

ECO.COUNT

Creating the
right market
ecosystem

How do we beat
the mindset?

Stories of
Savings

Is it easy for you to spend on Green Solutions?

Have you considered how every poll will show the number of Indian managers who worry about climate change has increased, and yet nearly no one is prepared to pay even a small sum a month to combat climate change. We are changing that at AltTech Foundation and Ecophoria. We understand that it is not easy for you as a CXO to afford to spend anything additional. You will see some of the Stories of Savings this week show you how you can get an energy asset with a soft, monthly payment option that can extend anywhere from 36 to 60 months, and you will only be paying from what you are already paying as electricity bill, while you will reduce your carbon footprint, and get an asset that will stay with you for 20 years.

We have to find ways to beat the grave news on the climate front, You and I have to do it, as decision makers. We cannot leave the blame at the government's door and shrug it off. It is within our powers, and within our financial means, as you have seen in the previous editions, and this edition presents, too..

Within each of us, there is a voice that is not the demand of self-interest or pure rationality. It says, we have no right to give ourselves enjoyment at the expense of our ancestors' memory and our descendants' prospects. We hold our present advantages only in trust. Check the rest of what this edition offers.

How Can We Help the Decision-Maker in You?

There's a yawning deficit between what is needed by CXOs as Green Solution Seekers in industry as India moves toward a new regulatory regime with ESG, BRSR, ECSBC and other frameworks that are aimed at helping to reduce the national Carbon footprint. While India meets the Nationally Determined Contributions [NDCs] what can companies and institutions do to bring in IDCs, or Individual Determined Contributions? What is offered by Consulting professionals and by Solution Providers in India today falls short of these needs of the future. It is not their fault. They come from certain disciplines that does not cover the harder contours of cost and business strategy.

If you and I have to ensure that there is acceleration of adoption of the right solutions with the economics also intact, there has to be a greater fertilisation of ideas without the business imperatives being a hurdle. For example, most Solution Providers do not know and are also not willing to share what they know because they think it is an IP right of theirs!

How do we help the CXO make decisions on Sustainable Solutions?

How can we help you as a decision-maker – whether you are managing an apartment, or a builder project or you are concerned about rising costs of water and energy in your cement plant, or an IT Park or a hotel. How do you accept these solutions? How do you convince your Management and your end-users and customers. “Are you experimenting at my cost?” is a question that typically the CXO is asked when any innovative solution is offered. As a strategic manager, how can you get buy-in from your sales team in the building industry? Most customers – especially if they are homebuyers or members of RWAs start on a ‘suspicious note’. So do guests at a hotel or your employees at the industrial plant or commercial building that you run. They need proof of performance of any new solutions, testimonial of work already done elsewhere of such solutions. The solution provider is usually guarded in giving details and info, for

fear that the Client who is seeking solutions will violate IP and proprietary knowledge. Most often, the IP is just knowing who the right person is. How do we break this bind?

How do we beat the mindset?

Picture this... Someone offers you a different and better and more cost-effective way of managing a problem, with a solution that is prima facie superior. You resist the change simply because you are used to a way of managing it with solutions that are firmly in place and installed for many years. If it has been in service for many years, why would it be not acceptable to me? That is the question you will ask as a decision-maker.

It is a tough choice for you who actually have to invest. The consultant or a really good expert who is very convincing on what he offers as a 'different' and 'new' solution leaves you with the nagging scepticism if not suspicion. You know that the expert may be right, but the risk is still yours, there is no skin of his or her nose. As a consultant s/he does not have a financial stake in the game. If it is a vendor, it is worse, for the person is not going to tell you as the prospective buyer, what is wrong with his/her product. How do you seek a second or third opinion on an offer that has been made to you by a solution provider or by a consultant?

In the emerging new markets today, sustainability is taking centre stage. But what does that mean to you as financial or technical or operational risk, if there is any at all. Certifying agencies like the IGBC can only offer you the methodology and the guidelines for securing certain kinds of outcomes in your building. They cannot tell you how to achieve it. They can offer you pointers and give you list of possible solution providers in the domain. They cannot own the process of achieving the outcomes. That is only natural and understandable.

Creating the Right Market Ecosystem

How do we create the right market ecosystem for people to take the next step? Should you confine yourself to doing just what the mandate and legislation seeks? Should you do things that bring sharp savings at very attractive returns? Should you decide on a system for water or energy management that clearly offers superior ways of managing operating costs?

In almost all cases across the country, the ritual of an energy audit or water audit remains merely an exercise to fulfil regulation. Similarly, every five star hotel fulfils a regulation that the groundwater tribunal set down on recharging groundwater in some other building, if they have to draw water in their own hotel. Nobody asks whether it is the right thing to do. Nobody asks whether instead of recharging the water, it can be harvested and made drinking great water for the schools or such other institutions where the company is mandated to provide such water balance.

