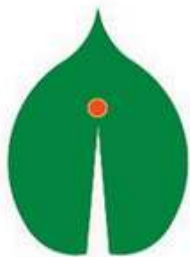


NEWSWATCH



INDIAN ENVIRONMENTAL ASSOCIATION

Sunvision Classic, 5th Floor, Hanuman Road,
Vile Parle (E), Mumbai 400 057. Tel. : 022 3512 9410 / 022 2611 9782
Email: info@indianenviron.com / indenvassociation@gmail.com

Website: <https://indianenviron.com/>

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President: Madhukar Naik

From the President's Desk:



Dear friends and members of IEA, **the Indian Environmental Association**

Greetings from me and the entire IEA Board!

At last Monsoon has arrived. It is after a number of years that the Monsoon is delayed so much. Not only is it delayed, but the meteorologists are predicting less than normal Monsoon this year. Which means less water for irrigation, less water for Industries and less for human consumption. It also means we must prepare ourselves for inflation.

Availability of water is an issue that needs to be addressed to Government level like drive for rainwater harvesting. Another issue is uneven rains. It may pour very heavy at some places and some places may remain dry. It gives me a sense of urgency while bringing this April 2026 edition of the NewsWatch, to the waterfront.

As a true Environmentalist, let us drive for Clean and Green India.

No explanation is required to an Environmental Engineer as to why there is a huge Global warming. We will have to work hard to counter Global warming.

Now IEA looks forward to the new financial year. Kindly suggest new plans and new events to hold and celebrate.

The Governing Body of IEA has been formed, with three layers of management, The Directors, the Managing Committee members, and sub-committee members. We have even formed a working group that actively works for drafting, follow-up, invitations, booking of venues, and so on.

India is amongst a handful of countries where Environmental Protection and wildlife protection are part of The Constitution. To be compassionate to other animals is part of our duties. In short, Environmental Protection includes all surroundings including plants, forest land, wild and domesticated animals, etc. This covers the full spectrum of Environmental Protection.

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

read more

»» Updates from around the globe Page2-4

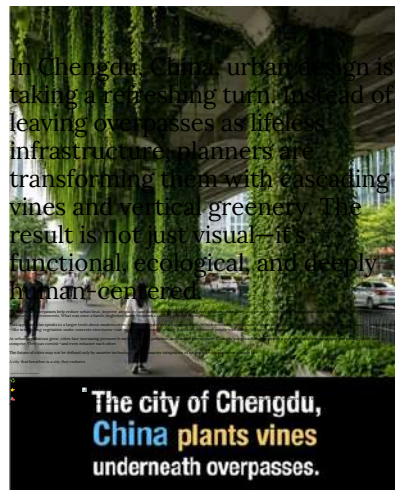
»» Updates from IEA



Sustainability Infographics:

Green Buildings for Tomorrow

When Concrete Starts to Breathe



What if the space beneath highways wasn't forgotten grey concrete—but a living green corridor?

In Chengdu, China, urban design is taking a refreshing turn. Instead of leaving overpasses as lifeless infrastructure, planners are transforming them with cascading vines and vertical greenery. The result is not just visual—it's functional, ecological, and deeply human-centered.

These green underpasses help reduce urban heat, improve air quality, and soften the visual impact of heavy infrastructure. They also create cooler microclimates that make walking and cycling more comfortable in dense city environments. What was once a harsh, neglected space becomes a calming passage through nature.

This approach also speaks to a larger truth about modern cities: sustainability doesn't always require high-tech solutions. Sometimes, it starts with rethinking how we use existing spaces. A single design decision—like introducing vegetation under concrete structures—can improve biodiversity, reduce dust, and reconnect people with nature in their daily routines.

As urban populations grow, cities face increasing pressure from heat islands, pollution, and limited green space. Chengdu's approach demonstrates a powerful idea: infrastructure and ecology don't

have to compete. They can coexist—and even enhance each other.

The future of cities may not be defined only by smarter technology, but by smarter integration of nature into the places we already live.

A city that breathes is a city that endures.

The City That Harvested Every Drop of Rain

By **Dr. Muhammad Rizwan**
Senior Environmental Consultant

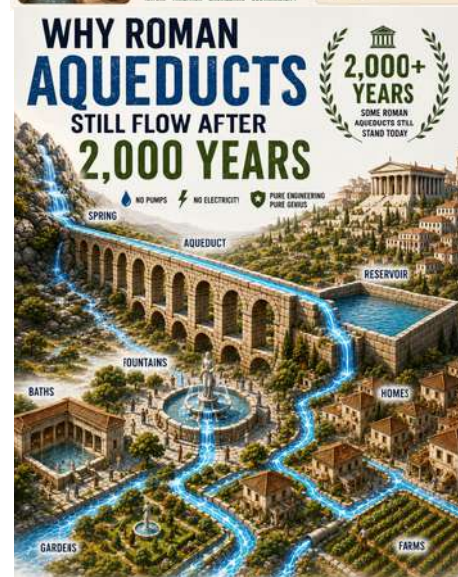
2,000 Years Before Smart Water Systems

Imagine living in the middle of the desert...

