

# ECO.COUNT

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Counterpoints

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# A Point...

Hard to beat the jargon! This is from an ICICI report cited recently by a news daily: “We estimate Rs 31 lakh crore of green investments through 2030. Accelerating grants and incentives, scaling up blended finance initiatives with multilaterals, policy support and flexibility to drive initiatives for carbon market development and industrial decarbonisation are imperatives in the road ahead”

What does this mean? It says further, “Of the Rs 31 lakh crore investments foreseen, ~Rs 19 lakh crore is seen going into renewable energy and storage, ~Rs 4.1 lakh crore into transport and automotive sectors, and ~Rs 3.3 lakh crore into oil & gas.”

Nowhere does it talk of what the investment will be for such green assets. It doesn't state what the committed CO<sub>2</sub>e reduction will be either.

Even a very basic math exercise tells us that the challenge is massive. If you paused for a moment, and considered only an average saving of 100,000 units of electricity a month for a mere 250,000 manufacturing units in India of various sizes, at a factor of 4x as multiple for Source Energy Units and at 0.8 as a factor, this will be 1200 trillion units of annual electricity use per manufacturing unit as Source Energy. That is, for every company in the sector this will mean about 800 trillion kgCO<sub>2</sub>e or a mere 800 million tCO<sub>2</sub>e. For 250,000 units the annual reduction can potentially be in the range of 2 billion tonnes for a year. It is such savings that will lead India towards Net Zero targets. Officers in administration at State and Central levels are as confounded by the challenge as are business managers. The motions of compliance that are sought with ESG protocols or BRSR guidelines, or even the newly launching ECSBC are not evening scratching the surface.

# On the Water Front

There are directives that are quietly being issued to companies by State departments or by the Ground Water Tribunal. What is sought as reduction can make a substantial difference from the inefficient base case of most such water-consuming industries and companies. For every million litres of fossil water a year [long-distance based river water, or borewell-extracted groundwater] the tCO<sub>2e</sub> is at 6,000 tons. If only a million companies in the Services Sector or in the IT sector reduced 1 MLD of consumption that will amount to 216 m ton/year. A million such companies comply with the regulations of these agencies, and we will have 216 billion tonnes of tCO<sub>2e</sub>. This is substantial...

## New Directives Governing Water

New directives from the Groundwater Tribunal or from the Groundwater directorate demand a slew of things that can be achieved by any company. AltTech Foundation is pioneering this effort to achieve these for companies.

Consider what the Tribunal is seeking and tell us whether you think these are reasonable.

1. The firm shall submit the water audit report to KGWA through certified auditors within One year of issue of NOC for more than 100KLD Ground water users.
2. The well should not be used for drawing water for any other use other than applied for.
3. The withdrawal of water should be better managed to avoid wastage of water
4. The utilized water should be recycled and reused after necessary treatment
5. The construction of rain water harvesting structures in the vicinity of the well/ bore well shall be as per the technical opinion of Senior Geologist, District Groundwater Office, Groundwater Directorate
6. The utilization of water will be subject to regulation from time to time based on extraction of water from the bore well

7. The pollution of groundwater resources should be avoided with preemptive measures for protecting each of the borewells from such risks.
8. Water meters have to be installed and data on groundwater extraction has to be maintained and submitted every month to the Authority concerned.
9. The groundwater quality has to be monitored twice in a year during pre-monsoon and post-monsoon periods.

There is more, but this will give you an idea of the intent and design of well-meaning government agencies who are obviously aware of the situation.



