

DECENTRALISED SANITATION SOLUTIONS:

Forging a Collaborative
Agenda for Capacity
Building & Research

PARTICIPANT KIT

FSSM learning materials available on scbp.niua.org

DECENTRALISED SANITATION SOLUTIONS:

Forging a Collaborative Agenda for Capacity Building & Research

 18th November 2018, Mumbai  9:00am to 4pm  Taj Land's End, Mumbai, India

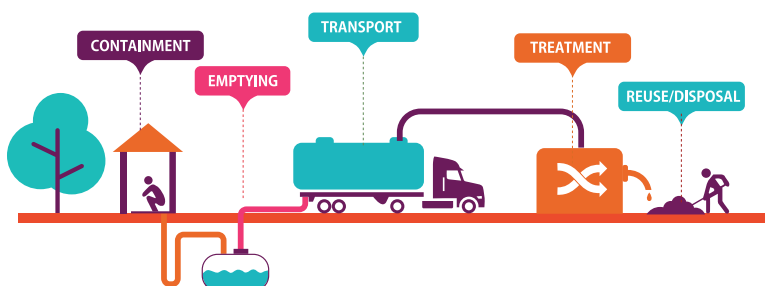
South Asia is a fast urbanising continent with manifold urban planning and development challenges. Untreated waste water and faecal waste pose a major health and environment challenge, polluting ground water and surface water bodies. It is also a cause of several social, gender and human rights violations (emanating from current practices of unsafe collection and discharge of waste water and human waste).

Several countries are recognising the growing urban sanitation challenge and putting in place Policy and Regulatory frameworks, creating additional waste water treatment capacity and some are also promoting decentralised treatment systems.

Decentralised sanitation and waste water treatment systems are cost effective solutions as compared to centralised treatment solutions, are easy to install and operate. Many implementing and support organisations are promoting decentralised systems solutions by investing heavily in capacity building of various stakeholders and through knowledge awareness, advocacy and communications.

This Learning Event brings together practitioners from different countries and backgrounds, from academia to training institutes and government officials to share country experiences and lessons from work done on decentralised treatment systems.

With the aim to explore collaborative engagement for capacity building in Asia, through sharing of knowledge resources, training approaches, strategies, evaluation metrics and upcoming research priorities.



Workshop Objectives



Perspective Building :
Decentralised Sanitation for
Asian Towns and Cities



Capacity Building
Challenges &
Priorities



Collaboration for Decentralised
Sanitation Systems and
Research in Asia

Participants

► Government ► Nodal Training Agencies ► Experts ► Academia
► Private Sector ► NGOs ► Implementation Agencies

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I.

Agenda of Workshop

DECENTRALISED SANITATION SOLUTIONS:

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 18th November 2018  9:00 hrs to 16:00 hrs  Taj Land's End, Mumbai

AGENDA

8.30 – 9.00 hours	REGISTRATION
9.00 – 9.05	Welcome Address : Ecosan Services Foundation
9.05 – 9.10	Opening Remarks : Mr. Depinder Kapur, NIUA
9.10 – 9.30	Key Note Address : Ms. Madhu Krishna, BMGF
9.30 -10.45 hours	SESSION I
	Perspective Building: Decentralised Sanitation for Asian Towns and Cities
9.30 – 9.45	Indonesia: Mr. Foorst Bustraan
9.45 – 10.00	Malaysia: Ms. Punita Nook Naidu
10.00 – 10.15	Nepal: Mr. Ramdeep Sah
10.15 – 10.45	Q&A Session Chair/Moderator: Mr. Arno Rosemarin, Stockholm Environment Institute
10.45 – 11.00 hours	TEA BREAK
11.00 – 13.30 hours	SESSION II
	Capacity Building Challenges and Priorities
	Panel 1: Capacity Building Organisations
11.00 – 11.15	Ms. Jyoti Dash Sanitation Capacity Building Platform, NIUA
11.15 – 11.30	Ms. Utkarsha Kavadi AIIILSG Mumbai

11.30 – 11.45	Mr. Fabian Suter, EAWAG
11.45 – 12.15	Q&A Session Chair/Moderator: Prof. Dinesh Mehta, Professor, CEPT University
12.15 – 13.00	Panel 2: Academia Engagement in Capacity Building <ul style="list-style-type: none"> • Mr. Vishwanath S, BIOME, Azim Premji University • Prof. N.C. Narayanan, IIT Bombay • Prof. Kajri Mishra, XIMB Bhubaneswar • Prof. Parag Sadgir, College of Engineering, Pune • Prof. V Chudgar, Indus University, Ahmedabad • Mr. Rajesh Pai, BORDA
13.00 – 13.30	Q&A Session Chair/Moderator: Mr. Depinder Kapur, NIUA

13.30 – 14.30 hours

LUNCH BREAK

14.30 – 15.30 hours

SESSION III
Collaboration for Decentralised Sanitation Systems and Research in Asia
Group Work and Discussion in Two Separate Groups

