



Activity Report

For the period of **June 2009 to March 2010**

This report represents the deliverables of ecosan activities as per contract No. **83039783** with
gtz, Germany
and
Ecosan Services Foundation

Submitted in April 2010

PROGRESS AT A GLANCE

SL. No	Activities	Percentage Progress									
		10	20	30	40	50	60	70	80	90	100
1	Organizing workshops on different topics related to ecosan such as workshops with agriculturists, decision makers, builders/developers, education institutes, schools etc.										
2	Encouraging the media (e.g. local & national newspapers, magazines, radio stations, TV, internet sites, internet communities etc.) to communicate about ecological sanitation										
3	Promote ecosan at the grassroots level by means of community meetings and the development of teaching material in local language										
4	Conducting training courses on ecological sanitation										
5	Development of “ecosan experts” networking platform on the ESF website										
6	Organisation of at least one “keep on doing” workshop										
7	Compilation of a small FAQs-publication to the most common operation & maintenance problems of different ecosan systems										
8	Coordination and support in developing ecocity hub Pune for GTZ-ASEM workshop										
9	Coordination and support in developing ecocity hub NEERI for GTZ-ASEM workshop										
10	Compile Information to Analyse Dr. Mapuskar’s Malaprabha Household Biogas System										
11	Coordinating the initiation of working demonstration models for rural and peri-urban sanitation in Pune										
12	Update of Badlapur SuSanA Case Studies										
13	Development of sustainable sanitation competence center Pune										

Introduction

As per the Contract No. **83039783** between GTZ and ESF, and following the meeting with Mr. Arne Panesar, the following are the key deliverables:

1. Organizing workshops on different topics related to ecosan such as workshops with agriculturists, decision makers, builders/developers, education institutes, schools etc.
2. Encouraging the media (e.g. local & national newspapers, magazines, radio stations, TV, internet sites, internet communities etc.) to communicate about ecological sanitation
3. Promote ecosan at the grassroots level by means of community meetings and the development of teaching material in local language
4. Conducting training courses on ecological sanitation
5. Development of “ecosan experts” networking platform on the ESF website
6. Organisation of at least one “keep on doing” workshop
7. Compilation of a small FAQs-publication to the most common operation & maintenance problems of different ecosan systems
8. Coordination and support in developing ecocity hub Pune for GTZ-ASEM workshop
9. Coordination and support in developing ecocity hub NEERI for GTZ-ASEM workshop
10. Compile Information to Analyse Dr. Mapuskar’s Malaprabha Household Biogas System
11. Coordinating the initiation of working demonstration models for rural and peri-urban sanitation in Pune
12. Update of Badlapur SuSanA Case Studies
13. Development of sustainable sanitation competence center Pune

The details of the above deliverables are provided in the following pages.

Deliverable No. 1: Organizing workshops on different topics related to ecosan such as workshops with agriculturists, decision makers, builders/developers, education institutes, schools etc.

a. Workshop conducted at Pune University

A half day workshop was organized for the final year students of Master's in Environmental Sciences, Department of Environmental Sciences, Pune University on 23rd Sep 2009. This workshop is in continuation with our objective of targeted audience oriented awareness raising and sensitizing the audience about sustainable sanitation. The Workshop was conducted with the following objectives:

Objectives:

1. To create awareness among the students about the sustainable sanitation.
2. To access the resources, identify the needs & hygiene education to the key audience
3. Importance of ecological sanitation –
 - Preparing the modules for implementing sustainable sanitation solution such as Ecological Sanitation, promoting them on large scale.
 - To provide information about the reuse concept of human waste



Students in the group activity during the workshop

There were around 22 participants for the workshop. The workshop was divided into three sessions-

- First session explains about the Ecosan overview and technologies, involves current sanitation scenario, conventional sanitation approach includes the limitations of this system, Sustainable Sanitation in the context of Bellagio Principles and about technologies of ecosan like Urine-Diversion Dehydration Toilets (treatment on-site), Biogas sanitation (treatment on-site), Biogas sanitation (treatment off-site), Vacuum Systems – waterless urinals. Two case studies – Thergaon UDDT project and Adarsh Vidya Mandir Badlapur – were also presented to show the practical application of sustainable sanitation principles.
- Second session was themed “Sanitation is Dignity”. This presentation involves topics like sanitation situation in India, Brain Storming Session & Why Sanitation Is Dignity following which a group activity was carried out. Students were divided into three



Students presenting their group work during the workshop

groups & each group has to present the answers of the questions & best group was awarded with prize.

b. Workshop conducted for agriculturists

Agriculture in India is suffering from lack of soil nutrients, and production of chemical fertilizers is energy-intensive. Theoretically, the nutrients in domestic wastewater and organic waste are nearly sufficient to fertilize crops. Thus, in order to highlight this fact, ESF organized a workshop for farmers, agricultural officers, agricultural field officers and agricultural assistants with focus on the principle of ecosan, reuse and technologies of Ecological Sanitation. The workshop was organized in Gangapur village, situated about 200 Km from Pune. Around 51 participants were present for the workshop.



