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GLOBAL INSIGHTS

> "Even as a child, I was fascinated by the fact that on the surface, everything's calm, while beneath the surface, there's a vast and enchanting world."
>
> — Tijana Veličković, Freshwater Biologist

It's February 2024

Here are this month's insights in 757 words (a 4-minute read).

The state of our water, Part I

From clouds down to roots, from springs to wetlands, and from rivers out to the sea, the journey of fresh water is a carefully balanced cycle that's sustained our planet for millennia. But today's challenges threaten that balance.

This month we're covering the state of our water in 2024—the challenges our freshwater ecosystems face, the vital roles they serve for planet and people, and the solutions we can bring to bear. Let's dive in.

Freshwater flows and connections in Wells, Maine. © Julio Aguilar/TNC Photo Contest 2023

Water connects us all—but many of those connections have been lost.

This may be obvious, but it's worth emphasizing—without water, there's no life on Earth.

Freshwater ecosystems provide food, sustain an outsized portion of the world's biodiversity and help us be more resilient to a changing climate. Fresh water also determines how life on land is distributed, while connecting coastal and marine life that moves between fresh and salty waters (like salmon and eels).

And yet freshwater ecosystems around the world are in peril.

We've over-extracted, overfished and over-engineered our freshwater ecosystems. Deforestation, fragmentation from dams, unsustainable farming and fishing, and unchecked pollution are adding to the threats (not to mention accelerating climate change).

The world has already lost nearly **one-third** of its freshwater ecosystems since 1970, and monitored freshwater populations have declined by an average of **83%**—faster than in any other biome. More than **two-thirds** of wetlands have been lost since 1900 and **two-thirds** of the world's longest rivers have lost their connections back to the sea.

Climate change puts even more strain on this system. **By next year, drought will affect 75% of Earth's population.** And while droughts may dry up water supplies in one region, flooding will bring runoff pollution and unsafe living conditions in another. And as the planet warms, so, too, will the water—putting even more freshwater species at risk. Yet dammed and disconnected rivers mean those species won't have pathways for migrating to cooler waters.

Dive Deeper

Learn more about the threats to freshwater systems around the world—and what TNC is doing to address them.

Get Informed

Caroline Springs in Texas produces 3,000 to 5,000 gallons of fresh space water—*per minute*. © Erika Nortemann/TNC

Connected challenges, connected solutions

These challenges are deeply interconnected. That makes them trickier to solve—but it also means that their solutions could have multiple benefits.

And fortunately, we have growing momentum to tackle these challenges. Targets set by the Paris Climate Accords, the Convention on Biological Diversity and the U.N. Sustainable Development Goals hold the world accountable to significant progress by the end of the decade.

This confluence of global ambition represents a real opportunity for collective action—and we mean collective. In the water, in boardrooms and in legislative halls; with Indigenous leaders and local partners; and alongside global financial institutions.

Explore Solutions

In our next issue, we'll explore on-the-ground, in-the-water projects that are bringing big benefits for our freshwater systems—and the people who depend on them. Until then, stay hydrated.

ROAD TO 2030

By 2030, TNC aims to conserve a million kilometers of river systems and 30 million hectares of lakes and wetlands by engaging in collaborative partnerships, promoting innovative solutions and supporting policies that improve the quality and amount of water available in freshwater ecosystems and to communities. Learn more about all our 2030 Goals.

Paddling down the Kansas River. © Dan Videtich

WE'RE ON IT: SCIENCE THAT MATTERS FOR YOUR WORLD

A how-to for natural climate solutions

A TNC-led paper outlines five principles to help leaders deliver effective climate solutions with the power of nature.

Soils on our side?

Global soils may now be emitting more carbon dioxide than they're storing.

Better together

Researchers say coupling wind and solar farms with actual farms is an efficient use of land producing both energy and food.

30x30?

Not so fast. A new study found that more than 80% of the land area needed to meet biodiversity goals and support human well-being is unprotected.

ALSO ON OUR MINDS

Going with the flow

A just-launched, TNC-backed partnership is working across six countries to put local communities at the heart of river conservation efforts in the Western Balkans—home to some of Europe's last free-flowing waters.

