



Restore the Earth

New York City, USA 28 September 2019

Global Landscapes Forum

The Global Landscapes Forum (GLF) is the world's largest knowledge-led platform on integrated land use, dedicated to achieving the Sustainable Development Goals and Paris Climate Agreement. The Forum takes a holistic approach to create sustainable landscapes that are productive, prosperous, equitable and resilient and considers five cohesive themes of food and livelihood initiatives, landscape restoration, rights, finance and measuring progress. It is led by the Center for International Forestry Research (CIFOR), in collaboration with its co-founders UN Environment and the World Bank and Charter Members.

Charter Members: CIRAD, CIFOR, Climate Focus, Conservation International, Ecoagriculture Partners, EFI, Evergreen Agriculture, FSC, GEF, GIZ, IPMG, CIAT, ICIMOD, IFOAM - Organics International, INBAR, IUFRO, Rainforest Alliance, Rare, RRI, SAN, UN Environment, Wageningen Centre for Development Innovation, part of Wageningen Research, World Agroforestry, WRI, WWF Germany, Youth in Landscapes Initiative, World Bank Group

Funding partners





Federal Ministry for Economic Cooperation and Development



A t the close of the UN Secretary-General's Climate Action Summit and of Climate Week in New York City in September 2019, the Global Landscapes Forum (GLF) convened its New York event, Restore the Earth. This event provided a key opportunity to bring together key actors and movements to help build the momentum needed for the UN Decade on Ecosystem Restoration, which begins in 2021 and continues to 2030. The Decade was conceived as a crucial opportunity to massively scale up the restoration of degraded and destroyed ecosystems, and as a powerful measure to fight the climate crisis and enhance food security, water supplies and biodiversity.

The GLF New York event was convened to engage a large diversity of actors challenged with considering the spectrum of global ecosystems, addressing the main challenges and identifying viable strategies and enabling conditions for large-scale ecosystem restoration.

Restoration is certainly not a novel idea; although restoration ecology is a relatively new discipline. Individuals and groups have been practicing ecosystem restoration for thousands of years. However, in the face of a human-induced climate crisis, contemporary restoration efforts are more urgently needed than ever before.

In this context, the UN Decade on Ecosystem Restoration was adopted and aims to:

- Showcase successful government-led and private initiatives to halt ecosystem degradation, restore those ecosystems that have already been degraded
- Enhance knowledge exchange on what works and why (policy, economics and biophysical aspects), and how to implement restoration at scale
- Connect initiatives working in the same landscape, region, or topic, to increase efficiency and impact
- Create links between ecosystem restoration opportunities and initiatives with businesses interested in building a solid portfolio of sustainable production and impact investment
- Bring a wider spectrum of actors on board, especially from sectors that are not traditionally involved, by demonstrating the importance of ecosystem restoration to conservation as well as generation of social and economic benefits.

The case for ecosystem restoration is clear, and many countries have already committed to this work through initiatives such as the Bonn Challenge, AFR100, Initiative 20x20 and the New York Declaration on Forests. Meanwhile, natural climate solutions, of which restoration is one, have the capacity to provide up to 37 percent of the climate mitigation needed to achieve the 2 percent goal of the Paris climate agreement¹.

Despite some notable successes – the U.S., for example, has already exceeded its pledge under the Bonn Challenge to bring 15 million hectares into restoration by 2020² – many restoration efforts at the national level have thus far failed to deliver on ambitious commitments. There are multiple reasons for this, including persistent pressures to develop landscapes and seascapes for economic growth, lack of capacity to implement restoration effectively, a shortfall in funding for operationalization, illegal activity, and insufficient political will at different levels of governance.

Degraded ecosystems are found across the planet and in all shapes and sizes – from urban wetlands conversion in China to overgrazed rangelands in the Sahel, and from rainforest degradation in the Amazon to peatland conversion in Indonesia. The extent of degradation highlights both the significance of the challenge and the magnitude of the opportunity for restoration. In fact, the World Resources Institute (WRI) has estimated that more than 2 billion hectares of land are suitable for restoration.

Ecosystem restoration is not the responsibility of politicians and policymakers alone. Instead, making progress during the UN Decade of Ecosystem Restoration will require support from across all sections of society; and restoration efforts will benefit from the awareness, know-how and action of communities around the globe. The world cannot afford any more delays: now is the time to act.

