



# annual report

2011-12

### Foreword

It is my pleasure to present WASH Institute annual report for the period April 2011 to March 2012. The hallmark of this period was to keep momentum going by providing quality training programs in water and sanitation sector to key stakeholders and also increased engagement with the Government efforts in sustained capacity building and skill enhancement of their staffs at various levels. WASHi also supported other capacity building and planning initiatives of the Government. Apart from this various programmes were conducted for other organisations as well. This year mark the occasion of establishment of WASHi office at Patna to strengthen its work in northern states.

The job oriented academic course on Environmental Sanitation (Sanitary Inspector's course) was also started during the year. The demand for WASHi training has been steadily increasing as there are few organisations in India to provide quality trainings on WATSAN issues. This demand for trainings, combined with the support by the Government and Plan India helped WASHi to continue rendering quality programs, thus enabling departments and organisations to better implement the water and sanitation projects and quicken the pace of achieving the coverage and usage in water and sanitation.

WASH Institute is extremely grateful to the Ministry of Drinking Water Supply, Government of India, Sanitation Missions of Jharkhand, Bihar, UP, Rajasthan & Odisha, TWAD Board, INGOs, NGOs and communities for their continued association and support in capacity building efforts.

We sincerely thank our partners in capacity building and action research Plan India and SEI Sweden respectively who have been supporting the growth and development of WASHi since its inception. We also thank our Governing and Advisory Boards for their continued support. We are certain that WASHi will expand more and more to create a pool of experienced resource persons at national, state and district level to support water and sanitation interventions across the country to serve thousands and thousands of community with improved water and sanitation facilities.

**Prakash Kumar**  
Chief Executive Officer

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## Introduction

Bridging the knowledge gap between community and service-providers, implementation managers and policy-makers through a continuous and effective capacity building is one of the major goals of WASHi. WASHi has successfully completed its fourth year of operation in spearheading capacity building efforts in WATSAN sector. The period was very successful in terms of rolling out important activities with support from the Ministry of Drinking Water Supply and Sanitation to WASHi as a Key Resource Centre and different State Government PHED. WASHi conducted a series of water and sanitation trainings, besides stakeholder consultations, conferences and workshops. Training programmes have been conducted for NGOs and INGOs as well. A notable feature was number of requests for meetings from Government both at State and Centre which emphasized the acute need of various kinds of required technical support in the WATSAN sector and the confidence reposed in WASHi conducted programs. The Institute has scaled up its activities in the past few years from mere capacity building organization and ventured into the arena of providing support for various activities which involved stakeholder consultations through conferences, workshops, providing policy advocacy inputs for strengthening various aspects of WATSAN programmes viz. implementation, monitoring and evaluation and research. WASHi is at an important cross-road for enhancing its capacities and outreach.

## WASHi Vision

A world in which all the communities have access to safe, protected and sustainable drinking water and sanitation services, with improved hygiene practices.

## WASHi Mission

WASHi's prime focus is to facilitate development of skilled professionals in water and sanitation sector with a community perspective to address the growing need of trained human resources in the sector.

## Training Programmes

### Ministry of Drinking Water & Sanitation, GoI sponsored training programmes

WASHi has been recognized and approved as a Key Resource Centre among twenty other institutions in the country since 2010, by the Ministry of Drinking Water & Sanitation (MDWS), Government of India. This KRC status contributed to an increased financial support from the ministry for various capacity building programmes and other services in the WATSAN sector. During the reporting period, MDWS sanctioned two projects: i) Series of Trainings on Water and ii) Series of Trainings on Sanitation.



A view of the Puducherry participants

### 1. Training on Water

The MDWS sanctioned 8 training programmes and one National Conference under the Water theme. These trainings were planned and conducted for Assistant Engineers, Junior Engineers and Panchayati Raj Institution members of different states. The trainings were under three topics namely Better Water Quality for Better Health, Construction and Maintenance of Iron Removal Plants, Community-based Water Security Plans. A total of 251 officials of the government departments benefited from these trainings.

S. No.	Particulars	No. of Trainings
1.	5 days residential training programme on various aspects of water security and planning.	3
2.	3 days residential training programme on various aspects of water security and planning.	5
3.	2-days National Workshop on Household and community level treatment technology	1
	Total	9

The details of the training conducted are presented below:

#### a. Training on Better Water Quality for Better Health with Special focus on Mitigation measures

Three day program on this themes were organized for the five selected States / Union Territories which addresses various issues in the rural drinking water

sector. The states were Bihar, Chhattisgarh, Odisha, Puducherry and Uttar Pradesh. During these training programmes, special attention was given to water quality issues, mitigation measures, guidelines, Millennium Development Goals linkages with WATSAN, water purification methods - physical, chemical and bacteriological approaches and change management. Practical sessions were conducted in the field for demonstration of water quality analysis using Jal-Tara, Orlab and TWAD board water quality field test kits.

#### b. Training on Construction and Maintenance of Iron Removal plants



A view of the participants of IRP training

A training programme was conducted for 34 engineer participants from Odisha who were trained on the step-by-step construction of Iron removal plant. In addition the participants were taken to the Terrafil on-site manufacturing plant for imparting a practical learning on various aspects of the iron removal technology. A practical test was done on how Terrafil filters operate to improve the water quality.



