

From the Chairman's Desk

Colorless Water Needed for Ecosystems



Rajendra Shende
Chairman, TERRE

A familiar sentence while describing the global water scarcity reads, “Even after global efforts to meet the targets under the Millennium Development Goals, more than 600 million people will still lack access to safe drinking water in 2015”.

Another one comes with more resounding effect: “Improved water supply in adequate quantity and quality is probably the single most cost-effective means of reducing water-related death and disease globally.” These sentences do reflect the

state and trends related to human needs for water and impact of its scarcity. The unfortunate part is that world has been keeping only account of the consumptive use of water for agriculture, industry and domestic use. But we still do not have accounts for the water needed for the environment i.e. for sustaining the ecosystem on which the life on earth depends, -directly and indirectly. As a consequence, we do not have common faith in what is needed to be address the water scarcity. There are at least 18 international agreements over last 40 years which recommend, encourage, urge the nations to take specific policy decisions and actions on Fresh and Marine water related issues. We still seem to treat the symptoms and not understanding the roots. About 80 million people are expected to take part in the world’s largest ‘water -summit’ that ends in the middle of March 2013! There is no conference center that can accommodate what I call it as ‘general assembly’ in its real sense. It is not United Nations gathering. It is taking place in open, on the bank of a river. What more, the participants have shared understanding of the faith at this summit. There are no positions, no negotiations, not even an agenda. It is called “Kumbh Mela” –literal translation is: festival of a water-pot. It is festival of common faith that draws the participation. I thought the similar faith is needed to draw the actions on the water scarcity and water footprints. The water management concept contains the management of ‘blue water’ (rivers, lakes and the ground water), ‘green water’(water retained in the soil) and ‘grey water’ (water required to assimilate pollution from all sources). We need to add the fourth dimension- ‘colorless-water’, water needed to maintain the ecosystems whose services humans receive almost free and hence not yet estimated. United Nations Environment Programme (UNEP) in 2012 has published a global mapping of the in “blue water scarcity “ based on the study published by Hoekstra and Mekonnen in 2011. This indicator is defined as the proportion of groundwater and surface water consumed relative to the sustainable water available for human use. Most of India, as per the mapping, faces extremely severe blue water scarcity. Globally it is a significant factor in human security, with a fifth of the global population living in areas with physical water scarcity. The experts have made beginning in understanding the need for the ‘colorless water’. It is estimated the water required to maintain ecosystem goods and services as 75 per cent of the global water use, while direct human water use –blue, green and grey.

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At the age of 40 UNEP Gets Raise and Promotion

The first ever Universal Session of the Governing Council of United Nations Environment Programme (UNEP) took place from 18-22 February 2013, at the UN Office at Nairobi, Kenya. The event was held according to the decision of the United Nations General Assembly to strengthen and upgrade UNEP, as called for in the Rio+20 outcome document called 'Future We Want' that was agreed at Rio de Janeiro in July 2012. The 27 the session of Governing Council of UNEP adopted a decision to invite the UN General Assembly to rename UNEP's governing body “UN Environment Assembly,” to ensure” the active participation of all relevant stakeholders and explore new mechanisms to promote transparency and effective engagement of civil society in its work. By 2014 a process for stakeholder accreditation and participation that builds on the existing rules of procedure and takes into account the inclusive modalities of the Commission on Sustainable Development (CSD) and other relevant UN bodies will be evolved and implemented. Over 1300 participants from 147 countries, including 80 ministers, representatives of UN agencies, international organizations, academia, NGOs, business and industry, and women and youth organizations Delegates adopted 13 decisions, on inter alia: the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES); coordination across the UN system, including the Environment Management Group (EMG); oceans; sustainable consumption and production; the green economy in the context of sustainable development; advancing justice, governance and law; state of the environment; and chemicals and wastes.



Pune City Faces A Heavy Toll Of “E-Garbage”



A city that has contributed so much to develop super-computer is now facing the challenge of “Super-e-waste” The Pune Municipal Corporation does not seem to have clue on how to set long term practice nor has a scientific way of safe disposal of the “E-garbage” (electronic waste). In the mean time our mother Earth is tolerantly accepting the dreadful wastage that we are discarding as part of our modern life style.

