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TAMIL NADU   URBAN SANITATION   SUPPORT PROGRAMME

KNOWLEDGE MANAGEMENT AND EXCHANGE STRATEGY FOR URBAN SANITATION

September 2018
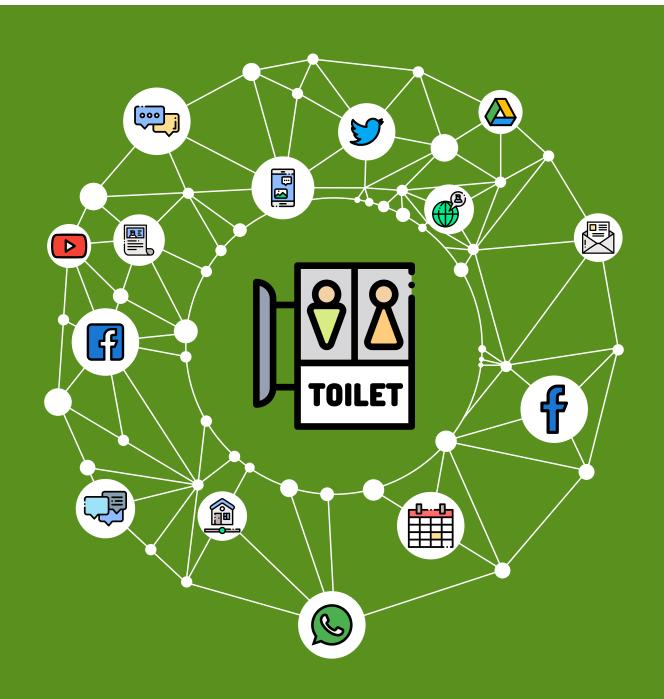
KNOWLEDGE MANAGEMENT AND EXCHANGE STRATEGY FOR URBAN SANITATION

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CONTENTS

Tables

Figures

Abbreviations

BCC	Behaviour Change Communication
CDD	Consortium for DEWATS Dissemination Society
CLTS	Community Led Total Sanitation
CoP	Communities of Practice
FB	Facebook
FSM	Fecal Sludge Management
FSSM	Fecal Sludge and Septage Management
IIHS	Indian Institute for Human Settlements
ISC	Indian Sanitation Coalition
KM	Knowledge Management
NFSSM	National Alliance on Fecal Sludge and Septage Management
SanCOP	Sanitation Communities of Practice
SDG	Sustainable Development Goals
SuSanA	Sustainable Sanitation Alliance
TNUSSP	Tamil Nadu Urban Sanitation Support Programme
TSU	Technical Support Unit
UGD	Underground Drainage
ULB	Urban Local Body
UNC	University of North Carolina
UNESCO-IWE	United Nations Educational, Scientific and Cultural Organization – Institute for Water Education.
WEDC	Water, Engineering and Development Center, University of Loughborough, UK

Executive Summary

Executive Summary

Fecal Sludge Management (FSM) practices in India and in several other developing countries are at an elementary stage, with governments working to create and change policies to prioritise FSM. Several pilot projects, prototypes, and interventions are unfolding in various parts of the world. The adoption of the United Nations Sustainable Development Goals (SDGs), specifically SDG 6, which aims to ensure universal access to water, sanitation and hygiene, necessitates a greater need to share learnings and exchange knowledge. TNUSSP's Knowledge Management Strategy aims to locate its work in the existing body of knowledge on FSM.

There are several regional and country level forums, websites and blogs as well as academic journals and conferences dedicated to water and sanitation to enable the exchange of knowledge among practitioners. One source of knowledge is the peer-reviewed journals, reports and other grey literature. These journals publish evidence-based research as well as learnings from field-based interventions on water and sanitation. Further, several organisations and initiatives such as Sustainable Sanitation Alliance (SuSanA) provide platforms for practitioners to share knowledge on FSM. WaterAid, World Bank and Practical Action maintain blogs which actively share information on their current projects and learnings. In addition, the FSM Conference is yet another important platform which brings together researchers, practitioners and entrepreneurs. However, there are severe knowledge gaps in the various components of the FSM chain – from the initial stages of containment until final stage of reuse and disposal.

Given the nascent stage of FSM in Tamil Nadu and India, Tamil Nadu Urban Sanitation Support Programme (TNUSSP) plays a vital role in building a repository and disseminating knowledge from its on-ground work to stakeholders, which include urban local bodies (ULBs)and Government officers, urban sector professionals, and TNUSSP partners. As a learning organisation, TNUSSP is committed to contributing to FSM knowledge creation and dissemination through communities of researchers and practitioners, as well as the IIHS Knowledge Gateway which is a repository of all published and in-progress research at IIHS.

