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**Point for discussion this month**

**Importance of Chemistry & Microbiology in  
Pollution Treatment**

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Dear Readers,

Now, we all are familiar with the word 'Ecotechnology' since first issue of SERInews. The word was coined by Sandeep Joshi since he is working of application of ecological principles for pollution control from last 15 years. He is working on different economical and ecological treatment systems for various types of waste waters since 1992. Now, again he has coined a new word "Ecological Intelligence" to define the wisdom of preventing, controlling degradation of environment by using simple ecological principles to maintain environmental quality and healthiness not only for him but for biosphere as a whole. There are news world over that the leaders and administrators need to be updated with the environmental compulsions due to climate change if they want to continue their insatiable hunger for world resources and crown.

Next month, 5<sup>th</sup> June is World Environment Day. Our UV Foundation in association with Pune Chapters of Indian Environment Association (IEA) and Indian Association of Aquatic Biologists (IAAB) is organizing first of its kind "Paryavaran Sansad".

It's a novel concept and practical approach to increase the participation of public at large in the process of maintaining environment quality and healthiness of urban, rural and natural ecosystems.

Thanking you,  
Chief Editor

## Ecological Intelligence for Civil Environmental Responsibility

- Sandeep Joshi  
Environment

Technologist

Intelligence is buzzword of the today's fast expanding global economy, market and civilization. Initially, it was intelligent quotient (IQ) which mesmerized the newly emerged marketing of scientific concepts of 20<sup>th</sup> century. With the invention of Artificial Intelligence, and fast acceptance of electronic brains, a sea change has been brought in the routine, commercial and leisure life of modernized man.

It was said that the basic needs of human kind is the food, cloth and home means to energy and protection from environmental adversities. The cost of getting these needs fulfilled was the efforts to procure resources and process them. Being intelligent creature, man started memorizing the experiences of procuring and utilizing the natural resources through which he developed his intelligence.

Man's niche was restricted to a small area where his individual and familial needs got fulfilled. Therefore he needed knowledge of availability and processing of the resources at subsistence level. But, the vibrant scientific research and quest to conquer earth lead to more complicated processes and wastes.

Wastes generated at subsistence level were easily assimilated in the natural cycling. But, as the processes became more complicated and quality issues became more dominating; the wasting increased tremendously and processed waste is difficult to get assimilated in nature within short period of time. The waste keeps on piling creating inhabitable, unhealthy conditions.

Hence, the modernization is leading to accumulation of waste in every sphere of environment and destruction of environmental quality on which the health and very survival of human being is dependent 100%. Environment Policy 2006 of India says increasing pollution is the result of system failure. But you can call it as lack of Ecological Intelligence at every level of social fabric and hierarchy.

Intelligence comes through correct

information and experiences. It's an attempt to sustain livelihood by processing gathered information and experiences. Intelligence is needed for continued sustenance and improvement. The quests mask the intelligence. Then it becomes obsession and it compels to live at the cost of others may be it is country or region, or towns or ecosystems. This is not the way which leads to the most coveted "Sustainable Development".

Industries talk about EMS, ISO14001 and green charter and what not because they need to sell their products irrespective what they spend on environmental aspects. One of my students was working in chemical industry in Pune. He was so surprised when the legal formalities were completed without any audit or visit by concerned authority. It was just forwarding of papers from one table to another table.

Secondly, he was told by Chairman of the company itself that the hazardous waste should be carted in closed vehicle and dumped in the inhabited hills and valleys. Thirdly, he noticed that untreated liquid wastes were being poured into a hidden pipe which took it to unknown ecological destination. Means the person has Economic Intelligence to maximize the profits by zeroing the cost of waste disposal which is his own corporate environmental responsibility (CER) and not the corporate social responsibility (CSR). But he lacks Ecological Intelligence; not only he, but everybody involved in getting certification for his industry and disposal of wastes.

Actually, in today's context, allocation of funds for environmental corrections, pollution treatment is supposed to be charity! Charity is never responsibility. It is minor fraction of turnover or earnings. Therefore, environmental improvements in surrounding areas should not be corporate social responsibility (means charity work) but it should corporate environmental responsibility (a must do work).

This can be elaborated with the example of distilleries. One of the distilleries in Maharashtra visited by us had lagoons for the storage of spent wash. The pollution strength of spent wash is well known and understood even by illiterates. These lagoons were unlined, cracked and a lot of high

strength of wastewater entered into the crevices and cracks of the land. The soil is highly permeable.

This activity has damaged soil, water bodies and groundwater to such strength that the cost of correction would be many times that of the distillery's sale and turnover. But, because of their lack of understanding and interest the damage they have caused to ecosystem, its persistence and spread and its overall effect and impact on regional economy is huge, enormous and may take years to rectify the environmental quality.

Environmental impacts are not confined to the site of waste storage or disposal but it spreads with the streams and reaches to groundwaters, rivers and lakes consequently reducing the availability of scanty freshwater. Therefore, the understanding of the impacts of wastes and their prevention, control, use - reuse or recycling or their treatment in eco-friendly manner will lead to better environmental quality, healthiness for all.

