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Point for discussion this month**Policies for adoption of lake.**

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Dear Readers,

You might be aware of the decision of Karnataka High Court which restrained the Lake Development Authority (LDA) “from entering into any fresh agreements with private companies to develop any lake in the state”. Actually the concept was adoption of lake by private parties under PPP programme. The term ‘Adoption’ itself suggests the responsibility of the owner to nourish, to up bring, to develop and to protect the adapted sibling.

Now adoption in case of any water body does not implicate any infrastructural development on its banks or shore. Rather this type of eco-development may sooth your eyes. In practice, it results in the deterioration and alteration in the catchment, flood plains and shores of that particular fresh water body. When some agency adopts the water body then its activity should nourish the ecological life of that water body, should increase the quality of water, should develop biodiversity in and around the water body and should protect it from any polluting or deteriorating activities.

But in Bangalore, more than 20 lakes were handed over to the builders and hotel groups, who utilized them only for commercial gains. Is nature to be preserved only for haves? In this issue, a story of new kind of adoption, nurturing of a lake towards goal of Ecological Quality has been given. WIPROCARE is caring for lake with the help of SERI's Sandeep Joshi, the Ecological Designer.

Thanking you,
Chief Editor

Article

Eco-transformation of Manikonda Lake

- Sayali Joshi

Manikonda is a small lake located near newly emerged IT Park adjacent to Gachchi Bawali, western outskirts of the Hyderabad city. Hyderabad has earned a reputation as IT hub from a decade or so, the city is changing fast into the most modern urban sprawls with convergence of intellectuals from the country and abroad. Manikonda is beautiful water body developed 75 years ago in British Era to provide water supply to surrounding population. Nowadays, with piped water supply, the importance of lake has been lost to such an extent, the government industrial organization has brought in water from kilometres to cater the need of IT companies. According to Sandeep Joshi, who studied Manikonda catchments, the lake has enough water to cater the needs of surrounding industries if rainwater harvesting is properly planned.

We know that the golden age of India prospered at because of the sparkling millions of lakes spread over peninsular region in ancient times. Developed India lost its glory with fading lakes, administrative neglect and quest for piped water supply at the doorstep. Many urban settlements caused deaths of confined water bodies – lentic waters – lakes like in Hyderabad, Bangalore etc. due to infrastructural development in the catchment, making them as waste dumping yards, siltation, and encroachment etc. Resurgent India needs water and this water can be made available by conserving lakes, rejuvenating them ecologically – with full of diverse aquatic life.

There are plenty benefits of the lake other than just a water supply source such as source of food, conservation of biodiversity, maintenance of soil moisture and water table in surrounding area, micro-climatic effects etc. Ecological services of the lake in ecotones are numerous which make them invaluable in socio-economic terms. They receive runoffs during the rains and contribute to moderate floods. Moderation

of floods is very essential as far as human settlements in the catchment are concerned. This was experienced in case of Manikonda lake in the monsoon of 2008. Hyderabad received torrential rains between 7 – 10th August. Concretized catchment of about 1 sq. km led to multifold increase of runoffs with greater speeds. Even then, 75 years old bund of Manikonda lake sustained most of water except a crack near the metallic sluice sludging gate.

Manikonda's catchment was under enormous stress since the inception of IT Park. A small catchment experienced the construction of huge buildings of IT giants. This situation disturbed the sensitive intellectuals of WIPRO CARE and WIPRO Technologies Ltd. And they determined to rejuvenate the Manikonda Lake and give it its earlier ecological status. They adapted the lake from Hyderabad Urban Development Authority (HUDA) and it was first of its kind experiment to adapt lake for ecological revival by private sector as a social responsibility. They came in contact with Dr. Mohan Kodarkar, an experienced limnologist, internationally acclaimed scientist, a member of Scientific Committee, International Lake Environment Committee (ILEC), Japan because they had a will to revive lake ecologically. Dr. Mohan Kodarkar is well known for ecosystem approach.

In subsequent interactions the name of Shrishti Eco-Research Institute surfaced as masterminds who can transform ecological dreams into reality. Shrishti Eco-Research Institute of Pune has experience of 13 years in developing ecotechnologies for pollution control and conservation of natural resources using ecological engineering. SERI is constantly involved in ecosystem scale projects 1999 onwards under the able guidance of Sandeep Joshi, Environment Technologist and Ecological Designer.

The outcomes expected from the Manikonda Restoration Project are listed as improvement in the hydrology, water holding capacity and recreational value, creation of roosting and nesting sites for local and migrant bird species and resultant enhancement in recreational potential. The weed patches shall be developed as feeding and breeding ground for birds apart from giving an aesthetic value to the water body.

