populations – urban and rural - by kilometre tiers from the municipality (in red). This type of mapping is crucial for understanding the feasibility of an urban-based FSTP serving a larger radius than just the borders of the immediate urban population.**

Using GIS to map out the Dhenkanal municipality and the concentric populations surrounding it, adjoining GPs, census towns<sup>1</sup> (CTs) and LDVs<sup>2</sup> were located within 20 kilometers from the jurisdiction of the Dhenkanal municipality which were also clustered around three existing FSTPs – one in Dhenkanal and two upcoming in Bhuban and Kamakhyanagar. These ‘clusters’ were seen as feasible to serve using the existing and planned FSTPs based on feasibility and cost analyses that incorporated the cost of running the FSTPs, the transport or ‘cesspool’ trucks, the salaries of operators, equipment and products for safe management of trucks and FSTP, etc.

There is currently an on-going study of village-based on-site systems, waste management practices and perceptions, and any existing FSM services known to various community individuals.

## **ii. Undertake green field projects in the identified cluster of GPs of Dhenkanal district:**

Based on the above study findings, the result of a sanitation market mapping exercise and an assessment of the solid and liquid waste situation in GPs, a district-wide implementation plan and roadmap will be developed for intervention in the identified cluster of GPs. Rural technologies for FSM will be compiled and disseminated for the purpose of adopting a suitable technology for green field on FSM in selected panchayats.

Institutional mapping to understand the role of elected representatives, Community based Organisations (CBOs), Other actors including government officials have been undertaken and capacity building strategy has been designed to strengthen capacities of all stakeholders in the district for effective FSM. Institutional processes to bring convergence between rural and urban governance systems for facilitating SLWM will be put in place and strengthened over a period of time.

To create demand for SLWM and spread awareness on SLWM practices, information, education and communication (IEC) materials is in the process of being developed and a strategy of communication will be built in with the support of the District. District level mechanisms and platforms will be explored for wider dissemination of FSM related awareness.

## **Next Steps and Envisaged Outcomes**

The connection between the Dhenkanal FSTP with the surrounding cluster will be operationalized through the passage of Municipal Council Resolution by the Dhenkanal Municipality, as well as resolutions by the concerned GPs. This intends to create a convergence model which can be replicated in the other cities and towns of the state, and ensure that there is ownership by community and government leaders who can sustain the gains realized.

This intervention is first of its kind in the entire state, where systematic activities are being undertaken through a district-wide approach to plug in rural areas within the existing FSM solution available at a municipality level. This effort is a step towards making the whole district of Dhenkanal free of liquid waste flowing in the soil, drains and therefore will address the issue of environment pollution. This in turn, will support the communities being served in being healthier and live in contamination-free environments for children to play and thrive in.

In 2020, SBM-Grameen Phase II was launched, and it lays emphasis on FSM in rural areas and suggests two approaches for effective FSM in GPs. Firstly, it enunciates that upcoming district-level FSMP plans should be

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<sup>1</sup> Census towns are towns where population exceeds 5,000 having a density of 400 person per sq. km. and at least 75% of main working population is employed outside the agricultural sector. However, CTs are administered under rural

<sup>2</sup> Large Dense Villages (LDVs): LDVs are defined as villages having population of at least 1000 and a density of 400 person per sq. km.

developed keeping in mind the adjacent rural areas that can be potentially served by existing plants and other methods of treatment, both for FSM only and co-treatment solutions. Secondly, the approach focuses on setting up a system for FSM where FSTPs do not exist by choosing technologies which are suitable to the rural context. The pilot intervention in Dhenkanal too embraces both these approaches of plug in and green field. The lessons learnt from the pilot intervention in Dhenkanal can be useful in up scaling efforts for FSM in rural areas in the state and in the entire country as it not only creates sustainable FSM services in the district but also brings in the rural-urban convergence.

### **III. Project Progress and relevant Documents as on Nov. 2020**

1. Brochure of the Project **Annexure-I.**
2. Direction from the PR & DW Department issued to the District Administration for facilitating the survey in the district **Annexure-II.**
3. Letter issued by the District Collector, Dhenkanal asking Dhenkanal Municipality and neighbouring GPs for signing agreement between them for formalising the delivery of FSM services **Annexure-III.**
4. PRC was constituted with issuance of notification by the district administration **Annexure- IV.**
5. Municipal Resolution containing the fee structures for desludging services in the adjoining GPs **Annexure-V.**
6. PD, DRDA, Dhenkanal letter to PRIs & BDO Sadar Block on fee structure **Annexure-VI.**
7. Survey Methodology and tools developed and finalised **Annexure-VII.**
8. IEC Strategy and communication plan **Annexure- VIII.**
9. Stakeholder Analysis Report developed and shared with UNICEF **Annexure- IX.**
10. Proceedings of District FSM Launch Workshop **Annexure-X.**
11. Policy brief for towards institutionalizing FSM for achieving ODF Plus **Annexure-XI.**
12. Project Overview and Survey Findings presentation to PR&WD on 20102020 **Annexure- XII.**
13. Presentation on Project Overview & Survey Findings **Annexure-XIII.**