ESF Team in discussion with the participants

The objectives of the workshop were:

- To create awareness among the agricultural officers, agricultural field officers and agricultural assistant about the sustainable sanitation.
- Giving them insight sanitation situation particularly in India.
- To access the resources, identify the needs & hygiene education
- To provide the technical guidance about ecological sanitation

The workshop started with the warm welcome by Mr. Pramod Chavan, agricultural officer, Gangapur Taluka. Ms. Pradnya Thakur, Head Projects, put forth the sanitation situation all over the world and discussed the need of action by highlighting the ECOSAN concept and importance of using UDDT in villages.

The participants were interested to know about any government subsidy for UDDT. Mr. Chavan gave vote of thanks and encouraged the farmers to adopt novel ideas put-forth by us.

c. Workshop with decision-makers

ESF intended to focus on decision makers like municipalities, city corporations and state government to spread the awareness of sustainable sanitation. A half day Workshop on Ecological Sanitation with special focus on high-end technologies was conducted on 4th January 2010 at Hotel Pristine Inn exclusively for the Pimpri Chinchwad Municipal corporation sanitation and sewerage department engineers.

Pimpri Chinchwad Municipal Corporation is situated on Mumbai Pune National highway. It was established in 1982 covering an area of about 87 square km. This is the Richest Municipal Corporation - not only in India but the Richest in Asia. This is the reason Ecosan

services foundation have chosen this municipality for the decision makers workshop. There were total 10 top officials from Sanitation and Drainage department Pimpri Chichwad Municipal Corporation (PCMC).

Objectives:

- To bring together the sanitation and sewerage department top most officials on the board to discuss the need of ecological/sustainable sanitation.
- To enlighten them with High End Technologies in Ecological/Sustainable sanitation.
- Create a network with the government officials.

The workshop started with the welcome and introduction Mrs. Sreevidya Satish. She explained the need for such workshops focusing to decision maker's. Mr. Dayanand Panse started the workshop with the overview of Ecological Sanitation in which statistical analysis of sanitation situation was discussed. Mr. Lars Späth from Roediger Vacuum Systems delivered lecture on Vacuum Sewer Technology and showcased some of the Roediger projects. He explained the possibility of vacuum technology in developing world and described various cost estimations depending upon the projects. An insight to the principles and onsite treatment of wastewater: Decentralized Treatment System (DTS) was given by the Ms. Leonellha Barreto Dillon. She showcased the case study of Badlapur for explaining the DTS system.



Mr. Lars Späth from Roediger Vacuum Systems

The workshop was well appreciated by the engineers from PCMC. Engineers expressed their interest in the subject and promised that they will include the technologies and concept in their preference technologies for town planning.

d. Poster competition for school students

To give an overview on environmental issues among the school children one day poster competition was organized by ESF together with gtz international at DAV public school, Aundh. The students from 6th to 9th standard participated in the poster competition. The theme of the poster competition was **GREEN NEIGHBOURHOOD**. Students came with different ideas for the improvement of the local environment. There were 36 group entries and 13 individual entries of students.

The objective of the workshop was to:

- To create awareness among the students about the environmental problems.

- To come across the environmental problem in their local area and tackle the problems of water and sanitation problems in their surrounding nature.

Students have given one week for the preparation of the posters and the posters were exhibited in the school on 6th February 2010. The entries were in individual and in groups. Students participated in the competition showed their skills in poster preparation.



Dr. Supate and Mr. Panse distributing the prize

Committee of five judges was there to assess the children. Mrs. Aparna Doke, Ex Mayor, Pimpri Chinchwad Municipal Cooperation(PCMC), Dr. Amar Supate, Senior Project Officer, Maharashtra Pollution Control Board, Dr. Mahajan, Faculty, Department of Environmental Sciences, University of Pune, Mr. Prasad Nagnath, Artist, Studio Orange and Mr. Dayanand Panse.

Poster competition was appreciated by all the students, parents and judges. The students expressed great interest in the subject. Principal deeply appreciated the participatory approach of students in the program. The participants were very motivated with the program, as they demanded more such kind of competitions in the school.

