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Point for discussion this month **Zero Discharge or Zero Pollution Discharge, Which is effective?**

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Shrishti Eco -Research Institute, Pune

Eternal Words

“As human beings we have a special responsibility, especially with a view to future generations, for Earth and the cosmos, for air, water, and soil. We are all inter-twined together in this cosmos and we are all dependent on each other. Each of us depends on the welfare of all. Therefore the dominance of humanity over nature and cosmos must not be encouraged. Instead, we must cultivate living in harmony with nature and the cosmos.”

- Hans Kung

Dear Readers,

Wish You All A Very Happy and Environment Friendly New Year!

The world Environment conference at Copenhagen is over by generating lots of cold breezes. Who is responsible and who's responsibility? Those are the questions constantly pointing fingers to each other.

In present situation everyone is in race. Race will never yield equity. And this race of development is against environment. Developing countries want to be developed one and developed countries want to be more developed. This is unending.

There is a great hope when individual persons like Mr. Sanjay Athvale and Mr. Viral Desai come forward to treat all solid and liquid domestic waste of their own house. From my point of view this is a great achievement! While purchasing any property we pay attention on fresh water connection, electricity, common amenities, at the same time we should pay equal or rather more attention on waste treatment system. If we don't pay attention on the waste treatment, then future generation will not be able to survive on this earth. That's why, in this issue we have given some points to ponder on green policy.

The basic principle of "Sustainable development" is having two important words- Need and Equity. You can satiate the needs but not the wants. The equitable distribution of resources among the members even to the weakest sections of the society is desirable in the concept of sustainable development. This can be achieved through proper designing of systems and careful implementation of equitable sharing and continued maintenance of ecological health of living places.

The conceptual plans of Eco-village are being practically implemented in Katewadi - native village of Hon. Agriculture Minister, Government of India Shri. Sharadchandra Pawar and Maharashtra State Energy and Water Resources Minister Shri. Ajit Pawar. The concept was conceived by Dr. Amar Supate with inspiration and support from Mrs. Sunetra Pawar. We are proud that SERI is part of think tank for innovative ecovillage project and it has developed ecological restoration scheme for small temple lake and green bridge treatment system for village sewage.

Thank you,
Chief Editor

From SERI's Desk

Peoples Action: Way to Sustainability

People in action to purify their beloved rivers (Ganges) when misguided dejected and dilapidated administration and policy take backseat.. India has suffered attacks by many of pseudo or uncivilized, hostile invaders from last hundreds of years which dipped the civility of India's very magnanimous population.

Sixty years are gone after the independence means at least 5 generations have spent life in restoring the India's nobility and eco - civility. People are coming forward on their own to assist confused, directionless administration and policy due to the speed of radical changes in urban processes as shown in following photographs.

If such successful peoples' islands cover the entire India then, the dream of Noble eco - civility (NEC) is not far away.



Restoration of India's Eco -civility – People are coming forward to restore their rivers and lakes with or without help from the government. In the above photograph, Dr. Amar Supate, Sandeep Joshi and Mrs. Sunetra Pawar are studying the site conditions for the implementation of eco-village project components.



Noyyal river is one of the most polluted river due to industrial as well as sewage waste. There are many textile industries on the bank of this river. The Peoples' movement, Valam, at Tiruppur has started ecorestoration of this river with SERI' technological support. Mayor of Tiruppur is also supporting this activity.



Ahar river of Udai pur has become a drain of chemicals and solid waste. JSS is the people s' movement in Udai pur which is working with SERI for the ecorestoration of the Ahar river.

Green Policy

Nowadays, everybody is talking about “Green Certification”. Another kind of fashion or movement whatever you say is catching the imagination of architects, builders, Customers and governing agencies.



So, here are few questions need to be considered while planning the sustainable urban ecosystem with properly networked resources management and waste eco - cycling in human systems or natural systems by qualified city managers -

1. What is the basic unit of urban ecosystem individual bungalow, row houses, multi-storeyed buildings, colonies or townships?

2. Can we apply ecological exchange principles and cycles while using the nutrients resources in the human urban systems?
3. Are legal provisions acts, rules, regulations, norms, standards and guidelines complimentary, supplementary or derogatory, anomalous antagonistic?