Proposed Topics

Practitioners

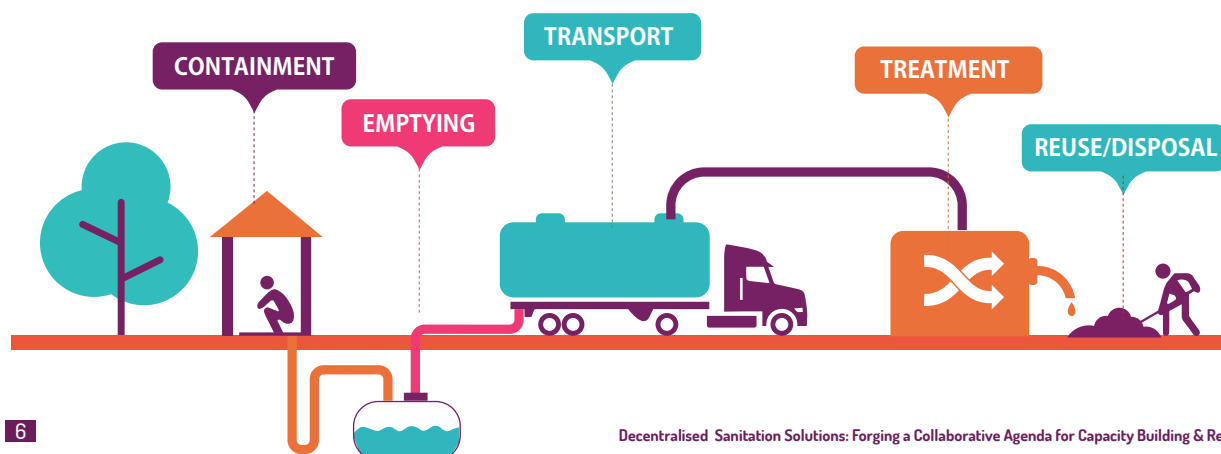
- 1 Orientation & Exposure Visits
Lead by Ms. Utkarsha Kavadi
- 2 Planning and Finance
Lead by Mr. Rahul Sachdeva
- 3 Technology
Lead by Mr. Dhawal Patil

Academia

- 4 Perspective Building & Research
Priorities Lead by Ms. Jyoti Dash
- 5 Masters & Elective Course
integration Lead by
Ms. Sreevidya Satish
- 6 Professional Course
Lead by Mr. Depinder Kapur

15.30-15.45 hours

Closing remarks by Mr. Dayanand Panse, ESF



II.

Presentation:

Introduction to Session 3
– Group Work and Discussion in two
separate groups – Practitioners and Academia

COLLABORATION FOR DECENTRALIZED SANITATION SYSTEMS AND RESEARCH IN ASIA

Session – III Background, Group Exercise Expected Outcomes

18th Nov, 2018 Taj Lands End, Mumbai



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National Institute of Urban Affairs



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SCBP/NFSSMA – CAPACITY BUILDING IN FSSM

FSSM Capacity Building Focus

1

State Level Capacity Building for FSSM

2

Institutional Capacity Building for FSSM
at National Level

3

Evidence Based Advocacy for FSSM

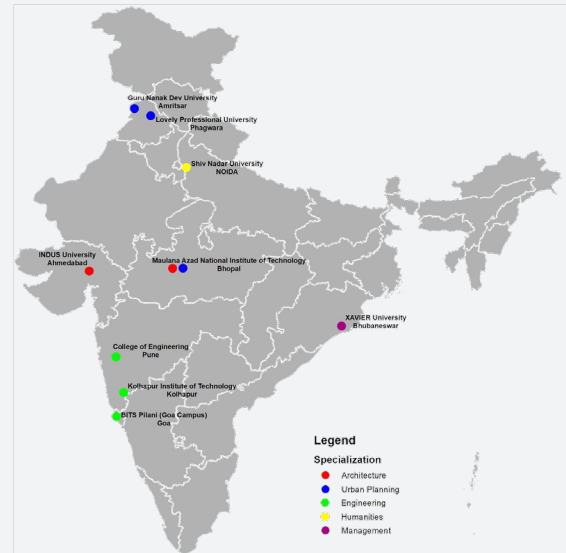
- **Total of 47 Training Modules** : 17 Target audience
- Orientation Modules (30), **Advanced (7)**, ToT (6)
- Advanced Modules: Technology, DPR Preparation
- Duration : **Mostly 1-3 Days**
- Certification Courses are few, mostly Training Programs and Exposure visits
- Training Delivery
 - AMRUT institutes
 - Partners
 - State Training Institutes
 - Academia



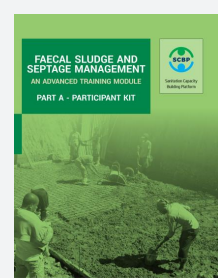
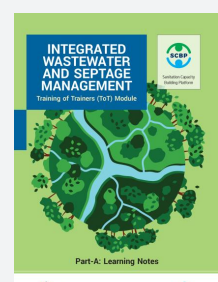
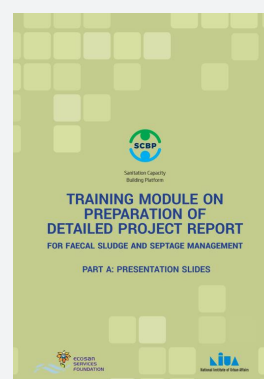
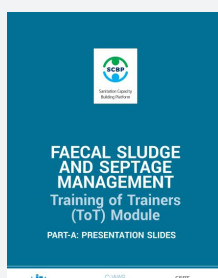
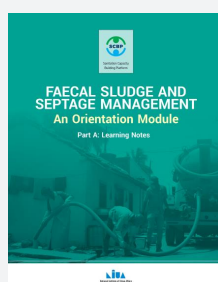
AMRUT TRAINING INSTITUTES



ACADEMIC INSTITUTES



TRAINING PORTFOLIO



1200+ government officials and participants from private sector across 13 States trained in FSSM

CAPACITY BUILDING – KEY LEARNINGS

- **State specific CB strategy** required with state specific learning content
- State level technical agencies / TSUs should be targeted for technical trainings, and not just the ULBs
- **Institutional linkages** needed at state level for training delivery
- **Standardise FSSM training module** typologies/levels
- **Measuring impact of CB efforts** very challenging – getting right participants and follow up with trainees critical to create an impact
- Sector requires larger **pool of trainers** – ensuring **quality control** of trainings
- States have different contexts and are at different levels wrt FSSM – requirement of common minimum **framework for CB at state level**
- Format and duration of training delivery – very important to ensure optimal participation from targeted stakeholders
- **Engagement with academia** important to create cadre of professionals in Decentralised Sanitation

