NEWSWATCH

INDIAN ENVIRONMENTAL ASSOCIATION

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From the President's Desk:





Dear friends and members of IEA, **the Indian Environmental Association**
Greetings from me and the entire IEA Board

For all Environmental Engineers, suppliers, buyers, designers and contractors, good news in this month is that IFAT Mumbai 2026 is here. IEA has been invited as a supporting organization at the upcoming IFAT at Bombay Exhibition Centre on 8th, 9th and 10th September 2026. IEA will play an active role in some of the events involving discussions and technical debates.
Do take the advantage of this exhibition, which has been wholeheartedly been supported by IEA.
Of course IEA members get special preference.
The IFAT provides an opportunity to interact with other environmentally conscious people. It opens a floodgate of knowledge for newer Equipment and latest Technologies in Environment Engineering.
My editor Mr Pramod Shah agreed on this issue. He says that newer Water and Wastewater Treatment Technologies are welcome and are the need of the hour.
IFAT will also have parallel sessions on some important topics and Environmental issues. Debates and discussions galore.
Recycling will be an important issue that will be discussed.
Do take advantage of this and attend IFAT Mumbai 2026 in large numbers.
Now IEA Board looks forward to your suggestions for topics of next Round Table Conference,
Do contribute to the NewsWatch on current Environmental issues. You may email the articles, and newspaper cuttings to indenvassociation@gmail.com
To cover the cost of the NewsWatch publication, we have decided to accept advertisements related to the Environmental field in the NewsWatch. Do enquire for the same on the above e-mail ID.
I would again request you all to increase the circulation of NewsWatch and come forward with various suggestions for improvements not only for NewsWatch but also overall planning of IEA activities

Yours truly

M A Naik
President IEA



Newswatch at a glance

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>>> Updates from IEA

UPDATES FROM AROUND THE GLOBE

Forest Land Released For Adani Projects

69,933 square feet of mangrove and reserved forest, gone, for a cement terminal.

Maharashtra just cleared close to 83,700 sq ft of forest land for two Adani Group projects. In Alibag, nearly 70,000 sq ft of reserved forest and mangrove land will now make way for a jetty and conveyor corridor at Adani Cementation's cement terminal. In Amravati, another 13,788 sq ft of forest land clears the path for an underground gas pipeline.

Both approved through government orders this week. The only condition attached is that forest officials keep access to the site.

Here's what doesn't make it into most headlines. Mangroves aren't just trees standing in creek water. They are the first wall between the coast and the sea. They slow down storm surges, hold the soil together, and give fish a place to breed. Mumbai learned this the hard way in 2005, when lost mangrove cover made the flooding so much worse.

You cannot fast forward a mangrove belt back into existence once it's cleared. It takes decades.



From Desert To Greenary-Millions of Bees Released Into Sahara Desert – The 1-Year Result Would Change Everything

Sahara, the hottest and largest desert on Earth,has long been seen as the final forntier life.A place where sand not only buries vegetation but steadily erodes human hope. for decades, nearly every attemp to green this land has failed until a contraversial idea emerged.

Bees, tiny agents of the eco system, were proposed as a ray of hope for one of Africa's harsest landsacpes. If bees can help in preventing ecological collapes, in other desert, could they do the same in the Sahara? Reality, however, quickly revealed a hard limit. Bees can not create water, cannot convert sand into soil, and only return once the ecological foundationhas been repaired. From the realisation, humanity was forced to seek a more fundamental approach. Once that begins not with species or greenry, but with land and water.That is when Africa's Great Green Wall was born.

Join TerraCyclr Works as we trace this journey from fragile bees to crescent-shaped earthworks and onward to one of the largest ecosystem restorationeffort ever undertaken by humankind,

The Sahara Experiment- From Bees to the Great Green Wall

The Sahara is often seen as a vast, motionless desert, frozen in place at the heart of Africa, In reality it is a system in motion. Over past century, the southern edge of Sahara has steadily advanced into the Sahel, a region where people once farmed, glazed livestock, and built livelihoods across generations. Landscapes that once supported grasses and shrubs have gradually turned into bare, cracked surfaces, stripped of their ability to recover on their own, The most frightening element is not the sand itself, but the disappearance of the transitional ecological layers. As sparse vegetation vanishes, the soil loses its protective cover. Rainwater no longer infilterates and each rainy season washes away another fragment of the land's biological foundation. Desertification, therefore does not unfold as a sudden dramatic collapse, but as a slow draining of life. Until the ecosystem no longer has a foothold from which it can return to its previous state.