No rivers.

No pipelines.

No electricity.



Yet your city never ran out of water. That wasn't science fiction. It was Petra, the ancient Nabataean city in present-day Jordan.

More than 2,000 years ago, the Nabataeans engineered one of the world's most sophisticated water management systems—proving that sustainable cities existed long before modern technology. Instead of fighting the desert, they designed with it.

They transformed rare rainfall into a reliable water supply using remarkably advanced engineering.

- Their innovations included:
- Rainwater harvesting from surrounding mountains
- Rock-cut cisterns capable of storing millions of liters of water
- Stone channels and ceramic pipelines that transported water efficiently
- Small check dams to slow flash floods and increase groundwater recharge
- Landscape engineering that minimized water loss in one of the driest regions on Earth

The result?

A thriving city that supported thousands of people in an arid environment where survival depended on every drop of water.

- Why It Matters Today,
Today, many regions—including the Middle East—are facing:
- Rising temperatures
- Increasing water scarcity
- Rapid urbanization
- Growing demand for resilient infrastructure

Yet one of the most valuable lessons may come from engineers who lived over two millennia ago.

Their success wasn't built on high-tech equipment.

It was built on understanding natural systems.

Expert Perspective

As an Environmental Scientist and Environmental Engineer (PhD in Environmental Engineering & Energy) with over 15 years of experience in wastewater treatment, biofuel production, and biofertilizer systems, I believe future water security will require more than advanced treatment technologies. It will require combining:

- ✓ Traditional water wisdom
- ✓ Modern engineering
- ✓ Nature-based solutions
- ✓ Circular water management

The smartest cities of tomorrow may not simply invent new ideas—they may rediscover the best ones from the past.

Key Insight

The future of water security may already have been engineered 2,000 years ago.

Sometimes, the most innovative sustainability solutions are not new. They're forgotten.

Discussion

If you could bring one ancient engineering solution into every modern city, what would it be—and why?

Engineering the future by learning from nature and the wisdom of the past.

Dr. Sundara Narayana Patro, Educationist. on June 5, 2026: World Environment Day.

Wish you a very happy "World Environment Day". Let the Journey continue towards a Green Future.

"World Environment Day" is the international day observed on 5th June every year for the environment awareness promotion. Led by the United Nations Environment Programme (UNEP), and held annually since 1973, it has grown to be the largest global platform for environmental outreach. It is celebrated by millions of people across the world.

Every year a country hosts the global level celebration on a particular theme. India was the global host in 1977, 2011 and 2018.

The global host for 2026 is Baku in the Republic of Azerbaijan.

This year's official theme is "Inspired by Nature. For Climate. For Our Future" under the campaign message #NowForClimate.

The key focus areas for this year are to highlight the transition to a green economy, nature-based solutions, and the push to remain within the climate threshold. The 2026 campaign rallies the world around the urgency of combating climate change, promoting

initiatives like green hydrogen scaling and AI-optimized energy grids. Communities, schools, and organizations worldwide—including efforts across India—are focusing on ecosystem restoration, sustainable agriculture (such as millet inclusion), and eco-friendly lifestyle choices.

The world's temperature is reaching record highs and industrial emissions causing climate change on continents. The three planetary crises the planet Earth facing now are climate change, biodiversity loss and systemic pollution. This is an annual event that reflects the human ecological footprint and reminds us that we need to go beyond quick fixes and superficial solutions for the ecological issues that we face, and move towards a more comprehensive and structural approach, a shift towards circularity. The era of creating a resilient economy where industrial growth is intrinsically linked to the use of finite raw materials is the topic of much discussion in 2026 and there is a shift of focus directly towards advanced mechanical recycling frameworks.

"The greatest threat to our planet is the belief that someone else will save it." – Robert Swan.

Vanishing woods: Trees in French forests are dying prematurely, indicating climate-driven forest decline

Even ideal growing conditions, such as warm, wet springs, can increase the risk of trees dying, finds study

By Himanshu Nitnaware

Trees across French forests are dying prematurely over the past decade, signalling widespread climate-driven forest decline, according to a new study. The paper by the Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), published in Nature Communications, said there was a 1.5- to 4-fold increase in mortality rates among the nine most common tree species, including European beech, pedunculate oak, and Norway spruce.

The researchers reached these conclusions after analysing data of over 500,000 individual trees across 52 different species for the period 2015–2023 from the French National Forest Inventory (NFI).

Ecologically and economically important species such as *Fagus sylvatica*, *Quercus robur*, and *Picea abies* show steep increases. Many species showed a pronounced surge after 2018, highlighting the vulnerability of European forests to extreme drought events, while spatial patterns pointed to the compounding role of long-term regional warming and drying, the authors said.