TRAINING MODULE REVIEW COMMITTEE - ROLE

- Identification of **priority stakeholders** and accordingly **training modules** for Capacity Building
- **Standardization of priority training modules** – appropriate standardization of content with **flexibility** for customization based on **State context**
- Development of **A Normative Framework** – For Capacity Building at State Level
- **Quality Control of Trainings** – criteria for ensuring minimum quality of training content and delivery
- Strategy for **measuring impact of trainings** and capacity building efforts
- **National** FSSM Capacity Building Plan for NFSSMA



Training Module Matrix for Capacity Building Stakeholders

Stakeholders Module No.	Target Audience/ Training Modules	Executive Officers Commissioners of Small Towns	Mid Level Engineers ULBs/Para State agencies/ PCB	Elected Representatives Chairpersons/Mayors and Ward Councillors	Junior Technical and Administrative Staff Sanitary Inspectors, etc.	Commissioners, Senior Officials, Senior Engineers	Town Planners
1-A	Orientation Training	One day orientation for mixed group of audience – Topics : urbanisation, integrated waste water management, city wide inclusive sanitation, basic concepts of Technology, Financing, Behaviour change, sanitation safety planning			Sensitisation/ Consultation – Develop videos, posters, handouts on case studies	Half day consultation/ workshop on policy, regulations and financing Advocacy material - policy briefs, handouts/ fact sheet on existing/ upcoming FSTPs, Co-treatment videos on FSSM and FSTPs	One day Orientation Training on linkage between urbanisation and sanitation. Linkage between planning tools/ documents Rules & legislations of the two interconnected sector - land use planning and sanitation
1-B			Half day Training Topics : Roles of Elected Representatives (74th Amendment) Basic FSSM concepts, FSSM and what ULBs are expected to do				
2	Specilaised Training and Exposure Visit	Two days training and exposure visit. (one day class room, one day site visit) Topics: Policy and regulations, basic technology and financing for FSSM	Three day Training and Exposure visit - 2 day class room & one day exposure Topics : Technology options for emptying, transportation, treatment and co-treatment of septage at STPs procurement and funding estimation	Two day training and exposure visit along with EO (one day class room, one day site visit). Topics :Policy and regulations, basic technology Financing for FSSM	One day exposure visit to state level good practice on solid and liquid waste management	Two day peer learning/ Twining programme Exposure visit to FSTP & interaction with senior state/ ULB officials	
3	Advanced Training		Three day Advanced Training - two day class rom, one day field visit Assessment and planning, design of treatment module, O&M, financing, DPR review, financing and procurement			International exposure visit	

	Target Audience/ Training module	Community level partner	Masons	Sanitary Workers	Plant Operators	Desludging Tanker Operators	PM Consultants, Designers	Working professionals/T rainers/Sector Partners
1	Orientation	One day Basic Orientation Topics: Concepts - community engagement framework, Basics of FSSM Septic Tank Design Logic, Case Studies, Exposure visits One day orientation Topics : Community engagement strategy, BCC and IEC for FSSM	Half day Basic Orientation of Concepts Topics : Septic Tank Design Logic Retrofitting of existing containment/Septic tanks Posters, Videos	Half day orientation Topics : Health and safety issues, Facilities and benefits available under various programmes and schemes for them	One day Basic Orientation Topics : Concepts, O&M of plant - case studies Videos, posters	Basic Orientation Topics : Concepts, Safe desludging practices - videos, posters	Two days training on Planning and designing of FSTP	Professional Courses, Seminar Based Learning Events
2	Advanced Training						Three days (class room) training on Preparation of DPRs (3 days) -	Three days (class room) on Planning and designing of FSTP + one day site visit

ACADEMIA ENGAGEMENT - OBJECTIVES

- **Support Universities in Discovering and Developing a Perspective** on Urbanisation, Urban Planning and Decentralised Sanitation solutions. Academia is eminently placed to question and explore ideas, should not be reduced to training agencies
- **Integrating within existing curriculum and developing new courses** : concepts of decentralized planning, technology, economic, management, Legal and Institutional perspective of waste water management
- **Provide a Platform** for Cross Learning and Development of Curriculum and Faculty
- **Pool of practitioners, researchers and policy makers**

UNIVERSITIES IN PROMOTING SANITATION

- Narratives, Ideas, Discourse, Experiential learning. Unravelling the political economy of sanitation
- State and Town level Perspective : Urban Planning Priorities for the state, Investment, Operations and Maintenance, Regulation, Planning, Monitoring
- Research & Teaching
- Skills Training