My grandmother does not have a Ph.D. in land restoration, but she is now being recognized by the Intergovernmental Panel on Climate Change because she is an expert on her land. So why can't we move from saying, 'We need to be experts on this,' and go to those who have already been restoring for centuries?"



Hindou Oumaro Ibrahim Coordinator of the Indigenous Women and Peoples Association of Chad

¹ Griscom et al. 2017 (PNAS)

² Bonn Barometer on Info FLR

Key Messages

Indigenous peoples and communities are central to restoring and conserving ecosystems, and their traditional knowledge should be combined with the latest science in restoration.

Ecosystem restoration must go hand-in-hand with reducing carbon.

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Food-system change, including financing, and sustainable agriculture is key to landscape sustainability.

The youth movement is growing, and the voices of youth must be responded to with clear actions to secure a more sustainable future.

Participants Global Landscapes Forum New York 2019.

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Background

On 28 September, closing Climate Week NYC 2019 and the UN Secretary-General's Climate Action Summit, Global Landscapes Forum (GLF) convened more than 400 stakeholders at UN headquarters for the first public consultation on the UN Decade on Ecosystem Restoration. Complementing the GLF attendance numbers, a further 131 million people were reached via news media and over 25 million people on social media.

The Decade was adopted by the UN General Assembly in March 2019 and beginning in 2021, will bring together research, traditional knowledge, finance, activism and consumer markets while heightening public awareness around the economic, social and environmental benefits of restoring degraded landscapes. Effective restoration is a proven measure to mitigate and adapt to climate change as well as help achieve multiple targets outlined in the Sustainable Development Goals (SDGs); specifically those related to human wellbeing (SDGs 1 and 3 plus others), food and water security (SDGs 2 and 6), and biodiversity (SDGs 14 and 15).

We need to be a downpour. We need to be a human flood over this next decade coming together in a peaceful way to wash away much of the old world and make room for what must now come next."



Bill McKibben Author and founder of 350.org We need to take action. Let's do it. Let's establish a committee with different sectors, regions and ages where we define an operational route for the decade on restoration, because we are running out of time."



Lina Pohl

FAO Representative in Mexico, Former El Salvador Environment Minister and key force behind the declaration of the UN Decade

The GLF consultation event brought together policymakers, scientists, finance and business leaders, conservationists, farmers, youth, Indigenous peoples, musicians, filmmakers, explorers and others. Sessions focused on degraded landscapes in various ecosystems: agriculture, forests, mountains, drylands, rangelands and oceans. Discussions highlighted important knowledge gaps, recent developments and potential solutions to restore these ecosystems.

Thematic sessions supporting the vision of the Decade, included creating a 2030 vision, the restoration agenda, how to fulfill restoration promises and commitments, healthy diets, and collaboration to scale-up restoration. Each session began with an inspirational talk or film, followed by a technical discussion by leading experts.

The Case for Ecosystem Restoration

Ecosystem restoration is about so much more than planting trees. According to the Global Partnership on Forest and Landscape Restoration (GPFLR), the 2 billion hectares of degraded landscapes – an area the size of South America – earmarked for restoration, is having a negative impact on the lives of at least 3.2 billion people and is responsible for a 10 percent loss of global GDP. This is before considering the further degradation of oceans and coral reefs – which make up 75 percent of our planet.

While a report from the Intergovernmental Panel on Climate Change (IPCC) in 2019 warned of the necessity to limit global warming to 1.5 degrees Celsius above pre-industrial levels by 2030, a subsequent report from the same body released in August of 2019 stated that warming in land surface air had already averaged 1.53 degrees Celsius above those pre-industrial levels.

The urgency of these numbers resounded throughout Climate Week, with leaders and stakeholders repeatedly calling the 2020s the "climate decade." For the first time, delegates at the UN Climate Action Summit focused on the potential of nature-based solutions to climate change, issuing a manifesto on these solutions. Restoration of degraded ecosystems was named as one of the most powerful naturebased solutions, bringing back ecosystems' biodiversity, strengthening resilience, and supporting livelihoods.

