



# SERI news

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

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**Point for discussion this month**

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**Benefits of Indigenous Technologies for  
the restoration of natural water bodies**

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## Eternal Words

Water is also one of the four elements, the most beautiful of God's creations. It is both wet and cold, heavy, and with a tendency to descend, and flows with great readiness. It is this The Holy Scripture has in view when it says, "And the darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters." Water, then, is the most beautiful element and rich in usefulness, and purifies from all filth, and not only from the filth of the body but from that of the soul, if it should have received the grace of the Spirit.

*-John of Damascus (679?-749) Exposition of the Orthodox Faith*

Let us a little permit nature to take her own way; she better understands her own affairs than we

*- Michel de Montaigne*

For a successful technology, reality must take precedence over public relations, for Nature cannot be fooled.

*~Richard P. Feynman*

Dear Readers,

World Water Day is celebrated on 22<sup>nd</sup> March every year. This year has been declared as international water co-operation year. In India many discussions and symposia being organized on the theme of water co operation. Recently one such dialogue was organised by Centre for Science and Environment, New Delhi. While inaugurating the AA Dialogue India's Hon. Vice President of India, Mr. Hamid Ansari told that only 20% of the total 40,000 million liters of the sewage generated per day by urban cities in India is being treated and rest 80% is going directly to the rivers and lakes.

It's clearly evident that unidirectional development – modern energy intensive and high consumption growth – has yielded unprecedented deterioration of rivers and lakes. This deterioration means the disturbance in life – supporting services and products from the aquatic systems. So, now there is need to redefine the parameters of development by integrating the life-supporting qualities of environmental resources also to develop human development index. We are more advanced than the developed man of 20<sup>th</sup> century. Now, we are in 21<sup>st</sup> century. As Sandeep Joshi says, this millennium is of Energy and Environment. Our all technologies should be aimed at minimizing the energy consumption and maintaining the environmental quality. When Robert Oates says that India needs to develop own technologies for river restoration, we need to ponder it. When our Hon. Prime Minister inaugurates the “SRISTI” scheme for innovators, how we will be linking both the quotes for rejuvenating our deadly polluted, cancerous water bodies?

Recently, ILEC team was in India to discuss “Heartware” for sustainable management of lentic-lotic systems. Dr. Masahisa Nakamura of Japan and Dr. M. A. Chitale led the discussion on ILBM for the well-informed basin governance for cyclic improvements with feedback mechanisms. This programme was organised at Bhubneshwar by Chilica Development Authority which itself became instrumental in innovating the technique to save the Chilica Sarovar (Lake). So, ecological innovations are at service to the humanity to save their aquatic resources from the wrath pollution or encroachment.

Thank you,  
Chief Editor

## Selection of Technology Does Matter

The Thies International River Prize is most prestigious environment award which was commenced in 1999. Initially it was funded by Thies Pty Ltd. but since 2003 it has been funded by the International River Foundation (IRF). This prize is given to those who have demonstrated successful restoration of river.

Though the restoration of rivers and lakes is a prime responsibility of the Government, it has always been neglected. Health of river is directly related to health of thousand-millions of people residing in the catchment of that river.

Thames River Restoration is one of the best example of government initiatives, public participation along with application of suitable technologies. When policy, institution, participation, information, technology and finance work together the outcome is a sustainable project.

In 2010, Thames River Trust (TRT) won the Thies International River Prize for the restoration of Thames River. In case of Thames River, mostly lower part of river near the sea was biologically dead affecting the migration of aquatic life during their breeding season. Due to the efforts of TRT, the Thames government took initiative and promoted local industries and entrepreneur to develop pollution preventing equipments and technologies. The government forced the industrial units to contribute for operation and maintenance of this river restoration technologies.

TRT had shared this prizing money with local communities which are working on river restoration around the world mostly in the developing countries. Peace Institute Charitable Trust (PICT) is one of the Delhi based organization which is working for the Yamuna River restoration. TRT shared this prizing money with PICT for Yamuna River restoration project.

In the first week of March, Robert Oates CEO, TRT visited the PICT office. During his visit he shared his work and experience on Thames River Restoration. He told that, the technologies which were used for Thames River restoration are only suitable for the northern European countries and not for tropical countries due to climate deviations. India has potential to develop new technologies which are suitable for Tropical climate.

India has a very good experience of Ganga Action Plan I where sophisticated, state-of-the-art-waste-treatment-technologies purchased from Europeans are unable to justify the amount spend on them as they cannot give results due to lack of electricity and skilled man power in the rural areas where they are installed.

Being a tropical country India has advantage of presence of various microbes which can effectively decompose the pollutants from water and soil. This natural biological force can help us in cleaning the waste from our natural resources.

As Mr. Robert Oates pointed out that only indigenous technologies can fulfil the objective because they can sustain the local climatic variations and technology transfer which is a key for the success of any technology can be smoothly done for native technologies. Public participation plays very important role in water body purification and maintaining the purified status.

According to the Integrated Lake Basin Management approach Policy, institutions, participation, information, finance and technology are the pillars of sustainable restoration of any natural water body. When these six pillars are effectively involved they form an umbrella to protect the water body.

Sustainable river management will improve ecological, economical, health and social status of the surrounding community.