ACADEMIA ENGAGEMENT

Sr. No.	Name of Institute	Proposed Activity	Target audience
1	Shiv Nadar University, Noida	Two-day Workshop and Half-day Policy Dialogue Meet: Water-waste cognition	Professionals in urban planning, citizen groups, municipal corporations
		University Wide Elective on Decentralized Urban Sanitation Systems	University Wide Elective for undergraduate students
		Field Visits and Studio Exercises on aspects of Decentralized Sanitation Systems	MSc, MA and undergraduate students of civil, architecture, design, sociology, etc.
2	Guru Nanak Dev University (GNDU), Amritsar	Workshop and Studio Exercises for M.Plan students	M.Plan (Infrastructure)
		Student Dissertations on Decentralized Sanitation Systems	B.Plan, M.Plan, M.Plan (Infrastructure)
		State level Dissemination and Advocacy Workshop	City Officials, state officials, experts and practitioners
3	Maulana Azad National Institute of Technology (MANIT), Bhopal	Design and roll out of Short-Term Training Programme on Recent Trends in Urban Sanitation Systems	40 (20 professionals, 20 students)
		One Day State Level Dissemination and Advocacy Workshop to promote Decentralized Sanitation	City Officials, state officials, experts and practitioners
4	Institute of Design, Environment and Architecture, INDUS University, Ahmedabad	Introductory Two-Day Workshop on Decentralized Urban Sanitation	Local architects, NGOs, academicians
		Prototype of toilet-containment and treatment systems (A permanent exhibition)	20-25 B.Arch students
		Curriculum development of Technical Module and course on FSSM and urban sanitation systems	For B.Arch Semester 4,6,8
5	Xavier Centre for Urban Management and Governance, XAVIER University, Bhubaneswar	Stakeholder Consultation and Curriculum Development for Certificate Course on Faecal Sludge and Septage Management	Working professionals, City Officials, state officials and practitioners
		Roll out of Certificate Course for upto 30 participants	

ACADEMIA ENGAGEMENT

Sr. No.	Name of Institute	Proposed Activity	Target audience
6	Birla Institute of Technology and Sciences (BITS) Pilani, Goa Campus	Curriculum development and running of minor programme in water, sanitation and solid waste management for first degree students (for two electives Sanitation Entrepreneurship and Resource oriented Sanitation)	2 batches of graduate students, working professionals
		Prototype development/testing of innovations for FSSM	5 PhD/Post graduate students
7	Civil Engineering Department, College of Engineering, Pune (CoEP)	Curriculum development and running of elective course on 'Decentralized Liquid Waste Management'	U.G., P.G. Students of Civil Engineering and Town Planning
		Winter School on 'Decentralized Liquid Waste Management'	25 students nominated by Govt Colleges of Engineering Institutes in Maharashtra
		Faculty Development Program on 'Decentralized Liquid Waste Management'	24 teachers/participants from 12 educational institutes/Govt Colleges of Engineering Institutes in Maharashtra
8	Lovely Professional University (LPU), Punjab	Workshop on Community-based technologies for domestic wastewater treatment and reuse	Planning Students, City Officials, state officials, experts and practitioners
		Certificate short course on Planning and Design for Efficient Sanitation System	Working professionals, City Officials, state officials
		Elective/Core paper on onsite sanitation systems for integration into existing programmes	B.Plan, M.Plan Students
9	Kolhapur Institute of Technology's College of Engineering (Autonomous), Kolhapur	Two Weeks Certificate Course on Global and National Perspective of Sustainable Sanitation Approaches and Technology Interventions	Working professionals, City Officials, State officials

TRAINING MODULES FOR STANDARDIZATION

	Module	Target Trainees
1	Orientation Training	One Day Module <ul style="list-style-type: none"> • Executive Officers, • Mid Level Engineers and • Elected Representatives
2	Orientation Training	Half Day Workshop Presentations Deck for <ul style="list-style-type: none"> • Commissioners • Senior State and Central Govt Officials and Policy Makers
3	Specialized Training	Two Days, including one day Field Visit <ul style="list-style-type: none"> • Executive Officers • Mid level Engineers • TSU/PSU staff
4	4 Modules Set Trainings primarily on Project Planning and Designing of FSTP	primarily for Consultants, Engineers, Private Sector, Academia and Professionals with a provision for Para State Technical Staff also joining <ul style="list-style-type: none"> • Planning Module (3 days) • Technology Module(4days) • Finance and Contracting Module(2 days)

GROUP WORK & DISCUSSION

GROUP - PRACTITIONERS

Orientation and Exposure Visits

- Administrative and technical staff from ULB
- Consultants from Pvt. Sector
- Elected Representatives

Planning and Finance

- Consultants, Engineers, Private Sector, Academia and Professionals
- Provision for Para State Technical Staff to join the module

Technology

- Consultants, Engineers, Private Sector, Academia and Professionals
- Provision for Para State Technical Staff to join the module

Expected Outcome

Review of module content and recommendations

TMRC Review Process and Timeline

Collaboration

GROUP - ACADEMIA

Perspective Building & Research Priorities

- Learning Events
- Seminars / Workshops
- Research

Masters & Elective Course Integration

- Course Outline
- Course Content: besides Technical include Policy, Finance, Procurement, Social Aspects
- Duration
- Enrollment Fees
- TMRC Review Process

Professional Course

- Course content: include Policy, Finance, Procurement, Social Aspects
- Target Audience
- Duration
- Certificate Value

Expected Outcome

III.

Role of Training Modules Review Committee (TMRC)

A. Capacity Building at State Level: A Normative Framework

Purpose

The Note is prepared for the purpose of developing a common understanding of an engagement strategy for Capacity Building for FSSM at State level, as a reference guide for any organisation working in a state. Depending on the stage at which the state has progressed towards an FSSM path, capacity building intervention can be decided.

Background

Over the past 2 years, several NFSSMA partners have supported national government, states and towns in various ways to promote FSSM, with the **aim to achieve a paradigm shift from centralized to decentralised sanitation systems policy and programme commitment, on ground alternative systems operationalized and significant human and environmental well being outcomes.**

Capacity building has been one of the important components of this support, provided by different agencies based on their own capacity and knowledge.