In this contex, the question is no longer how to green Sahara, but what caused the lands along its margins to lose their capacity to sustain life in the first place. And as the ecological foundation begins to crumble, how do the roles of biological links, from plants to pollinators like bees, begin to change.

On a global scale, bees are not just insects.They are part of the planet's ecological infrastructure, Roughly one third of the food humans consumeeach day depends directly or indirectly on pollination by bees and similar spicies. From applesand almonds to melons leafy vegetables and even the plants that feed livestock, all are linked by those small, but tireless flights. Bees do not create life, bees do not create life, but they determine whether life can continue. When bees disappear, collapse does not arrive as a loud, dramatic catastrophe. It unfolds quietly and often irreversibly

By contrast, when bees return, recovery is usually faster than people expect. Wildflowers can reappear within a single season. Seeds are dispersed further. Isolated patches of green reconnect into continuous vegetation. For this reason bees are often regarded as biological indicators. Where bees thrive, ecosystem are functioning properly.

Even in harse environments this role does not change. In Nevada, one of the hottest and driest states in the united States, more than thousand bee spicies still survive across deserts and semi-arid landscapes.They pollinate native plants, maintain sparse, but stable vegetation, and indirectly prevent the land from collapsing entirely into sand. When bees populations there began to decline in early 2000, it was not only honey that disappeared, but the entire local ecosystem became more fragile. Nevada reveals a critical truth, even at the edge of survivability, bees remain force that keeps life from slipping out of balance.

Bees And The Hypothesis

From this central role, a boldd assumption begins to take shape.If bees can prevent harse landscapes like Nevada or the Arava from collapsing completely, could bees become the spark that restarts life in places that are almost entireely dead?bees are not seen as a complete solution, but as a catalyst.Queen bees are collected from other regions, kept cold to slow their metabolism, then transported acrossseas, across sand and deep into the Sahara.The goal is not to turn the desert into grassland within a few years, but to trigger an ecological chain reaction, giving plants a chance to reproduce, preventing young vegetation from remaining isolated, and creating the first biological footholds for soil recovery.

Israel's Arava Desert, bees have not only

survived, but become a foundation of modern desert agriculture. Amid dry, rocky terrain, beehives are placed directly in the fields.They pollinate crops, significantly increse yields and transform areas once considered uncultivable into major sources of agricultural production.

In this case bees do not green the desert, but they allow humans to extract the max. potential from what the desert can support. This is what turn Sahara into next question larger, harser and far more dangerous, however The Sahara is neighter Nevada nor the Arava. it is a place for biological limits are pushed to the extreme. Bees can adapt to heat but not to infinite heat. The ideal temparature inside a beehive is about 35 degree C. When the surrounding environment exceeds that threshold the entire colony must work relentlessly just to survive. flying to create airflow, carrying water back to the hive, beating their wings like living fans.

In the Sahara, the heat does not retreat, sand temp. can exceed 70 degree C. and the air is almost dry so the most dangerous factor is not the heat itself but its persistence. In Nevada ground water and vegetation still exist researchers have documented beehives melting at during prolong heat waves. The wax soften, the structure collapses, and colonies are forced to abandon their nests. If this can happen in an ecosystem that is still functioning, than in the Sahara, where there is no biological foundation to rely on. For this reason , the Sahara dooes not need more bees at this moment.

It needs something more fundamental Soil that can hold water and water that can remain long enough for the life to restart from the ground up. Bees do not create this conditions. They only return once such conditions already exist. It is precisely along the southern edge of the Sahara ,where the desert. meets the Sahel, that humans have chosen a different approach- repairing the land itself.

A **project is known as Africa's Great Green Wall.**

Sahara Desert currantly covers about **9.2 million square kilometers,** however it is still expanding. As the Sahara advances, the Sahel does not disappear overnight, but it gradually loses the ability to sustain human life. The Paradox is that the sahel is not without rain but soil lost its capacity to absorb water. After decades of over exploitation, heavy grazing and prolonged drought, the land surface has become compacted, sealed hardening like cement. Drought weakens the soil, heavy rain accelerate erosion of top fertile soil, thus the land becomes even less capable of retaining water.

The Great Green Wall is a mosaic- like network of ecosystem restoration effort. Each region applies different solutions tailored to localsoil conditions, water availability and the livelihoods of surrounding communities. The core philosophy of the project is clear. It does not force the desert to turn green, but repairs the way soil and water function. Once the land regains its ability to retain water, life can return on its own, following the natural sequence. Trees are not startingpoint. They are the final outcome of a system that has been restored correctly.