Our hope, dear reader, is that we will help you secure some new dimensions on how to go about convincing yourself, your management, and your customer, convincing the decision maker, enabling the solution provider to understand why his product is in deficit of certain aspects of what has to be offered, how solution enablers can help to understand what is wrong with what is being recommended by the regular mainstream marketplace.



A Villa Enclave Certifies Net Zero Water Positive with a Platinum rating

The IGBC offers 3 ratings for Net Zero Water... Near Net Zero, Net Zero Neutral and Net Zero Platinum for water-positive projects. It took two years and many iterations of design and execution to achieve this prestigious rating from the Indian Green Building Council [IGBC] of a Net Zero Water Platinum rating. "This is indeed a moment of pride and fulfilment for us all at Vakil's," said Mohd Ali Vakil, a Director of the company who remained steadfast over the long period that it took to create the water assets and infrastructure for achieving surface water harvest of rainwater falling on roads, pavements, storm drains and park areas. The harvest count at end of the 2024 monsoon exceeded 4 million litres helping achieve a financial savings of about ₹6 lac, while the avoiding of use of borewells was a priceless advantage that the residential villa enclave secured. The next year promises to bring in a harvest of over 15 million litres. Beyond such one-of-a-kind in the world of surface water harvesting, there is a unique waste water treatment, and many more demand-side and supply-side sustainable strategies that have been put into place at this villa enclave to the southeast of Bangalore, off Hosur Road.

| | |
|---|---|
| Surface water harvested in a year | 15-25 m litres over 8 months of the monsoon |
| Rooftop water harvested in a year | 100,000 litres to every villa that chose to adopt the RWH solution |
| Subsurface water harvested with open wells, percolation tanks and pits, and recharge gravel pits | 10-15 M litres in the non-rain months |
| Efficient fixtures and systems with measure-monitor-manage | 20 m litres on the base case for every home and common infrastructure areas. |
| Energy saved every year on base case | 2 million units of electricity |
| Payback of Capital cost on the Green Water Infrastructure: | 3 years @ ~cost of 15 p/litre for 300,000 litres a day at full occupancy |
| Carbon Tonnes Reduction a year | 1.6 million kg of CO2 reduction |



A 100% export oriented Garments Factory Goes Net Zero Water and Energy

This is a journey that Bharat Silk Mills began about a year ago. The young CEO was keen on going green but did not know who to ask, nor was he getting satisfactory responses or answers to his searching questions with solution providers he invited. Along came Vijay Kanda and things changed. A bunch of solutions were explained, discussed threadbare, costs worked out, savings established, return on investment ascertained before the decision was made. The first taste of success came with the installation of the rainwater harvest system on the rooftop with the year 2024's monsoon offering over 5 lac litres. The plant premises had by default a 10 lac litre tank and that came in handy for storage and reuse. The factory is expanding to add another 300 workers to the current workforce of about 400. The management is gearing up to meet the higher need of water and electricity that another block of sewing machines and workers will get busy on. The listing here shows the range of solutions that are going into orbit at the Bangalore plant and at the Gurugram unit of the Company.

| | |
|--|------------------------|
| Rooftop water harvested in a year | 6-7 million litres |
| Subsurface water harvested with open wells, percolation tanks and pits, and recharge gravel pits | 2-3 m litres |
| Efficient fixtures and systems with measure-monitor-manage | 1 m litres |
| Energy saved every year on base case | 7500 units at end use. |
| Carbon Kg Reduction a year: | 25,000 Kg |
| Payback of Capital cost on the Green Water Infrastructure: | 18-20 MONTHS |



A Lighting Factory in Hyd goes Net Zero Water

A 27-acre campus to the south of Hyderabad has had a challenge until now.... They buy about 60,000 litres a day at a massive cost of ₹280 per KiloLitre or about ₹17,000 as daily cost. That is an annual bill of ₹56-60 lac. Apart from this, their existing borewells are exploited to extract about 140,000 litres everyday at an approx. cost of energy and maintenance of ₹7000 a day or annually about ₹22-25 lac. The set of solutions we have offered has taken several months to be drawn up. Execution is now on... Take a look at the outcomes, and the massive savings in cost of water, and in energy consumed as well as the Carbon KG reduction that the Net Zero Water plan brings to this plant. What the solutions mean as savings:

| | |
|--|---|
| Current daily demand from both tankers and borewells is 200,000 litres. Annual demand is computed on this basis. | 65-70 million litres. |
| Rooftop water harvested in a year | 25 M litres / year |
| Subsurface water harvested with open wells, percolation tanks and pits, and recharge gravel pits | 15 M litres / year |
| Efficient fixtures and systems with measure-monitor-manage | 5 M litres / year |
| Waste Water in a year | Over ~20 M litres/year |
| Energy saved every year on base case | 5 lac units at average cost of ₹12 per unit, or Rs 60 lac. |
| Carbon Kg Reduction a year: | ~16 lac kg /yr |
| Payback of Capital cost on the Green Water Infrastructure: | 32-36 months |
| A dense vegetation zone that enriches groundwater retention | This land expanse of about 4 acres will enhance the groundwater retention strength of the shallow aquifers. A network of designed micro harvesting structures will yield an additional 4 m litres / year. |

Solutions Lie Right Under Our Nose!