E-Waste is not only harmful for the environment but also hampers human health significantly. Most of us are proud owners of electronic goods like T.V., fridge, computers, and printers as well as the luxury items of entertainment and other electronic appliances. In past few years as technology emerged with breathtaking speed. Along side, the world saw emergence of the significant younger generation. We now take pleasure in possessing their latest versions of mobile phones, smart phones, laptops, scanners, tablet computers, cameras, MP3s, LCD/LED screens and exotic gadgets like video-pens and host of other electronic toys. The technology development allows the latest new versions of electronic items that are made available in the market at affordable prices, and the youth, upgrade themselves with new

gadgets with changing time. The traditional Indian culture of reduce, reuse and recycle has long been forgotten, leading to increase in the E-waste at alarming rate endangering the environment. There is lack of awareness that electronic scrap components may contain contaminants such as lead, mercury, cadmium, beryllium, or brominated flame-retardants, which are toxic for the humans as well as other life forms and harmful to the environment. Presently this garbage is disposed off either by burring it underground or by burning the waste. These substances pollute the land as well as pollute the water surfaces so cannot be disposed off and if burnt then they produce hazardous chemicals, which pollute the air in large amounts. It is estimated that in Pune city, more than 3000-4000 tones of “E-Waste” is generated as per Maharashtra State Pollution Control Department). As per the report published by UNEP, the cities in the world would be producing 5 times more e-waste over next decade.

TERRE is initiating the project called ‘Mother-Board’ to create awareness on this challenging issue. As many of the elements in the e-waste are rare earth and heavy metals that are precious, there is opportunity of ‘cash from trash’.

Wine is healthy but what about Grape-growing?

Is it dangerous to work in the middle of a vineyard? A study by the Kudzu Science Laboratory recently revealed by the NGO Générations futures shows that wine workers are particularly risked to pesticides. From last October and November researchers collected some locks from 25 persons in the Médoc (South-West of France) who are, for the most part, working or living in the vineyards. As a result, every wine worker had residue from pesticides. On average, they had 6.6 different sorts, which is eleven times more than the vineyard residents. The latter were themselves five times more risked than the people who live far away from the vineyards. The NGO, which alerts to the danger and the carcinogenic nature of these pesticides, recognizes that this survey “does not have the pretention to be a scientific study”. Thus, the results have still to be confirmed.

Even Paris needs Cleanliness Drive



Cigarette butts, dog shit, chewing gums are the significant additional 'disposal' and 'throw away' items that make Paris dirty.

“Nous pouvons faire le maximum, mais pas l'impossible” (“We can do the maximum, but not the impossible”) is the new slogan that one sees in Paris now days. The Paris Municipality wants to encourage Paris citizens to pick up the shit of their dogs and the litter of their own and to throw it in the dustbin. Apart from the poster campaign, a short movie will be broadcasted from the 6 March in 123 Parisian cinemas.





In the recent years, we often hear about rampant violation of environment by people in pursuit of their personal pleasure and gains.

Many times, this happens unwillingly without awareness of the results of their actions, both central and state governments and also local authorities have imposed some regulations to curb environmental violations. But without adequate awareness at grassroot level, noticeable and effective improvements and turn around will not be possible.

Broadly speaking , we can classify environment violation or pollution under following categories:

- a. Air pollution
- b. Water pollution
- c. Soil pollution
- d. Noise pollution
- e. Others

The harm caused to human and animal lives and existence because of the above can broadly or briefly be described as under:

a. Air pollution: It involves direct release of harmful chemicals in the air because of burning of fuels creating fumes, smoke, heat etc. Increase in the level beyond acceptable norm causes diseases like asthma, lung cancer and breathing problems. Global warming can create havoc for animals life in general and can upset

Environment Protection : A Primer

nature's balance by giving rise to hurricane heavy rains causing floods, droughts and growth of certain crops.

b. Water pollution: It is mainly cause by direct mixing with water flows of hazardous pollutants. The source of these pollutants is mainly the large industries that dispose of their waste in lakes, ponds, rivers etc. Mixing of human waste and dirty materials also contribute. Water pollution not only affects fish and other creatures living in water but also affects the whole food chain by transferring the contaminants to the humans and animals.

c. Soil pollution: This results because of release of harmful substances into soil, there may include chemical fertilizers, pesticides and industrial waste like ashes. Mining and deforestation are also additional contributing factors. The plants, which are the producers of food chain take up their nutrients (good and Bad) from the soil and they get transferred to the consumers and animals in turn.

d. Noise pollution: It is caused by increase in the rate of noise level in the environment. It is the result of a number of factors including honking of vehicles, processions, loud music, airplanes taking off and landing, playing of harsh bands etc. High level of noise has adverse effect on human ears. It also penetrates into human mind and creates adverse

impact like psychological illness, stress, hypertension and aggression. It can also cause depression and forgetfulness.

e. Others include a variety of actions which disturb ecological balance in the world and adversely affect the peaceful existence of flora and fauna on the earth. This includes cutting of trees, killing of animals and birds, sand removal, fires, wars etc. The regulatory authorities have framed certain

rules and imposed certain restrictions to curb pollution, narrating and explaining them needs a special presentation. But it is necessary to remember that without adequate appreciation by the common man and strict enforcement of the rules, it will be difficult to produce effective results. One can however list a few important actions for the common man as indicated below. The list is just illustrative and can hardly be said to be exhaustive. Readers are welcome to suggest additions, which are practically feasible at individual and household level.