Ecological Intelligence is an essential feature of everybody from common man whether literate or illiterate, young or old, men & women. Irrespective of cast, religion, social status, ecological intelligence will lead better living and healthy environment. The most responsibility lies on government agencies and departments since they are responsible for providing protection to citizens (who pay taxes - on which government thrives) from every ill or attack. The pollution is one of the enemies government should take initiative to combat with as it owns all the environmental resources in its sovereign state, geographical area.

The ecological intelligence of politicians and administrators will definitely lead to sustainable progress as they are the policy and decision makers. They decide the course of action of the use of environmental resources, economy, exploitation or protection of society or ecosystems. Ecological ineptness has been experienced when USA attacked Iraq and many oil wells were set afire. It's a terrible reality humanity has sustained. It is not the way to sustainability. Sustainability cannot be attained at the cost of others livelihood or resources.

Ecological equilibrium in the ecosystems is

achieved through optimizing the cycling and exchange of matter and energy through biosphere and lithosphere, hydrosphere and atmosphere. This optimization is possible in human systems also. But many times, it gets destabilized by predatory rulers though they pretend to be democratic. Human society should adapt the ecological culture where nothing is wasteful whether it is living thing or non-living. Then only, the human culture will thrive for thousands of years on this mother earth.

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### News Analysis

- It's a terrific loss of Pune-kars due to traffic and road problems. This loss amounts to about 13000 crores per annum! This is the outcome of careful study of traffic patterns by SERI in Pune. This loss is calculated based on fuel costs, delays and health problems. The study has also revealed that road safety and carriage width is overlooked while designing and constructing the roads.
- Sewage floods in Gaza Belt in last month have shown ugly face of the war. Due to bombing, the sewage tanks were broken and the citizens were compelled to travel in the floods of sewage. Where are we leading to? More civilized communities or environmental disasters? Then we may not need ammo to kill people but environment is quite armed with its own missiles which can kill not only defenders but attackers also.
- There was news of capacity building programmes for leaders and politicians on compulsions of climate change. Climate Change programme has received major blows from the ecopolitics of the issues which are of utmost concern and urgent as far as deterioration of environment is concerned. This deterioration may lead to a chain of disasters irrespective of geographical boundaries. Nobody will be spared from the wrath of nature. This needs to be explained to leaders and administrators who spark off the activities from Gali to Delhi, from local to global level. In today's world, everything is politico-centric. Hence, they need capacity building programmes.

- Amit Naregalkar



## NewsCapsule

- ✚ Sandeep Joshi delivered lectures on Lake Water Quality Monitoring and Pollution control twice in the month of April 2007 in National Water Academy at Pune. The trainees were from middle and higher management of various government departments including irrigation, urban local bodies and state pollution control boards.
- ✚ Amit Naregalkar had been to Jaipur to improve the percolation efficiency of the Soil Scape filter installed on textile printing unit.
- ✚ The news of VAASA Wild life film festival, Finland hit the media once again at the time of World Water Day. The film "A Short Story of Water" is produced by Jagdish Kulkarni, YCOU, Nashik and written by Sandeep Joshi. This documentary received second prize in education for youths' category.
- ✚ Indian Environment Association's Pune chapter has seen shuffling of shoulders recently. Sandeep Joshi remained secretary but chairman changed. Dr. V. S. Ghole handed chairmanship to Dr. A. D. Patwardhan. IEA has been actively engaged in creating environmental awareness among the masses, educating the students of science and engineering faculties on water, wastewater engineering; instrumentation for water and wastewater management.
- ✚ Sandeep Joshi has been selected as a President of Pune Chapter of Indian Association of Aquatic Biologists (IAAB). IAAB is having head office at Hyderabad. National Secretary of IAAB, Dr. M. S. Kodarkar visited Pune recently and IAAB Pune Chapter was formulated. Dr. Bagade has been nominated as Secretary.

- Compiled by Priya

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## Announcements

1. UV Foundation, Indian Environment Association (IEA), Pune Chapter and Indian Association of Aquatic Biologists (IAAB), Pune Chapter are jointly organizing Paryavaran Sansad in Pune

on 5<sup>th</sup> June 2007 – World Environment Day. The concept is involve citizens in the process of betterment of environment for all.

2. SERI's Pollution Clinic announces a Free Scheme of the assessment of ETP reports, designs and evaluation of present status of ETP / STP / C-ETP starting from May 1, 2007. The scheme is free for first 200 registrations only.

The only requirement is to give all the details of existing facility or planned pollution control facility and register as early as possible.

The brief study report will be inclusive of with cost – effective suggestions with environment management guidelines to achieve the norms set by pollution control authority.

For more details, please contact –  
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3. SERI's website is [www.seriecotech.com](http://www.seriecotech.com). Some articles are posted on website. Earlier issues of SERInews are also available on website.
4. SERI has announced to absorb about 10 students for summer training (for 1 month – starting schedule from 1<sup>st</sup> of June); 7 students for projects (as a part of curriculum at graduation / post graduation science or engineering); 7 freshly passed out students as internee / environment trainee. All aspiring students are requested to contact Mrs. Priya Kapole, Environment Officer, SERI.

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For Green Arch: Mrs. Sayali Joshi

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