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Point for discussion this month Control of emissions: whose responsibility?

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Eternal Words

Hymn (Prayer) to Ganga by Shri Adya Shankaracharya, who revived vaedic religion of Indian sub-continent –

Heaven-born river! (In Himalayas) **Bhagavati Ganga!** (Goddess Ganga River)

Goddess Redeemer of all the world (provides life – water to all)

In ripples Thy waters playfully are flowing;

Though waderest in Siva's matted hair; (rises from ravines of mighty mountains)

Grant that my mind, O Thou who art stainless; (sparkling, non-polluted, pure water, human nature shall be like Ganga's water)

Ever may dwell at the lotus of Thy feet! (Want to be part your purest ecosystem)

(With thanks from Book titled Gandhi, Ganga, Giriraj edited by Lachman M. Khubchandani, Published by Navjivan Trust, Ahmedabad and National Women's Organisation, Pune)



Dear Readers,

Discussions on climate change have become talk of the town as its impacts are creeping in everyday life. Its direct effects on economy and market are becoming prominent as every day passes. So the world leaders are really worried about the control of global warming and climate change. According to some of the scientists and eminent personalities the real cause of environmental deterioration is the greediness of humans increased over the period of from last few centuries and the trade, market processes increased multifold compared to historical exchanges among the communities. World leaders again are formulating the strategies to combat the impacts of global warming and subsequent climate change.

The cover photograph is of Udaipur's Udaisagar Lake – one of the most beautiful sites on the earth but it is under stress due domestic and industrial discharges into it through various drains. The people dependent on that lake are aggrieved due to disturbed livelihood. They are waiting for the actions which will revive their lake and sustenance. There are many such lakes, reservoirs, streams and rivers are waiting for the revival of their ecological health. This will definitely be positive towards the control of climate change if the wastes are prevented from being discharged directly into the water bodies.

Nowadays, from economists to scientists and technologists to government officials is talking about the environment business and market. There is a huge market for carbon credits but it should not be mistaken that planting trees means carbon credits are accrued. The best part of is to optimize the utilization of resources, prevention of wasting and eco-cycling of wastes discharged. There is also misconception about “zero discharge”. People misinterpret it as, a unit cannot discharge even treated water from its premises. If the water quality of discharge is better than the receiving water body, then where is the problem? The better word is “Zero Pollution Discharge”. This can be achieved using ecotechnological systems.

Thank you,
Chief Editor

Newsviews

Climate Business talks

British deputy high commissioner Sanjay Wadvani advised businessmen to invest in low carbon businesses and make most of the business opportunities associated with climate change, which was close to three trillion US dollars in India. Speaking at a meet at the Indian Chamber of Commerce (ICC), Wadvani asked industry not to be “afraid of climate change” or wait for the government to act. Senior state pollution control board officials present at the meeting said India could not compromise on its development agenda in the name of climate change.

Rs. 28,000-cr Carbon Credits: Opportunity for India

According to Environment Minister Jairam Ramesh, the Indian Government has approved more than 1,400 projects as part of the Clean Development Mechanism (CDM) that could attract around \$6 billion (Rs 28,000 crore) into the country by 2012 through sale of Certified Emission Reduction (CER) certificates.

Mr. Ramesh told, “This is the potential foreign direct investment (FDI) that India gets to feet to earn from carbon credits. In fact, because of this, 10 per cent of India's annual greenhouse gas (GHG) emissions can be neutralised”

One Carbon Credit is equal to a tonne of carbon dioxide. There are two broad methods of obtaining carbon credits. Carbon Credit technologies consist of clean forms of energy production, and use of wind, solar, hydro and biofuels. Carbon Reduction Credits comprise the collection and storage of carbon from the atmosphere through biosequestration (reforestation, forestation), ocean and soil collection and storage efforts.

India has generated about 30 million carbon credits, and approximately 140 million credits are in the pipeline. Around 225 Indian projects in the fields of biomass, cogeneration, hydropower, and wind power with a potential of 225 million CERs have been registered. Carbon credits from solid waste projects may see a rise in near future. At present, the Indian solid waste management market is witnessing tremendous growth. Currently it is valued at about Rs. 750 crore and is expected to grow at a rate of around 20 to 25 per cent in the next three to five years.

Jolt for Indian Upcoming Power Plants

At least 30% of the upcoming Indian power projects that hope to run their plants using imported coal, mainly from Indonesia may suffer due to coal shortage. India's determined to generate an additional 180,000 MW of power in the next seven years. This plan will face hurdles if Indonesia goes ahead with plans to cap coal exports to serve domestic demand.