This is done through generating and documenting evidence-based research and presenting findings to different target stakeholders. Towards this, the research team also identifies potential areas of research based on emerging gaps from the field and knowledge is generated primarily through team members. Further, government officers will also be encouraged to not only share information but also to transfer their tacit knowledge on FSSM into explicit knowledge through the use of Whatsapp groups, the TNUSSP website and other forums.

Since FSM interventions are in their early stages in Tamil Nadu, there are several learnings gained in the implementation of the programme, which will be captured through baseline surveys, process documents and thematic studies, among other forms. Knowledge will be shared through digital media channels such as the TNUSSP website, Facebook page, Twitter, LinkedIn, blog (Fecelore) and WhatsApp groups. Knowledge networking will be done through Communities of Practices (CoPs) and knowledge gateways like SuSanA, Community Led Total Sanitation (CLTS), India Sanitation Portal, India Water Portal and Sanitation Communities of Practice (SanCOP) and international conferences. A combination of print, digital and audio-visual technology will be used to implement the knowledge management strategy by also publishing across popular platforms such as IndiaSpend, The Wire, Scroll and The Hindu.

Implementation of this strategy will be done through various approaches. Regular presentations that capture learnings from various studies undertaken by the team have been made to the Government of Tamil Nadu during advisory meetings. Baseline surveys have been converted into knowledge products

such as reports and practice briefs, and as conference papers at the FSM conference in Chennai in 2017. TNUSSP's behaviour change strategy was also presented as a poster at the same conference. Team members will also be participating in various outreach activities such as representing TNUSSP in the NFSSM (National Alliance on Fecal Sludge and Septage Management), India Sanitation Coalition, SuSanA, UNESCO IHE, etc. Active engagement with media channels in Tamil and English is on-going.

However, some challenges faced in implementation of this strategy include disinterest of Government officers due to being overburdened with work, lack of open sharing policy among fellow professionals given stiff competition, lack of data reliability and heavy costs for data collection, rapidly changing technology which mandates quick production of knowledge products.

Introduction

1. Introduction

The Tamil Nadu Urban Sanitation Support Programme (TNUSSP) aims to support the Government of Tamil Nadu in improving urban sanitation and demonstrating improvements along the sanitation chain in two model urban locations of Tiruchirapalli and Coimbatore. As a learning organisation, TNUSSP aims to not only create and acquire knowledge on the full cycle sanitation but also aims to actively transfer knowledge to and from various stakeholders. Knowledge management (KM), therefore, becomes an important component of the TNUSSP. This document aims to provide an overview of knowledge management in the rapidly emerging field of Fecal Sludge Management (FSM), and TNUSSP's strategy to meet those needs.

While knowledge management has been part of the programme since its inception in Oct 2015, the approach and strategy has evolved since then aided by specific actions, events and team experiences. This document outlines the current strategy and also captures the activities that were carried out in the first phase of the programme.

1.1 Knowledge Management in Water and Sanitation

The adoption of the United Nations (UN) Sustainable Development Goals (SDGs), specifically SDG 6, which aims to ensure universal access to water, sanitation and hygiene, necessitates a greater need to share learnings and exchange knowledge on the methods, innovation, practices and tools amongst water and sanitation practitioners to help develop contextualised solutions. The need to collaborate has been acknowledged globally with the formation of learning networks, alliances, communities of practice and knowledge gateways such as SuSaNa, saniblog on water and sanitation that are not only knowledge sharing platforms but are also places of collaboration.

In addition to such global alliances, there are several regional and country level forums (Annexure 1) in Asia, Africa, Latin America and the Middle East, which enable the sharing of grey literature such as reports, case studies and project briefs with a wider audience as well as facilitate real-time discussions and knowledge exchange between different initiatives across geographies. There are also several websites and blogs as well as academic journals and conferences dedicated to water and sanitation to enable practitioners to exchange knowledge.

1.2 Knowledge Management in FSM

Although FSM practices in India and in several other developing countries is at an elementary stage, it has been observed to grow at a fast pace. This is due to the recognition that on-site sanitation systems (OSS) are most prevalent in several urban as well as rural areas, and that FSM is critical to addressing the challenges they pose. Not only are governments working to create and change policies to prioritise FSM, but there is also a complementary push from donor agencies who are putting forth FSM as a possible solution to networked sewerage systems. On the ground, FSM practices are also evolving at a rapid pace. Several pilot projects, prototypes, research studies and interventions are unfolding in various parts of the world which need to be discussed and shared. In this rapidly changing scenario, knowledge management becomes a crucial link in ensuring knowledge creation and transfer happens in a timely manner.

1.3 Gaps in FSM

Currently, there are severe knowledge gaps in the various components of the FSM chain (Figure 1.1), from the initial stages of containment until the final stage of reuse/disposal. Table 1.1 details these gaps and the stakeholders who could benefit from access to this information.

