

Study shows climate value of earth's intact forests

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Credit: Wikipedia.

New research published today in *Nature Ecology & Evolution* demonstrates the extraordinary value of Earth's remaining intact forests for addressing climate change and protecting wildlife, critical watersheds, indigenous cultures, and human health. Yet the global policy and science communities do not differentiate among the relative values of different types of forest landscapes—which range from highly intact

ones to those which are heavily logged, fragmented, burnt, drained and/or over-hunted—due in part to the lack of a uniform way of measuring their quality.

With over 80 percent of forests already degraded by human and industrial activities, today's findings underscore the immediate need for international policies to secure remaining intact forests—including establishing new protected areas, securing the land rights of indigenous peoples, regulating industry and hunting, and targeting restoration efforts and public finance. Absent specific strategies like these, current global targets addressing [climate change](#), poverty, and biodiversity may fall short, including the United Nations' Sustainable Development Goals to sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss.

"As vital carbon sinks and habitats for millions of people and imperilled wildlife, it is well known that [forest](#) protection is essential for any environmental solution—yet not all forests are equal," said Professor James Watson of WCS and the University of Queensland. "Forest conservation must be prioritized based on their relative values—and Earth's remaining intact forests are the crown jewels, ones that global climate and biodiversity policies must now emphasize."

According to the study, the encroachment of human and industrial activity can have catastrophic effects. Once opened up, formerly intact forests become increasingly susceptible to natural pressures such as disease, fires, and erosion; they become less resilient to man-made climate change, and they become more accessible to human use, driving a spiral of decline.

Some key benefits of intact forests include:

- Climate change: Intact forests currently absorb around 25 percent

of carbon emissions from all human sources - damaging them will leave far more carbon dioxide in the air to warm the climate.

- **Water availability:** Intact [tropical forests](#) ensure the stability of local and regional weather, generating more rain than cleared forests and thereby reducing the risk of drought.
- **Biodiversity:** Intact forests have higher numbers of forest dependent species and have higher functional and genetic diversity.
- **Indigenous culture:** Intact forests enable many indigenous groups to sustain their traditional cultures and livelihoods. In turn these peoples are often staunch defenders of their ancestral lands.
- **Human health:** Forest degradation and loss compromise the supply of medically-beneficial species that millions of people rely on; additionally, forest degradation drives the spread of many infectious diseases by bringing humans and disease vectors into close contact.

Said Dr Tom Evans, WCS Director of Forest Conservation and Climate and joint lead author of the study: "Even if all global targets to halt deforestation were met, humanity might be left with only degraded, damaged forests, in need of costly and sometimes unfeasible restoration, open to a cascade of further threats and perhaps lacking the resilience needed to weather the stresses of climate change. This is a huge gamble to take, for conservation, for climate change, and for some of the most vulnerable human communities on the planet. Our research shows that a remedy is indeed possible, but we need to act whilst there are still intact forests to save."

Retaining the integrity of intact forests must be a central component of global and national environmental strategies, alongside current efforts to stabilize deforestation frontiers and stimulate restoration. The researchers recommend several policy interventions to fill this gap, including:

- Creating new standard metrics of intactness that can be used to raise awareness of the importance of forest quality and to help target action towards the most intact places.
- Embedding the intact forests concept in the UN Framework Convention on Climate and the Intergovernmental Panel on Climate Change's Special Reports, to help ensure the Paris Agreement's [climate](#) commitments include intact forest protections.
- Supporting global and local forest policies that limit road expansion; regulate hunting, extraction, and development; invest in restoration and protected areas; and help secure indigenous communities' land tenure rights.
- Supporting efforts that both restore and make degraded forests more productive while also conserving at-risk intact systems—rather than opening intact forests to activity.

More information: James E. M. Watson et al, The exceptional value of intact forest ecosystems, *Nature Ecology & Evolution* (2018). [DOI: 10.1038/s41559-018-0490-x](#)

Provided by Wildlife Conservation Society

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