Eg. While getting the environmental clearance, the expert committee may rule that the unit irrespective of industrial or constructions project has to follow “zero discharge” notion. Industries can recycle treated wastewaters in manufacturing process again. Can anybody compel the residents - users of facility and not the builders to absorb/use 100% treated water in their facility? It is expected that residents should drink their excess of treated sewage?

4. Are we concerned about the ecological flows in the streams, rivers and ecological volume of the ponds and lakes? How are we going to maintain these urban aqua systems? Do these aquatic ecosystems have any role in urban environment?
5. How to create healthy places and healthy environment where the individual units are linked with adjacent units and city as a whole for resources utilization and waste management?

Sandeep Joshi has tried to tabulate certain critical parameters to evolve comprehensive green policy for residential and commercial constructions. These buildings will be used by residents or businessmen and not the builders.

If the integrative urban ecosystems approach is taken, then only government can fulfil the dream of sustainable cities - presently which is far from reality.

Instead of ruling imposing certain opinions, planning tools can be employed by governing agencies only then one can achieve dream within shortest possible time.



Sr. no.	Activity	Criteria/Provisions to obtain Green Certification
1.	Water Supply	135 lcpd Separate Kitchen & Flush lines
2.	Water Quality: Kitchen	Hardness - <300 mg/L TA - <200 mg/L Colifoms - 0 nos./100 ml
3.	Water Quality: Flush	Odourless, Coliforms upto 50 nos./100 ml Hardness 300 mg/L
4.	Energy Supply	MSEDCL - Domestic Common lighting Alternative - solar/wind/Bio Average - Conventional 80% + nonconventional 20% Good - Conventional 60% + nonconventional 40% Best - Nonconventional >40%
5.	Open space (Play ground etc.)	Average - 100 sq.ft/family Good - 150 sq.ft/family Best - 200 sq.ft/family
6.	Garden space (inclusive of landscaping)	Average - 150 sq.ft/family Good - 300 sq.ft/family Best - 400 sq.ft/family
7.	Parking space owner+ guests Low income - No cars only two wheelers Middle income - 1 car -plus Two wheeler High income more than 1car & two wheelers	20 sq. ft 120 sq. ft. 240 sq. ft.
8.	Waste treatment space	30 sq.ft/family
9.	Roads	Not less than 6% of total land area for <50 flats/units scheme Not less than 10% of total land area for <100 flats/units scheme Not less than 15% of total land area for >200 flats/units scheme
10.	Roadside Greenery	Average - 2 m wide shrubs supplied with fresh water Good - 4 m wide with shrubs supplied with treated sewage Best - >4 m wide with trees ,shrubs supplied with treated sewage
11.	Terrace Gardens	Average - 20% green cover with fresh water Good - 40% with treated sewage Best - >40% treated sewage



12.	Sewerage System	Must for all types of schemes
13.	Sewage Treatment Plant	Connection to Municipal drains for <50 flats/units scheme Must for <100 flats/units scheme Must for <200 flats/units scheme
14.	Sewage technologies - Aerobic - Anaerobic - Ecological	Zero electricity treatment systems for all schemes desirable
15.	Solid waste segregation Composting Recycling/sale	Must for all schemes
16.	Rainwater Harvesting	Must for all schemes; depending on regular rainwater use - Fair if >10% of total water supply Good if >20% of total water supply Best if >50% of total water supply
17.	Healthy place assessment for continuation of Green Certification 1. Open dumping or burning of wastes 2. Leakages of water supply lines 3. Leakages of drainage lines 4. Plant species 5. Use of treated sewage 6. Use of compost/methane from waste in the premises	1. Complete Ban 2. Nil 3. Nil 4. Average - Local species 50% Gold - Local species 75% Best - Local species 90% 5. Fair - <40% Good - >40% Best - 100% 6. Fair - <40% Good - >40% Best - 100%
18.	Interaction with neighbouring societies/building/communities	Fair - 1 or 2 programmes Good - 2-5 programmes Best - > 5 programmes