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Point for discussion this month

Proper management of municipal solid waste.

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Dear Readers,

There is lot of deliberations going on Biodiversity Parks to be developed in Pune city to restore the degraded ecosystems due to enormous pressure of ever growing urban areas. It is told that about 900 - 1200 ha area is being suggested to develop and maintain biodiversity in the mid-urban locations of Pune Metropolitan area.

As suggested and presented by Sandeep Joshi earlier these biodiversity parks can be employed to treat city wastes. It's an electricity-free system of assimilation / absorption of waste into ecosystems. He termed them as "Brown Biodiversity Park". Cover photo is of a sanctuary in Rajasthan which shows the eutrophic water body fuelling the ecological cycles of nutrients in the park.

SERI's experts Prashant Dhotekar and Priya Kapole presented their studies on Pune's traffic in Institution of Engineers Pune, on 22nd Jan.2008. It was very interesting to see Pune's traffic issues from different angles like carrying capacity of the road and width of the roads. They have given very important points to be considered while town planning. In that programme, a film developed by Mr. Rohit Pawar on traffic problems in Pune was shown This film is very effective though there is no narration.

Thank you,
Chief Editor

Article

Taxation, Reforms And Ecology

Globalization has brought sea change in the extraction of resources, processing and production of commodities, and demands of market. Governments are amassing huge money through the power of taxation and reforming various sectors. In all these exercises, it is experienced that ecology, environment, waste management and technological innovations for healthy environment are once thrown backstage, because the price of "healthy environment" is not considered in present accounting system and economic aggressions.

Our indices consider only money gained or spent; there is no provision to count the damage caused by discharges of human wastes into environment and costs involved in restoring the quality of environment before extracting resources for human consumption again. For example, the wastes released from the cities like Delhi, Pune, Pimpary-Chinchawad find their way into the rivers. Dispersion of these pollutants in the rivers hundreds of kilometres downstream affects the ecosystem and human systems as well. This leads to increased operational cost for the treatment of contaminated water to convert into drinking water. If this is calculated then it will be much more than what is spent on the waste minimization and treatment at source only. Others' environment serves as a free commodity for the polluters - be it industry, commercial building, city or township. Are they going to realise the real price of "Environment Quality"?

This apathy is promoting the deterioration of lands (due to extensive modern agricultural practice, unscrupulous waste disposal, uncontrolled settlement growth); waters (due to discharges of sewage, industrial effluent, agricultural run offs); air (due to emissions from industries, exhausts from vehicles, smoke from residential areas) and creating un-habitable conditions. Is accounting system aware of this? The realization of Climate change of climate change has twisted ecopolitical system of the world but these reforms and processes will take a lot, undefined time to set the processes base on 'Conservation 'principles rather than 'Exploitation'.

The exploitation has gone to such an extent that the honest polluters who want to control pollution are also pinned down by the concerned government authorities. So, reforms are really needed from top to bottom in governing systems not only in India but all over the world also. Then it will strengthen humanity to adapt Climate Change and develop sustainably.

- Sandeep Joshi

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Newsviews

Zoning Atlas: Sustainable Regional Blueprint

A massive work in developing strategic planning for the siting of industries has been done by Maharashtra Pollution Control Board's Dr. Amar Supate and his team. They deserve the appreciation for their excellent work in providing intelligible tool for all including polluters, pollution mitigators and government departments.

This exercise ---

1. Will foster the decentralised growth of industries taking undeveloped areas into stride leading to the fulfilment of equitable growth in all geographical conditions.
2. Will reduce the loads of pollution on environment and subsequent damage of self purification capacities.
3. Will be a very handy tool for non environmental decision makers and policy makers from other government departments and even for the industrialists.

Dr. Amar Supate, Project leader for Zoning Atlas presented his team's work on Jan.2008 in Pune in presence of Mr. Sham Lal Goyal, Chairman MPCB and Principle Secretary of Ministry of Environment, Government of Maharashtra. His team delved in developing Zoning Atlas and evolving methodology for Pune District from last three years. It was delighting experience to witness the original work done by MPCB official.

Prashant

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News Analysis

'Nirmal Gram By 2012!

The Union Minister for Rural Development Dr. Raghuvansh Prasad Singh has called for

implementation of safe drinking water to all by the year 2009 and total sanitation throughout the country by 2012. The minister said that clean villages will lead to healthy India. The Ministry is taking special efforts on sustainability of rural water supply sources. Rural Water Supply and Sanitation is the component of Bharat Nirman Programme. The Minister urged the states to undertake rainwater harvesting and water conservation with cost effective technologies which will help in creating more drinking water sources. Low cost technologies to be implemented to recharge the water bodies. The Minister, while addressing the Consultative committee, assured that his Ministry is taking care of water quality in Fluoride and arsenic affected areas. The supply of quality water to all sections of society is to be met to ensure better health and faster socio-economic development of the country.

Solid Waste Management-well managed!