Mr. Bambang Setiawan, Director General for coal, minerals and geothermal energy at the Energy and Mineral Resources Ministry of Indonesia says, 'The Indonesian government proposes to cap coal exports at around 150 million tonnes (mt) a year in a bid to guarantee supplies for domestic power plants'.

Indonesia is expected to soon topple Australia as the largest coal exporter. It is the most suitable destination for Indian power plants for its proximity to the country, which means lesser freight charges.

Leading power sector players such as Tata Power, Reliance Power and GMR Energy have already got hold of coal mines in Indonesia. In the last two years, almost all power project developers like state-owned National Thermal Power Corporation (NTPC), Essar Power, Adani power, JSW Energy, Indiabulls] Power and Lanco Infratech] are scouting for coal mines in Indonesia, to fuel some of their proposed power projects.

According to proponents and architects of India's ambitious capacity addition plans India has to wait and watch the move, as this may compel Indian companies to look for other coal markets such as Mozambique, South Africa or Australia.



(Photo from internet)

India gears up to set Eco Authority with US help

Indian Government has been considering setting up a national environment protection authority. The proposed authority is intended to enhance the stature of Indian environmental agencies, improve public information, consultation and transparency, and to improve environmental compliance and enforcement.

As part of the India-US Green partnership, and the agreement signed between two countries in the latest visit of Prime Minister Mr. Manmohan Singh to US, the United States is intended to help India in setting up a National Environment Protection Authority (NEPA).

American support is likely to be in terms of the kind of scientific and organisational backup that would be required by the proposed authority.

Discussions on the final structure of the proposed authority are still in progress. In September, the ministry put out a discussion paper for wider consultation. India will not be following the US model, as USEPA is backed up by regional EPAs. This will not be possible, as in India the states already have the state pollution control boards. The environment minister Jairam Ramesh said, "NEPA will be backed by similar state bodies. In time, NEPA would subsume existing regulatory bodies like the Central Pollution Control board,". The task before pollution control authorities is Herculean as the urban centers are sprawling like anything in India.





From SERI's Desk

SERI's Initiatives for the global challenge of Climate Change

Global warming and climate change are the today's most key issues of development in this millennium. Carbon is held in different reservoirs of biotic and abiotic components of environment. Abiotic stocks include oceans, fossil fuel deposits, terrestrial system and the atmosphere. Majority of earth's terrestrial carbon - about two-third - is deposited in the form of biotic components such as forests, and forest soils. There are some non-living but biologically derived stocks such as wood logs, products, and waste dumps inclusive of man-made carbon stock. A component or process which absorbs carbon is termed as a sink and the one releasing carbon is called a source. Transfer or flows of carbon from one reservoir to another such as from the atmosphere to the forest, are termed as carbon fluxes.

It is well experienced that wastes from urban areas are directly discharged into the water bodies. As per the study of Shrishti Eco-Research Institute of ten municipal corporations from Western Maharashtra, most of surface waters and ground waters are highly polluted due to improper disposal of waste streams. Similar observations were made by Central Pollution Control Board that 76% of the India's population was not served with proper sewerage system; hence the rivers and lakes in urban areas were polluted.

These wastes in the water bodies undergo anaerobic degradation and generate methane gas. It can be said that the pollution of water bodies is one of the causative factors in India to release the greenhouse gases which are responsible for climate change.

Benefits of Living Systems in the Treatment of Pollution

It's a two prong action - detritus feeding organisms consume the pollutants (because its nutrient for them) and and secondly, the green plants absorb carbon dioxide from the atmosphere. Thus, the pollutants get transferred to natural cycles i. e. biogeochemical cycles of carbon and other elements. Plants store carbon in the forms of live biomass. Once they die, the biomass becomes a part of the food chain again and eventually enters the soil as soil carbon. This is natural process which doesn't need electricity at all. Hence, the ecotechnologies - using ecological engineering principles to treat pollution - have immaculate advantage on energy intensive technologies.

The advantage of this technology is that it takes 1/5 time that of conventional systems to install and commission. It does not require any

additional land or electricity or cement. It can be developed with locally available material only. Even after 4 years of installation, the parameters of treated water found to less than that of receiving water body.

Green Bridge at Anandnagar Nalla in the Pune city

Project Outlined as:

- **Removal of non-biodegradable material from the Nalla**
- **Excavation of soil at some places**
- **Installation of Screens at some places**
- **Installation of Green Bridge at some places**
- **Development of green lakes.**