IE THING: OUR CITIES

'Encroachment leads to higher flood risks'

In this edition of IE Thing: CITIES series, presented by The Indian Express with Omidyar Network India, panellists discussed how Hyderabad, a growing urban metropolis, can tackle issues of illegal constructions, pollution and floods. The session was moderated by Rahul V Pishardy, Assistant Editor



OMIDYAR NETWORK INDIA

On HYDRABAD'S efforts
AV RANGANATHI IYERAA, with its jurisdiction spanned across Greater Hyderabad Municipal Corporation and 27 other municipalities, is focused on disaster response and asset protection. It manages a large area with frequent heavy rainfall events that cause flooding and traffic problems. HCFMCA has a large fleet of over 3000 staff to deal with flooding emergencies. It also focuses on protecting public lands like lakes, water bodies, parks and open spaces from encroachments.
 Since July 19, we have reclaimed almost 114 acres of land, controlled about 17 developments and removed encroachments to 12 lakes. We have started the process of rejuvenating lakes encroached upon. Most of the lakes have disappeared from Hyderabad's map.
 We are also collecting a lot of information in coordination with the revenue department, litigation department and agencies such as the RDSO.

On pollution of water bodies

DR DONTI NARASIMHA REDDY Hyderabad and its periphery, especially in lake encroachment areas, being a semi-urban city is not due to multiple factors. The natural water holding capacity of water bodies was due to encroachment and filling of lakes and water bodies, pollution of water bodies with untreated and dirty water from other factors and the pumping of water from external sources lead to increased water volume in lakes and water bodies. If you look at the last 100 years, in the Deccan plateau, basically the surface water, it goes up when it rains and goes down towards streams. In the cycle of depletion and replenishment is so. With this waterway being there throughout the year, the floodwaters has no capacity to go. So that's how the storage capacity of the catchment areas is being utilised.

On effects of urbanisation of water bodies

MGP PRASANNA RAO Hyderabad's rapid urbanisation and industrialisation have significantly impacted its water bodies and environment. The concentration of pharmaceutical industries in Medhakhedi to serve pollution issues. Inadequate water treatment facilities and improper disposal of effluents contaminated water bodies.
 The rising demands of industrialisation further exacerbated the problem. Unplanned urban growth resulted in encroachment on lake lands and water bodies. This reduced the water holding capacity of these bodies and increased pollution levels.

THE PANEILLISTS

MS PRASANNA KUMAR
 SENIOR SOCIAL SCIENTIST, THE AIRSATEL POLLUTION CONTROL BOARD

Hyderabad's rapid urbanisation and industrialisation have significantly impacted its water bodies and environment. Pharma industries in Medhakhedi have also led to severe pollution.



DR DONTI NARASIMHA REDDY
 ASSISTANT COMMISSIONER, DISTRICT AND MUNICIPALITY, MEDHAKHEDI (JMD)

Letting water bodies pollute is a weapon to degrade the ecosystem services of water bodies and facilitate encroachment. These factors contribute to increased flood risks and harm the environment.



AV RANGANATHI IYER
 COMMUNITY ENGAGEMENT COORDINATOR, REGIONAL ASSISTANT DIRECTOR GENERAL

Since July 19, we have reclaimed 114 acres of land, demarcated 17 encroachments from 12 lakes. We have started rejuvenating lakes that were encroached upon.



DR. BY SURYA RAO
 DIRECTOR, URBAN FORMATION, DEVELOPMENT AND POLLUTION

We need a holistic approach that addresses these issues, including improved water infrastructure and sustainable urban planning.



One aspect which is important is that you have a lot of residential areas which come up around the water bodies. And these residential areas, after they come up, instead of the lake being either a detriment or a place where relative income was coming up, when they flood and the rains, it was the sewage, domestic sewage, going into the water body.

On reasons for increased flood risk
DR BY SURYA RAO The lack of adequate water table infrastructure to handle the

rising sewage generation, poor coordination between departments, a lack of understanding of urban hydrology and unplanned urban development lead to increased flood risks. There is a need for integrated urban planning that considers water management and disaster risk. It is important to assess the impact of land use changes on water bodies and drainage systems. We need a holistic approach that addresses these issues, including improved water infrastructure, sustainable urban planning and effective disaster management practices. Relying on hydrological can mitigate the risks of flooding, water scarcity and other urban challenges.