As in other sectors India is also not far behind in the production of municipal solid waste. The development in IT and medical services has contributed great by generating e-waste and biomedical waste respectively. The National Solid Waste Association of India is certain that typical Indian MSW constitutes 16 per cent of recyclable waste. The biodegradable waste constitute 55% and 29% is inert material. Thus, biodegradables and recyclables constitute 71 per cent of the total MSW. But according to Central Pollution Control Board of India's study only 6 per cent goes to recycling and the remaining 94 per cent waste is dumped in open landfills.

Black Salt

Gujarat is India's biggest producer of salt. Kutch is India's salt hub. You can see large heaps of salt are piled up across the rugged expanse in Kutch. But something stands out like soar in your eye, the salt is black! A massive reconstruction project took place in Kutch after the 2001 earthquake taking advantage of tax breaks by central and state governments. Due to excessive pollution from these new industries you can see black heaps of salt.

Priya

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Article

Hariyali Shuddha Jal Ke Liye: Component of Total Sanitation Programme

India is moving ahead with great pace in this 21st millennium of modern world towards the sustainable development with the objectives of pure water supply for everybody and complete sanitation to protect environment from pollution. Even today, large population in India resides in villages. Strengthening of these settlements will bring really the equitable development in all states including remote and tribal areas. Basically, one more need has to be added in basic needs of human being food, cloth and shelter i. e. waste disposal. This is becoming an alarming issue with in-depth studies of pollution control authorities and noted research workers.

As per the study of Central Pollution Control Board in 2000 76% out of 233 class - I cities in 14 major river basins of India having population about 105 crores are releasing untreated sewage to freshwater bodies mainly rivers and lakes and Class -II cities don't have even sewerage systems for the collection of sewage. Natural drains, streams and rivers in the cities are serving as sewer lines only.

With such grave scenario in cities, we can take preemptive steps towards the better environment for our villages which are having comparatively pollution free environment to live.

At the beginning of this century, the concept of use of domestic wastewaters for farming emerged with scientific and technical support. The domestic wastewater is a better source of plant nutrients to minimize the use of chemical fertilizers and pesticides subsequently reducing the cost burdens on farmer who is presently reeling under the pressure of high production and loans. So, there is a need to evolve institutional mechanisms and employ technologies to help farmers to recycle wastewater for farming so that scarcity of water for irrigation can be addressed to some extent.

Technologies for Total Sanitation in Villages of India

National River Conservation Directorate (NRCD) observed that most of the Sewage

Treatment Plants (STPs) with state-of-the-art-technology constructed in Ganga Action Plan are not working efficiently due to lack of electricity and skilled man power. So, they suggested that the STPs should be based on eco-friendly principles to avoid electricity failures and breakdowns. Even Environment Protection Agency (EPA) of United States of America observed that most of their STPs do not comply which are based on the principles of Activated Sludge Process – a mechanistic system. So, they are also suggesting using eco friendly techniques to treat the wastewater from communities and to reduce the capital and operational costs.

National Environment Policy 2006 (NEP) of India has central theme of healthy environment - responsibility of state and also that of every citizen to enhance and maintain environment quality. It also emphasizes to secure livelihood from conservation of resources rather than degradation. In order to achieve these goals some challenges such as nexus of environmental degradation with poverty, economic growth, intensive agriculture, polluting industry and unplanned urbanization, aggravates due to institutional failures etc. are to be met. Therefore, the very first objective should be to conserve critical environmental resources which are essential for life-support, livelihood, economic growth, and a broad concept of human well being.

Therefore, the community wastewater from village settlements can be dealt with innovative approaches to convert it into resources. The NEP suggests that wetlands can be used as alternative technology to capital intensive municipal sewage plants (statement on page 33). Our suggestion is that not to use natural wetlands but construct new ones to treat wastewaters. This will be right approach to use and recycle community wastewater as a nutritional resource for farming as a component of total sanitation programme. There are landmark innovations by a number of technologists all over India. One of them as time tested, used and demonstrated approach is the ecotechnology. s. This is simple technique which can be replicated and used in any geographical condition and region.

Using combination of ecofriendly techniques a cost effective 100% water recycling programme can be evolved and implemented successfully all over India as a part of Total Sanitation Programme for villages to be completed by 2012. This can be termed as **Hariyali Shuddha Jal Ke Liye** i. e. Green Plants to Purify Village Wastewater for Farming. This will bring the satisfactory results of integrated water resource management (IWRM) for the regional development also.

Implementation of Programme

The panchayats and local administration with co-operative societies of farmers can be updated, trained and educated for using ecofriendly techniques for their effective waste management – including liquid and solid wastes. Demonstration projects can be developed in at least 25 villages in every state of India with direct central assistance, guidance and technical support and at the same a massive capacity building programme for other villages and settlements can be taken up with the help of trained experts for explaining the benefits of treating community wastewater and reuse in agriculture for national GDP and growth due to primary productive sector of India i. e. agriculture and farmers.

-Sandeep Joshi

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Eternal Words

From Book "Cities & Natural Process" by Michael Hough (1995; Publisher Routledge, London)

Conventional wisdom has traditionally regarded the modern city as the product of cheap energy, economic forces, high technology and a view of nature that is under control. The underlying disciplines that have shaped the city have little to do with the natural sciences or ecological values

- Compiled by Dr. Pramod Salaskar

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