### c. Trainings on Community-based Water Security Plan



*A view of the participants of the CWSP training*

Two programmes on this theme were conducted for the states of Bihar and Jharkhand. A total of 58 participants were trained on water quality issues, watershed management, water budgeting, demand calculation, village mapping and water security. The training programme included theoretical and practical sessions with participatory games and films on the subjects. Participants were taken to the field for two days to observe implementation of community water security plan.

## 2. Training on Sanitation

The second theme sanctioned by MDWS for WASHi was on Sanitation with a total of 8 trainings. The project duration was from December 2011 to June 2012. The module of this training includes session on "Sustainable Sanitation, School Sanitation and Ecological Sanitation" which was planned for Jharkhand, Bihar, Rajasthan and Uttar Pradesh. The participants of the trainings were government officials, assistant engineers, junior engineers and Panchayati Raj institutions members. During the reporting period three trainings were completed for the state of Jharkhand. The remaining trainings are to be conducted for Bihar, Rajasthan and Uttar Pradesh. The details of the programmes conducted are:

### a. Training on Sustainable Sanitation, School Sanitation and Ecological Sanitation

The trainings covered all the three topics in detail and participants learnt about technical aspects of different toilet models, ECOSAN concepts, solid and liquid waste management, waste management technologies, recycling of waste and converting into soil nutrients, WASH program in schools, water and sanitation related diseases and its preventive measures, Water quality

testing using field kits and Behaviour change communication.



*Participants of the 1st Sanitation training conducted for Jharkhand*



*Participants of the 2nd Sanitation training conducted for Jharkhand*

During the three training programs, a total of 85 participants were trained and out of them 52 were engineers, PRIs members and NGOs members and 33 were the Jal Sahiyas from the state. A pre-test and post-test assessment of participants during the training program showed that there was a considerable increase in the knowledge of the participants.



*Participants of the 3rd Sanitation training conducted for Jharkhand*

### Capacity building support to INGOs and NGOs

As WASHi core expertise is in conducting capacity building programs for various stakeholders in the WATSAN sector, services of WASHi have been utilized by different International and National NGOs to train their staff personnel. Continuing this trend, the reporting period also witnessed a series of programmes for INGOs and NGOs.

### a. Training on School Water and Environmental Sanitation for Plan India staff



*Training on School Water and Environmental Sanitation for Plan India staff Participants of Plan India*

Plan India, besides supporting the operational costs of WASHi and supporting the leveraging of funds from the Government as KRC, also requested WASHi to undertake capacity building programmes for its staff and Project unit (PU) staff. A comprehensive School WES training program was conducted at Bhubaneswar from 19th – 21st October 2011 for the PU staff of Plan India's three partner organizations from Uttarkashi and Odisha. The purpose of this training was to orient and enhance the knowledge on the principles of hygiene, improvement of the quality (functionality and usability) of existing WASH facilities in schools and to emphasize on strategies to coordinate with different stakeholder. The training programme consisted of various conceptual lectures involving interactive sessions and field visits for practical exposure. Pre-tests and post-test of participant's knowledge level revealed a positive improvement.

### b. Training on Integrated Water Supply, Sanitation and Hygiene – Water For People (WFP) staff

Water for People is another INGO that showed keen interest in getting their staff trained through WASHi. A 3-day training programme on Integrated Water Sanitation and Hygiene was conducted for staffs of WFP



*A view of WFP training participants*

and partner organisation at Kodaikanal from 27th June to 1st July 2011. Exposure visits were made to Musiri Town Panchayat and urban slums located at Tiruchirapalli. The participants expressed having learnt new concepts and methodology in WATSAN, which they felt had increased their self confidence in implementing their projects.

### c. Training on Ecological Sanitation for WFP staff personnel



*Participants of ECOSAN training near Kolkata*

This residential training for WFP staff was arranged by Tagore Society of Rural Development (TSRD) partner organization of WFP, located in Sagar Island of Kolkata from 26th to 31st December 2011. A total of 26 participants participated from different parts of West Bengal and were trained on Ecological sanitation. A model of ECOSAN toilet unit was also constructed to explain the construction steps and designs to the participants.

### d. Training programme for Foundation for Ecological Research, Advocacy and Learning (FERAL) staff

One of the blocks in Krishnagiri district has been selected for a pilot project on School WASH by UNICEF-