A. To reduce heat and smoke in the atmosphere:

- i) Use compact fluorescent tube lights to save on electricity consumption and generation.
- ii) Turn off devices/instruments when not in use.
- iii) Switch off automobiles (including two wheelers) at Signals.

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Quick Question

What was the theme of 2011 World Environment Day ?

- ☞ Forests : Nature at Your Service
- ☞ Many Species : One Planet. One Future
- ☞ Your Planet Needs You : Unite to Combat Climate Change'
- ☞ Deserts & Desertification : Don't Desert Drylands!

Send in your entry to us at terrepolicycentre@gmail.com

Last Issue's Answer

Plastic is the most common type of trash thrown away by Americans

Quick Answer

Purva & Paresh



Environment Protection...

From page 3... iv) Do not use cars/ motor bikes for short distances, except in emergency.

v) Switch off neon light advertisements/ hordings after late nights or around 12am. Or so.

B. Water wastage

i) Use water sparingly and do not allow to waste it by allowing leaky faucets to run.

ii) Use rain water and do rainwater harvesting which will help depletion of water table.

iii) To reduce water pollution and soil pollution keep a watch on the people/ industrial units etc. which pollute the water/ soil and report such cases to appreciate authorization.

C. Use filtered / boiled water only for drinking.

D. Plant and grow trees wherever and whenever possible and ensure that they do not die or get destroyed.

E. India is “loud” country, generally speaking, there are certain reasons for that like long distance from one farm to other, almost absence of telephone communications till recently belief that for a prayer to reach “god”, it has to be loud, lack of traffic discipline needing honking of horns often, etc. Everybody should make conscious efforts to ensure that he/she and the organizations they belong to, produce as little noise as possible. No processions, bands, loud speakers etc between 10pm and 8am. Educating masses about environment pollution and its effects is important and that should be done through newspapers, radio and television media. Equally or perhaps more important is to create awareness about environment protection at school level on a regular basis. At least one hour per week should be devoted to this subject and imaginative ideas to curb pollution should be encouraged.

- P. B. Kulkarni

(Former Chairman of Bank of Maharashtra)

The sea urchin, ultimate weapon against the global warming?

The sea urchin would be ready to give us a present: the ultimate weapon against the global warming. As often, the greatest discoveries are due to chance. A few months ago, by studying the urchin's technique to make its own exoskeleton from carbonic gas, the doctor Lidija Siller (Newcastle University) discovered a high concentration of nickel on the surface of the bone. Strange... She took a sample of this nickel to plunge it into an acid carbonic bath.

The enriched solution mops the carbonic gas in the air before turning it into carbonate (chalk). Indeed, the nickel turns out to be as a super catalyst able to trap quickly and economically the CO₂ into the air. The researcher is planning to make a carbon trap to put on the exit of the thermal power stations' chimneys or even on the cars' exhaust pipes.



Colorless Water Needed for...

From page 1... together represented only 25 per cent, which we are attempting to manage. The human consumption (agriculture, industry and domestic) itself is overdrawn in many places on the earth particularly in the rich countries, leaving insufficient resources not only for human consumption in the developing countries but also for sustaining ecosystems on the earth. While a global study of 424 of the world's major river basins, surrounded by the population of 3.9 billion people, it was found that environmental flow requirements were violated in 223 basins, surrounded by 2.67 billion people facing severe water scarcity during at least one month of the year. As per FAO study, the proportion of renewable water withdrawn in African and Middle East regions exceeds 50–75 per cent, leaving little environmental flow required to

sustain ecosystems. There is less recognition of water needs to support ecosystems, which are themselves legitimate water users. The importance of formally recognizing the environment as a legitimate water user remains on a relatively small scale in practice. Mankind is taking giant steps to explore universe to find the planets that show signs of water. However we have not fully explored the signs of scarcity of water needed for the ecosystems. We need Kumbha Melas like global gathering of common faith in recognizing the ecosystems as ‘consumers’. A transformational shift is needed to understand transform the fundamental understanding of the ‘water needs’ and ‘water foot print’ for a life on the earth. A holy dip in Ganges transform the sins committed by humans. Would deep dip in ecosystem transform our past sins of looking only at selfish needs?

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