Across all 52 species analysed by the scientists, nearly half (48 per cent) showed significant increase in mortality. "These trends span size classes and coincide with reduced growth, indicating they do not reflect demographic turnover but widespread climate-driven declines in forest health. Similar reports across Europe reinforce that these processes are continent-wide, consistent with evidence that ongoing warming and drying are eroding forest health," the study said.

The hotspots for this dieback were concentrated in northeastern France, particularly in the Jura, Vosges, and Grand Est regions. The study notes that these losses are not being offset by new growth or recruitment, indicating a widespread decline in forest health rather than a typical demographic shift.

Among the nine most common species, the temperature feature in almost 93 per cent of all models associated higher mortality risk with warmer anomalies during these seven years, the study stated.

While in 63 per cent of the models, the climatic water balance (CWB) feature associated higher mortality risk with drier anomalies, and in 34 per cent of models with wetter anomalies. When combining the temperature and CWB feature responses within each model, 62 per cent of models associated higher mortality risk with warmer-drier conditions and 31 per cent with warmer-wetter conditions.

"Such a strong association with warmer-drier conditions was expected, as these conditions are known to increase tree mortality, whereas the warmer-wetter response was surprising and suggests that even seemingly favourable anomalies may elevate mortality risk," the study said.

The scientists in a statement said that across Europe, there have been signs for about 20 years that more and more trees are dying prematurely. In some regions of the continent, the state of the forests is now even worse than it was in the 1980s, when air pollution caused serious damage to trees in selected regions.

Even positive growing conditions, such as warm, wet springs, can increase the risk of trees dying.

"On-average warmer winters and warmer spring minimum temperatures stood out as particularly frequent and influential drivers of increased mortality risk. Although these anomalies occur in different seasons, they point to related physiological and biotic stress pathways. Warmer winters shorten or disrupt dormancy, leading to insufficient chilling, desynchronised spring leaf-out, and reduced investment in frost protection,

which increases vulnerability to sudden cold spells,” it said.

The researchers noted that lower dormancy for trees may also demand to sustain higher metabolic activity during winter months, eventually depleting carbon reserves and potentially starving the trees.

Species such as *Fraxinus excelsior*, and *Castanea sativa* showed particularly high increases in the modelled additional mortality risk under warmer winter or warmer spring conditions.

This warming during winter dormancy and early spring can significantly increase mortality risks, long before the onset of summer stress.

Warmer spring minimum temperatures can also cause early bud break, increasing exposure to late frost, stretching growing seasons and further increasing chances of experiencing drought during growing seasons.

Collectively winter and spring warming exacerbate biotic pressures while milder cold-season conditions enable pests to survive, emerge earlier and breed rapidly.

Further, on-average warmer summer temperatures were less frequently identified than winter or spring anomalies yet exerted a comparable influence on mortality risk when present. Elevated summer temperatures intensify atmospheric water demand, contributing to “hotter” droughts”, a well-established driver of tree mortality globally and across Europe, the study observed. “The relatively low frequency of summer temperature features across models likely reflects that temperature-driven evaporative demand was already captured by the drought index, such that impacts are expressed through CWB features rather than temperature features. Nevertheless, when warmer summers coincided with drier summer conditions, modelled mortality risk increased even more, indicating that warmer summers may amplify drought stress, although they may also increase stress through increased respiratory carbon losses (increasing the risk of carbon starvation) or accelerated pest development (e.g., bark beetles produce more generation in warmer summers, compounding stress in already weakened trees and enabling infestation of healthy ones),” it added.

Species such as *Fagus sylvatica*, considered relatively drought-tolerant were noted to fail to recover from 2018 drought.

Contrary to drought stress, wetter spring conditions that are generally considered favourable because they promote growth at the start of the growing season did not hold true as studies indicated increased mortality in favourable and wet growing conditions.

“Consistent with these findings, our models frequently associated wetter spring anomalies with increased tree mortality risk, with effects within the range of warmer temperatures and drought-related stress,” the authors said.

Citing reasons, the authors said structural overshoot that occurs when favourable growth conditions drive excessive canopy growth, leaves trees more vulnerable to hydraulic failure during subsequent drought.

They said the plausible explanation supported with their findings at species level as taller trees were found disproportionately more sensitive during wetter springs.

This is consistent with empirical observations of higher evaporative demand and hydraulic risk in larger trees, they said.

“The additional evaporative demand imposed by an enlarged canopy reduces hydraulic safety margins during drought because a higher minimum conductance (i.e., water loss through inefficient stomatal closure or cuticular transpiration) pushes xylem water potentials closer to hydraulic failure thresholds,” they explained.



Forest in the south of France in autumn. Jerome Sirquet via/Stock