Deliverable No. 2: Media coverage and website uploads

a. 60 minute TV Program on Water Conservation and Reuse

Doordarshan, India's largest television network broadcaster, under the Ministry of Broadcasting, Government of India, organized a live "Question-Answer" program for one hour on Water conservation and Reuse aspects. Mrs. Pradnya Thakur, Head – Projects, attended the program and answered queries and concerns on water issues, specifically at water conservation and sustainable sanitation. The program was broadcast in the regional language (Marathi).

b. Press Conference

In the context of winning the National Urban Water Award for ecological sanitation for the Badlapur project, ESF organized a press conference to share the news about the award and to express the need to replication of such projects and need of sustainable sanitation. Powerpoint Presentations were made to the reporters about the overview of ecosan concept, conservation of water, the decentralized treatment system along with reuse and resource oriented approach.

Following the newspaper report, we have received many responses for feasibility in implementing such treatment systems, and a local newspaper published two articles by ESF on water conservation and ecological sanitation.

c. Participation in International Rural Network Forum, Udaipur

ESF participated in International Rural Network Forum at Udaipur, on 26th and 27th August 2009, in order to strengthen the local network and spread about sustainable sanitation and ESF's activities over the last couple of years. IRN had organized a conference was for all the NGO teams, Rural community leaders, Development Practitioners, Company executives, involved with communities, Activists, Policy makers, Researchers, Funders & Development students.



A presentation was made by ESF elaborating the activities we are involved in, and ecosan curriculum CD and the up-coming course information were circulated at the Forum also.

d. Workshop at Delhi Public School, Ghaziabad

Delhi Public School, Vasundhara, Ghaziabad, organized an Inter-school Environmental Quiz Competition. About 14 Schools from Delhi has participated. Mrs. Pradnya Thakur, Head – Projects, who was invited to the event, presented a talk to the audience. The talk provided an overview of ecological sanitation with specific focus of water resource management at household level, and tips on water conservation.

e. Awareness raising about waterless urinals

A meeting was held at the Conservator's Office, Gwalior on July 15th, 2009 to discuss the potential and possibilities of Green Buildings for the Forest Department, Government of Madhya Pradesh. ESF presented the water conservation and reuse and recycling aspects of sustainable sanitation and during the course of the meeting, the focus shifted on waterless urinals.

The Forest Department immediately provided consent to convert all their urinals to waterless urinals, which was completed by ESF subsequently.



f. Participation in Red-R training program

RedR – Registered Engineers for Disaster Relief - is an international NGO, a support organisation that provides recruitment, training and support services for humanitarian professionals and aid agencies across the world. RedR runs an extensive capacity building programme for emergency relief and development professionals of all disciplines.

Objective of training program:

To improve participants' understanding of Environmental Health, the principles and practicalities relating to environmental health interventions and how these interventions can impact on the general health of people affected by emergencies.

The following topics have presented in the one week training program:

1. Monitoring and Evaluation
2. Rapid assessment in Emergencies
3. Communicable diseases
4. Concept of Environmental health
5. Ecosan overview and technologies
6. Excreta disposal and emergencies
7. Gender in Public Health
8. Health and hygiene promotion methods

ESF have taken part in Red R training program only for one day. Mrs. Pradnya, Head Projects ESF gave a presentation on **Ecosan Overview and Technologies**. The presentation by ESF includes the topics like –

- a) Current Sanitation scenario
- b) Conventional Sanitation Approach
- c) What is Sustainable Sanitation
- d) Bellagio Principles
- e) Technologies
- f) Case studies

Deliverable No. 3: Promotion of ecosan at Grass root levels

a. UDDT – Hands on training at Solapur

Gramin Samaj Vikas Kendra (GRASVIK), Solapur is a nonprofit voluntary organization and has a mission to promote a process which is sustainable and a society where people will have equal rights and access to protected water, sanitation, health and improved income status with gender equality.

Agro climatically entire Solapur district comes under rain shadow area. Rainfall is uncertain and scanty. The average rainfall for the district is 545.4mm. Due to scanty and non-uniform rains scarcity condition prevail in the district. This has adversely affected the socio-economic condition of people.

Mr. Atul Phadtare, President of GRASVIK, visited ESF office to explore the possibility of assistance towards better sanitation, given the context of Solapur and its climatic conditions. During the discussion, urine diversion dehydrating toilets seemed to be most optimal solution given the water scarcity and the need for organic fertilizers. Accordingly, a visit was made to Solapur on 28th June, 2009. Mr. Phadtare coordinated the visit. ESF explained the concept of ecological sanitation with specific focus to UDD toilet.

A visit was also made to two villages and a meeting with farmers and masons was held. Two farmers want to build UDD toilets, and the planning is in progress by GRASVIK.

b. Workshop with Rotary Club

To promote the concept of sustainable sanitation, a half day Ecosan Workshop was organized at Rotary Club of Sangli, a small town in Maharashtra on 23rd September 2009. The workshop was focused on the principle and technologies of Ecological Sanitation. Over 150 participants participated in the workshop.