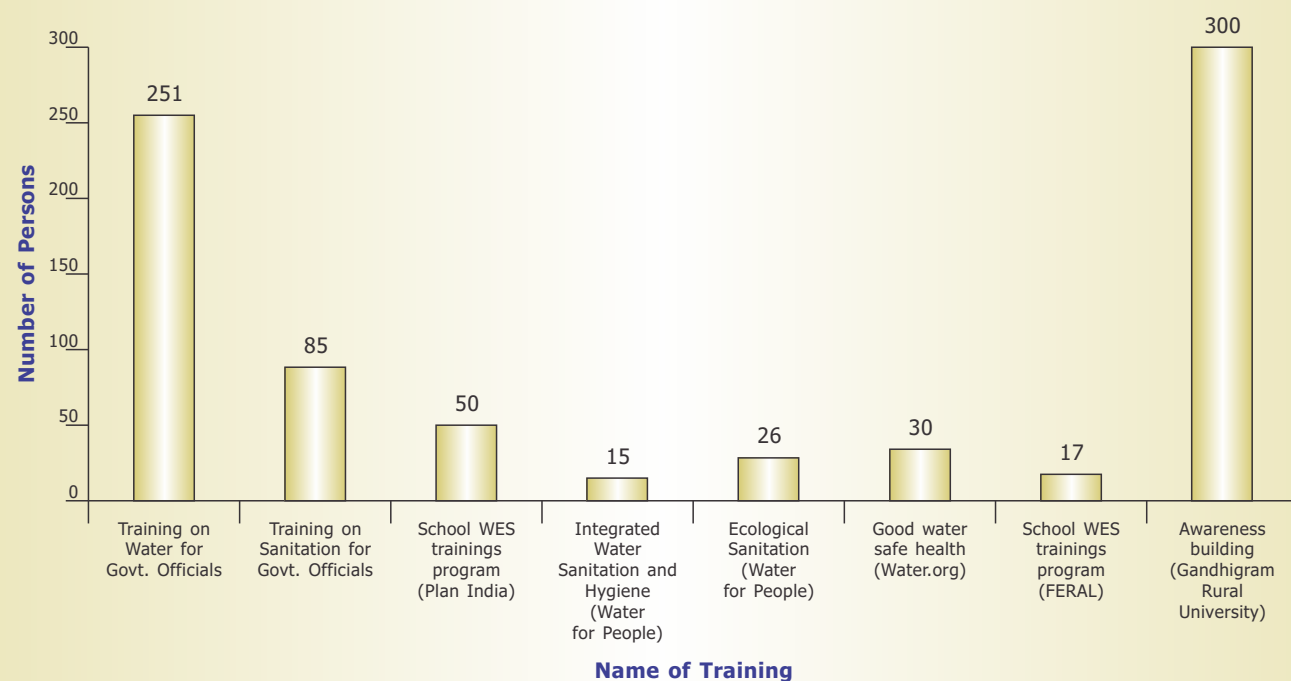
Training for FERAL NGO

Tamil Nadu. FERAL, a local NGO was entrusted for the implementation of this pilot project. WASHi was requested by UNICEF to organise training programme

for the FERAL staff and government school teachers of Krishnagiri district. About 17 teachers participated for the School WASH programme. 2 training programmes were conducted on 24th - 25th Nov 2011 and 07th Dec 2011 for the government officials, block resource trainers, Child-Friendly Village Panchayat (CFVP) coordinator, assistant education officers and FERAL staff. The participants felt they were now better equipped with knowledge and methodology to implement the programme.

During the reporting period total 800 participants were trained on water and sanitation by attending programmes of 3-5 day durations including exposure visits. Most of the participants belonged to the Public Health Engineering Departments, School teachers, Panchayati Raj Institutions, INGOs/ national NGO staff, technical experts working with national as well as international agencies.

### WASH Institute Training 2011-12



## Workshops / Conferences Organized

### National workshop cum Exhibition on Drinking Water Quality, New Delhi



Mr. Jairam Ramesh, Hon'ble Minister for Rural Development addressing the gathering

Addressing water quality issues has been on the prime agenda of the Ministry of Drinking water & Sanitation, Government of India. With a view to bring along policy makers, bureaucrats, research institutions, manufacturers and other stakeholders actively pursuing the problem, the MDWS in collaboration with

UNICEF, Plan India and WASHi organised the national workshop-cum-exhibition on drinking water quality at the India Habitat Centre, New Delhi on 15th – 16th November 2011. Honourable Minister for Rural Development Mr. Jairam Ramesh inaugurated the workshop.

The participants included Ministers in-charge of rural water supply, Secretaries, technical officials and heads of departments from various states besides INGOs, NGOs, academia and manufacturers.

The prime agenda of this workshop was to deliberate on various technological options for addressing water quality contaminants, apart from bringing about coherence between researchers, manufacturers and field-level implementers. Highlights of the 2-day workshop also included selected paper presentations on different technologies for contaminant-removal from leading research organizations across India and South East Asian countries. Many new innovations in technology were presented. Special focus was given for deliberations on arsenic, fluoride, nitrate, salinity and bacteriological contamination's impacts, treatments and mitigation measures. Over 300 persons participated in the two day workshop.

## Participation in Workshops / seminars

### a. SACOSAN-IV

The SACOSAN is an inter-ministerial Conference of SAARC countries hosted triennially by SAARC member nations. Flanked by participation of the Government agencies, NGOs, Civil society organisations, academic and research institutions, donors and many others, the Conference attempts to outline the long-term goals and road maps for addressing sanitation issues. The SACOSAN-IV was organised by the Government of Sri Lanka from 4th - 8th April, 2011 at Colombo, Sri Lanka. Ms. Berna Mary participated in the conference as part of the Indian delegation led by the Minister for Rural Development. Three days of focused presentations, thematic discussions on various aspects of sanitation took place during the SACOSAN-IV. Few of the highlights of the SACOSAN-IV are:

- The number of people in the region without sanitation is still 716 million i.e. 65 % Asians still lack sanitation. The situation is aggravated by the fact that South Asia is prone to natural disasters.
- Sri Lanka has already achieved the MDG target for

sanitation at the national level.

- India has recognised sanitation as a basic necessity and thereby has accelerated the reforms in sanitation sector.
- In Afghanistan, the national policy for water supply and sanitation was launched in 2010.
- In Pakistan the sanitation sector faced serious challenges owing to emergencies and disasters that affected the achievement of desired results.
- In Nepal some results were achieved by School led sanitation and the government dedicated more funding for rural sanitation.
- In Bangladesh the disparities in sanitation between the rich and the poor and rural and urban had slightly reduced since a decade.

WASHi not only participated in the Conference but also exhibited numerous of its publications contributing towards a better awareness, knowledge-management and capacity building in the WASH sector in India.



