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Advisors

Dr. Jayant Mandlik
Dr. Suresh Karkhanis
Dr. M. S. Kodarkar
Suresh Gandhi

Contact

Executive Editor
Shrishti Eco-Research Institute, B-106,
Devgiri, Opp. P. L. Deshpande Garden, Near
Ganesh Mala, Pune - 411 030. India. Phone:
91-20-65702809 /Telefax: 91-20-66206539

Website: www.seriecotech.com

Email: seri_news@yahoo.co.in

Point for discussion this month

**Why environmental costs are always
considered as external costs?**

(For private circulation only)

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or own them.

Dear Readers,

International Water Day is celebrated on 22nd
March every year just to realize the
responsibility of maintaining our freshwater
resources clean for our own development
and for future generation.

The month of February was eventful with
announcement of Tamil Nadu Government
to use reverse osmosis technique to convert
sea water into drinking water; profitable rail
budget by Lalu Prasad Yadav and Financial
Budget by P. Chidambaram.

Use of reverse osmosis to procure the
drinking water for the Chennai reveals the
failure of the system to maintain the water
resources free of pollution. But it's a promise
of technology to give absolute drinking
water for the citizens. It's a revolutionary
project which emphasizes the need of
pollution free water to be made available for
the dreams of economic growth our leaders
have planned.

If you look at both the budgets carefully, you
will find that there is a little scope for the
betterment of environment for the citizens of
India Now it's high time to realize the
importance of the pollution of our resources,
their impacts on health and economy.

This time, we received feedback from Dr. M.
S. Kodarkar asking for more pages to read
Dr. Amar Supate suggesting to add more
spice in the text so that the necessity of the
reforms in the environment management
and pollution control will be vehemently
stated. Er. Chetan Pandit wants to know
details of use of solar energy to convert
waste into energy. We thank our readers for
their suggestions.

Thanking you,
Chief Editor



Use of Solar Energy to Convert Waste to Energy

- Sandeep Joshi
Environment Technologist

Green plants - autotrophs – producers use solar energy to convert carbon dioxide into organic matter – i. e. food for herbivorous species. It's a starting point for the energy flow where solar energy into chemical energy then it is utilized by dependent species.

So, the combustion waste – carbon dioxide can be utilized by green plants or autotrophic microorganisms and the final outcome will be organic matter with oxygen as a by product. So, its an useful process which gives us vital product – OXYGEN.

Solar energy evaporates water. Can we use for evaporation of wastewater? Then, this steam can be used for generation of electricity. O. K., today, the use of sun – rays might be costly and may require more areas as compared microfiltration and ultrafiltration procedures. If the electricity is not available for such hi-tech pressure filters, then, we will have to think of the alternatives.

After solar steam generation unit, the solids shall be composted and converted to fertilizer. So, a city like Pune generating 450 MLD wastewater will have a decentralised electricity generation units. After that, if the water is condensed, it will flow through the river so that towns and villages downstream will get pure water for drinking. This is all possible with the wise use of solar energy. But, the technologists should be supported not only by citizens, corporates but ULBs, State and Central Governments also. SERI is always ready to take up such challenges and work for the social benefits and environmental health

Thirdly, there are certain archaebacteria which can use organic matters from the wastewater in association with light energy; they liberate absolutely clean fuel on this earth – HYDROGEN! We can develop and optimize this technology for the benefits of mankind. Only thing is that, today it is just concept, someday it will be reality when other sources of energy are exhausted.

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SERI's Services

Pollution Clinic

SERI's Efforts to Provide Environmental Counselling

- B. R. Pisal

Making services to suite the needs of the customer is the motto of the modern service industry. Environmental Consultation also follows the same.

Everybody is concerned about the degradation of environmental quality and pollution which has greater impact on individuals' and social health. There is need to develop a different approach to give better services in the environment management and pollution control activities. Pollution control means – it's not just trading of equipment but better process understanding of process and its maintenance.

That's the concept has been culminated by Sandeep Joshi in our SERI. We all, at the SERI, have decided to provide environmental counselling under the name Pollution Clinic. We have an array of experts who can deal with various troubleshooting issues of STPs and ETPs.

SERI's management has supported to nourish and cherish this novel concept and to reach the masses, business houses, small scale industries and students who need the expert advices, counselling at affordable costs.

Pollution Clinic is the need of the hour. It is useful for eco-efficiency, fine tuning of the environmental performance of the industry, environmental health and safety for the community, capacity building for the students of environment, teachers and professionals.

It will help all interested parties on various tickling environmental issues and prescribe properly which in turn will be beneficial for society as a whole. Presently, consultation and counselling sector is ill developed in environment and pollution sector. In view of this, SERI is going to offer cost – effective services and critical care through "Pollution Clinic".

Pollution Clinic will offer experts advice across the table on environmental acts, rules, regulations and norms; trouble shooting of the physico-chemical and biological processes of STPs and ETPs with conventional or modern treatment techniques; designing of the STPs, ETPs, rainwater harvesting systems, solid waste management systems etc.

SERI's experts will provide services to evaluate the feasibility reports, analysis reports, environmental status and technical reports, DPRs etc. SERI's experts will provide technical information services to students and professionals as per their requirements. Training and capacity building programmes will be organized by Pollution Clinic to spread the message of Environmentally Well-being.