Figure 1.1: **Fecal Sludge Management Chain**
Source: Adapted from Bill and Melinda Gates Foundation, 2012

Table 1.1: **Illustrative list of Knowledge Gaps in Sanitation Chain**			
Sl. No	**Components**	**Knowledge Gaps**	**Key Stakeholders**
1.	Containment	• Lack of data on the exact number, type and condition of containment & soakaway structures, and their volume. • Information on sludge accumulation rates in septic tanks which can help determine the frequency of desludging. • Poor availability of information on point source and non-point source leading to contamination of water sources by septage. • Status of legacy structures and methods of retro-fitting containment structures that do not comply with prescribed standards. • Characteristic of the fecal sludge from households as well as community toilets which can provide valuable information on its treatment. • Limited knowledge and understanding on the requisite masonry skill to build appropriate toilet design, based on contextual needs. This stage of the sanitation chain usually includes interactions between engineers and	• Urban Local Bodies (ULBs) • Central government • NGOs • Community-based organisations (CBO) • Households (HHs) • State government

SI. No	Components	Knowledge Gaps	Key Stakeholders
Table 1.1: **Illustrative list of Knowledge Gaps in Sanitation Chain**			
		contractors as well as house-owners, and knowledge gaps that affect decision-making about the suitable access or containment system to be built. • Limited awareness amongst officers of the Urban Local Bodies (ULBs) on Tamil Nadu Septage Management Operative Guidelines, 2014	
2.	Emptying & Transport	• Low awareness of households on the need for regular desludging. • Limited information available on the numerous operators available to de-sludge tanks further complicates the emptying and transport of fecal sludge. • The absence of personal protective and safety equipment used by these operators represents a significant gap in knowledge of safe sanitation practices.	• ULBs • Private sector players
3.	Treatment	• Lack of knowledge amongst households and desludging operators, on the importance of safe treatment of septage is a concern. • Information on technologies for treatment of septage is often limited.	• ULBs • Private sector players • Households • State government
4.	Safe Disposal or Re-use	• Information among various stakeholders on the different methods and opportunities to use treated fecal sludge is minimal. • Knowledge on technologies that can help enable re-use of fecal sludge is not easily accessible.	• ULBs • Farmers • Households • Private sector players
Source: TNUSSP 2018			

The knowledge gaps described in Table 1.1 result in the various stakeholders of the sanitation chain contributing towards further deficits in sanitation. Since the knowledge needs for each stakeholder is different, targeted strategies and tools with regard to knowledge management are required.

1.4 Knowledge Needs of Stakeholders

At each stage in the sanitation chain, there are multiple stakeholders involved requiring specific pieces of knowledge. For example, households need information on the importance of properly constructed on-site sanitation systems and their maintenance; masons who construct these on-site sanitation systems need to be aware of the existing guidelines on the construction of septic tanks as do the ULB officials who provide the building permissions and other clearances; the desludging operators need awareness on the use of safety equipment for personal protection and more importantly the importance of safe disposal of septage; farmers, who are also a key stakeholder in the sanitation chain as they

often allow the raw septage to be discharged into their field, need to be made aware of treatment before reuse; NGOs and CBOs could use more data and information about the sanitation ecosystem such as the characteristics of fecal sludge, masonry practices in construction of septic tanks, quantum of fecal sludge generated, frequency of desludging, etc. which could impact the solutions created for the community.

1.5 Knowledge Networks in FSM

The stakeholders in FSM are both consumers and creators of knowledge that may or may not be shared formally. The formal networks comprise sanitation professionals, academicians and practitioners who share knowledge in peer-reviewed journals, reports and other grey literature. These journals publish evidence-based research as well as learnings from field-based interventions on water and sanitation. Some examples are the Journal of Water, Sanitation and Hygiene for Development, Journal of Water Resource, Planning and Management, Water Lines, Environment and Development, Current science and so on.

With the preference for shorter and crisp messaging forms offered by new media such as Facebook, Twitter and multiple online platforms, knowledge managers have grown to include them as important tools for knowledge sharing. India Water Portal, SaniBlog, and the Water Blog by the World Bank are examples of niche sector-specific platforms, while LSE Cities, Scroll.in, IndiaSpend and The Hindu are examples of popular online platforms.

However, there is a need to recognise the informal networks of knowledge creation, such as whatsapp groups amongst government officials in India. This has enabled faster and simpler ways of information sharing using different formats such as text, images and videos. This trend has also been noticed among desludging operators, masons and other grassroots professionals who have traditionally resorted to oral sharing of knowledge within their cohort.