## b. International Workshop on Climate Change in Agriculture

The Faculty of Agricultural and Animal Husbandry, Gandhigram Rural Institute (GRI), Gandhigram, Tamil Nadu, organized the International Workshop on "Climate Change in Agriculture: Adaptation and Mitigation Strategies" during 21-23 March 2012. The conference was sponsored by the University Grant Commission and GRI. Mr. Arumugam Kalimuthu presented a paper on the Impact of Climate Change in Water and future perspectives during the conference. Other WASHi Trustees and staff participated in the workshop.

## c. Workshop on Improving Drinking Water Quality

A project was implemented by Indian Institute of Technology (IIT), Chennai on improving water and sanitation in Myilai Balajinagar urban slum, in association with Queens University, University of Guelph and IDRC Canada. A one-day workshop on "Improving Drinking Water Quality and Sanitary

conditions in underprivileged communities of urban areas" was organized by Water Resource Engineering Division of Civil Engineering Department, IIT Chennai on 20th April 2011. The workshop helped to share the learning and enhanced cross-sectoral sharing with other NGOs. WASHi presented its learning in the field of rural water and sanitation during the meeting.

## d. Workshop on effective monitoring of School WASH

WASHi has been involved in the monitoring and evaluation of School WASH project supported by AusAid and Plan India. In this regard, WASHi provided inputs during the workshop on 6 - 7th Nov 2011 at Bhubaneswar, for devising strategies for the monitoring and evaluation of School WASH activity-framework. The workshop was organised by Plan India. Mr. Richard and Ms. Lee from AusAid who presented their views on the implementation of the school WASH project which has already showing positive results. The recommendations were given on behaviour tracking mechanism, sharpening the school management clubs and awareness on community.

## c. Consultative meet at Jharkhand on 12th five-year plan

The Planning and Development Department, Government of Jharkhand organized an interaction at ViSWA, Ranchi during 16th -20th May 2011 on various topics. Principal Secretary-PHED and State Water and Sanitation Mission Chief Engineer invited WASH Institute to participate in the 12th five-year plan meeting for inputs in the field of water and sanitation. This invitation came as a result of knowing WASHi and its trainings on Ecological Sanitation conducted for the Engineers of the Public Health Engineering Department during October 2010. The meeting was presided over by Mr. Arjun Munda, Chief Minister of Jharkhand who also inaugurated the session. All the participants were divided in to five groups for discussion on various topics namely:

- i. Role of Community in Water supply and sanitation
- ii. Urban water and waste management
- iii. Community led total sanitation
- iv. Innovation in drinking water and irrigation
- v. Role of community in spectral ecological balancing.

Mr. K. Y. Babu participated in the discussions and gave suggestions to be included in the 12th five-year plan recommendations of the state. Ecological Sanitation has been accepted by the group as one of the sustainable sanitation option in the state. Further to this, a meeting was called by the Principal Secretary Mr. Sudhir Prasad and Chief Engineer Mr. Shardendu Narayan in which WASHi representative presented their views which were incorporated in the state's plan. Principal Secretary, PHED requested WASHi to support for the capacity building of the implementing agencies in the state of Jharkhand.

## d. Consultation meetings with SWSM, Govt. of Jharkhand

The SWSM, Government of Jharkhand called for various organizations to find a lead NGO for conducting training programmes and WASHi was invited. The aim of this meeting was for "identification of suitable agency/NGO/KRC for imparting trainings, IEC

development and concurrent evaluation of watsan facilities in Jharkhand". 9 organizations participated in the consultation meeting. WASH Institute was selected as a nodal agency for delivering the training at state level. WASHi to act as an "umbrella organization" under which local NGOs, can be selected for implementing the training at district, block and Panchayat level. WASHi and two other NGOs based in Jharkhand were asked to develop the joint proposal and submit to SWSM of Jharkhand. The modality of the project is also discussed with the local NGO Vikas Bharti.

## e. Consultation for strategies for Open Defecation Free (ODF) urban areas

As part of the campaign to make Tamil Nadu Open-Defecation-Free by the year 2015, many State Government agencies commenced their strategies to achieve the goal. The Commissioner of Municipal Administration, Government of Tamil Nadu convened a meeting on 17th March, 2012 to discuss modalities for Information, Education, Communication strategies to eradicate open defecation in the urban areas. Dr. S Rajendra Kumar participated in the meeting along with two other organizations Nalamdana and TVS Electronics and proposed several strategies. Further discussions are underway in the process of development of suitable communication strategy for ODF in urban areas.

## f. Network meetings and consultation workshops with FANSA

To expedite the construction of school toilets with prime focus on girl children as per the recent order of Supreme Court, the WATSAN experts came together at the network meeting to prepare an appeal to Government of Tamil Nadu regarding Supreme Court order which urged to complete toilet construction. In addition to the network meeting, a consultation workshop was organized by FANSA to discuss and suggest a draft sanitation strategy to be presented to Government. Dr. S. Rajendra Kumar participated in this workshop and put forth WASHi ideas through presentation on "Status of Sanitation in Tamil Nadu".