On learnings from Bengaluru case study

AV RANGANATHI Having come recently to Bengaluru, learning on disaster management and lake restoration practices, was able to identify potential solutions and strategies to address similar challenges faced by Hyderabad. There is a need for a dedicated disaster monitoring agency in Hyderabad, similar to Karnataka.

On rejuvenation of lakes

DR DONTI NARASIMHA REDDY Instead of the challenges faced by Hyderabad are different from those in Bengaluru though some are similar. One challenge is that we have finished encroachment. We don't know how many lakes have been

restored/filled up for restoration. Many lakes in Hyderabad have been completely or partially restored but some, making them suitable for usage and handling restoration efforts. There is a need for a multi-agency approach involving experts from various fields, including hydrology, ecology, engineering and social sciences, to address these complex challenges and ensure the restoration of Hyderabad's water bodies.

On community involvement

BY IYERAA Community involvement, ecological restoration and scientific approaches to lake restoration efforts in Hyderabad are important. Each lake is unique and different. Each lake needs a specific, focused restoration. Each fish tank needs a different application. We have developed a list of local lake restoration and I think it's time for IYERAA to get associated with local commu-

unities. Prioritising the restoration of the natural ecology of lakes is essential.

On mitigation steps to revive lakes

AV RANGANATHI IYERAA is working with the Telangana Pollution Control Board (TSPCB) on covering lakes. We will also look into improving the quality of water in addition to flood mitigation and increasing holding capacity of lakes. We need to do much more. We will definitely involve experts. We will have a multi-disciplinary team. I will keep it before the chief minister. We will have talks with various houses and will need a multi-agency team.



Scan the QR code to watch video

A first scan of this headline and the response is: "We know of these challenges, but what is the solution beyond the usual lament of what the government and city corporations is not doing? This report of what these panelists have to offer, shows the way that is obvious, under the nose. It is not for want of solutions that these are not getting done. Either it is refusal of administration to accept solutions, or their lack of awareness of solutions that exist among a few select solution providers.
 Reflect carefully on the math that this equation offers. A city like Bangalore with 700 sq km, or 70,000 hectares, has at least 10,000 hectares of rooftops at 15% of all lands [or a conservative 15% of the city's land area as rooftop]. Every 1 hectare of such rooftop areas

alone can secure potentially 10 million litres every year at the average of 1000 mm of rainfall that the city receives. At this estimated total rooftop area of 10,000 hectares this means 100 billion litres [or about 15% of the city's annual consumption of about 900 billion litres at today's estimated daily consumption of 2.5 billion litres]. This is just rooftops.

An SOS feature in this edition [see previous pages] talks of nearly the same equation that is now reality in a residential enclave of a minuscule 27 acres, or a little over 10 ha. But it makes a world of difference. This enclave has harvested rainwater falling on roads, storm drains, and other surfaces of the enclave. This alone has accounted for a whopping 27 million litres of water in that campus. Rooftops account for about 5 Lac Sft or about 50 million litres of water that can be harvested! If that enclave can do it, you could do it as well in your residential building, in your office campus, and indeed in all the countless Government-owned buildings.

Bangalore, or Hyderabad, can be easily made water-positive if only citizens, apartment owners, and owners of commercial buildings, hotels, hospitals and IT parks chose to do this simple expedient of harvesting, filtering, and treating to drinking grade water.

Many water professionals and administrators in the water sector love to muddle us with TMC, and cusecs. The math cannot alter. Bangalore can surely do at least this 15% of the area that are rooftops to harvest the rains, and upgrade every litre that is captured to Drinking Grade Water? Most water experts are loath to harvest water, even from rooftops and use it as drinking water. Yet, you and I as regular consumers have accepted unquestionably that bottled water that we buy at ₹20 a litre is safe, even healthy! You have to visit any water bottling plant anywhere, to check the source of water they are treating, and you will never ever buy or drink that water! What the advertisements offer you is not what you get. What the RO or UV filtration system at your home kitchen offers is surely not what is safe—a question we will take up in a future edition of EcoCount.

Our understanding of water, its source, the safety levels of the water we drink... all have to change. Right here in Bangalore, the first set of buildings that treat waste water for reuse in toilets as flush water has grown. What is more, a bunch of apartments and companies have gone the next step of treating further such water to drinking grade water. So the loop is complete. They don't need water from borewells, or from tankers or from BWSSB.

ECOPHORIA

**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
You can call/whatsapp us at: +91 98454 50543

**ALTTECH
FOUNDATION**