Internationally, several organisations and initiatives produce knowledge on FSM. Sustainable Sanitation Alliance (SuSanA), an online platform for community of practitioners as well as researchers who frequently exchange information about their work from different parts of the world, is one such initiative. Similarly, organisations such as WaterAid, World Bank and Practical Action who have extensive WASH programmes, maintain blogs which actively share information on their current projects and learnings. Apart from social media and knowledge gateways, the annual Fecal Sludge Management Conference is yet another important platform which brings together researchers, practitioners and entrepreneurs.

The Gates Foundation, which actively supports several organisations working on FSM in India, has also formed an alliance called the National Fecal Sludge and Septage Management. The role of this alliance is to facilitate the sharing of information and best practices on FSM in the Indian context, which is an important step towards knowledge creation.

TNUSSP's Knowledge Management Strategy

2. TNUSSP's Knowledge Management Strategy

2.1 Background

In TNUSSP, knowledge management assumes a very important and specific role as it specifically focuses on FSM, which is emerging as a new body of practice both globally and in India. Given the nascence of the practice and the limited number of examples of large scale FSM programmes, effective knowledge management is important in order to learn from other programmes and initiatives— often in real time. Knowledge management also becomes critical to accurately identify the gaps in knowledge and conduct appropriate research to close some of these gaps.

In addition, TNUSSP is an integral part of the State Government's Mission for Total Sanitation—Muzhu Sugadhara Tamizhagam—a campaign aimed at achieving 100 per cent sanitation coverage across the State of Tamil Nadu. Given the nascent stage of FSM in Tamil Nadu and India, TNUSSP has a vital role to play in building this repository and disseminating knowledge from its work on the ground. As a learning organisation, TNUSSP is also engaged in creating, acquiring, managing and transferring knowledge on FSM within the existing network of organisations as well as contributing in Communities of Researchers and Practice (CoPs) through the use of websites, social media and journals.

2.2 Objectives

The objectives of knowledge management in TNUSSP are as follows:

1. Enable learning by team members, government officers and others involved directly or indirectly in the implementation of the programme.
2. Contribute to the wider FSM knowledge community by documenting and dissemination findings from the programme, specifically converting the tacit knowledge into explicit knowledge.
3. Dissemination through CoPs, knowledge gateways, social media, mainstream media, and academic journals.

2.3 Stakeholders

TNUSSP's KM strategy is designed to sieve through the materials available on FSM to maximise the benefits for various stakeholders but also reduce the 'information fatigue' that practitioners and researchers are faced with. Therefore, our KM activities are not document-centric but people-centric, catering to the specific needs of identified stakeholders. If TNUSSP is to position itself as one of the leading knowledge producers in FSM, identifying the stakeholders who we are trying to reach out becomes very important.

The strategy for knowledge management is explained by answering the following questions:

1. Who are the target audience and stakeholders?
   Target audience can be both external and internal. External stakeholders include state government departments, urban local bodies (ULBs), a larger community of researchers, academicians, practitioners in FSM and other urban sector professionals. At the moment, the internal audience for knowledge management mainly includes the TNUSSP teams and its partner organisations.

2. What are the key needs and demands of stakeholder groups?
   Based on a consultation amongst stakeholders on their knowledge needs, it was found that curating and sharing of knowledge continued to be a challenging proposition both within the Technical Support Unit (TSU), among the partners, and external stakeholders like the State Government and the ULBs. Identifying and curating of knowledge from other urban sector

professionals and sharing of knowledge from the TSU was another area that needed attention. Some of the knowledge needs identified among the different stakeholders are discussed below.

2a. State Government and the ULBs: One of the main challenges faced by the TSU while dealing with external stakeholders like the State Government and representatives and officers of the ULBs is to convince them about the reliability of septage management as a viable alternative to the existing UGD system. In this instance, the knowledge need lies in sourcing and disseminating information on different kinds of technologies related to sewage treatment and convincing the government bodies and ULBs on reuse of the treated sewage. Apart from these, the ULB's themselves needed a system of sharing best practices and know-how between and among themselves, which was quite limited extent.

2b. Urban Sector Professionals: The knowledge challenges while working with different urban sector professionals mainly consisted of answering the following questions: (i) what is the information that should be disseminated from the ground; (ii) how can that information be disseminated effectively; and (iii) what technology could be helpful to disseminate this information?

Most urban sector professionals follow the conventional norms of urban planning and design which, in the sanitation sector, means emphasis on underground or networked sewerage systems as against on-site sanitation systems. As a result, large urban and peri-urban areas that do not have access to networked sewerage resort to various unsafe ways of disposal. In order to target the information deficiencies pertaining to FSM in this group, KM activities need to be tailor-made to present FSM as a viable alternative to networked systems.

2c. TNUSSP Teams: Poor data availability, data reliability and application of data for programmatic work was stated as one of the biggest challenges which hampers all areas of intervention in TNUSSP. Apart from data, keeping abreast of changes in technology options, policy priorities, emerging trends in FSM, media coverage on sanitation are other knowledge needs of the TNUSSP team. Sourcing and disseminating information among the team members on key outputs from different components of the programme itself was mentioned as a key knowledge need.