In India lots of research work is being done in government as well as private sectors to develop waste water treatment technologies demanding less or zero electricity. The results are quite encouraging and there are many field case studies like Ahar river restoration, Allahabad's restoration of polluted stream complex and Ludhiana's Buddha NEER Project showing consistency in the treatment. The need is formation of effective policies and their implementation.



Shrishti Eco-Research Institute, Pune

## National Seminar on "Energy Management - Challenges and Strategic Solutions", 27<sup>th</sup> - 28<sup>th</sup> February 2013, Pune.

- SERI Team

Urbanization, environmental pollution, global warming, depletion of natural resources, Energy thefts are few of the many challenges we are facing today. Today Energy Management has become the need of the hour. The depleting sources of energy has given rise to the concept of Energy Management.

Two-day National Seminar on the theme "Energy Management - Challenges and Strategic Solutions" was organized on 27<sup>th</sup> and 28<sup>th</sup> February 2013 at Matrix Business School, Pune.

About 60 Research papers of authors from Industry as well as Academia created a platform to discuss various issues on Energy Management and also provided an opportunity for industry leaders, managers, academicians, research scholars and students to exchange their experiences and benefit from the practical suggestions that emerged during the seminar on

1. Effects of urbanization on natural resource conservation.
2. Energy audit and conservation.
3. Electrical energy conservation - an approach to future.
4. Green Marketing - New hopes and challenges.
5. Corporate Social Responsibility - A vision to build environmental sustainability.
6. Green IT - A road ahead.
7. Conserve water for Life.
8. Biogas Energy generation.
9. Productivity of business houses and Energy Management.
10. Energy Management and global warming.

Students from various institutions and active environmentalists and technologists working in the field of energy management or energy conservation gave presentations and shared their experiences in a session chaired by Mr. Vinod Bodhankar, SETU, Pune, Dr. Kulkarni from College of Engineering, Pune, and Prof. Ugale, Matrix Education Foundation, Pune.

Mrs. Sussan Raj from The Academic Advisor, Pune and well-known activist in Garbage recycling, discussed the issue of solid Waste generation in Metro cities and Role of generations and how recycling of plastic will be a promising solution not only for MSW but also for deteriorating river health.



## Heartware for Lake Management

- SERI Team



Pradnyesh Agre and Pallavi Patil from Shrishti Eco-research Institute, Pune elaborated redefined wastewater treatment. While redefining the existing waste water treatment scheme, they put forward ecotechnologies - that are based on ecological principles and invented by Sandeep Joshi. The main advantages of these ecotechnologies are Zero energy consumption, No chemical use and treated water with 90-98% purity. This serves energy management as well as wastewater management.

At the end in valedictory function Dr. E.B. Khedkar, Dean, Management Faculty, Pune University, and Dr. Shilpa Kulkarni, Founder Secretary, MEF concluded seminar with their valuable thoughts.

Shrishti Eco-Research Institute, Pune

ILBM Indian National Workshop on was organised by Chilika Development Authority in association with International Lake Environment Committee (ILEC) Foundation, Japan on 5-7 February at Bhubneshwar, Orissa. It was inaugurated by Shri. Bijayshree Routray, Honourable Minister for Forest and Environment, Government of Odisha in presence of Dr. M. A. Chitale and Shri. R. K. Sharma, IAS, Principle Secretary. Indian case studies of lakes Loktak, Harike, Powai, Vembanad, Pushkar and Ujjani were presented. Sandeep Joshi presented the methods to resolve the conflicts in lake basins using ILLBM approach. The concept of ILBM was explained by Dr. Masahisa Nakamura in detail and Dr. M. A. Chitale elaborately talked about the necessity of sustainable management of lakes using concept of "Sarovar Samvardhini" (Formal Lake Conservation Groups). The conference was well-organised by Dr. Ajit Patnaik, Chief Executive, CDA, Mr. Rajesh, Addl. Chief Executive and their members.

After conference in Bhubneshwar, the SAARC lake experts shifted to the CDA premises along the Lake Chilika. For two days they deliberated on "Heartware". The term "Heartware" is explained by Dr. Nakamura as the process of popularizing the "Integrated Lake Basin Management (ILBM)" approach, as human sentiments of mutual concern and facilitation to others, respect for traditional values and culture, the long-term and historic memories of the community interacting with the nature, etc., that collectively form an essential part of the concept of lake basin governance and ILBM. It complements the other aspects of ILBM, i.e., "Hardware (generally implying the engineering and technological aspects)" and "Software (generally implying the institutional and policy aspects)". The ILBM "Heartware" Project is meant to enrich the concept through collaboration among those having been aware of the importance of the concept, with implicit as well as explicit application to sustainable management of lakes and basins. Vinod Bodhankar with Sandeep Joshi presented the heartware of Ujjani Basin for the convergence of urban-rural population through various interactive programmes like Jaldindi and Jalmaitri. Nepal's case was presented by Shailendra Pokhrel and Manprasad Nipunane who came all the way from Kathmandu to attend the programme.

Adelina C. Santos Borja from Philippines joined in heartware programme. All the members enjoyed the tour on Chilika Lake and saw a number of migratory birds but their hearts were broken when they could not spot dolphins.