In many regions of Senegal, Niger, Burkina Faco and Mali, the starting point of restoration is improving soil structure. The choice of structure depends on the way rain behaves in Sahel. Rain does not fall gently but arrives short, violent bursts,then water rushes down slope through straight trench. The rain water is intercepted from multiple directions,forcing the flow to slow down, spread out and settle. water is not pooled into standing ponds, wher it would quickly evaporate, but instead water remains longer so that it infiltrate in soil. The design depends on terrain and gravity. The pits are dug and sow drought- tolerant native grass, such as Andropogon or Cenchrus. these are not selected on immediate economic value, but for their ecological function. Their fibre root systems help anchor the soil, increase water infiltration, and retain organic matter. After almost 2-5 years the change becomes visible. The scattered patches of grass gradually connect into continuous ground cover.

So more importantly, it is not only grass that returns, as soil moisture and structure improve, shurbs and native trees begin to regenerte naturally. Insects, small animals and grazing systems slowly follow transforming isolated green patches into functioning ecosystem.

The revival of the Sahara does not come from a miracle, but from humans repairing the collapsed foundations of soil and water. When land loses its ability to retain water, entire ecosystems slowly and when that foundationis restored, life finds its own way back.





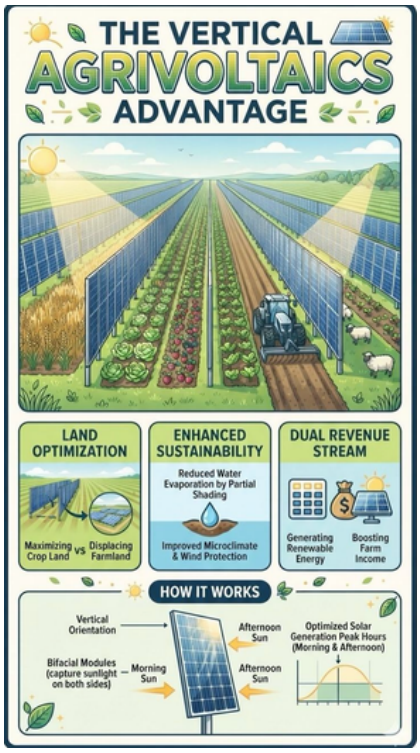












The Vertical AGRIVOLTAICS

BY SANJEEV JAIN
Chief Engineer(Retired),IICA Certified Independent Director

Vertical agrivoltaics is the practice of installing upright, fence-like solar panels directly within active agricultural fields. By utilizing bifacial solar modules that capture sunlight on both sides, this setup allows farmers to generate renewable energy without sacrificing their land.

How It Works

- Orientation: Panels are typically aligned in North-South rows.
- Bifacial Modules: The cells absorb direct morning sun on one side and afternoon sun on the other.
- Row Spacing: Installers leave wide pathways, typically 8 to 15 meters apart, so tractors and harvesters can move freely.
- Minimal Footprint: The physical structure takes up only about 1% of the ground space, leaving over 90% available for crops or grazing.

Core Benefits

- Grid Stability: Electricity generation peaks during the morning and afternoon, matching peak demand hours.
- Microclimate Control: The vertical structures function as hedgerows or windbreaks, minimizing soil erosion.
- Water Conservation: Partial shading reduces water evaporation from the soil by up to 50% during dry periods.
- Dual Revenue: Farmers gain a reliable secondary income from selling power while maintaining crop yields.

Practical Challenges:

- Machinery Hazards: Operating large machinery close to the rows poses a risk of accidental collisions with the structures.
- Zero Weather Protection: Unlike canopy-style agrivoltaic structures, vertical panels provide no overhead protection against extreme hail, heavy downpours, or frost.
- Forage Limitations: Shading can occasionally alter the growth rate of specific light-sensitive crop varieties.

Ministry of New and Renewable Energy (MNRE)

The world has started regulating microplastics. Here is what the rulebook looks like

New global rules target intentionally added microplastics and unintentional releases from tyres, textiles, paint and plastic pellets

By Anjali Nair

A plastic bag can be banned. A bottle can be collected and recycled.
But microplastics are different. They are often too small to be captured through conventional plastic-waste policies, and their sources are far more diverse. Some are deliberately added to products, while others are generated as plastic products break down or escape during production, transport and use.

This makes microplastics much harder to regulate.
Tiny plastic particles, generally smaller than 5 millimetres, are no longer seen only as a marine pollution problem. They have been detected in water, soil, food and air, as well as in human biological samples, including blood, placenta and breast milk. Their detection in the human body has raised concerns about exposure and potential health effects, although the extent of the associated risks is still being investigated.

Around the world, a regulatory rulebook is beginning to emerge. But rather than addressing microplastics through a single overarching law, governments are increasingly regulating them source by source.