2.4 Different Aspects of Knowledge Management and its Constituents

Knowledge management is directly linked to the plans and activities of different aspects or components of the programme. Within TNUSSP, knowledge management will include knowledge transfer, information sharing and capacity building in two categories:

(i)   generating and/or documenting evidence-based research; and
(ii)   presenting and communicating findings, insights and lessons amongst different target stakeholder and audience segments.

Research aims to generate new information from primary and secondary sources, while communication involves information dissemination and sharing of findings through various print and digital media in the form of reports, journals, websites, social media pages and CoPS. Research studies in TNUSSP includes primary studies such as baselines and reviews, as well as secondary studies such as scoping studies, policy reviews, etc.

Apart from this, as a learning organisation, TNUSSP continuously engages with different actors and stakeholders in the FSM arena from whom there is learning, sharing, and exchange. All these

interactions also influence and contribute to a robust knowledge management process within the organisation. This sharing has taken the form of report, papers, speeches, presentations, etc.

An example of the knowledge management process being followed at TNUSSP is the capacity building component, which undertook a training needs assessment for masons to assess the current knowledge gaps in the construction of septic tanks. Much of the information collected was new. This study was perhaps the first attempt at systematically capturing masonry practices in sanitation. The findings of this assessment along with a similar assessment of ULB officers has been published as a TNUSSP practice brief which has been disseminated across knowledge gateways, websites and social media sites. Similarly, a review of legal and institutional arrangements on sanitation in the State of Tamil Nadu was undertaken to map the multitude of institutions and legal instruments that govern sanitation in the state. While this was done to improve the understanding of the sector for the TNUSSP team, it proved to be a fruitful exercise to capture as well as share this knowledge which previously existed in a scattered manner.

Alongside such reviews and assessments, TNUSSP is also documenting the processes followed for certain important activities. For example, a detailed process documentation of the Fecal Sludge Treatment Plant (FSTP) including land procurement, legal clearances, consent processes, contracting and construction was commissioned to not only capture the learnings and challenges faced in the entire process but also to convert what exists as tacit knowledge to explicit knowledge which can be used by a larger community of sanitation professionals.

Towards this end, the KM strategy of TNUSSP will undertake the following steps:

- understand the knowledge needs of the different members of the TSU and government officers/leaders at different levels;
- conceive a system for internal sharing of knowledge between the different teams within the TSU and between the TSU and the partnering organisations;
- develop a system of knowledge sharing from TNUSSP to other stakeholders such as NGOs, private sector, academic institutions, and the informal sector;
- curate and understand the different kinds of work being done by different projects involved in septage management in India;
- curate knowledge from urban sanitation professionals within the country and in South Asia; and
- contribute to the Urban Policy Dialogues, a flagship event of IIHS, as well as other flagship events at IIHS including the Urban Practitioners Programme and the Urban Fellows Programme.

2.5 Implementation

The implementation of a knowledge management strategy hinges on three important elements: people, processes and technology. The objective of this strategy document is to address all these elements systematically. Being a living document, the knowledge management strategy is likely to undergo changes to reflect the organisational goals and aspirations, as well as emerging accomplishments.

2.5.1 People

When planning KM activities, identifying the knowledge workers in an organisation and defining their roles becomes critical. Some organisations believe knowledge management to be the domain of one group whereas some believe knowledge management is too important to be restricted to only one group. Whatever may be the case, the involvement of senior management and their buy-in on the importance of knowledge management is pivotal to the success of a KM strategy.

TNUSSP aims to be an innovative implementation project, that aims to both learn by doing, as well as proactively learn and innovate while implementing. Thus, knowledge will be generated primarily through

team members implementing the programme—whether at the city or state level, through both grassroots intervention as well as strategic intervention in conjunction with the government. A dedicated knowledge management and communications team will work closely with others to capture, manage, network and share knowledge. The knowledge management and research team will also identify potential areas of research, based on emerging gaps from the field. Communication experts and designers will closely work with the KM team to structure a variety of knowledge products such as infographics, Facebook and Twitter campaigns, practice and policy briefs and a host of teaching-learning material such as cases for Government officers training and educational institutions.

Government officers from the State and the ULBs will also be encouraged to not only share information but also supported to transfer their tacit knowledge on FSSM into explicit knowledge through the use of Whatsapp groups, and TNUSSP website. Also, interviews with Government officers will be conducted to capture their tactic knowledge and published. Efforts will be made to translate relevant material into Tamil for wider dissemination within the state. Other organisations working in FSM will also be enlisted as knowledge partners since they have their ears to the ground. They will be encouraged to share visual and textual stories from the field, which will be translated as necessary.