Not only does ecosystem restoration mitigate climate change through carbon capture and sequestration, it also brings enormous economic returns. For example, fulfilling the Bonn Challenge target to restore 350 million hectares of degraded lands by 2030 is estimated to cost approximately USD 800 billion but realize up to USD 9 trillion in net benefits and could significantly contribute towards alleviating rural poverty through job creation, more productive and sustainable agricultural systems, secure tenure, and increased market access for smallholders.

Image: Contrast of the second seco

Building on Key Messages

1. Indigenous peoples and communities are central to restoring and conserving ecosystems, and their traditional knowledge should be combined with the latest science in restoration.

At the GLF event, members of Indigenous communities from as far apart as Canada and Chad echoed the importance of valuing not only their rights to land but also their profound knowledge of that land. As the original caretakers of the world's ecosystems, Indigenous and local communities have deep connections and generational knowledge of nature in their territories and are acutely attuned to the alterations within their ecosystems due to climate change. Despite accounting for only 5 percent of the global population, Indigenous peoples are thought to influence the management of approximately 28 percent of global land cover³. The importance of their influence, knowledge and experience cannot be overstated. Thus, they should be increasingly consulted in scientific, policy-making and restoration processes, from IPCC reports to plantation development. This should happen not only out of respect for their rights but also for the particular value of the knowledge which often, they alone hold.

As climate change and human activity rapidly alter the natural states of ecosystems, traditional methods of caring for, and living off, ecosystems cannot at times keep pace with the rate of change. Speakers at the GLF event, therefore, also emphasized the importance of matching traditional knowledge with current scientific research and tools. The ArcGIS mapping and analytics platform, for example, can show which species are surviving where in Chad's degraded drylands. But for greater impact, that technology should be paired with local observations and historical knowledge about the long-term health of the relevant species.

Another example heard during the event came from Kalimantan in Indonesian Borneo. There, peatlands - whose vast carbon storage capacities depend directly on the wetness of the peat - have been drained and dried to make space for largescale agricultural plantations. Traditionally, shifting cultivation methods for clearing peatlands for agriculture have worked effectively at a small scale for local communities, but the new conditions have escalated land-burning into headline-making fire and haze crises, signaling that improved fire management and peatland restoration strategies are urgently required. Scientists are now successfully researching how woody plants can boost water retention and soil health in degraded peatlands, restoring the soil while producing biomass that locals can sell on the market for bioenergy. Community consultations that actively engage local people have been crucial in this process for trading knowledge and determining which biomass species thrive where.

Evidently, sustainable ecosystem restoration efforts must ensure both ecological integrity and the well-being of humans. Interdisciplinary and crosssectoral thinking is important to ensure buy-in from all relevant actors. Along the same lines, cautious is required when identifying restoration sides and defining access and benefit-sharing rights, to avoid any further marginalization or displacement of Indigenous or local communities.

³ Garnett et al. 2018 (Nature Sustainability)



G I can't help but think about how many countless resources and precious time could have been saved had the voices of Indigenous elders been heard when they themselves were child advocates pleading to be seen and understood."



Janene Yazzie

Co-convener, Indigenous Peoples Major Group for Sustainable Development

2. Ecosystem restoration must go hand-in-hand with reducing carbon.

While restoring degraded ecosystems is crucial to securing a sustainable future, the deleterious effects of climate change cannot be thwarted without aggressive reductions in fossil fuel emissions. Renewable energy, clean transportation and 'greener' supply chains must be rapidly accelerated to meet the internationally agreed climate and sustainable development deadline of 2030.

Sustainable finance has the potential to be a major catalyst for transformational change by investing in new technologies and projects that seem promising in concept, but lack the necessary funds for implementation. As Inger Andersen, UN Environment Programme Executive Director, has pointed out, restoration efforts require a substantial initial investment of approximately USD 800 billion. To put that into perspective, the total amount is equivalent to only two years of global fossil fuel subsidies. This example highlights the importance of rethinking subsidies and taxation, in order to develop financial incentives for initiatives that create social and environmental value capable of mitigating **(**"USD 800 billion are needed to restore dangerous climate change.

Many veteran environmentalists, including GLF event opening speaker Bill McKibben, founder of 350.org, have high hopes for solar energy, a renewable resource that much of the developing world has in abundance yet is lacking the tools needed to convert it into usable forms. More investment in solar energy infrastructure and technology could put rural communities on the grid, aiding their sustainable development and improving local livelihoods.