# Green or Greenwash?



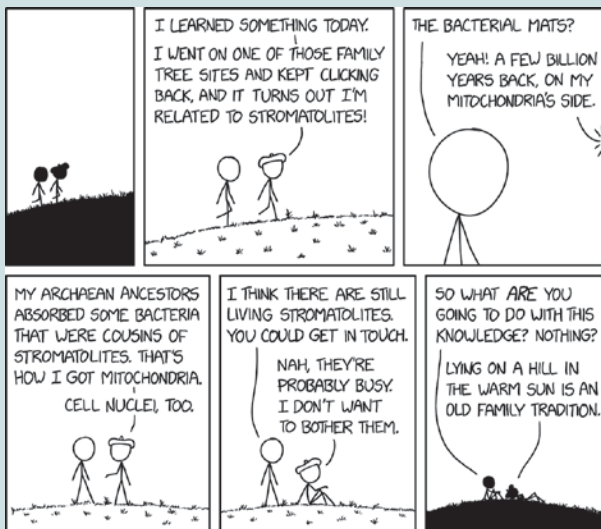
Here is a spoof on green marketing. 'Eco development' for Business comes from a context that is completely unemotional, and has nothing to do with what the world or the country needs. To 'professional' managers, efficiency is it. What is the potential a 'green initiative' holds to drive successfully their business plans? If a softer eco footprint came as a result, well, that was alright. The bottom line to them is: is it enabling higher profits, reducing operating cost, or helping beat competition, or simply helping meet a regulation that a government agency clamps on them? Most often it is the last that gets any company to stir into some action. And, of course, they will find many ways to beat the regulation or to 'comply' without intent to actually reduce fossil water of fossil energy, or to contemplate on the contribution their company can make to India's avowed targets of Carbon reduction. By 2030 if India is beyond this, there was no reflection on the need for being invested in the Cause and the Purpose.

# Water Speak That We Don't Want to Listen to...

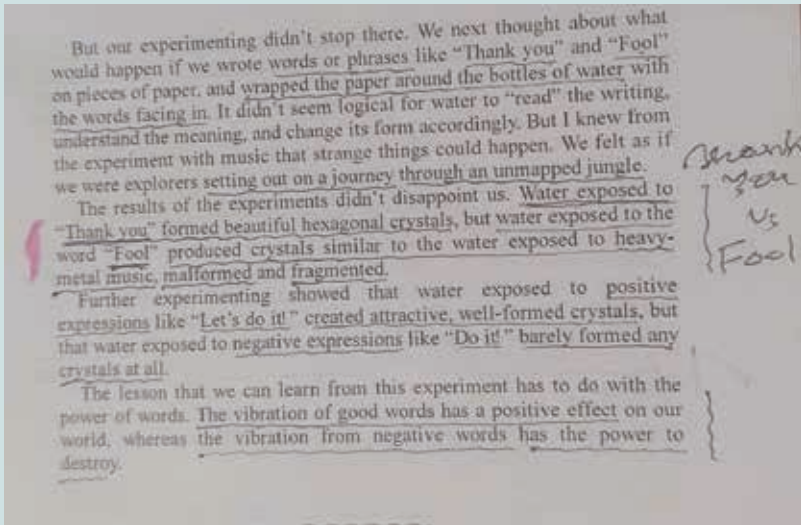
This cartoon is a gentle take on what as humans we don't want to understand, and how we continue to ravage the world... as long as Earth is willing to take such abuse.

Here is a plaintive set of questions that Dr Raval asks. If anyone has any answers to these, please write to us at [reachme@AltTech.Foundation](mailto:reachme@AltTech.Foundation).

“What or how planet homeostasis was maintained before photosynthesis appeared on this planet? Any idea of what the planet was before diatoms appeared? If algal bloom promotes fish-bloom, does it mean you favor algal blooms? If algal blooms are good, why they are called HABs (Harmful Algal Blooms)? Why not BHBs (beneficial algal blooms)? All finance and marketing management schools and economists would worship & build temples of diatoms. If scientifically correct, why do we need STPs? No extensive sewerage, power consumption, no expense on STPs. Like soap, how about putting sachets full of diatoms in each toilet? If it solves the world's problems there would be no rural/urban sanitation, no developed, underdeveloped countries. Everyone produces poop each day, me included. And not all 8+ billion drive a car. And those who have, do not drive it each day.”