2.5.2 Process

Process refers to the ways in which knowledge will be captured, stored, used, shared and replicated. Since the knowledge management strategy will be used for internal and external purposes, the following set of processes will be adopted.

- Knowledge Capture: The practice-based work of TNUSSP is a fertile ground for knowledge capture. Since FSM interventions are in their early stages in Tamil Nadu, there are several learnings gained in the implementation of the programme which are being captured in the form of a process documentation. Thematic Studies that cover a broad range of topics such as manual scavenging in urban areas, link between urbanisation and urban sanitation, behaviour change communication (BCC) for FSM, capacity building of masons, and co-treatment protocols for solution providers will be undertaken by the team. In addition, baseline surveys on sanitation in different parts of the state and country, identifying evidence gaps through research and sector scoping studies will be undertaken on a periodic basis.

- Knowledge Management/Sharing and Engaging: The physical/virtual handling of information generated through the KM initiatives will be maintained in a shared drive and disseminated through an internal news bulletin. A TNUSSP WhatsApp group has been formed to share updates and flag important news. Digital media channels such as its website, Facebook page, Twitter, LinkedIn, and blog (Fecelore), will be the primary modes of engagement for knowledge sharing.

- Knowledge Networking: CoPs and knowledge gateways like SuSanA, CLTS, India Sanitation Portal, India Water Portal and SanCOP provide a fertile ground for exchange of ideas and knowledge networking. Conference such as FSM IV, WEDC Conference, UNC's Water and Health Conference and World Water Week, among others, are some cutting-edge conferences where TNUSSP will aim to present its work. While there may be several other conferences and workshops, TNUSSP will select those that engage in discussions on components that are directly relevant to its work.

2.5.3 Technology

Technology is an important enabling factor for knowledge management. However, technology can also hamper the process of KM when there is excess use of it or employees are resistant to use it. Therefore, a combination of print, digital and audio-visual technology will be used to implement the knowledge management strategy. TNUSSP has a website and Facebook page which is populated frequently. Additionally, an automated search engine has been built to scan sanitation news covered in several dailies across the county.

With the shift in the document management systems to a digital platform, the use of technology will also be adopted by TNUSSP. However, traditional route of printing documents and reports will be continued in order to be inclusive of those who do not have digital access. Website, WhatsApp, Twitter and Facebook will primarily be used for project communication while CoPs and knowledge gateways will be used for knowledge networking and sharing. However, for certain select stakeholders such as state government officials, WhatsApp messaging will be used as the preferred mode of communication instead of email. Announcements, newsletters, images, and data will be shared in simplified formats through WhatsApp.

2.6 Operationalising the KM Strategy

Since its inception, TNUSSP has been actively engaged in creating knowledge. Explicit knowledge such as baseline surveys or presentations made to the Government of Tamil Nadu have been converted into knowledge products such as reports and practice briefs. The baseline study was presented as a paper at the FSM IV conference held in Chennai in February 2017, and TNUSSP's behaviour change strategy was also presented as a poster at the same conference. Three practice briefs on legal and institutional review, capacity building and behaviour change have also been added to our website as well as in knowledge gateways. Apart from these, regular presentations have been made to the Government of Tamil Nadu during advisory meetings that capture learnings from various studies undertaken by the team.

Team members are also participating in various outreach activities such as representing TNUSSP in the NFSSM, India Sanitation Coalition, SuSanA, UNESCO IHE, etc. which are examples of the leading communities of practice (CoPs) and research/educational institutions in FSM and sanitation. Participation at such events ensures that team members gain expertise in the area of FSM, and are able to map out the different actors, resources persons/groups, experts, and institutions.

The use of technology in TNUSSP, as detailed in the earlier section, is a vital part of the KM strategy. In addition, systematic steps are being taken to streamline the process of knowledge creation in the form of a KM framework. Given below is a detailed listing of various activities and tasks undertaken.

Scoping knowledge management and exchange platforms:
1. A secondary review of existing KM initiatives in the area of sanitation in general and septage management in particular was conducted. A list of blogs and knowledge gateways on FSM was collated, in order to facilitate exchange of knowledge from TNUSSP.

2. A list of academic and practice journals that could potentially accept TNUSSP's work was compiled.

3. A list of domestic and international conferences, which are appropriate platforms to present TNUSSP's research and implementation initiatives, has been curated.

4. Stakeholder engagement and knowledge sharing: It is proposed to set up a vibrant knowledge sharing platform at the TSU level, between the TSU team and the partners – Keystone Foundation, Gramalaya and CDD Society.

