

Four reasons why restoring nature is the most important endeavor of our time

October 6 2020, by Jake M. Robinson



Credit: Gozha Net/Unsplash, FAL

Ecosystem degradation is a global phenomenon. It is expected that by 2050, [95%](#) of Earth's land will be degraded. A whopping [24 billion tons](#) of soil have already been eroded by unsustainable agricultural practices. This land degradation is the [leading cause](#) of losses of ecosystem functions such as nutrient cycling and climate regulation. These functions sustain life on Earth.

It is recognized that this constitutes a crisis. At a UN summit this September, more than 70 [world leaders](#)—bar those from the US, China or Brazil—signed the [Leaders' Pledge for Nature](#), promising to clamp down on pollution, eliminate the dumping of plastic waste and strengthen environmental agreements worldwide. This is a good step, but as UN Deputy Secretary-General Amina Mohammed [noted](#) at the event, to "rescue the planet's fragile tapestry of life, we need vastly more ambition and action."

Next year will mark the start of the [UN Decade on Ecosystem Restoration](#), aimed at addressing the enormous task of restoring degraded habitats across the planet. Against a backdrop of ecological crisis, this declaration is a [chance to revive](#) our life support system—the natural world. The UN has highlighted several [important actions](#) to empower a global restoration movement, such as investment in restoration and research, celebrating leadership, shifting behaviors and building up the next generation.

4.7 million hectares of forests are lost every year.

Ecosystems support all life on Earth. Protecting them can help end poverty, combat the climate crisis & prevent a mass extinction.

More from [@UNEP](#): <https://t.co/UDP3ciWLHh>
[#GenerationRestoration](#) [#ForNature](#)
pic.twitter.com/VgWgyhCJUK

— UNESCO (@UNESCO) [October 4, 2020](#)

There is no doubt this is an ambitious plan. But it must be translated into action. Such pledges can actually work against action by creating the illusion that something is being done. There is often a gap between

rhetoric and reality. Indeed, the world's nations have failed to fully achieve any of the [20 global biodiversity targets](#) set by the UN a decade ago. Humanity is at a crossroads. What we decide to do now will affect many future generations to come.

New research is constantly demonstrating the urgency of the situation. One recent study focusing on the consequences of [indiscriminate deforestation](#), for example, suggests we have a less than 10% probability of surviving the next 20-40 years without facing a catastrophic collapse if we remain on our current trajectory.

Here, I summarize four key reasons why [ecological restoration](#) is the most important endeavor of our time. If we are to reverse the ecological crisis that we are currently facing, and protect biodiversity for itself and for future generations, we must turn pledges into immediate action and restore our [ecosystems](#) on a global level.

1. Healthy soils sustain life on Earth

Our food systems depend on healthy soils. The revival of plants, crops and forests depends on the revival of degraded soils. This depends on the restoration of the complex relationships between the soil, the plants and a plethora of microbes, including fungi, bacteria and viruses.

Healthy soils thrive with these microscopic lifeforms: they are essential for plant growth and protection against diseases. Soil degradation not only threatens the intrinsic value of the ecosystems, but also our ability to produce healthy and sustainable foods. And protecting and reviving our soils and their microbial friends is key not only for humans, but for the diverse yet [declining](#) plant and animal species that depend on them.

2. Our relationship with nature is failing

Ecosystem degradation is contributing to our failing relationship with nature: people's accepted view of ecological conditions are continually lowered, a phenomenon known as [shifting baseline syndrome](#).



Fungi provide essential ecosystem services, yet are also on the decline. Credit: [Jesse Dodds/Unsplash](#), [FAL](#)

Restoring our emotional connection to nature (known as "nature connectedness") is therefore important. People who feel more connected to nature are [more likely](#) to engage with actions such as wildlife conservation, recycling, and supporting environmental organizations. These are essential to reverse the ecological and climate crises we face. Importantly, nature connectedness can [increase over time](#) through

frequent nature engagement.

Simple actions such as acknowledging the good things you see in nature each day, whether it be a robin's dawn chorus, or the vibrant colors of wildflowers, can do this. Check out these pathways to achieving a closer [connection with nature](#).

3. Indigenous cultures and knowledge is being lost

Indigenous culture is intimately connected to the land. The erosion of ecosystems can therefore result in the erosion of culture—including knowledge and [language](#). This knowledge is often hyper-localized and has evolved over thousands of years. It is vital to the health of many ecosystems and the [livelihoods of communities](#) across the globe.

Ecological restoration can help to sustain the rich diversity of human cultures on our planet by supporting relationships between humans and the environment that are mutually advantageous. Protecting the rights and livelihoods of indigenous peoples and supporting indigenous research leadership has an important role to play in this process. This includes dismantling the view that traditional ecological knowledge is simply a data source that can be extracted.

Ecological restoration should ideally be viewed as reciprocal: a mutually beneficial relationship. [Reciprocity](#) is the basis for relationships in many [indigenous cultures](#), and will be fundamental to long-term, successful restoration.

4. Human health is dependent on ecosystem health

The restoration of ecosystems is intrinsically linked to the [restoration](#) of human health. The COVID-19 pandemic, which has so far caused over a

million deaths worldwide, is a poignant reminder of how ecosystem degradation can contribute to the emergence and spread of [novel pathogens](#). To combat these emerging global conditions and protect the lives of future generations, we need to protect and restore our habitats and biodiversity.

In addition, biodiversity loss could be making us sick. Restoring environmental microbiomes (the diverse networks of microbes in a given environment) through [revegetation](#) may have an important impact on our immune systems. My [research](#) explores the relationship between the environment, the microbiome and human health. Through [landscape design and restoration](#), we may be able to help restore microbial relationships, and as a result, our health and wellbeing.

As Robin Wall Kimmerer, professor of environmental and forest biology, eloquently articulated in her book [Braiding Sweetgrass](#): "As we work to heal the earth, the earth heals us."

Let's make the next decade the ecologically transformative movement that our planet so desperately needs.

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