# Advocacy through participation in consultative meetings

## a. Consultation meet with MDWS, New Delhi

WASHi was part of the National Consultation meeting presided over by Mr. Jairam Ramesh, Union Minister for Rural Development. , New Delhi organised at the SCOPE complex, New Delhi on 6th February 2012. Several presentations were made by selected representatives from various sectoral partners from all over India on the topics of water, sanitation, hygiene, waste management etc. Discussions were also held on "Improving water and sanitation facilities in India". The meeting concluded with some key recommendations as below:

- Increased subsidy/ financial support for toilet construction
- Involvement of NGOs for improving the Water and Sanitation facilities in villages
- Efforts for reduction of VAT for sanitation products
- Re-financing for the SHG with importance to sanitation to be emphasised.
- Corporate sector should play a key role in improving the Water and Sanitation

## b. Consultative meetings with the State Planning Commission, Government of Tamil Nadu

The State Planning Commission, Government of Tamil Nadu regularly holds consultations with various sectoral players in the field of WASH. In this regard, a series of meetings were called by Mrs. Shantha Sheela Nair IAS (Retd.), the Deputy Chairperson, Planning Commission, Government of Tamil Nadu. WASHi participated in the meetings conducted on 10th November 2011 and 5th January 2012. Various pressing issues on water and sanitation were discussed like policy reforms, strategic approaches for addressing sanitation, mechanisms for equitable access, quality-control of infrastructure development, exploration of cost effective and user friendly technology options, operation and maintenance, Behaviour Change Communication etc. Different sub-committees were formed for addressing various aspects of WASH. The sub-committees prepared reports of the discussions and recommendations were made to the Planning Commission.

# Organisational Development

As part of strengthening organisation's capacity and capabilities to further expand in the sector, program for capacity building of the WASHi's personnel has been developed. WASHi personnel were nominated to

different capacity building programmes for refreshing their skills and also being updated on the innovations taking place in the sector, which are summarized below:



### a. Training on Decentralized Wastewater Treatment Systems

WASHi team members Mr. K Y Babu and Dr. Rajendra Kumar attended the training on Decentralised Wastewater Treatment System organised by The Consortium for DEWATS Dissemination Society (CDD) from 9th – 11th November 2011 at Madurai. DEWATS is an option for sustainable sanitation and many developing cities are accepting DEWATS as cost effective viable option for wastewater treatment. The 3 day residential training programme was coordinated by resource persons from TATA – Dhan Academy and CDD Bangalore. The training programme was found useful.

### b. Exposure visit to Vivekananda Kendra on Solid and Liquid Waste management

WASHi team as part of capacity building underwent a one-day exposure visit to Vivekananda Kendra in Kanyakumari district on 26th January 2012. The Vivekananda Kendra has carried out extensive research

and developed models on Solid waste management, low-cost construction etc.

Different low cost construction options developed without using the cement and utilizing locally available material were seen. A whole assembly of rain water harvesting model and solid waste management and use of Biogas by use of kitchen waste were seen. The exposure visit proved very useful for the WASHi team.

### c. Desktop Calendar

WASHi, in association with REAL, Dindigul prepared a thematic desk top calendar and annual planner for the year 2012. This activity was financially supported jointly by Plan India and Water for People. This year theme was on "Save Water, Secure the Future". Few copies of the publications were circulated among government departments / INGOs / NGOs and Professionals and as in the previous year's many have appreciated the messages in the calendar as being useful and thought provoking.

## WASHi Action Research cum Advocacy Project in Bihar

### SIDA supported Stockholm Environment Institute and WASHi project on sustainable sanitation

This is one of the important action research cum advocacy work that WASHi is implementing in Bihar in close partnership with Stockholm Environment Institute (SEI), Sweden. The project specifically work to focus on sustainable sanitation solutions in areas experiencing recurrent flooding in the State of Bihar, the most flood-prone Indian State with more than 16% of the total area flood-affected and with more than 22% of India's flood-affected population. It is of great importance to reduce human vulnerability in Bihar and better sanitation systems, to be accomplished by increasing coverage of improved sanitation to a higher percentage than the current level of 25%. To ensure effective monitoring of SEI-WI project, WASHi had established its office at Patna. To achieve the objectives of the project some of the major activities done during the reporting period were:

- State level Seminar on "Arguments, Processes And Technologies for establishing alternative and sustainable drinking water and sanitation security in flood prone areas of North Bihar",
- Assessment on sanitation challenges in flood affected areas (5 districts) of Bihar and prospects for ECOSAN. The brief report is attached as annexure -6.
- Establishment of community centred, driven and owned alternative secure sanitation process and facilities in one flood prone hamlet of Rupauliya village of Paschim Champaran district.
- Demonstration of Integrated Water supply, Sanitation and Hygiene facilities in a High school in Maner, Patna.
- Partnership and networking with local NGOs and agricultural scientists and promotion of urine harvesting.

## WASHi in Monitoring and Evaluation Assignments

One of the important activities taken up by WASHi was the monitoring and evaluation of the School WASH programme of Plan India. The School WASH project was implemented with the support of AusAID through three of its partners in Uttarkashi and Odisha. Each of the project units cover 25 schools, thereby 75 schools were covered under the School WASH Programme. As per request of Plan India, WASHi took-up the assignment of monitoring and assessment of the School WASH programmes in April and June 2011. WASHi successfully conducted the visit to the schools and reviewed the designs and models of the toilets in the

schools. Review and assessment of the software activities were made for the following activities like:

- School health club formation, PTA and MTA formation and their functioning
- Methodology and effectiveness of promotion of hygiene messages in the schools
- Role played by the teachers in the school WASH programme were all assessed for recommendations. A comprehensive report for the same was submitted to Plan.

## WASHi Academic Courses

With a view to provide a formal learning and educational platform, WASHi successfully launched two academic courses bearing affiliation with the Madurai Kamaraj University, Tamil Nadu.