What started as exposure visits to various FSTPs and a few Presentations based classroom training sessions, has now developed into a set of formal training programmes conducted by several Alliance Partners in the last 2 years. The Training Modules Review Committee's (TMRC) **quick assessment of Training Modules prepared by NFSSM Alliance Partners** showed:

- Total of 47 Training Modules : 17 Target audience
- Maximum Orientation Modules (30), Advanced (7), Training of Trainers (6)
- Advanced Modules are only for Technology aspects
- Most Modules are a collection of Presentations and Reference Material only. Few Modules come with well defined learning notes.
- Duration : Mostly 1-3 Days
- Certification Courses are few, mostly Training Programs and Exposure visits
- Training Delivery Agencies;
 - AMRUT Institutes
 - Alliance Partners
 - State Training Institutes
 - Academia

With more states showing an interest in promoting decentralised sanitation, more Training Institutions engaged in formal capacity building and more opportunities to leverage on the early successes of septage treatment plants coming up in different states, it was felt that the **we need to define a broad strategy for capacity building for decentralised sanitation that could be used as a guidance framework for any agency, to be suitably modified for their specific use.**

Proposed Actions

- 4 Training Modules to revise on priority to serve the purpose of this standardization.
- Quality Control Checklist for any Training Module
- Measuring the Outcomes of Capacity Building

What constitutes Capacity Building

From the experience gained over the last 2 years, Capacity Building for Decentralised Sanitation can be broadly defined :

- **A set of Capacity Building Actions**
 - Policy advise
 - Technical Support in terms of assessments, studies and DPRs
 - Training of officials of Urban Local Bodies and Para state technical agencies, Private Sector and others
 - Training of Trainers
 - Development and updating of online and off line learning content, innovative practical exercises
 - Networking and Learning opportunities
- **To advocate and influence, train and achieve the following outcomes**
 - Trained and skilled human resources: officers of ULBs, Decision Makers, Managers, Planners, Designers, Development agencies, Para state agencies, Private sector Consultants and Contractors, NGOs and Communities.
 - Enhanced Institutional and individual knowledge and skills
 - Enabling Policy and Regulatory environment

B. Ensuring Quality Control of Trainings

Content development should follow a rigorous peer review process.

The following was discussed in terms of PROCESS : how a Module needs to follow certain minimum quality control criteria.

1. **Define Objectives** of Each Training Module and its sub sections.
2. **Define appropriate target trainees** for each module
3. **Identify the appropriate length and duration** of a module.
4. **For each Module:**
 - a. Define **Essential Readings** and larger Reference Readings
 - b. **Standardised Terminologies** and
- Definitions.** May be simplified for different audience
- c. **Table of Contents and Key Messages/Facts/Priorities** for each session defined
- d. **Exercises identified that are appropriate and interactive**
- e. **Case Studies & Videos**
- f. **Feedback and Follow up**
5. **Internal Review**
 - a. Review Modules with NFSSMA members. For a module developed by one partner, others should provide input.
 - b. NFSSMA Task Forces to review components of a Training Module : Tech, Finance, Gender
6. **External Review**
 - a. Eawag : Technology
 - b. Others : to be decided

C. Measurement of Impact and Quality Control of CB Modules

Following was discussed;

1. **Preference should be for demand based training.**
 - a. Registration and understanding of their training needs helps
 - b. Not possible to ensure the right ULB officials will attend successive trainings
2. **Should have clarity on what we want to achieve as outcomes from each Training.**
 - a. What we want them to do as a follow up on return
3. **Normally 3 types of quality controls** done usually at the end of a training
 - a. Session wise feedback
 - b. Test/Recall
 - c. Follow up Actions trainees will do on return
4. **Follow up actions, post trainings are critical.** These need to be defined well.
 - a. Define lower to higher level follow up outcome/actions that trainees can be expected to do on return – stakeholder wise for each training and trainees. For example : simple interest for higher level learning, assessments, planning, etc.
 - b. This should be done as a working/planning session, not as a feedback at the very end of a training
5. **Calling participants or asking for feedback on return** : best done within 3 months of end of a Training to ensure recall.
6. **Psychometric learning test may not be worthwhile.**

7. **Better to have a Recap of Learning Uptake at the end of a Training**, not Tests to score and measure learning recall.
8. **Support we are willing to offer post training : needs to be factored as part of a Training Module**
 - a. Google Groups, Speakers connect, WA group follow up support, any programme or financial support, etc.
 - b. Support for follow up actions built into the training contract of partners : for supporting ULBs and Officers to do : assessments, masons trainings, regulations, exposure visits, etc.
 - c. This needs to be considered and made part of a training module.
9. **Review meetings : post trainings, with some trainees.** Useful if planned well. Are expensive to conduct.

IV.

Structure and Content of Modules

Module 1: One Day Orientation Module for Executive Officers, Mid Level and Junior Engineers and Elected Representatives

Timeline	
Existing PPTs and Learning Material shared in Google Drive by all partners	5 th Nov
Revised session wise PPTs shared by partners	20 th Nov
Revised session wise learning note with objectives and key messages shared by partners	3 rd Dec
3 rd TMRC meeting - Review of modules	5 th Dec

TRAINING MODULE STRUCTURE AND CONTENT				Partner
Duration	Session	Session Plan	Content	Anchor Partner - NIUA
Session 1 90 mins	Urbanisation and Sanitation	30 mins - Setting the context	Urban sanitation situation - India Vs State, sanitation situation in participating ULBs - why is FSSM necessary, need, health sanitation nexus, nutrient and hydrological cycle,	NIUA
		30 mins - Sanitation Systems	context for FSSM - waste centralised vs decentralised, Waste water types and characteristics - black ,grey, sludge, septage	
		30 mins - Policy and programmes	National/State level Policies and Programs, Manual Scavenging, Gender and Social Concerns	
Session 2 90 mins	Existing situation and challenges	15 mins - introduction to FSSM service chain	Existing value chain, FSSM service chain	CEPT
		15 mins - video on existing situation and challenges	FSSM situation and challenges - video - Sinnar /Warangal / Delhi	DASRA
		45 mins - group exercise and discussion	challenges across various components of service chain and identification of stake holders	NIUA
		15 mins - video on solutions/ interventions/ approaches adopted by cities	Video - Sinnar / Warangal / Delhi	DASRA
Session 3 90 mins	Technology options	30 mins - technology options for containment and conveyance	over view of technology options, challenges, scheduled vs demand	ESF
		30 mins - technology options for treatment	overview of technology options - presentation of various models/ case studies based on state context technology selection criteria and thumb rules for costing	
		15 mins - video on FSTP case study	Devenahalli / Leh/ Bhubaneswar/ Warangal	DASRA