5. Knowledge sharing and exchange with and between the State Government and ULBs is also being planned.

Conference presentations:
1. Presentation of BCC strategy as a poster at FSM IV

2. Paper presentation on the Baseline study at FSM IV

Other knowledge products:
1. A detailed typology of resources has been developed to the guide the creation of knowledge products such as reports, briefs, audio-visual material, teaching-learning material, infographics, etc. Three knowledge products i.e. practice briefs that showcase the work carried out in the field have been published and several others are in the pipeline.

2. A blog on sanitation (Fecelore) is being maintained by TNUSSP on its website. The posts on the blog are being written by TNUSSP team members who share experiences and learnings from the field. There is a syndication arrangement with India Water Portal to republish the posts.

3. With the completion of several on-going studies, the TNUSSP team proposes to submit a few articles to reputed journals within the discipline of sanitation, urbanisation, water and environment.

4. Data stories and articles written using survey data and findings from the field have been written for online platforms including India Spend and The Hindu, with many more pieces in the pipeline.

5. A communication strategy which outlines the dissemination plan is shown in Annexure 4.

Media engagement:
1. Active engagement with the media and the press (in both Tamil and English) is ongoing. It is planned to organise workshops on FSM for the media in order to build a relationship with media persons and also provide the training to write on nuanced aspects of FSM and the work done by TNUSSP.

Monitoring knowledge management: Implementation of a KM strategy in an organisation requires continuous monitoring and evaluation. KM activities will be tracked on the basis of the following broad set of indicators:

  - Ease of access to knowledge products both online and offline.

  - Usage of knowledge products gauged by the number of downloads and hard copies circulated.

  - Increased presence of TNUSSP in Communities of Practice and other knowledge management gateways.

  - Increased attention to KM tasks such as periodic update of blogs, Facebook page and website.

2.7 Emerging Lessons in the Implementation of a KM Strategy

Despite a strong KM strategy, an organisation may face struggles that could interfere in achieving its KM objectives. Some challenges that the TNUSSP team faces are listed below:

1. Engaging government officers: Disinterested and overburdened with work, government officers are a challenging lot with respect to knowledge sharing and dissemination. These officers have no incentives to update their knowledge as these activities are not linked to their performance or promotions. Formats such as newsletters and emails that require active engagement are unlikely to work. However, WhatsApp seems to be a good disruption with officers consuming and sharing information on an hourly basis thus far.

2. Open sharing of knowledge: The community of sanitation professionals which includes researchers and practitioners work in a small ecosystem where there is stiff competition for innovative approaches in service delivery, use of technology and resource mobilisation. Since

the innovation to tackle the sanitation challenge is also directly linked to the ability to raise or attract funds, open sharing of knowledge is discouraged.

3. Rapidly changing environment: As FSM is in its early stages of growth and popularity, the ecosystem is a rapidly changing one. As a result, knowledge generated becomes outdated quickly. Delay in sharing information has a direct impact on knowledge production.

4. Data reliability and cost: Data pertaining to FSM is scarce and existing data is often unreliable. This results in heavy investment of time and resources to collect data.

In TNUSSP, thus far, producing short blogs, articles and reports in English and in Tamil has been quite challenging. Apart from this, increased reliance on technology and processes may also delay KM outcomes. In any organisation, there is no guarantee that all staff adhere to a strategy document and carry out their activities accordingly. Keeping all these aspects of KM i.e. people, processes and technology to the minimum will have tremendous impact on the KM outcomes. Lastly, identifying innovative means to present project information across social media and the press is a challenge. Cultivating media connections by closely following their news reporting in order to ensure the same reporters attend our event and provide coverage could be very useful.

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Annexures

Annexure 1: Types of TNUSSP Outputs

I. Project Communication
1. Brochures
2. IIHS Newsletters
3. Press Releases
4. Facebook page, posts and campaigns
5. Twitter posts and campaigns
6. Website
7. Blog posts
8. Posts on knowledge gateways and CoPs (SuSanA, SaniCoP, DGroups, etc.)

II. Programme Outputs

A. Reports and Publications
1. Reports
2. Case studies and success stories
3. Workshop reports/ conference proceedings
4. Fact sheets
5. Policy Briefs
6. Practice Briefs
7. Field reports
8. Training Manuals
9. Technical assessments
10. Summary reports
11. Guides and Guideline documents

B. Training Material
1. Training material slides
2. Booklets
C. BCC material
1. Films
2. Posters
D. Others
1. MIS App
2. Sanitation Planning Tools

III. Individual Writing
A. Academic
1. Journal articles
2. Conference papers
3. Approach papers/working, white, discussion papers
4. Book chapters
5. Monographs/reader/compendiums
B. Other writing
1. Blogs
2. Op-eds
3. Data stories and photo stories

Annexure 2: TNUSSP Communication Strategy and Plan

Dovetailed with the knowledge management strategy is the communication strategy and plan for TNUSSP. Communication cuts across all the components of the TNUSSP as it helps attain the following goals:

- inform, persuade and remind the target audience (specified in the KM strategy) about FSM related issues;
- establish dialogue with various stakeholders; and
- build relationships for synergies across disciplines.