- One Year Post Graduate Diploma in Environmental Sanitation Science (Sanitary Inspector Course)
- One year Certificate Course on Capacity Buildings of Health Workers

This was a new beginning for WASHi whereby students would be oriented with the various aspects of environmental sanitation and developing health linkages for drinking water & sanitation. The course includes different modules for interactive learning through class-room teaching, hands-on training on numerous aspects and a practical exposure through field based learning. New full time teaching staff was recruited besides guest faculty.

### WASHi course changed my life practices



"Earlier I was a very casual kind of guy. I never used to take bath daily and the regular tooth brushing was not my business. Not only I have changed, but have also made my friends, family and relatives to change to good practices. After joining the course of sanitary Inspector at WASHi I realized what I was neglecting. The course content and faculties at

our institute are wonderful and I am accumulating very valuable information and knowledge about health and hygiene. I am confident that coming out of this institute, I will get an opportunity to work with good companies where I can leverage my learning".

**G. Rajalingam**  
student - Sanitary Inspector Course

### WASHi linkage with Academic Institutions

#### Awareness building for Gandigram Rural University, Dindigul

Addressing the request of the Agricultural Department, Gandhigram Rural University, Dindigul, WASHi conducted an awareness programme on 11th August 2011 for the students on water and sanitation. The programme was attended by 300 students and staff personnel who shared their views, thoughts and comments on the presented topics.

### Feedback from the participants on training

"Overall it was excellent, learnt many new things and wants to get more similar training in water and sanitation so that I can implement the same"

*Indra kant Jha, AE (PHED), MedniNagar*

• • •

“Learnt very important aspects of water & sanitation and now want to make aware my villages and would like to participate in similar trainings. Overall it was an excellent experience”

*Sudha Devi, PRI member, Sahebganj*

• • •

“I was fascinated by the concept of Roof Rain Water Harvesting. I am definitely going to use this technique in my Panchayat”

*K. Ansari, Mukhiya, Giridih*

• • •

“The knowledge sharing on ECOSAN toilet was brilliant, will try to encourage our people to use the same in our area”

*Janardhan Pd. Singh, SDO, Madhupur*

• • •

Annexure I: Key Resource Persons associated with WASHi during the period

1. Dr. A.B. Shukla, Consultant, WSSO, Uttar Pradesh
2. Mr. M. Subburaman, Director, SCOPE, Tiruchirapalli
3. Dr. A.K. Upadhyay, Environment Consultant & Lab In-charge, State Lab, Bihar
4. Dr. Ashok Ghosh, Professor, Environment Department, AN College, Patna, Bihar
5. Dr. C.A. Srinivasamurthy, Professor, GKVK, Bengaluru
6. Dr. Nitish Priyadarshi, Environmentalist, Ranchi, Jharkhand
7. Dr. P. Mariappan, TWAD Board, Tamil Nadu
8. Dr. Samir Bajpai, Associate Professor, NIT, Raipur, Chhattisgarh
9. Er. K.M. Namboodiri, Consultant, Kerala
10. Er. Ravindran, Head of Organization Development, Centre for Excellence, Chennai
11. Mr. B.P. Ojha, Director Water Quality, PHED, Bihar
12. Mr. Chandi Charan Dey, WATSAN, Coordinator, Ram Krishna Mission, Kolkata
13. Mr. Jyothirmoy Chakraborty, Consultant, Kolkata
14. Mr. E. Manoharan, TWAD Board, Tamil Nadu
15. Mr. Mohd Shehfar, Research Associate, Centre for Science and Environment, New Delhi
16. Mr. Prabhakar Sinha, BTAST, Patna, Bihar
17. Mr. R.P. Diwedi, Coordinator, Ruchika Organisation
18. Mr. Rajesh Prashant, Jagrti Vihara, Ranchi, Jharkhand
19. Mr. Robert Chandra Kumar, Advocate, Madurai Bench-Chennai High Court, Madurai
20. Mr. Satyabrata Achariya, Program Director, PRADAN, Jharkhand
21. Mr. Somnath Basu, WASH Specialist, UNICEF, Jharkhand
22. Mr. Vivek Singh, Research Scholar, IIT, Kanpur
23. Mr. R.Sukumaran, Consultant, Coimbatore

Conclusion

The period was very eventful where WASHi has been able to contribute to the ongoing programs of government through skill building of their staffs by organizing several training programmes and conferences. The consultations in which WASHi participated presented new concepts, add to existing knowledge, information's, practices and innovations to refine the ongoing programmes for wider and long term impact for improved health and livelihood of the community. The WI-SEI Bihar research project has started implementing newer concepts in sustainable sanitation and more particularly demonstrating system that will effectively close the sanitation loop and use nutrients found in human excreta in agriculture. The initial successes are very encouraging. WASHi with launch of academic programmes has started a new beginning for bridging the gap for availability of more skilled personnel in the field of water and sanitation and also creating newer job opportunity for the young. The increase of manpower and tapping of more resources are the two major areas for WASHi to put more efforts as it aims to grow bigger and more effective.