SERI started its mission in 1995 by developing Ecotechnologies to treat different types of wastewaters. It's taking it to the masses at large by offering well sought services through the Pollution clinic. We request readers of SERInews to avail the services of Pollution Clinic for the betterment of environment.

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NewsCapsule

✚ Sandeep Joshi was invited as Chief Guest for the Wildlife Film Festival on Feb. 23, 2007 organized in Pune Expo 2007 by Ashay film Club and CMS Vatavaran, New Delhi under the auspices of MCCIA, Pune.

✚ Suresh Gandhi – a staunch well wisher of ecotechnology and SERI's associate – had been to Gauhatti for National Games during Feb. 10 to 19, 2007. Being an excellent Kho-Kho player in past, he accompanied Maharashtra's Kho-Kho teams who earned gold medals.

✚ SERI has developed 4 feasibility reports and DPRs for restoration of water quality of lakes in different cities of Maharashtra in different geo-climatic conditions in the year 2006.

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SERI's Services

GreenArch

- Sayali Joshi

GreenArch is the division of SERI which will provide the services of designing of natural ecosystems on treated industrial or domestic wastewaters. The aim is to make the premises whether it is industrial or residential – make it zero discharge.

Paradise is the scheme for the use of treated industrial wastewaters; Valley of Flowers – a scheme for treated domestic wastewaters and Fragrance of Ocean is the scheme for high TDS industrial wastewater.

GreenArch aims at increasing ecological value of the land or premises of the organization using treated wastewaters and further stabilization of wastewater by using ecosystem approach. The salient features of GreenArch Services are –

- Land Management with Ecological Planning and landscaping
- Creation of enchanting, enthralling greenery
- Use of treated industrial and domestic wastewaters – means making Zero Pollution or Zero Discharge premises
- Beautification of premises with natural, wild fragrance and aesthetic look
- Stripping of the pollutants from the air making it pure

GreenArch is an extension work of Ecotechnology for the wastewater treatment developed by Sandeep Joshi. It has wide base of natural biogeochemical cycles and biodiversity. It can beautify the premises over the period of time considering the ecological succession of species dependent on inputs and climatic conditions.

It's a cost effective approach to utilize the treated wastewater instead of discharging it into natural waterbodies or over the land. There will be returns from the system in terms of plant biomass, value added products, medicinal plants, flowers etc. The economic returns will be supported by invaluable other benefits.

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News analysis

32 Distilleries are given ultimatum

- Suresh Gandhi

News appeared in Maharashtra Times in the last week of Feb. 2007 regarding the ultimatum given to distilleries to control the groundwater pollution. In next week, there was another news about the high court asking one distillery to give bank guarantee towards the installation of Electrostatic Precipitator (ESP) to control the air pollution.

This implies that the judiciary and government's pollution control authority is taking serious steps towards the defaulters - polluters.

Here, again the question rises about the affordability of the pollution control equipment. If the industry is asked to spend more than its capital investment in plant and machinery for pollution control, then there will be some unwillingness because of the market pressure to keep competitive price of product.

So, there is need to develop, and validate the affordable technologies to treat the pollution. That way, the pollution control field has remained a paradise for the traders of equipment and imported technologies from 2 - 3 decades. The domestic research sector could not support the regulatory and market demands to develop cost effective technologies for the pollution control.

When, our Prime Minister and Finance Minister are saying that industries will be responsible for India's growth in future. But, we have to be cautious about environmental issues which may paralyse the industrial growth.

We need a time bound programme to promote the growth of technologies which are economically viable without diluting the goal of pollution free environment. Otherwise, our industrial sector will face closure due to the pollution issues. Then, reeling agriculture sector will not be able to improve GDP as industrial sector has done.

That's why, there has to be support from industrial sector and concerned government agencies to propagate indigenous technologies rather importing them or seeking international loans or funds for them. Then, the aim of development in harmony with nature may be sidetracked.

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Experience in SERI

- Amit Naregalkar

I am completing 4 years in the SERI in the next month. It will be worth sharing the experiences in SERI. When I joined SERI, it was very crucial time for me; as I was shown door by a Research Foundation in Daman on bizarre basis. Being post graduates of environmental sciences, We were expecting to work in the laboratory to analyse the environmental samples. But it was something else. Hence, I opted to resign. That time Joshi sir gave us breathing and asked not to keep any ill feelings about the ex - employer.

Being young blood, we were surprised. But he told that cherishing such ill feelings would damage our future. Growth is possible only when you are cool headed.

Working in the SERI means upgrading your knowledge about the environment processes and pollution treatment. Here in SERI, we nurture the principle to work honestly for the environment because humans have only this earth as a home. We must contribute to cleaning of our home. May be, there are some limitations while performing the work, but we learned not to dilute our goals.

We enjoy the work. Though, there is less lab work but there is lot of environmental planning, project planning and field applications of ecotechnological treatment units. I have been involved in various activities like environmental audits of industrial units, Environmental Impact Assessment studies of industrial and infrastructural projects, treatment of industrial and domestic wastewaters using ecotechnology.

I enjoyed work of organising the press conferences also. I wanted to be not only jack of all trends but master of everything which is needed in the private environmental institution like SERI.

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For Microbial cultures in Waste Treatment
 Contact - In - Charge, Microbial Culture Division,
 Shrishti Eco-Research Institute, B-106, Devgiri,
 Opp. P. L. Deshpande Garden, Near Ganesh
 Mala, Sinhagad Road, Pune - 411 030. Phone: 020
 - 65702809