In order to address these goals, the creative strategy or approach to expressing messages includes:

Informational messaging: Information may be in the form of a solution to a problem, or demonstrations on specific topics (such as how to construct a septic tank), or testimonials (on certain technology or training programme) and comparisons (between different sanitation efforts or initiatives).

Transformational messaging: Equipped with the information, the target audience prepares for transformation. Transformational messaging includes typical aspirational usage situation addressed to a typical aspirational user, in order to promote common values—such as cleanliness or regular desludging in the case of FSM and sanitation.

Motivational messaging: Typically attracts attention of the target audience to the message through humour, warmth, fear, special effects, linkages to disaster, etc. Handwashing campaigns mostly focus on disease prevention by instilling a sense of fear, or by using children and appealing to the emotion of warmth. Campaigns against open defecation use humour or shaming separately or in combination in order to promote the use of toilets.

In TNUSSP, all the three elements of communication have been incorporated into the communication strategy.

Communication outreach plan for different stakeholders

It is expected that there will be multiple products that will need to be promoted and shared among different sets of stakeholders from across all components of TNUSSP. For instance, the behaviour change component will include films, events and programmes which will require a different communication strategy from that of knowledge products. While there may be certain knowledge products that may be generic, certain products and services are expected to be specific to certain stakeholders.

A list of stakeholders and the strategy to be adopted for them are outlined below:

GOVERNMENT OFFICERS

The objective for this group of stakeholders is two-fold: demonstrating the credibility and viability of FSSM approaches, and to provide data and reference information about FSM. Some of the key communication activities will include:

Experience sharing through social media and WhatsApp
The TSU will curate key messages on FSM, city-level and state-level stories to be shared with city-level officers and facilitate exchange of ideas on FSM. Success stories and case studies both local and global, will be shared on this platform.

Newsletter
The TSU will bring out a monthly bilingual newsletter for GoTN officers. This will be made available on the TNUSSP website as well as emailed across a list serve.
TNUSSP Website and Knowledge Portal

The current TNUSSP website will be made more user friendly and responsive. Information on FSM will be documented and disseminated on the TNUSSP website through sanitation portals, newsletters, magazines, resource centres and other forms to all cities / municipalities / town panchayats. GoTN officers can also share case studies or submit their need for information.

Films
TNUSSP has created three films with help of film makers to ensure accurate dissemination of information about urban sanitation such as the norms for construction of septic tanks, de-sludging practices, building norms, etc. These films will be used for advocacy on FSM amongst all levels of GoTN officers and some may be used for the general public as well. The dissemination of these films may be at workshops, through WhatsApp, YouTube, the TNUSSP website as well as in cinema theatres.

URBAN SECTOR PROFESSIONALS
TNUSSP will share findings from the programme for wider dissemination through the following channels:

Contributions on international digital platforms
A system for sharing information on international digital platforms such as SuSanA, EAWAG, SWSM Forum is to be put in place.

Contributions to national platforms
The TSU will play an active role on national platforms such as the National Alliance on Fecal Sludge and Septage Management (NFSSM), and India Sanitation Coalition (ISC). These platforms bring together several sanitation professionals who seek as well as share knowledge on FSM.

Journal publications and research conferences
TNUSSP will publish academic papers in relevant journals on Sanitation, Urban Planning, Environment and Water.

CITIZENS AND GENERAL PUBLIC
The TNUSSP will seek to influence public opinion (though in a limited way) in the following manner:

Op-eds/ Articles in Media: TNUSSP will seek to publish in national and state media (both in English and in Tamil).

Social Media: TNUSSP will use social media to create a buzz around full cycle sanitation. Facebook pages both in English, and Tamil have been created and are regularly updated. Apart from these, WhatsApp, Twitter, LinkedIn and YouTube channels will also be used to reach out to various stakeholders.

Blog: The TSU has started "fecelore', a blog with contributions from all TSU members and partners from their field work. Articles posted here and republished on India Water Portal.

MEDIA PROFESSIONALS

To ensure the above, the TNUSSP will identify and work closely with media professionals. One-to-one meetings with journalists and some workshops and/or field trips will be organised for media persons to familiarise themselves with advancements in FSM.

TN US SP

TAMIL NADU · URBAN SANITATION · SUPPORT PROGRAMME

Tamil Nadu Urban Sanitation Support
Programme (TNUSSP) supports the
Government of Tamil Nadu and cities
in making improvements along the
entire urban sanitation chain.
The TNUSSP is implemented by a
consortium of organisations led by
the Indian Institute for Human
Settlements (IIHS), in association with
CDD Society, Gramalaya and
Keystone Foundation.