Annexure 2: WASHi – General Council

S.No.	Name	Address	Position
1.	Dr. T.T. Ranganathan	Prof. Agriculture, Gandhi Gram Rural Institute, Gandhi Gram, Dindigul, Tamil Nadu	Trustee - President
2.	Mr. Arumugam Kalimuthu	Country Director, Water For People (WFP), New Delhi	Managing Trustee
3.	Mr. L. Peter	Executive Secretary, Rural Education and Action for Liberation (REAL) Dindigul, Tamil Nadu	Trustee -Treasurer
4.	Mr. Tom Palakudiyil	Head of Asia Region, WaterAid UK, 47-49, Durham Street, London-SE11 5JD, UK	Member
5.	Mr. Girish Menon	Director - International operation, WaterAid, 47-49, Durham Street, London-SE11 5JD, UK	Member
6.	Mr. D.K. Manavalan, IAS (Retd)	Executive Director Action for Food Production (AFPRO) New Delhi - 110 058	Member
7.	Mr. S. Paramasivan	Country Director, Wherever the Needs (UK) Cuddalore, Tamil Nadu	Member
8.	Ms. Rajashi Mukherjee	Independent Consultant, Kolkata	Member
9.	Mr. P. Uday Shankar	Regional Director – India Office Water.org, Tiruchirapalli, Tamil Nadu	Member
10.	Mr. Prakash Kumar	Deputy Team Leader, SWASTH, DFID, Patna, Bihar, India.	Member

Annexure 3: WASHi – Advisory Committee

S.No.	Name	Address	Position
1.	Mr. Kumar Alok, IAS	Deputy Director General in the Unique Identification Authority of India, Delhi	Member
2.	Dr. Ian K Smout	Director, WEDC, Loughborough University (UK)	Member
3.	Mr. Rene Van Lieshout	Senior Programme Officer, RCD Section IRC, The Netherlands	Member
4.	Mr. Joep Verhagen	Senior Programme Officer, RCD Section IRC, The Netherlands	Member
5.	Mr. Anton Earle	Manager (capacity building), SIWI, Sweden	Member
6.	Mrs. Verity Corbett	Independent Consultant, New Delhi	Member
7.	Mr. James Wicken	Advocacy Officer, Water Aid, Australia	Member
8.	Mr. Dara Johnston	WES Chief, , Myanmar UNICEF	Member



Annexure 4: Financial Highlights

WATER, SANITATION AND HYGIENE INSTITUTE (WASH Institute)  
"Ashwath Nivas" 5-296, Anandhagiri 7th Street, Kodaikanal 624101  
Consolidated Receipts and Payments account for year ended 31st March 2012

Amount in Indian Rupees					
Receipts	Sch	Amount	Payments	Sch	Amount
To Opening Balances Cash	R1	3430	By Expenses	P1	7212625
Bank		1444664	Capital		128834
To Receipts	R2	10420488	By Contributions (Contra)	P2	1419683
To Contributions (Contra)	R3	1419683	By Advance	P3	1027941
To Advance	R4	236854	By Project Transfer (Contra)	P4	3014242
To Project Transfers (Contra)	R5	3014242	By Closing Balances	P5	
			Cash In hand		4026
			Cash at Bank		3732010
		16539361			16539361

Consolidated Income and Expenditure account for the year ended 31st March 2012

EXPENDITURE	Amount	INCOME	Amount
To Expenses		By Receipts	
Administrative Expenses	660	Bank Interest Earned	31347
Bank Charges	2348	Formal course	116300
MKU Course Centre Expenses	204500	Training & consultancy charges	808239
consultancy expenses	53000	Donations Received	20000
Programme expenses	553096		
To Depreciation	2292	By Contribution from project	1419683
To Excess of Income over Expenditure	1580773		
	2396669		2395569

Consolidated Balance Sheet as on 31st March 2012

Liabilities	Sch	Amount	Assets	Sch	Amount
General Fund	L1	2045614	Fixed Assets	A1	
Project Fund	L2	3127931	Land		450000
Advance	L3	665902	Other Fixed Assets		404205
			Total Fixed Assets		854205
			Current Assets	A2	4985242
		5839447			5839447

Place : Chennai  
Date : 16/08/2012

As per Report of even Date  
For ANNAMALAI ASSOCIATES  
Chartered Accountant



K.K.NILAKANTHAN, B.Com., F.C.A.,  
Partner. M.No. 27208.

Annexure 5: Map of India showing areas of Work



## Annexure 6: Sanitation assessment

### AN ASSESSMENT OF SANITATION CHALLENGES IN FLOOD-AFFECTED AREAS OF BIHAR AND PROSPECTS FOR ECOSAN

#### Background

The Stockholm Environment Institute (SEI), Sweden, in collaboration with the WASH Institute, India, has set out on a three-year action research project under a Swedish International Development Agency's (SIDA) Partnership Driven Collaboration grant on development and promotion of sustainable sanitation solutions in flooded areas. The project will attempt to examine the sanitation challenges that the affected communities face and the coping methods they adopt, which should facilitate the understanding of ways to promote and implement sustainable sanitation solutions in flood-affected areas.

The objectives of the action research project are; (i) to identify acceptable, appropriate and functional sanitation solutions for improved and sustainable sanitation in flooded areas, (ii) facilitate and support piloting of different technologies, (iii), generate and manage knowledge, (iv) support capacity development, (v) facilitate increases in sanitation coverage in Bihar through enhanced understanding and policy promotion, and (vi) disseminate to target audiences in the State of Bihar, India and internationally the findings for wider acceptance and application. By addressing each of these objectives, the project will attempt to contribute to enhanced human and environmental health by eliminating open defecation in flood-affected areas. As such, the project will contribute to reducing water-borne disease in the worst affected communities. Through demonstration of effective and improved sanitation solutions, the project attempts to facilitate better utilisation of available resources under the government-sponsored Total Sanitation Campaign (TSC).