Objectives of the Workshop:

- To create awareness among the participants about the sustainable sanitation.
- Giving them insight sanitation situation particularly in India.
- To access the resources, identify the needs & hygiene education
- To provide the technical guidance about ecological sanitation.

The workshop started with the warm welcome from Mr. Mukund Udgaonkar, President of Rotary Club, Sangli with lamp lighting & felicitation to ESF.

Booklet on wastewater management in Marathi was released on the occasion.

Lecture series started with Mrs. Pradnya Thakur's presentation on water conservation. She explained the current situation of water and discussed the pros



Launch of Booklet by ESF

and cons of conventional sanitation and made the audience to rethink on the sanitation system they are using. Mr. Dayanand Panse gave an overview on Ecological Sanitation... a need of an hour in which concept of ecological sanitation was explained to the audience.

Conclusion

The participants expressed great interest in the subject. Many of them were new to the world of Ecosan. The participants were very motivated with the workshop, as they demanded more such kind of workshops.

b. Development of material in local languages

Identification of relevant partners for translation and use of material on ecological sanitation is carried out, and presently, the basic ecological sanitation materials and UDDT construction manual is translated into Marathi and Hindi and distributed.

A copy of both the booklets is being provided along with this report.

c. World Toilet Day celebrations

Considering the need to address the issue of sanitation to the masses, we decided to organize a campaign on the occasion of “World Toilet Day”, which was on 19th November 2009.

The campaign was simply to squat for one minute in a highly visible location, and then has a plan to explain to anyone who notices WHY you're all squatting.

ESF in association with Red-R India celebrated World toilet day on November 19th 2009. All across the world, sanitation advocates will be raising awareness for the world's 2.5 billion people without sanitation by squatting for one minute in public places. It's called The Big Squat squatted in BAIF premises in collaboration with Red R India organization. Around 30 people volunteered on the World Toilet Day.



Deliverable 4: Training course in ecological sanitation

A training course is organized in partnership with National Environmental Engineering Research Institute (NEERI), Nagpur from 9th November – 13th November 2009. This one week course aims to provide the targeted audience an excellent overview of ecological sanitation, with conceptual and practical know-how of different ecosan systems, their relative advantages and disadvantages, and the applicability.

The objectives of the workshop are:

- To create awareness among the target groups about sustainable sanitation
- Giving them insight sanitation situation particularly in India
- To access the resources, identify the needs & hygiene education
- To provide the technical guidance about ecological sanitation



The participants expressed great interest in the subject since many were new to the world of Ecosan. The participants deeply appreciated participatory approach with group work in the program. They welcomed the possibility to train to argue for ecosan and to speak to the plenum. The participants were very motivated with the workshop, as they demanded more such kind of training programs, but for long duration with live project as an example.

Deliverable 5: Ecosan experts' network platform

The Ecosan Expert's Network Platform is completed and the screenshots are provided along with this report.

The platform is now in the testing phase.

Deliverable 6: Keep on doing workshop

ESF together with gtz international decided to look back into the activities of the former participants who have successfully participated in PPP Ecosan training Courses 2007, 2008 and 2009. Keep on doing workshop for the participants were organized in Gingee, Villupuram District, Tamil Nadu.

Their work started very enthusiastically, first with a big survey analysing the situation in the villages and then with a pilot project for the construction of 50 UDDTs in 10 different villages mainly for disadvantaged people. The small funding was granted by Prakash Kumar of UNICEF/SEI. Most of the UDDs have been constructed by now; a few are in their final stage of being completed.

Despite being sanitation novices, the Tamil Nadu Ecosan Initiatives people did a marvelous job so far: The initial awareness-raising with a UDDT model was done in an appropriate way, The construction of the UDDs is very proper and without any major constructional mistakes. Due to their shortage of funds, they only provided a partial subsidy (approx. Rs. 5000) to the owners. Subtracting the subsidy of Rs. 2000 from the TSC, most owners had to finance at least Rs. 5000 themselves.

Mr. Michael Kropac from seecon international, Mrs. Sreevidya Satish and Ms. Priyanka Patange from ESF visited Chennai to take overview on initiative taken by the “Tamil Nadu Ecosan Initiatives” in Gingee. Mr. Pravin Prakash, Director, Tamil Nadu Ecosan Initiatives welcomed ESF team and showed UDDTs constructed in village in Villupuram, Gingee district, Chennai. Gingee is a semi urban town which is around 150 km from Chennai airport.



Previously open defecation was in practice in the village. Tamil Nadu Ecosan Initiatives started with the awareness raising program in villages like Gingee, Thaiyur was carried out and the pilot project for the construction of 50 UDDs in 10 different villages mainly for needy people.

