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**Point for discussion this month**    **Use of sewage for agriculture**  
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## Eternal Words

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

*~Michel de Montaigne, translated*

*Nature provides a free lunch, but only if we control our appetites.*

*~William Ruckelshaus, Business Week, 18 June 1990*

*Don't blow it - good planets are hard to find.*

*~Quoted in Time*

Dear Readers,

The cover photo is of Mula-Mutha on the outskirts of Pune City near Urali Kanchan where the Water Resources Department of Maharashtra Government developed the Purandar Lift Irrigation Scheme to provide water for irrigation on mountain plateau at a height of 3000 ft. It's an interbasin transfer of water from Mula-Mutha to Karha - Nira. All these rivers are in the basin of Bhima River of Western Maharashtra.

In Aug. 2008, Dr. Masahisa Nakamura, Chairman SCICOMM, ILEC and Dr. Walter Rast, Vice Chairman SCICOMM, ILEC, Dr. Mohan Kodarkar, Indian Representative on ILEC visited this place with Er. Vidyanand Ranade ex-Secretary (Irrigation), Maharashtra State and Sandeep Joshi, Ecotechnologist to study the impact of Pune's pollution on Purandar Lift Irrigation Scheme. According to the officials, the situation has worsened in the last two years though Pune Municipal Corporation claims to have built up new STPs in addition to the 5 old units.

Last month, Dr. Nakamura and Dr. Rast visited Udaipur's site of Ecological Restoration of Ahar River (on 25<sup>th</sup> Aug. 2010) after having brief discussions on the future of Integrated Lake Basin Management (ILBM) with the Central Pollution Control Board and Ministry of Environment & Forests in Delhi on 24<sup>th</sup> Aug. On 26<sup>th</sup> Aug. they were in Ranzani, downstream of Ujjani Dam to understand the health impacts of Ujjani's pollution in the command area.

On 27<sup>th</sup> Aug., "Saving the Ujjani" Conference was organised in Fergusson College, Pune to discuss the legal-technical-health-technological issues of Ujjani Reservoir in the auspicious presence of Dr. M. A. Chitale, international water expert. Er. Vidyanand Ranade, Er. Dabhadkar, Er. Pramod Nirbhawane, Shri. Vinod Bodhankar. Priyanka and Puja presented their work before the mixed audience of experts and students of environmental disciplines. Dr. A. D. Patwardhan and Sandeep Joshi chaired the sessions.

The programme started after paying homage to Dr. M. S. Kodarkar, acclaimed limnologist and Member, ILEC. Dr. M. A. Chitale charted his contributions to the Indian and international lake policy and plans.

Thank you,  
Chief Editor

**"Saving the Ujjani"  
International Programme on ILBM  
Ujjani and Pune, Maharashtra, India  
(26-27th August 2010)**

Indian Association of Aquatic Biologists (IAAB) Pune-Mumbai Chapter with its associate organizations – Indian Environment Association (IEA) Pune Chapter had organized a two day programme on understanding and reviewing the current issues and activities undertaken to restore the water quality of Ujjani Reservoir by various stakeholders in the catchment and command area of the lake.

Glimpses of the event:



Before coming to Pune, Dr. Nakamura and Dr. Rast visited the ecologically restored Ahar river site at Udaipur. Dr. Tej Razdan and Er. Anil Mehta of UCCI accompanied them.



The ILBM team interacted with villagers near Ujjani reservoir in Aug. 2008



Mr Anil Patil of Maharashtra Vikas Kendra addressing the participants at Ranzani when ILBM team visited in Aug. 2010



Convergence of urban and rural water lovers



Dr. Walter Rast is addressing gathering and Sandeep Joshi translating in the language



Dr. Nakamura, Dr. Rast and Sandeep Joshi were felicitated by the villagers of Takli Village in the command area of Ujjani



Wrestler is showing his strength by lifting a stone having weight more than 150 kg at village Takli during ILBM visit



Serene Bhima river flows quietly after the Ujjani Reservoir



Pumping of river water for agriculture 24x7x365



(L to R - Dr. Nakamura, Dr. Chitale, Dr. Rast and Sandeep Joshi during the brainstorming session on 27<sup>th</sup> Aug. 2010



Dr. Chitale, guiding the ILBM participants on the lake restoration issues and necessities



Er. Vidyanad Ranade, one of the speakers charted out the whole account of environmental issues of Ujjani Reservoir



Vinod Bodhankar, urban life reformer, explained various citizens' initiatives in Pune city to restore the streams quality

## Components of IL<sup>2</sup>BM

As pointed out in the ILEC publication titled Integrated Lentic (Lakes) and Lotic (Rivers) Basin Management IL<sup>2</sup>BM - the experiences learned from the GEF Project - good lake basin management requires:

- A. **Institutions** to manage the water bodies and its basin for the benefit of all lake basin resource uses
- B. **Policies** to govern people's use of lake resources and their impacts on lakes
- C. **Involvement of people** central to lake basin management
- D. **Technological possibilities** and limitations exist in almost all cases
- E. **Knowledge** both of a traditional and scientific nature is valuable
- F. **Sustainable finances** to fund all of the above activities are essential

## Urban Rivers and Lake Basin's Key Challenges of Sustainable Management

### Challenge 1: Equity vs. Variability and Scarcity

### Challenge 2: Satisfying the changing pattern of competing water demands

Population growth is leading to urbanization on the one hand and demand for more food is putting pressure on agriculture. Balancing the demands of these two key sectors is the biggest challenge in governance.

### Challenge 3: Investment for sewage treatment

With increasing water supply to urban areas the quantum of sewage generated is also increasing proportionately. The sewage, if properly treated can be a resource for downstream agriculture. This needs large scale investment into the sewage treatment infra-structure and sustained budgetary allocation for running costs and maintenance.

### Challenge 4: Integration of technologies with eco-technologies - A green approach

The cost-effective and eco-friendly eco-technologies have potential to compliment the technological interventions. As a matter of fact, an entire stretch of a river can be effectively used for sewage treatment through eco-technological approach. Such an integration of technology and eco-technology depends on

change in the mindset of people managing the water resources.

### Challenge 5: Tackling the issue of toxic industrial solid and liquid waste (Industrial effluents)

Industrial waste, both solid and liquid, poses a special problem of toxicity depending on inputs and processes. Propagation of the concept of Green Industry is essential, because of zero pollution discharge and effective recycle and reuse of the resources.

### Challenge 6: Resolution of urban-rural conflict

Inadequately treated polluted water is being used for growing seasonal crops and vegetables on large scale. It must be reflecting in the form of poor health and pressure on public health system and loss of productive man hours and overall health of population.

### Challenge 8: Protection of Natural Habitat and water sanctuaries

### Challenge 9: Utilization of biological resources of the lake

The rivers and lakes, due to higher levels of nutrients (Nitrates and phosphates) reaching through sewage-rich water, become highly productive and this high productivity needs to be channelized for food productivity through scientific promotion of fishery. The traditional fisherman community associated with the water body needs to be given training in modern techniques for maximization of fish production.

### Challenge 10: Development of Eco-tourism, educational activities and awareness campaigns

The ecological and commercial values can be enhanced through development of eco-tourism by developing recreational facilities. These developments have potential to generate jobs in service sector for livelihood of the otherwise impoverished rural communities.

- Excerpts from the Concept Paper written by Sandeep Joshi, Sayali Joshi and Mohan Kodarkar