# The Complex Composition of Water and What Engineers Do to Savage...



Says a limnologist who, alas, is not as well known to the world as he should be, and who is a member of the WOW Action Forum that the AltTech Foundation has assiduously nurtured over four years and more, "We need to learn to see water beyond pipe & profits, beyond exhibitions, promotion, photoshops, dinner & drinks not expected of IPA, IPPL, IGBC, WPD, who celebrate prematurely with a lot back-slapping at what they have 'achieved' as 'greening of India'. Here is a fascinating story that he extracts from a book that is even less known than Dr Raval is: "We tried distilled water bought at a local store. The results astounded us when we played some of the finest of classical music. Beethoven's Pastoral Symphony, with its bright and clear tones, resulted in beautiful, well-formed crystals when examined under the microscope. Mozart's 4th Symphony, a graceful prayer to beauty, created crystals that were delicate and elegant. And the crystals created by exposure to Chopin's Etude in E.

Op 10 No. 3, surprised us with their lovely details forming in that bottle of water. All the classical music that we exposed the water to, resulted in well-formed crystals with distinct characteristics. In contrast, when water was exposed to violent heavy-metal music resulted in fragmented and malformed crystals at best.

The story gets more compelling as you will see the page extract that is offered here of this book by Masaru Emoto, *The Hidden Message in Water*. What does all this have to do with you and I, and the engineers who make such a disastrous mess of all things relating to water? Why would, as business managers, city administrators, or as engineers, we try not to understand that this means and how we should unravel the ways we need to treat fresh water or 'waste' water?

At the Kumbh mela in late January, on the most auspicious day of the series of auspicious occasions that the ancient Hindu calendar marks with such accuracy to this day, this is what occurred, says Dr Raval: "Water near Triveni Sangam was studied by eminent virologists and bacteriologists (Archaea included). They found a peculiar group of microorganisms (not found anywhere else along the river length and other rivers world over) which prey on pathogenic organisms.



## ...And Two Counterpoints

This is drawn from the same ICICI report that was first cited earlier in this edition of Eco Count: “India needs to balance its economic growth, energy security and environmental sustainability priorities and explore ways to overcome challenges such as financing gaps and technological barriers. Innovative financing can help ensure consistent investments. Given the reliance on climate funds, multilateral funding agencies and in the backdrop of integration of climate risk in the lending process by banks driven by the Reserve Bank of India, it is important that corporates enhance disclosure of ESG and sustainability-linked metrics.”

There is more talk of money and metrics than of the complex cultures of Nature and her inscrutable ways. Now consider the harmony in what Dr Raval says: “Zero order streams with each rain drop, a nano-reactor, have been destroyed by urban proliferation turning cities into a graveyard of human civilization. For those blinded by technology, zero order streams are those neonatal forms preceding 1st order streams not recorded by satellite imaging. Covering them with asphalt lining is river foeticide. As a result we end up losing rivers, floodplains, lakes, ponds. Of course, pipes can divert all that water to a sea. But the wetland-block shown in a diagram should be able to explain the rate of reaction for the water mass of flood (that is 2, 3 feet of water logging over a few square miles of a city). And that is the critical part of the whole process which is beyond an Autocad generated drawing. The real data generation & mathematics starts now. Let all engineers, finance experts, ecological economists, soil scientists, agricultural & irrigation experts, microbial scientists, biochemists and many more come to explain the rate of reaction doing the job in an hour or two. A century ago, London the storm water disposal line was on 6 mm rain per hour. Climate change proposition (2012) was for 80 mm rain per hour. @ £ 19 billion. I had seen that being laid in 2017; (expected to be laid by 2020, I have no update on that post Covid-19). It was focused only on transfer of floodwaters with no respect for reactions between water, soil, and

other components involved in the process. And they talk about resilient smart cities with green design.”

We will leave it to you, dear reader, and to your discerning judgment on what YOU should do as a responsible or conscionable business manager in your company.



*The Thames Flood barrier outside London City*



**ACCELERATING SUSTAINABILITY  
TRANSFORMING MARKETS**

**Talk to us to learn about our  
unique approaches with  
Systemic Integration of  
Sustainable Solutions**



For more information about what we do, write to us at  
[helpline@alttech.foundation](mailto:helpline@alttech.foundation)  
You can call/whatsapp us at: +91 98454 50543