As all Sanitation organizations in their starting phases, also the Tamil Nadu Ecosan Initiatives had to find out that sanitation is mostly about software, and less about the construction of toilets. Working in villages where people practice nearly 100% open defecation, they find it very hard to convince people to use the new UDDs at the end. Only about 30% of the newly constructed toilets are being regularly used.

Thus, there is a very urgent need for follow up- activities and IEC, so the new UDDTs will not be converted into storerooms or kitchens. As the network has used up all funds for construction, there is also a resource problem.

Deliverable 7: Compilation of a small FAQs-publication to the most common operation & maintenance problems of different ecosan systems.

ESF In-house team developed the FAQs on sustainable sanitation and specifically on O & M of the different sanitation system, and accordingly, is uploaded on the new website. The FAQs also address the social and economic issues, thus stressing the sustainability factor strongly.

Deliverable No. 8 – Coordination and support in developing ecocity hub Pune for GTZ-ASEM workshop

Experiences in India have shown that, a part of the fiscal resources, the improvement of the sanitary situation requires for one innovative and locally appropriate approaches to technology and handling as well as strong links between the user, local communities and local government bodies. Thus the Sustainable Sanitation Competence Centre (Ecocity) in Pune is designed to focus on creating an adequate platform where stakeholders have an easy access to sustainable solutions to their demand that are suitable to the local frame conditions in other words: economically and ecologically viable and socially acceptable.

Sustainable Sanitation Competence Centre at Pune is designed as a collaborative entity established and led by a sustainable sanitation network resourced by partners covering all aspects related to the issue of sustainable sanitation: from highly qualified field implementation projects to research projects focusing on reuse factors. By offering an opportune platform to the local experts, the Sustainable Sanitation Competence Centre - Pune, aims at coordinating and enhancing energetic and ecological solutions into a dynamic process of the region.

It is of great importance to disseminate the knowledge of the potential that alternative and sustainable sanitation approaches offers in terms of solutions related to wastewater, its collection and treatment – in short, its management in order to tackle the urgent sanitation matters.

Support and guidance offered by the ecocity hub will reflect an inter-disciplinary approach by combining technological developments, cutting-edge research and practical experience. The services offered will be flexible enough to be utilized by a wide range of stakeholder communities while still respecting various local and discipline specific issues.

- The goal of the CC is to combine and coordinate the expertise of organizations and individuals in the sustainable sanitation community, with special focus on urban and peri-urban sanitation.
- More specifically, CC aims to open perspectives to individuals and organizations (private as well as NGO's and Government Bodies) towards innovative concepts in sustainable sanitation and provides a competitive edge in wastewater management, which will help in reversing and thus preserving the natural resources and finally the environment.
- One main objective of the CC initiative is to achieve a competitive advantage for the sustainable sanitation community in and around Pune, encompassing the nearby states like Goa, Gujarat, Rajasthan, offering optimal knowledge transfer proficiency to ensure better sanitation to all.

The Team presented the concept of Eco-city during the Workshop on “Capacity Development for Sustainable Sanitation in India through Regional Nodes & Selected Pilot/Demonstration Projects” held on 2nd and 3rd March 2009 in New Delhi.

The potential Competence Centre would thus fill the missing link that lies between the capacities of the area around Pune – since many years several players are successfully implementing sustainable sanitation but do not yet have the necessary platform where to present their experiences. ESF will focus on knowledge transfer and on offering the suitable information to each demand. ESF has therefore already developed a system of collection and management of the information about the stakeholders as well as about their projects – the tools allow an effective search for the information the beneficiary is looking for when addressing us as a CC.



Deliverable 9: Coordination and support in developing ecocity hub NEERI for GTZ-ASEM workshop

ESF worked together with NEERI to develop the Technology Park and Resource Centre for Safe Water Supply and Sustainable Sanitation at NEERI.

The overall project-goal of the “Technology Park for Water and Environmental Sanitation at NEERI, Nagpur, India” is to contribute to the achievement of the MDGs in India by promoting safe water supply and sanitation systems which are taking into consideration all aspects of sustainability. Technology Park will be developed at NEERI, Nagpur. The project will be run by NEERI in collaboration with a range of Indian and international partners with the funding from Department of Drinking Water supply (Ministry for Rural Development, Government of India).

The objectives of the Technology Park is clustered accordingly:

Promotion and advocacy

- To promote and raise awareness on innovative safe water supply and sustainable sanitation solutions across India to bring them to the mainstream
- To highlight the importance of safe water supply and sustainable sanitation as a pre-condition to achieve overall sustainable development
- To demonstrate that safe water supply and sustainable sanitation systems can contribute reaching the targets set-up by Department of Drinking Water Supply (DDWS) and MDGs beyond water supply and sanitation, and consequently present a change of paradigm
- To mainstream business opportunities of safe water supply and sustainable sanitation projects as this will encourage public private participation

Teaching, learning and evaluation

- To enhance knowledge and skills in participatory methods on how to create more effective safe water supply and sanitation solutions in India on all levels.
- Bring about increased awareness of the complex interaction between behavioural and technological elements in households, communities and institutions.
- To identify and describe the mechanisms to up-scale implementation of these examples and develop new financing instruments for pro-poor safe water supply and sanitation provisions
- To encourage research on disease burden, food productivity, energy, social, economical and environment impacts after implementation of projects.

