Earthweek: Diary of a Changing World

Week ending Friday, April 11, 2025

By Steve Newman

'Thirstwaves'

Scientists have coined the new term "thirstwave" to describe prolonged periods of unusually high atmospheric demand for water, which can worsen drought impacts and threaten crops across the United States.

Research shows these events — driven by heat, wind, sun and low humidity — have become 17% more intense and 23% more frequent over the past 40 years.

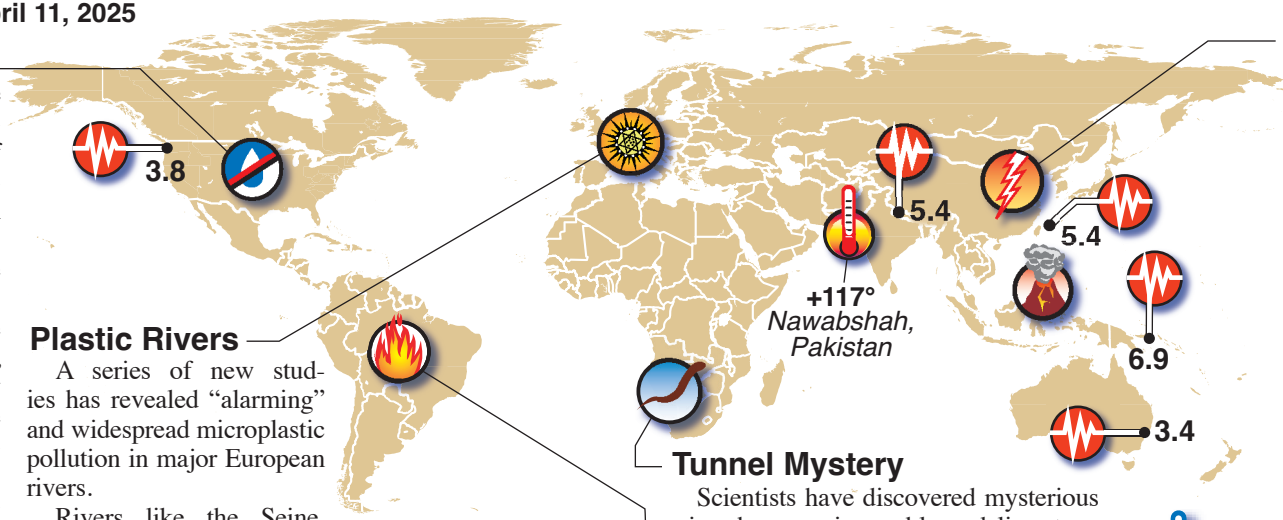
Unlike heat waves, thirstwaves involve how much moisture the atmosphere draws from plants, soil and water, despite temperature.

Researchers found they are now more likely to occur during the growing season and are spreading into areas that previously saw fewer of them, such as the Midwest and Northern Plains.

Earthquakes

A tsunami warning was briefly issued after a temblor struck just off Papua New Guinea's New Britain island.

• Earth movements were also felt in Australia's New South Wales state, northern Taiwan, western Nepal and western Washington state.



Plastic Rivers

A series of new studies has revealed "alarming" and widespread microplastic pollution in major European rivers.

Rivers like the Seine, Rhône and Thames were found to contain millions of plastic particles daily, including microfibers and tire fragments.

In fast-flowing stretches, such as in the Rhône, up to 3,000 particles per second were detected, posing a threat to aquatic life that ingests the invisible debris.

Scientists also discovered that nearly a quarter of these microplastics originated from raw plastic pellets used in manufacturing rather than from consumer waste.

Studies of sediment cores from the Rhône and Rhine revealed a steady buildup of plastic additives like phthalates and flame retardants since the early 20th century.

Amazon Recovery

Fires in the Brazilian Amazon fell nearly 70% in the first quarter of 2025 compared with the same period in 2024, according to new government data.

March alone saw a 71% decline in fire outbreaks year over year, though the number nearly doubled from February.

The drop comes as welcome news after 2024, when the rainforest endured its worst fire season in 17 years, with more than 140,000 reported fires.

That devastation contributed to the loss of nearly 45 million acres of Amazon vegetation — 58% of all land burned in Brazil last year.

Tunnel Mystery

Scientists have discovered mysterious micro-burrows in marble and limestone across Namibia, Oman and Saudi Arabia that appear to be biological in origin.

The tiny tunnels, about half a millimeter wide and up to an inch long, were found filled with calcium carbonate powder, possibly left by unknown microorganisms that burrowed through the rock for nutrients.

It's believed the structures are 1 to 2 million years old and may have formed during a wetter climate.

Scientists believe that tiny tunnels found in rocks from Africa to the Middle East were formed by unknown prehistoric creatures rather than through geological processes. Photo: Cees Passchier

Renewable Surge

Clean energy powered more than 40% of the world's electricity in 2024, the highest share since the 1940s, according to a new report by think tank Ember.

The rapid growth was led by solar power, which has been the fastest-growing electricity source for 20 years and now provides nearly 7% of global supply.

Despite this progress, global CO2 emissions hit a record high last year as electricity demand rose by 4%, fueled by extreme heat and growing use of technologies like air conditioning, data centers and electric vehicles.

China led in solar development, accounting for more than half of global growth. India's solar capacity doubled in just one year.

Eruption

A blast from Kanlaon volcano produced a rain of ash that blanketed several nearby villagers on the Philippine island of Negros.

The hourlong eruption spewed a column of ash and vapor 2.4 miles into the atmosphere but caused no significant damage or injuries.