TRAINING MODULE STRUCTURE AND CONTENT				Partner
Duration	Session	Session Plan	Content	Anchor Partner - NIUA
Session 4 90 mins	Planning for FSSM	30 mins - group exercise on financing	Estimating the Per Capita O&M Costing for Desludging Operations for FSSM in a small town	CEPT
		60 mins - group exercise and discussion on action plan	Preparing FSSM plan for respective ULBs - short term and long-term action plan, presentation by individual group and discussion	NIUA
Session 5 15 mins	Feed back and Closure	15 mins - Closure and feed back	Quiz to assess learning absorbtion	NIUA
			Training Module Assessment Feedback	
			Follow up actions and support needed if any	

Module 1 A : Half Day Orientation Module for Commissioners, Senior State, Central Government Officials and Policy Makers

Timeline	
Existing PPTs and Learning Material shared in Google Drive by all partners	5 th Nov
Revised session wise PPTs shared by partners	20 th Nov
Revised session wise learning note with objectives and key messages shared by partners	3 rd Dec
3 rd TMRC meeting - Review of modules	5 th Dec

TRAINING MODULE STRUCTURE AND CONTENT			Partner
Duration	Session	Content	Anchor Partner - IIHS
Session 1 30 mins	Urbanisation and Sanitation	DASRA Video- Sanitation	DASRA
		FSSM Relevance and Concept	
		National and state level policy, Process, Regulations	IIHS
Session 2 60 mins	Technology options and case studies - national and international	FSSM Value Chain	CDD
		Technology overview with examples	
		Case Studies - national	
		Group Discussion - Perspective of participants	
		International FSSM Scenario	
Session 3 60 mins	Decision Making	Financing and Contracting: Approaches	ASCI
		Planning an FSTP : steps	
		Discussion on priority areas of DPR	
Session 4 30 mins	Discussion	Existing Modules Feed back and closure	NIUA - Compile training list and Calendar

Module 2: Three day training and exposure visit

Module on FSSM Technology and financing option

Executive Officers, Mid Level and Junior Engineers

Timeline	
Existing PPTs and Learning Material shared in Google Drive by all partners	5 th Nov
Session wise PPTs shared by partners	30 th Nov
3 rd TMRC meeting - Review and finalisation of presentations	3 rd Dec
Session wise learning note with objectives and key messages shared by partners	22 nd Dec
Trail of module for exposure visit to Maharashtra and Odisha	Jan & Feb

TRAINING MODULE STRUCTURE AND CONTENT					Partner
Duration		Session	Session Plan	Content	Anchor Partner - AIILSG
DAY - 1	Session 1 45 mins	Urbanisation and Sanitation	15 mins - Setting the context	Urban sanitation situation - India Vs State, sanitation situation in participating ULBs - why is FSSM necessary, need	AIILSG
			15 mins - Sanitation Sytems	context for FSSM - waste centralised vs decentralised, Waste water types and characteristics - black ,grey, sludge, septage	
			15 mins - Policy and programmes	National/State level Policies and Programs, Manual Scavenging, Gender and Social Concerns	
	Session 2 90 mins	Existing situation and challenges	90 mins - Group exercise on various scenarios	Understanding Sanitation Sytems and challenges	ESF
			45 mins - Shit Flow Diagram illustrations and discussion	Understanding flow of various types of waste water in differrent city context/ scenario	CSE
DAY - 1	Session 3 90 mins	Role of stakeholders in FSSM Planning process	90 mins - Role Play group exercise and discussion	FSSM Planning Process and steps Challenges across various componets of service chain and Role of stakeholders	CDD, EAWAG
	Session 3 90 mins	Technology options	30 mins - technology options for containment and conveyance	over view of technology options, challenges, scheduled vs demand	ESF
			30 mins - over view of technology options for treatment	overview of technology options, selection criteria, thumb rule for costing	
			30 mins - case studies	Videos and hand outs	all partners

TRAINING MODULE STRUCTURE AND CONTENT					Partner
Duration		Session	Session Plan	Content	Anchor Partner - AIILSG
DAY - 2	90 mins	Site Visit	handout of case study shared during end of Day 1/ Day 2 morning	Leh & Devenahalli, Wai and Sinnar, Bhubaneswar and Puri	CDD, CEPT, EY
			Site visit and interaction with stake holders		
	90 mins	Interaction with state and ULB officials	45 mins - presentation by state/ ULB officials		AIILSG
			45 mins - discussion and Q & A		
DAY - 3	Session 1 45 mins	Follow up on site visit	Learning and feed back, Q&A		AIILSG
	Session 2 45 mins	Financing and Contracting Options	90mins - presentation and discussion	Financing options, recovery of O&M - user fee, licensing, scheduled vs demand based, private sector participation	CEPT
	Session 3 90 mins	Action Plan	90 mins - exercise on preparation of detailed action plan	Situation Assessment, Source of funding, ULB level resolutions/regulations, site selection, stakeholder engagement	CDD, AIILSG
Session 4 30 mins	Feed back and Closure	30 mins - Closure and feed back	Quiz to assess learning absorption	AIILSG	
			Training Module Assessment Feedback		
			Follow up actions and support needed if any		