Documentation

- To collect and compile information which will assist the decision makers (including civil society) to assess different safe water supply and sanitation technologies enabling them in identifying the regional specific sustainable sanitation option.

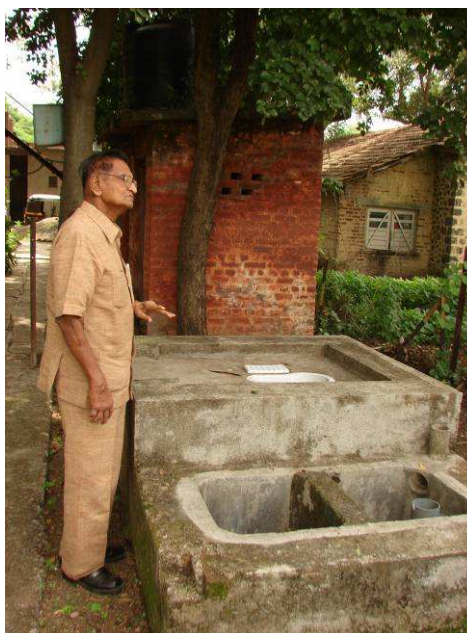
- To compile global documentation of best practices in safe water supply and sustainable sanitation projects (pilot or large scale) and act as a knowledge platform for learning alliances.

Deliverable 10: Compile Information to analyze Dr. Mapuskar's Malaprabha Household Biogas System

Mr. Arun Kumar and Mrs. Pradnya Thakur, ESF had a meeting with Dr. Mapuskar and specifically discussed its keenness to take the understand the Malaprabha design so that its scale-up can be explored since evidently, the design is aptly suited for single household construction, economical and environmentally safe.

For this process to kick-start, it was proposed to understand the design completely, both from the design aspect as well as from the performance aspects. Ms. Sampada Kulkarni, is a post-graduate in Environmental Science from Pune University, is spear-heading this research from ESF, under Dr. Mapuskar's guidance.

A factsheet in the SuSanA format is developed for the same.



Deliverable 11: Coordinating the initiation of working demonstration models for rural and peri-urban sanitation in Pune

Being working as a promoter for sustainable waste management systems, ESF team thought of carrying out a pilot scale project in the office premises itself. In future, this will help create an example of 'Eco-friendly' office and symbolize ESF as not only a promoter but also an implementer of their own promotions. Having understood the present situation and the project requirement, the overall approach to find the solution has been worked out keeping in mind 'Sustainable Sanitation' practices based on Bellagio principles.

Out of numerous technologies for waste management, considering space and amount of waste generated; following technologies are installed in the office.

- Installation of one Water Saving Urinal for gents - Completed
- Installing dual flush system - Completed
- Rooftop rainwater harvesting system of the building terrace roof – Completed
- Implementing toilet – linked biogas plant for the whole building – On-going
- Developing a terrace garden in the office - Continuous

Deliverable No. 12: Update of Badlapur SuSanA Case Studies

Following the successful operation of the sustainable sanitation initiative at Adarsh College in Badlapur, an assessment visit was made to Badlapur to understand the present status, and any hand-holding required for the authorities in O & M of the treatment unit.

Accordingly, the SuSanA factsheet is updated, and presented alongwith this report.

Deliverable No. 13: Development of sustainable sanitation competence center Pune

The framework document on “Benchmarks of Excellence for Evaluation of Centres of Excellence for Sustainable Sanitation” was prepared by Mr. Martin Wafler and Mr. Michael Kropac of seecon international which offers organizations/networks an opportunity to evaluate and improve their performance in the provision of sustainable sanitation services as a Centre of Excellence (CoE) for Sustainable Sanitation.

These Centres of Excellence are targeted at creating Knowledge Management Hubs for Sustainable Sanitation that will work towards the scaling up and mainstreaming of sustainable sanitation approaches primarily through raising awareness, changing mindsets, advocating for policy change and facilitate and coordinate capacity and skills development, knowledge sharing and collaboration of individuals and organizations.

The Benchmarks of Excellence focus on encouraging and recognizing overall high performance in sustainable sanitation services. To assist the evaluation process nine criteria have been identified as Excellence Criteria (EC) for CoE for Sustainable Sanitation, and ESF has carried out a self-audit on the nine criteria to qualify as a CoE.