The mercury soars

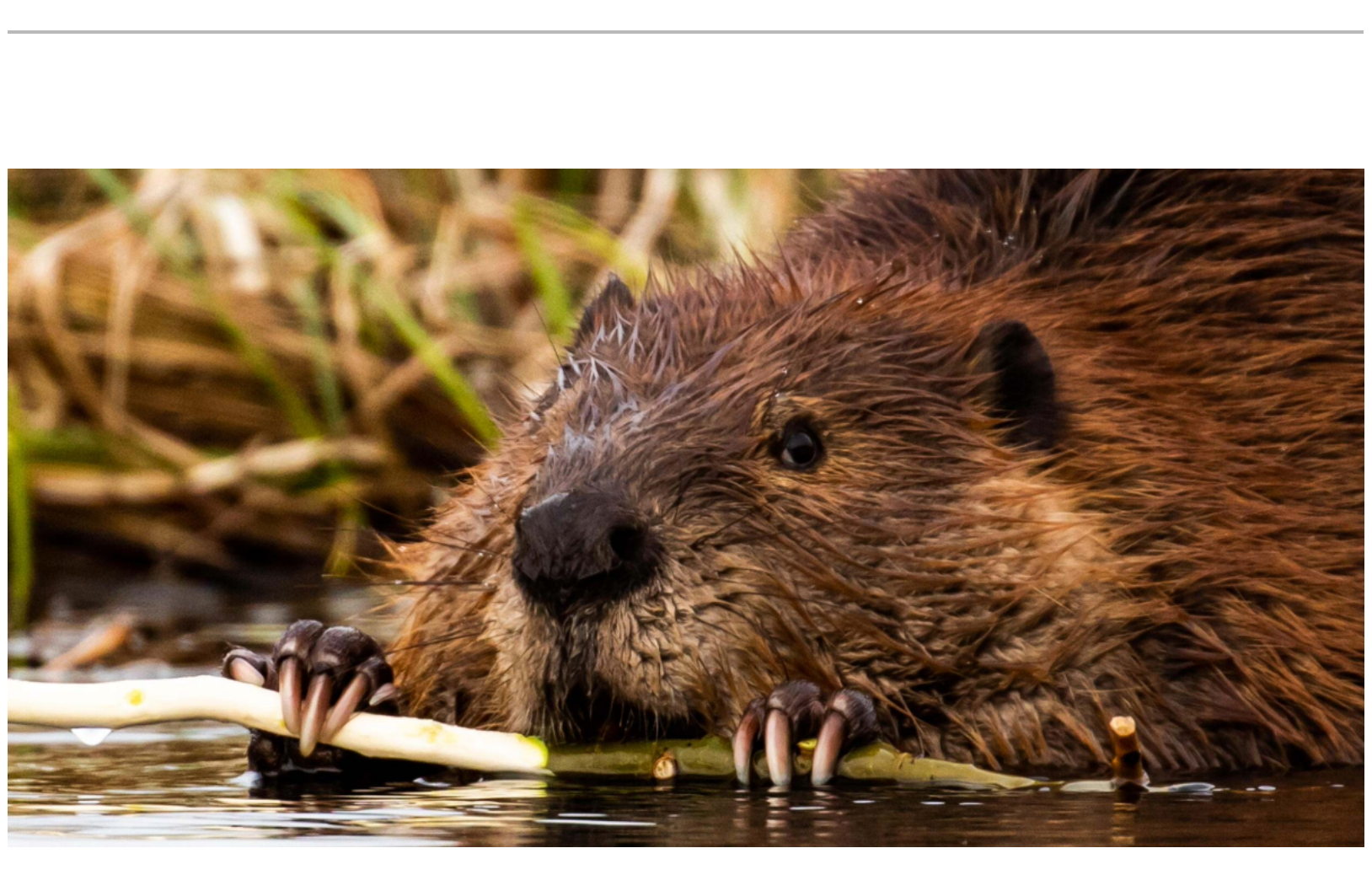
2023 was officially the hottest year on record, brushing up against the 1.5 degree threshold.

Mining the sea

Norway passed a controversial bill to allow commercial deep-sea mining for renewable energy minerals.

Ranchers and conservationists unite in Colombia

How the country established its newest national park by befriending the neighbors.



A beaver enjoys its breakfast in Calgary, Canada. © Jean Wallace/TNC Photo Contest 2022

...and one more thing

Famously—and perhaps tiredly—known as "nature's engineers," the mighty-yet-unassuming, tree-munching beaver has a new, equally important, anthropomorphized profession. Firefighter.

By chomping down trees to dam up streams, these compulsive stick-stackers make their own ecosystems. Their structures slow spring run-off, spread water across thirsty landscapes and create wetlands—no blueprint needed.

Now, new research suggests that proprietary, beaver-made wetlands play a crucial role in firefighting and fire prevention. By keeping water on land for longer, wetlands raise the water table and keep grasses from drying into tinder. Wetlands also create natural fuel breaks, giving firefighters a better chance for containment.

Two professions for the price of none? By waddling around and mowing down trees with their iron-enforced teeth, beavers are putting our desk jobs and college degrees (and student loans) to shame.

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