#### Assessment of sanitation conditions

In the context described above, SEI and WASH Institute commissioned the consultant Foundation for Greentech Environmental Systems, New Delhi, to carry out an assessment in five districts across the State of Bihar. The study covered 257 rural households and 16 schools. The study focused on four issues and throughout was an effort made to pay attention to cross-cutting gender aspects, especially, but not exclusively, menstruation hygiene management. The focus issues are the following, namely:

- Current coverage, access, usage and functionality of latrines constructed under national and State sponsored programmes
- Demand for sanitation services and links to

agricultural production

- Challenges faced, in terms of sanitation and hygiene, by the communities during and after flooding and
- Sanitation and hygiene practices.

#### Examination of prospects of ECOSAN and safe reuse

The action research project basically focuses on conditions in the Indian State of Bihar, which is predominantly agrarian. Thus, this condition lends itself well to the approach described as ECOSAN or ecological sanitation and alternatively referred to as productive sanitation, which implies safe reuse of humanure in kitchen gardens and biomass production. Thus, the potential for safe recovery and reuse of plant nutrients, micronutrients, water and soil-enhancing capacity of human excreta is an integral part of the assessment. In this respect, the study assessed the levels of understanding and willingness of the communities towards adoption of ecological sanitation solutions.

#### Key findings

When interpreting the assessment it must be remembered that it is not a base-line study. Such a base-line study is still to be prepared for Bihar and India in regard to use of functional sanitation systems and the consequences of its use or the lack of it on human and environmental health. Such a study would be costly and clearly beyond the scope of the current action research project. It should be noted that this Bihar assessment was conducted in such a manner so as to ascertain knowledge on a few essential issues from selected communities and school environments in five districts of which four are regularly flooded ones and one is suffering from water scarcity. Thus, the findings of the assessment can be seen as indicative of what the sanitation and hygiene situations are like in Bihar. Since there is no similar study, it is all the same hoped that this will be useful for decision-makers, professionals, NGOs, government staff and others in a better understanding of the situation in Bihar.

#### 1. Sanitation coverage and usage

The study found the coverage in the study area to be about 28%, with 80% of these facilities constructed with private funding. Significantly, a wide range of challenges affecting performance of the centrally

sponsored Total Sanitation Campaign were identified. The latrines constructed under TSC are generally of a lower quality and are prone to collapse during flooding events. Indeed, the single-pit, pour flush design is unsuitable in an area with shallow groundwater table and inappropriate soil conditions. These conditions commonly results in high levels of bacteriological contamination, a harmful process with serious consequences, in poorly constructed water supply wells, which is further accelerated during flooding. It can be noted that within the communities there are examples of privately constructed latrines with a better superstructure construction and septic tanks more suited to the local soil, groundwater conditions and flooding. However, only 7% of respondents indicated an ability to afford the costs of these types of latrines. Unfortunately, the TSC funds are inadequate for the construction needs in flood-affected areas. Additionally, with a perception of poor quality, the community and individuals often return to open defecation or continues with the practice of open defecation.

A particular issue in this context is related to the disposal of children's excreta. Two thirds of the mothers interviewed allow children to defecate in the open.

In spite of the above, 60% of respondents demonstrated a willingness to own an individual toilet facility.

#### 2. Design requirements

Clearly, improvement in design and construction of the Total Sanitation Campaign efforts are of critical importance to create a drive for better acceptance of facilities constructed under its campaign in local communities.

#### 3. Hygiene, hand-washing and water-borne diseases

In general, the study found that hand washing is common in place within the communities. Beyond hand washing, however, hygiene practices are restricted by the lack of facilities, in particular periods of menstruation. Community sanitation blocks could help address the issue related to menstruation hygiene management in providing adequate space and privacy for women and girls who have reached puberty. Issues of hygiene were most clearly demonstrated with two thirds of respondents reporting an incidence of water borne disease within their household in the last three months. An integrated campaign of behaviour change communication is clearly required with emphasis on the links between open defecation, poor hygiene practice, malnutrition and disease, including morbidity and mortality.

#### 4. Potential for safe reuse

Being mainly an agrarian community, there is a high level of interest in sustainable waste management practices by the respondents – particularly for products with an origin in the kitchen or from agriculture. The interviewed communities, therefore, appreciates the potential benefits of the ecological sanitation approach for resource recovery. (See elsewhere for safe nutrient recovery from humanure.) ECOSAN could help the more economically disadvantaged population to have access to a cheaper source of fertiliser. This, along with the high demand for sanitation within the community, provides an opportunity to increase demand for coverage and to improve hygiene practices for better human health and environmental conditions. However, the ECOSAN approach requires an integration of several aspects, including drawing on the resources available through the TSC and improving the design for flood resistant sanitation systems technologies, while understanding the cultural context in order to formulate effective behaviour change programmes.

#### Conclusion

The uniqueness of the current assessment offers considerable insights into the areas of sanitation, drinking water resources, hygiene, health and nutrients. By striving for testing, implementing and communicating the above touched upon opportunities related to enhanced sanitation services and hygiene practices, the outcome of the SEI/WASH Institute action research project is expected to help the State of Bihar to implement accelerated sanitation coverage that is functional and acceptable to the community. In a wider context, the findings of the project can be disseminated to audiences that is focussing on sanitation, water, hygiene, health and nutrients in Bihar, in India and internationally.





## Water Sanitation and Hygiene Institute

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