Other Projects

Sustainable Sanitation Strategy at Pandharpur

In the 139th Board Meeting of the Maharashtra Pollution Control Board (MPCB) the decision was taken to initiate the "Environmental Improvement Programme at Religious Places in Maharashtra. In order to achieve a significant change- for improvement of the situation in Pandharpur, an integrated approach for Water, Sanitation, Environment, Health and Hygiene is required. MPCB - assigned, the Non-Profit Organisation Ecosan Services Foundation (ESF) to conduct a “**Techno Economic Feasibility Study for Sanitation and Sewerage Management**” as per work order no. MPCB/ZA/EIP/P’Pur/WO/78/08 of 2nd June 2008).

The study focussed on the following points:

- A. Exploration of the current sanitation scenario, including the spatial analysis of the distribution of sanitation facilities during wari and non-wari periods;
- B. Provision of a sanitation strategy to address the sanitation demands of Pandharpur for residents as well as pilgrims during the wari period to eradicate the practice of open defecation;
- C. Provision of appropriate management techniques to address the sanitation and sewage management issues, drawing lessons from different temple towns and adopting the approach according to the local context in Pandharpur;
- D. Provision of sustainable sanitation treatment options, with details on the design and describing the operations and maintenance of each suggested options;
- E. Providing block estimates for different management strategies, soft skill and institutional development, toilet and sanitation infrastructure and as well as the costs for operation and maintenance of the same;
- F. Recommendations for improving of the efficiency and effectiveness of sanitation and sewage management, with emphasis on a better management with a Government-Public-Private-Partnership approach;
- G. Providing cost benefits and comparative analysis between the different proposed options with the conventional treatment approach, thereby smoothening the decision making process for the stakeholders;
- H. Providing a foundation for further involvement of the local stakeholders to develop a shared vision and goal for the way Pandharpur will manage its sanitation and sewage infrastructure in the future.

The comprehensive report - was presented on 18th March 2009 to the High-Level Project Monitoring Committee, under the chairmanship of Mr. A. K. Jain, Principal Secretary of the Department of Water Supply and Sanitation, Government of Maharashtra, Mumbai including Ms. Valsa Nair Singh, Secretary, Department of Environment, Government of Maharashtra and Mr. Sanjay Khandare, Member Secretary of the Maharashtra Pollution Control Board, and other stake holders. The final report is submitted to Maharashtra Pollution Control Board / with recommendations after the incorporation of the few suggestions made during the meeting.

As per the recommendations made by Hon’ble Chairman of the Committee during the meeting on 18th March 2009, elaborate concept papers were prepared on the following subjects:

- i. Clean Pandharpur – Clean Chandrabhaga Campaign
- ii. Community Based Organisation – Strategy
- iii. Information, Education, Communication Strategy
- iv. Detailed Project Implementation Plan

The concept papers were presented on 6th May 2009 during the Workshop at Sahyadri Guest House, Mumbai, to the committee with representatives from different stakeholders viz, Mr.

A. K. Jain, Principal Secretary, Department of Water Supply and Sanitation, Government of Maharashtra; Ms. Valsa Nair Singh, Secretary, Department of Environment, and Mr. Sanjay Khandare, Member Secretary, Maharashtra Pollution Control Board, Vice-President and Managing Director, Maharashtra State Road Transport Corporation; District Collector, Solapur; Chief Officer, Pandharpur Municipal Council; SDO Pandharpur; Executive Engineer, Maharashtra Jeevan Pradhikaran and others.

The feasibility study presented has been accepted with a general consensus on the recommendations made and the proposed action plans for short, mid and long term implementations. As discussed and directed by the Committee during the meeting, **herewith we are submitting the proposal for the preparation of Detailed Project Report (DPR) for the immediate activities as proposed during the above stated meeting, and the same is listed below.**

1. **Institutional capacity building**
 - Information Education and Communication – Strategy (IEC)
 - Community Based Organisations (CBOs)
2. **Pilgrim Management Systems**
 - Decongestion of Queue
 - Development of model camp site
3. **Sanitation and sewerage management system**
 - Strengthening of the existing sanitation system
 - New facilities for State Transport and Railway Departments – toilet centres with on-site treatment systems
 - New facilities for Math Clusters
 - New model camp-sites at Parking Lot and Wakhri
 - Clean Pandharpur Concept

Objectives: The main objectives of the DPR preparation for immediate activities is the elaboration of the accepted recommendations as mentioned in the report and implement some of the crucial activities which can trigger a change and provide the necessary platform for expansion of the mid-term and long term activities. This three-staged strategy will result in the reversing of the environmental degradation, thereby improving health and hygiene conditions of the residential population and the pilgrims, and thereby making Pandharpur an enjoyable experience to all.

