



SERInews

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*With you in Pursuit of Sustainable
Management of Finite Water Resources*

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**Sustainable Environment Technologies in
India**

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Eternal Words

Water is the driving force of all nature.

- Leonardo da Vinci

Clean water is an investment in the future of our country

- Bob Shuster, US Congressman

A healthy natural environment allows each new generation including ours to prosper

- unattributable

Nature is not a drag on growth. Its protection is an unavoidable prerequisite for sustaining economic development

- Tony Juniper, sustainability and environment adviser (2013)

Dear Readers,

Cover photo is of polluted Buddha stream flowing through Ludhiana city in Punjab, state of India. Buddha stream restoration is in progress with full swing as various contractors' teams under Green Infrastructure are on site to develop stone enclosures and cluster plantation. Meanwhile, in the month of October SEERAM's team of volunteers comprised of post graduate students, teachers and medical practitioner surveyed the downstream villages till Lake Harike along the Buddha Stream. This was to judge the impact of pollution on agriculture, economy and health of the people in that region. This is first of its kind of studies being conducted because of financial assistance from the MoEF-NRCP-CPCB the prime institutions in India responsible for maintaining the water quality of lotic systems.

In the socio-economic surveys team of students under the leadership of Dr.Sanjeev Chauhan was also involved. This survey has not only provided the data and information about cropping-economy-health but it has created an interstate (Maharashtra - Punjab) bonding among the students and villagers. This was unique experience for the students from Maharashtra because they were received well by the villagers in Punjab though there was language barrier. Actually the a bond of water and emotions was developed among the volunteers and villagers. SERI is thankful to Dr.Sanjeev Chauhan, Punjab Agriculture University and Dr.MangeshKashyap, President of SEERAM for their cooperation in the survey.

MoEF has spent thousands of crores in restoring the water bodies for more than a decade or so. CAG observed in its 21st report of 2011 that despite of huge spending, there is no observable change in the quality of polluted urban stretch of river. There is need to look at river and lake restoration projects from different perspectives as Sandeep Joshi, Ecotechnologist always says that it not infrastructure "asset" based project but it is "process" based ecological health recovery project. Severe attacks of the pollution can be recovered by strengthening river's own natural purification processes. In order to discuss this approach in detail, Shrishti Environment and sustainability Society (SESS) has proposed to organize a workshop and conference in association with Ecological Society of Punjab Agriculture University of Ludhiana.

Thank you,
Chief Editor

From SERI's Desk

Socio-economic-health survey along Buddha Stream -downstream of Ludhiana City

-SERI Team

Buddha stream, a naturally isolated stream of Satluj, is traversing through Ludhiana city. It has become victim of enormous pollution due to fast growing industrial belt including textile, automobile, paper and leather industries. Once a natural drain Buddha stream is now a waste water channel carrying industrial and domestic waste from the urban, peri-urban areas of Ludhiana, the industrial city of Punjab.

The Eco-restoration of this most polluted stream having 600 MLD flow is being done using Ecotechnology. This Buddha NEER project is designed by Shrishti Eco-Research Institute (SERI) and executed by Green Infrastructure.

As a part of this project socio-economic and health studies are to be carried out. The first part of this is completed recently. Various volunteers and students from educational institutions from Pune & Ludhiana had participated in this 15 day's survey programme during 16th October to 30th October 2013. Volunteers from Shrishti Environment & Sustainability Society (SESS), Society for Environment Education, Research and Management (SEERAM) and Punjab Agricultural University conducted this survey on the stretch of Buddha stream downstream to Ludhiana city till Harike Lake, which is a Ramsar site, after confluence of Satluj and Buddha stream. Shrishti Eco Research Institute also conducted water analysis program in those villages.



Ludhiana Socio-Economical Survey Team

Buddha stream once a water source for villages in vicinity of Ludhiana city till 1960's, became more dirty day by day and got the status of nallah (waste drain) due to industrial and sewage discharges from 'Ludhiana city'. Though having a large water front in vicinity, people from these villages and most part of Ludhiana city are compelled to use ground water for irrigation and domestic use.

During the survey about 75 villages on the both bank of Buddha stream and Satluj River were visited. It was really a vast survey programme as the team travelled a lot to reach each village and gather the hands on experience of the local people. Initially



language was hurdle but the Punjab Agricultural University students helped a lot to understand the language and to make the interaction very smooth. Though going through worst situation the humanity shown by the villagers touched hearts of the volunteers. There was very good response from the participants and their concern about the situation was well reflected through their emotions.

While preparing the questionnaire most care was taken to include all the aspects contributing the socio-economic development of those villages. It gives information about the family members, education, source of income, agricultural details, health information, health assessment, community facilities available, etc.

Interaction with people in those villages evolved the socioeconomic and health issues of the community mostly dependent on ground water due to polluted Buddha stream and Satluj River.

The volunteers were very happy about the logistics and food arrangement by Green Infrastructure. A good night sleep and quality food plays major part in such hectic schedule. We are really thankful to Green Infrastructure for that.

The staff of hotel Mahal and the drivers of vehicles were very much co-operative and due to their support the team was able to complete the task in stipulated time period.

The whole team worked together as a family. Everyone was so much involved in this work that saying good bye to each other at the end of the survey was very difficult for all the team members.

