

## Forests: an unrecognized force for adaptation to climate change

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In early August 2021, scientist Houria Djoudi watched as wildfires blazed through her home country Algeria, turning the forests and landscapes of her childhood into ash. Trees that sustained the local people went up in flames across 100,000 acres, taking with them livestock, farms, homes and lives. Meanwhile, the findings of a new report from the Intergovernmental Panel on Climate Change (IPCC) were sweeping through headlines, answering any questions as to why these fires were worse than ever before with its main finding: that humans have already warmed the planet 1.1 degrees Celsius. “With every cedar or old oak burning, it is your identity, this is your culture, your history burning,” recalled Djoudi, a senior scientist at the Center for International Forestry Research, at a session at the Global Landscapes Forum alongside COP26 in Glasgow.

The session, “Leveraging the power of forests and trees for climate resilience,” emphasized that while climate change must continue to be mitigated, the rates of temperature rise and climate disasters are such that adaptation to new environmental realities must come into stronger and quicker focus. And from protecting land health to providing wood for fuel, homes and incomes, trees are among the best adaptation tools that we have.

“Much of the change is irreversible. It’s done, and it’s baked in, and we are already feeling it,” said Amy Duchelle, senior forestry officer and team leader of climate change and resilience at FAO, who moderated the session. “In the best IPCC scenarios, we will exceed 1.5 (degrees Celsius of global warming), but this can be brought down with deep cuts in fossil fuel emissions and protection and restoration of natural carbon sinks.”

“Without trees, we’re not going to survive in this region. It is just like that,” said Djoudi.

### The forgotten piece

Forests arguably received more attention at COP26 than at any UN Climate Change Summit before. The two-week event began with more than 120 world leaders signing a pact to end deforestation by 2030, rising to reach more than 140 leaders by the time the summit closed. Halting deforestation would reduce emissions by 11 percent.

More broadly, nature in totality was core to the summit’s negotiations, thanks in large part to the rise of the concept of ‘nature-based solutions’ to climate change – and forests have been the darling of such proposed solutions thus far.

Forests have risen so high in climate change agendas, said Mette Wilkie, who directs the forestry division of the Food and Agriculture Organization of the UN (FAO), in part because of the prominent REDD+ mechanism, a UN program implemented in more than 60 countries to help reduce emissions through various means of forest management.

As such, forests and trees have solidified their role as powerful climate change mitigators, but their power to aid adaptation is still largely overlooked – in programs, policies and weight given to adaptation overall. When looking at countries’ Nationally Determined Contributions to the Paris Agreement on climate change, “adaptation and resilience tend to be forgotten,” she said.

Moving money where it needs to go

Among the most prominent of climate ‘gaps’ – the gap between climate pledges and actions, between current and zero emissions, between targeted and projected temperature rise – is the gap in actual and needed finance, which is particularly gaping for adaptation finance.

A recent report from the UN Environment Programme (UNEP) stated that proper adaptation measures require USD 250 to 500 billion per year until 2050 – and that’s just for developing countries. (For reference, developed countries have still, after 12 years, not made good on their pledge to give developing countries an annual USD 100 billion of general climate finance.)

It is only natural that Mahamat Assouyouli, senior climate change specialist at the Adaptation Fund, says that international public adaptation finance’s 50 percent increase in the last three years is only a “small hope,” as it still accounts for less than 10 percent of climate finance in total, as reported by

UNEP adaptation Gap report 2021. And, this minimal amount of adaptation finance often focuses on immediate needs determined at the national-level rather than long-term needs identified by local communities and vulnerable countries.

“Unless we address the adaptation finance gap, developing countries will still have issues like how to address food security, how to make sure livelihoods are not threatened by climate impacts,” said Assouyouiti.

A large driver of deforestation, particularly in developing countries with carbon-rich tropical forests, is poverty, said Wilkie, which further highlights the need for long-term financing rather than short-term funding channeled through temporary projects. Ninety percent of all wood cut in Africa is for fuel, she cited, which extends beyond rural to urban populations too, who lack other alternatives.

Planting fast-growing trees to be used for fuel and restoring deforested areas with sustainable agriculture are a couple of the ways that basic human needs can be met through adaptive measures. “We need to move from talking about planting trees to talking about growing them,” she said.

### **Knowledge power**



In 2017, massive landslides in Freetown, Sierra Leone, triggered by heavy rainfall on deforested hills left more than 1,100 people dead or missing, making it the country’s worst recorded natural disaster. It was by any measure a tragedy, but it forced local communities to face the reality of their landscape and make changes to boost its resiliency to increasingly intense weather.

Five years since the landslides, Freetonians continue to learn the benefits of protecting their remaining forests and restoring forest cover and biodiversity, in ways that also bring benefits to their livelihoods, such as by using agroforestry to reduce erosion and enhance soil fertility on their farms. “It’s not just about the trees themselves,” said Michael Balinga, who leads a USAID program team that combats wildlife trafficking in West Africa. “This is an argument for tree-based approaches to funding.”

Sumarni Laman, a young Indigenous Dayak from Indonesia who leads the Heartlands Project to raise awareness about deforestation, also recalled experiences witnessing natural disasters, when forest fires swept through her province of Kalimantan in 2015 and again in 2019, as well as the worst flooding in 40 years between 2020 and 2021.

But changes in her landscape are no longer restricted to the natural world, she said, but also come in daily life, as more and more young people move to cities for education and job opportunities and lose the environmental knowledge passed down, often orally, from their families and ancestors. “That’s the start of the problem,” she said. “There’s now a gap between the older and younger

generations. It's crucial we make a bridge to reduce this gap. Indigenous knowledge and wisdom is critical."

Indeed, one of the most positive outcomes of COP26 was a pledge of USD 1.7 billion for Indigenous and local communities, who Wilkie described as, "invaluable agents against climate change."

According to Djoudi, though, "the knowledge we had in the past was sufficient to keep us in a certain balance with the ecosystem," but now it is not enough. She urged the building of databases and knowledge hubs, so regions experiencing the same climate change challenges in different parts of the world can share their adaptation methods in real time.

"We are in a state of urgency as our forests are burning every year," she said. "We need to accelerate learning processes and knowledge sharing and to combine scientific and local knowledge."

The next step in Djoudi's home landscape is to restore what was lost in the fires, through replanting trees and reforesting the burnt landscapes. "This region is an old cultural landscape where people and communities have a long tradition of stewardship to the land," she said.

"We need to make sure that restoration efforts will be built on this local knowledge to prioritize locally adapted practices that help not only climate change mitigation and adaptation but also biodiversity, human wellbeing and create opportunities for young people."