Eco-village project at Katewadi

Katewadi, Tehsil Baramati, Dist. Pune, Maharashtra, located to the east of Baramati, about 10 km away is awarded as a 'Nirmal Gram' village (open-defecation free) for achieving zero-open defecation. It comes under Pune zilla panchayat and Baramati as intermediate panchayat.

Under 'Katewadi - Eco-village' project, Ecosan Services Foundation (ESF) has been assigned the task of providing a sustainable solution for sanitation facilities and wastewater generated in Katewadi's public locations.

Project description/ scope of work:

ESF's scope of work includes consultancy and monitoring of the implemented system at 3 locations:

1. Primary school:

- Toilets for the school children and a Decentralized treatment system for the wastewater generated from the toilets.
2. New bus stand location:
 - Community Toilets for the commuters and nearby shopkeepers with a decentralized treatment system for the wastewater generated from the toilets.
 3. Lake behind Hanuman temple (which is a proposed site for Lake beautification)
 - Community toilets for the visitors with a decentralized treatment system for the wastewater generated from the toilets.

Project status:

- Construction of toilets and the treatment system is completed in the primary school. Inoculation is to be carried out after the leak tests
- There is one toilet block in the 'new bus stand' location already in use by the people. Additional toilets block and combined treatment system for the toilets have to be designed.
- The surrounding areas of Hanuman temple viz. public health care centre, gram panchayat office and community have sufficient sanitation facilities for them. Thus, designs for toilet construction and treatment system near the lake have to be made.

National Urban School Sanitation Initiative

As per National Urban Sanitation Policy (NUSP), the vision for Urban Sanitation in India is "All Indian cities and towns become totally Sanitized, healthy and livable to ensure and sustain good public health and environmental outcomes for all their citizens with a special focus on hygienic and affordable sanitation facilities for the urban poor and women".

The focus of the policy is on Awareness Generation and Behavioural Change by generating awareness about sanitation and its linkages with public and environmental health amongst communities and institutions and also promoting mechanisms to bring about and sustain behavioural changes aimed at adoption of healthy sanitation practices.

Ministry of Urban Development (MoUD), Central Board for Secondary Education and GTZ India joined hands together for National Urban School Sanitation Initiative to make most effective move for meeting the very first aim of the policy. This will help to inculcate good sanitation habits amongst children. The initiative is aimed at using "**Children as ambassadors of change**" philosophy and addressing the water, sanitation and hygiene issues in urban schools to initiate behavioural change among children, who can potentially take back the lessons home and trigger a change.

ESF carried out the baseline survey which is the first step of action towards improvements of the water, sanitation and hygiene/health situation of the school and community separately. Base line surveys needs to be conducted at the very initial stage of the programme to assess the existing situation of water, sanitation and health and hygiene status, to understand the practices, traditional beliefs and to identify the appropriate measures that can be considered for future plans. The findings from the baseline will be incorporated as the basis for developing the National Urban School Sanitation Manual, thus address the key issues

with water, sanitation and hygiene, so as to provide the school with a document for implementing better water and sanitation practices in their schools.

Objectives

1. Collect information on the awareness on sanitation, health and hygiene and extent of its practice
2. Collect information on the situation of water, sanitation and health/hygiene status of the school; in terms of adequacy, maintenance, availability and limitations
3. Prepare appropriate plan of action based on the base line information to improve the sanitary and health/hygiene situation of the students; and use the information to develop the National Urban School Sanitation Manual
4. Use the information at the index to measure the progress made in sanitation and health hygiene improvement.

Green buildings initiative

The first meeting of the Core Group on Green Buildings was organized by the Forest Department, Gwalior, Government of Madhya Pradesh on 18th September '09. The list of the participants is annexed.

The delegates were welcomed by Mr. R.B.Sinha, IFS, Chief Conservator of Forests, Gwalior, Government of Madhya Pradesh. Thereafter, Mr. Sanjay Kumar Srivastava, Advisor, GTZ, explained the gist of the meeting and also suggested the possible mandate/TOR's of the Core Group. Dr. V.N.Pandey, CCF Development, Bhopal, Government of Madhya Pradesh, delivered the keynote address. Mr. K.G. Devapriyan, Architect & Joint Director, Costford, Kerala, presented on the effectiveness on the construction of Low Cost Green Buildings and Mr. Arun Kumar, CEO, Ecosan Services Foundation, Pune, Maharashtra explained about zero Discharge sanitation management, related sanitation designs & innovations and also about the progress on Waterless Urinals in Bhopal and Gwalior, emphasizing in particular the water conservation techniques in sanitation. Mrs. E.P. Nivedita, Director, ministry of Urban Development, Government of India could not come personally, but participated in the meeting through telecom and made important observations.