Module 3 : Package of three training programmes on Project Planning and designing for FSTPs for Private Sector, Design Engineers, PMC Consultants, Sector Partners, Working Professionals

Timeline	
Existing PPTs and Learning Material shared in Google Drive by all partners	5 th Nov
Draft Structure and content for each training with session wise objective and key messages	15 th Nov
3 rd TMRC meeting - Review and finaliation of structure and content	19 th Nov
Session wise PPTs shared by partners for all three training modules	3 rd Dec
Session wise learning note with objectives and key messages shared by partners for all three training modules	25 th Dec
4 th TMRC meeting - Review and finalisation of presentations and learning notes	11 th Jan
Draft Module shared by anchor partners	30 th Jan

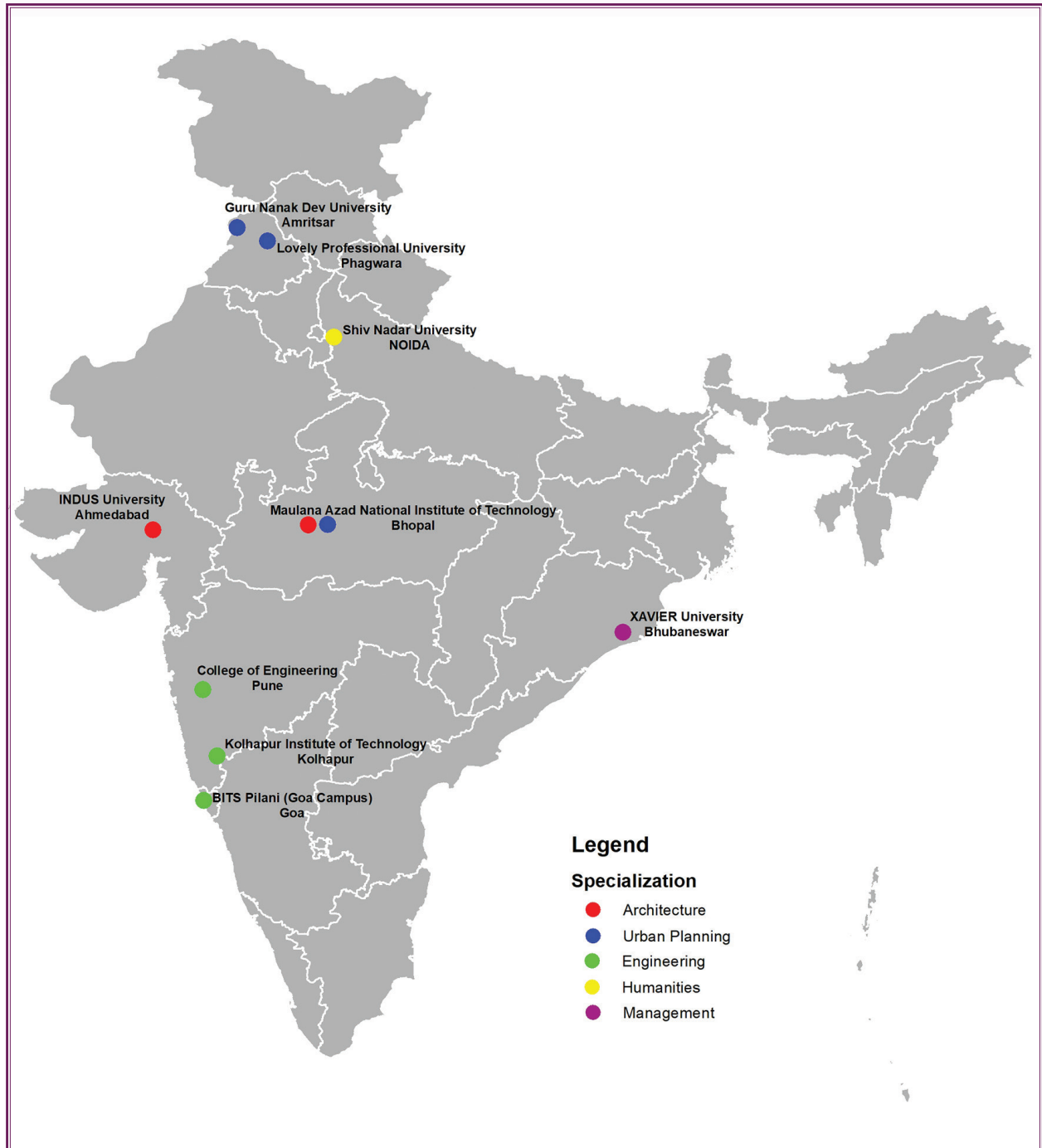
TRAINING MODULE STRUCTURE AND CONTENT			
	Duration	Content	Anchor Partner
Orientation	One Day	SAME AS MODULE - 1	NIUA
Module - 3A	Three Day	PLANNING FRMEWORK AND TOOLS	CDD
		Situation analysis (Data and Stakeholder)	
		Feasibility - Sanitation Systems	
		Scheduled and Demand Desludging	
		Quantification and Characterisation	
		Site Evaluation	
		Regulations and Compliances	
		Institutional frameowork	
		DPR Strcuture	
		Schemes & Programmes	

TRAINING MODULE STRUCTURE AND CONTENT			
	Duration	Content	Anchor Partner
Module - 3B	Four Day	TECHNOLOGY OPTIONS AND DESIGNING OF FSTP	ESF
		Quantification and Characterisation	
		Technology options for containment and conveyance	
		Treatment Mechanism	
		Technology options - selection criteria	
		Natural treatment - hands on design for solids	
		Mechanized treatment - hands on design for solids	
		Overview of liquid treatment options	
		O&M	
		Construction, Quality Control, Commissioning	
		Site Layout	
Module - 3B	Two Day	FINANCING AND MANGEMENT OF FSTP	ASCI, CEPT, EY
		Setting the context - technology, costing, regulatory framework	
		Schemes & Programes	
		Economics of value chain - collection and conveyance, treatment, financial flow models	
		Procurement and Contracting - model contracts, incentives, NPV, contracting models	
		Case studies	
		Risk and Challenges, Mitigation	
		Municipal finances	

V.