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Primary Observations of Health survey of Buddha Stream

- Dr Mrs Shirish U Ambegaonkar

The villages which were just off the highway like Hambran, had both- a better literacy rate and lifestyle. Most people had independent water filters installed in their houses. Fewer people complained of health problems, but lifestyle diseases like hypertension and diabetes were on the rise.

As we progressed towards the interior, the access to the villages became difficult and literacy and basic hygiene levels dropped. Most villages had open drains and were beset by hordes of mosquitoes and flies.

In many villages there was no network of water supply, and where the villagers



were dependant on water from bores that were shallow the health complaints were more. People in these villages complained of typhoid and jaundice.

Lack of health facilities and proper treatment regimens has led to many people complaining of recurrence, highlighting the fact that there are many, who are carriers of this disease, in this area. The women looked anaemic and tired, which I

think was not due to repeated childbirths as most women did not have more than two children, but because of malabsorption due to intestinal parasites. When questioned closely many admitted that their children had parasite infestations and so were not robust in health. Many young women had very dry skin and very dry and fragile hair, when we told them that this would improve with a higher water intake they simply pulled faces and told us that as the water was not palatable, they did not feel like drinking it!

There were many people who complained of having kidney stones, and there were a few who had gall stones.

When we spoke to the Doctors at the hospital in Hambran, DMC they told us that in the bone density camps that they conducted in the rural areas, there was a significant rise in the cases of osteoporosis.

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NEWS at a glance

“Tech for Seva” Conference

“Tech for Seva Conference’ took place at MKSSS Cummins College of Engineering for women, Pune on 28th and 29th September 2013. Over 1000 Delegates from 12 states representing NGOs, Corporates and research institutions had attended the conference.

Organised by Vijnanabharati, Seva Sahayog Foundation, GIST, MKSSS and Mahratta Chamber of Commerce, Industries & Agriculture (MCCIA). This two days conference served a common platform allowing academic & research institutions, individual & corporate innovators, NGOs & grass root operators to come together and share their success stories and problems that need scientific solutions to help the bottom of the pyramid of our country to share the fruits of development.

In his key note address at inauguration, ex AEC chairman Dr. Anil Kakodkar hoped “Top-down approaches of policy initiatives are generally very rigid and hence makes implementation difficult as against this the ‘bottom-up’ initiatives many time lack resources, perspective for scalability etc. So, a combination of both the initiatives facilitated by conferences like these would make good policies and take care of implementation also.”

Mr. S.K. Jain, Chairman of MCCIA explained the role of corporates in Tech for Seva. Mr. Pramod Kulkarni, CEO of Seva Vardhini pressed on the issue of carrying out knowledge initiatives in rural areas and the involvement of Tech for Seva at NGO level.

Youth’s participation was evident in the student competitions held the previous day where more than 600 students participated. Out of them 20 finalists were shortlisted and they will be given a chance to continue their work on respective projects in the form of internships in various Corporate.



Shrishti Eco-Research Institute, Pune

**Conference cum Workshop on
Ecorestoration of lentic-lotic water systems: ILBM perspective**

Theme and Call for the Participation:

Severe pollution of surface (rivers, streams and lakes), ground water bodies is the consequence of mismatched developmental and environmental processes. Ecology is lost in infrastructure and economic growth in last few decades which needs reconsideration in developmental planning. Market and economy has overtaken on sustainable livelihood and regional equilibrium. Therefore, there is a need of integrating growth and ecological processes for equitable distribution of wealth by achieving decontamination of streams, rivers and lakes stressed as a result of urban and industrial growth. From the case studies of Udaipur’s ecological restoration of Ahar River and Allahabad’s ecological treatment Rasoolabad Stream Complex, it can be said that if the benefits of the projects are well - understood by the local communities, then such projects deliver more than expectations in the form of extended social and ecological capitals. The capital and operational costs of ecological treatment processes are comparatively less than conventional engineering approaches. This becomes an attractive feature as experienced during the well - defined, well - planned activities in Udaipur and Allahabad projects with non-government funding. These projects have become pioneering landmarks to be adapted for treating the pollution from non-point sources.

Organizers

Shrishti Environment and Sustainability (SES) Society in association with SERI, Society for Environment Education Research And Management (SEERAM), Indian Ecological Society (IES) and Punjab Agriculture University (PAU) in support of Central Pollution Control Board (CPCB) and Punjab Pollution Control Board (PPCB) is organizing conference cum workshop on ecorestoration of lentic-lotic systems: ILBM perspective. ILEC and SERI are the knowledge partners and PPCB, Irrigation Department and Ludhiana Municipal Corporation are supporting the workshop.

Date : 7th & 8th January 2014

Venue : Punjab Agriculture University, Ludhiana -141 004 (India)

Theme:

1. Monitoring & analysis of lentic-lotic systems
2. Bio-energy and Eco-technology for waste treatment
3. Governance and participation for restoration of lentic and lotic system.

Important Date:

Submission of registration form and Abstract: **December 15, 2013**

Acceptance notification: **December 18, 2013**

Last date for submission of full length Paper: **December 25, 2013**

For more details please contact SERI’s office or mail on sess.culture@gmail.com