Protection of such areas adds to the ecological value of the lake with shorelines development as feeding ground for birds. The lake should be free of solid waste pollution and eutrophication. Enhancement of lake biodiversity and fishery as source of food for birds shall be achieved over the period of time. Enhancement of over all lake biodiversity shall indicate its sound ecological health.

Creation of bottomscape niches for fish and other benthic organisms and augmentation of water holding capacity is done by scientific de-silting of lake periphery to remove accumulated sediment and solid waste. It increased lake water holding capacity by 30% over 33 million litres as earlier capacity. It helped to develop flocks of fishes in the lake to the tune of about 1 ton as per one estimate. Repairing and strengthening of Bund is done using Green Mats technique, rearranging and fixing of irregular stones, strengthening of bund, broadening of bund, removal of encroachments etc. Creation of Island Habitat for birds – unique niche for biodiversity have been developed by landscaping the area to make it natural habitat using locally available silt, stones, plantation of native species of trees, herbs and rooted macrophyte. This has increased avifauna pond herons, kingfishers, ducks are the new visitors in addition to little cormorants and egrets.

Bio-conservation zone has been developed using green mats to control soil erosion. Controlled harvesting of weed has been done to prevent excessive growth and process of succession in the lake Eco-protective zone and attempt has been made to beautify the lake boundary using green mats. Siltation from incoming channels has been controlled using Green Bridge technique as silt traps and sewage treatment. Efforts have been made to avoid use of cement and electricity as far as possible in this project which has effectively brought the capital costs and paved the way for lesser recurring maintenance expenditures which can be earned through recreational water sport activities.

SERI has experienced inordinate delays at all levels in its earlier efforts for at least 25 lakes in Maharashtra, Andhra Pradesh and Rajasthan but in case of Manikonda Lake with a commitment and

positive outlook from WIPROCARE and WIPRO Technologies Ltd., the decision making period shortened to just 2 months after introduction of SERI and the initial restoration activities are completed in 3 months only. Now it has become an example of how determined and socially active private sector can efficiently and successfully work for the ecological restoration of the lake – a water body – for all including biodiversity which is not considered normally in such projects.

Changing Face Of the Lake



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News views

STPs – The Point Sources of Pollution!

Dal Lake is the crown of Kashmir's beauty. We can not think Kashmir without Dal Lake. But pollution giant has reached there also and the growth of obnoxious weeds has drastically affected its flora and fauna. The main cause of the situation is the unabated flow of sewage into the Dal.

Its not that, the government is not taking any action. Actually the Lakes and Waterways Development Authority (LAWDA) have constructed three huge STPs at Hazratbal, Laam Nishat and Habak; at the cost of Rs. 8.90 crores with a target to reduce 90 % of the sewage load They have used FAB technology (Fluidised Aerobic Bio-reactor). But according to experts, the FAB is 'outdated technology' and is anyway not suitable for Kashmir where sub-zero temperatures persists during the winter months. So, these STPs are throwing sewage water into the lake which is not sufficiently treated. That's why they have become point sources of pollution of the Dal Lake!

Central Pollution Control Board Members Not Qualified For Post

The parliamentary standing committee on science and technology, environment and forests has stated that, the Central Pollution Control Board is represented by members who did not have the expertise to deliberate on pollution related matters.

The panel observed that 'The trend of IAS (Indian Administrative Services) officers and bureaucrats holding the key posts at CPCB and state PCBs is very disturbing and that practice needs to be stopped forthwith"

It also recommended financial and functional autonomy and conveyed its disapproval over the fact that qualifications or criteria for members of CPCB had not yet been fixed.

Hats Off To Balbir Singh Seechewal

Kali Bein is sacred river for the Sikh religion followers. It is 160 km long and many villages and towns are dependent on this holly river. But due to the ever growing demand for ground water, and the industrial and agricultural chemicals and raw effluent that find their way into the river, this river is reduced to a filthy drain. It receives waste from more than six towns and 40 villages. Its polluted water also seeped underground, contaminating the ground water and causing lethal diseases.

In this apathetic situation one holy man Balbir Singh Seechewal came forward in 2000, and six to eight years of his tremendous efforts of restoration of this river has shown the world that everything is possible when there is a will. He and his followers adapted different policies as public awareness, enlisting volunteers for physical work, raising funds for the equipments, etc. At the height of his movement, people from more than two dozen villages were pitching in. When appeals to government and municipal bodies failed to stop dirty water flowing into the river, they encouraged villagers not to dispose sewage in to the river.

Today Kali Bein is thriving. The biodiversity is preserved. Devotees can bathe during religious festivals and Seechewal says, 'We have proved that it is possible to restore our rivers to a pristine condition if we all come together".

Eternal Words

From Book "Conservation of Lakes " by Dr.M.S. Kodarkar (2008; Publisher IAAB, Hyderabad)

Ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organization which encompass the essential processes, functions and interactions among organisms and their environment

(Dr. Kodarkar, 2008)