Collaborations with Academic Institutes under SCBP

Academic Collaboration Under SCBP



List of activities under MoU with Academic Institutions, SCBP, NIUA

Sr. No.	Name of Institute	Proposed Activity	Target audience	Tentative Dates	Nodal Faculty
1	Shiv Nadar University, Noida	Two-day Workshop and Half-day Policy Dialogue Meet: Water-waste cognition	Professionals in urban planning, citizen groups, municipal corporations	Nov 2018, Jan 2019	Prof. Suddhir Naudiyal, Prof. Rajeswari Raina
		University Wide Elective on Decentralized Urban Sanitation Systems	University Wide Elective for undergraduate students	Sep 2018, Nov 2018	
		Field Visits and Studio Exercises on aspects of Decentralized Sanitation Systems	MSc, MA and undergraduate students of civil, architecture, design, sociology, etc.	Oct-Mar 2018	
2	Guru Nanak Dev University (GNDU), Amritsar	Workshop and Studio Exercises for M.Plan students	M.Plan (Infrastructure)	Oct 2018	Prof. G K Johari, Prof. Ritu Raj Kaur, Prof. Kiran Sandhu
		Student Dissertations on Decentralized Sanitation Systems	B.Plan, M.Plan, M.Plan (Infrastructure)	Jan-Mar 2019	
		State level Dissemination and Advocacy Workshop	City Officials, state officials, experts and practitioners	Jan 2019	
3	Maulana Azad National Institute of Technology (MANIT), Bhopal	Design and roll out of Short-Term Training Programme on Recent Trends in Urban Sanitation Systems	40 (20 professionals, 20 students)	Dec 2018	Prof. Yogesh Garg, Prof. Manmohan Kapshe, Prof. NS Raghuvanshi
		One Day State Level Dissemination and Advocacy Workshop to promote Decentralized Sanitation	City Officials, state officials, experts and practitioners	Jan 2019	
4	Institute of Design, Environment and Architecture, INDUS University, Ahmedabad	Introductory Two-Day Workshop on Decentralized Urban Sanitation	Local architects, NGOs, academicians	Oct 2018	Prof. Bhanupratap Sharma, Prof. Vishal Chudgar, Prof. Pratik Zaveri
		Prototype of toilet-containment and treatment systems (A permanent exhibition)	20-25 B.Arch students	Dec 2018	
		Curriculum development of Technical Module and course on FSSM and urban sanitation systems	For B.Arch Semester 4,6,8	Dec 2018	
5	Xavier Centre for Urban Management and Governance, XAVIER University, Bhubaneswar	Stakeholder Consultation and Curriculum Development for Certificate Course on Faecal Sludge and Septage Management	Working professionals, City Officials, state officials and practitioners	Sep-Dec 2018	Prof. Kajri Misra, Prof. Mayank Dubey
		Roll out of Certificate Course for upto 30 participants		Jan-Feb 2019	

Sr. No.	Name of Institute	Proposed Activity	Target audience	Tentative Dates	Nodal Faculty
6	Birla Institute of Technology and Sciences (BITS) Pilani, Goa Campus	Curriculum development and running of minor programme in water, sanitation and solid waste management for first degree students (for two electives Sanitation Entrepreneurship and Resource oriented Sanitation)	2 batches of graduate students, working professionals	Sep-Dec 2018	Prof. Srikanth Mutnuri, Prof. G Raghurama
		Prototype development/testing of innovations for FSSM	5 PhD/Post graduate students	Dec 2018	
7	Civil Engineering Department, College of Engineering, Pune (CoEP)	Curriculum development and running of elective course on 'Decentralized Liquid Waste Management'	U.G., P.G. Students of Civil Engineering and Town Planning	Sep-Dec 2018	Prof. P M Raval
		Winter School on 'Decentralized Liquid Waste Management'	25 students nominated by Govt Colleges of Engineering Institutes in Maharashtra	Dec 2018	
		Faculty Development Program on 'Decentralized Liquid Waste Management'	24 teachers/ participants from 12 educational institutes/ Govt Colleges of Engineering Institutes in Maharashtra	Mar 2019	
8	Lovely Professional University (LPU), Punjab	Workshop on Community-based technologies for domestic wastewater treatment and reuse	Planning Students, City Officials, state officials, experts and practitioners	Oct 2018	Prof. Rahul Singla, Prof. Rishab Gaba
		Certificate short course on Planning and Design for Efficient Sanitation System	Working professionals, City Officials, state officials	Nov 2018	
		Elective/Core paper on onsite sanitation systems for integration into existing programmes	B.Plan, M.Plan Students	Sep-Dec 2018	
9	Kolhapur Institute of Technology's College of Engineering (Autonomous), Kolhapur	Two Weeks Certificate Course on Global and National Perspective of Sustainable Sanitation Approaches and Technology Interventions	Working professionals, City Officials, State officials	Nov-Dec 2018	Prof. Akshay Thorvat, Prof. VV Karjinni

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National Institute of Urban Affairs

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