First, regulate intentionally added microplastics

The easiest microplastics to regulate are the ones intentionally added to products.

The United States' Microbead-Free Waters Act of 2015 was one of the earliest major examples. It banned rinse-off cosmetics containing intentionally added plastic microbeads, such as face scrubs and some toothpastes.

Other countries followed. Canada prohibited the manufacture and import of toiletries containing plastic microbeads from 2018. The UK banned the manufacture of rinse-off cosmetics and personal-care products containing microbeads in 2018, followed by a ban on their sale. Thailand also prohibited the production, import and sale of rinse-off cosmetics containing plastic microbeads from 2020.

The European Union has gone further. Commission Regulation (EU) 2023/2055, adopted under the EU's chemicals law REACH — Registration, Evaluation, Authorisation and Restriction of Chemicals — restricts intentionally added synthetic polymer microparticles across products including cosmetics, detergents, cleaning products and certain agricultural uses, with restrictions being introduced in phases.

For certain applications, companies must provide information on the presence and use of these particles and, in some cases, report estimated releases. This helps regulators understand where microplastics are being used and how they may enter the environment.

The focus is also expanding to human exposure. In the US, the Microplastics Safety Act (H.R. 4486) was introduced in 2025. It would require the US Department of Health and Human Services, through the Food and Drug Administration, to study the potential human-health impacts of microplastics in food and water.

Plastic turning into microplastics during use

But the bigger problem is plastic that becomes microplastic while we use it
A car tyre sheds tiny particles as it moves. Synthetic clothes can release fibres during washing. Paint can wear away and release particles. These are unintentional releases of microplastics, generated as products wear, abrade or shed particles during

use.

These sources account for a substantial share of microplastic releases.

The International Union for Conservation of Nature estimated that, among microplastics entering the world's oceans, synthetic textile laundering accounted for 34.8 per cent and tyre erosion for 28.3 per cent — together making up nearly two-thirds of releases in its central scenario.

The European Union is beginning to address some of these sources. Euro 7, or Regulation (EU) 2024/1257, introduces requirements for non-exhaust vehicle emissions, including brake-particle emissions and tyre abrasion.

France has also addressed textile microfibres. Under its Anti-Waste for a Circular Economy Law, or AGEC Law, enacted in 2020, new domestic and professional washing machines must, from January 1, 2025, be equipped with a microfibre filter or another solution to reduce fibre dispersion.

This marks a shift from regulating plastic only after disposal to addressing what products release during use.

The plastic pellet problem

Plastic pollution does not always begin with a finished product. Before becoming bottles, packaging or other products, plastic often exists as small industrial pellets, sometimes called nurdles. These can escape during manufacturing, storage and transport and enter rivers and oceans.

The EU has now addressed this through Regulation (EU) 2025/2365 on preventing plastic pellet losses to reduce microplastic pollution. It requires companies and carriers handling pellets to take measures to prevent losses and, where spills occur, contain and clean them up.
The rulebook is expanding from waste to products. This may be the most important change taking place globally. For years, plastic policy has focused on the end of the pipeline: Use → discard → collect → recycle or dispose.

Microplastics are forcing governments to look at the entire pipeline: Design → production → use → emissions → waste → fragmentation.

The EU's Zero Pollution Action Plan has set an objective of reducing microplastic releases by 30 per cent by 2030, reinforcing this broader source-based approach.

This represents a shift from simply managing plastic waste to preventing plastic pollution at its source.

What about microplastics already in environment?

Stopping new releases will not remove the microplastics already present in rivers, oceans, soil and other ecosystems. Larger plastic waste already in the environment will also continue to break down into smaller particles.

This is the problem of legacy microplastic pollution, and it remains one of the least developed areas of regulation. Countries need monitoring systems to identify contamination hotspots and determine where containment or remediation is possible.
The regulations emerging around the world point to an important change. Plastic policy has traditionally focused on what happens after a product is discarded.

Microplastics require governments to look earlier — at what products are made of, how they are designed and what they release while being manufactured and used.

The question is no longer simply, how do we manage plastic waste? It is becoming: how do we stop plastic from becoming pollution in the first place?

Summary

- Microplastics are harder to regulate than conventional plastic waste because they come from many sources and are often too small to capture after release.
- Governments are increasingly regulating microplastics source by source, starting with intentionally added microbeads in cosmetics and personal-care products.
- Newer rules are expanding to unintentional releases from tyres, textiles, paints and plastic pellets lost during production, transport and use.
- The emerging global rulebook marks a shift from managing plastic waste after disposal to preventing plastic pollution at the design, production and use stages.