Decarbonizing technologies and improving supply chains to become more sustainable pose one of the greatest opportunities for private investment. However, these are extraordinarily complex endeavors with effects on lands, lives and rights, and potential outcomes must be carefully considered. For example, the real cost of batteries for electric cars – which hold promise for reducing fossil fuel dependence - can be measured in the destructive effects of mining lithium necessary to make those batteries. Documentary filmmaker Taylor Rees told the GLF event of his experiences filming in the Andean Atacama region where supply chain innovation is urgently needed because current mining practices are severely harming local landscapes. That, in turn, is making it nearimpossible for Indigenous communities to continue earning their livelihoods from their traditional lands.

While attention is often focused on reducing investor risk in projects, much more thought needs to be given to climate change solutions and to ensuring that the effects on communities and landscapes are to the benefit of all.

3. Food-system change, including financing, and sustainable agriculture, are key to landscape sustainability.

Exemplifying the GLF motto that 'it's all connected', the New York event hosted a number of sessions examining land systems that will impact, or be impacted by, restoration efforts. One such example is the food production system. It is widely

ecosystems. This may sound like a lot, but it really isn't. ... it is only two years' worth of fossil fuel subsidies. So, there is an opportunity to shift funds around."



Inger Andersen UN Environment Programme Executive Director



If we don't eat red meat, what we use to replace it is critically important. The biggest reduction in coronary heart disease – the number one cause of death in the world – is when we use plant-based proteins to replace red meat. Even replacing red meat with poultry and nuts gives some benefit."



Walter Willett Professor, Harvard T.H. Chan School of Public Health

considered that feeding a global population reaching 10 billion by 2050 will require an increase in global food production of between 50 and 70 percent, leading to further conversion of natural ecosystems and increased use of agro-chemicals. Already, one-third of the Earth's land surface is covered by agroecosystems.

Perspectives given from farmers, nutritionists, a young chef and land management experts at the GLF event maintained that the future of food and agriculture depends on striking a balance between personal and planetary health, and the various interests along food supply chains. Ultimately, this must result in more sustainable value chains for food and agricultural production.

Harvard professor **Walter Willett**, one of the world's leading nutritionists and co-commissioner of 2018's headline-making **EAT-Lancet report**, encouraged a shift to diets that are at least half composed of fruits and vegetables. Not only does this reduce greenhouse gas emissions through decreased demand for meat, it is proven to reduce strain on healthcare systems by lowering risks of heart disease and type 2 diabetes. A further solution to combatting the rising global demand for meat was provided by Impossible Foods, which produces a soy-based meat substitute responsible for 90 percent less greenhouse gas emissions than conventional meat, and requires significantly less land to produce. The brand's sales have grown fivefold since the beginning of 2019.

Incentivizing farmers to plant in a sustainable manner that takes account of soil health, biodiversity and water in food production – a practice known as regenerative farming – was discussed by Chris Newman, cofounder of permaculture-focused **Sylvanaqua Farms**. More support from private finance is needed to ensure fair pay for farmers, incentivize future generations to learn how to farm, and incorporate Indigenous knowledge into modern farming practices.

Currently, only 1 percent of the USD 1 million spent per minute on agricultural subsidies benefits the environment, the GLF event heard. Companies growing our food are, therefore, extremely important in terms of shifting towards more sustainable practices. However, those companies often are too distant and disconnected from the landscapes and the people affected by their operations.

The scariest thing about agriculture is the sheer smallness of the number of people who know how to do it and the fact that the skills are not being transferred. Right now, we have an exodus and a big brain drain of farmers leaving the land."



Chris Newman Co-founder, Sylvanaqua Farms



When we strike, and when we protest, and when we make our voices heard, what we do is we fracture the system. Our political systems aren't built to handle these problems. Our system needs to change."



Alexandria Villaseñor Co-founder, U.S. Youth Climate Strike and founder of Earth Uprising

Labeling as part of a trusted data reporting system for assessing and visualizing company performance offers an important ingredient to the systemic transitions needed. Financial systems can also play a critical role in this transition by offering trillions, rather than billions, of more patient and people-centered capital that works in support of local jobs for local people, rather than satisfying shareholder interests alone. In addition to innovative public-private approaches to finance, impact investors, philanthropy and carbon credit models offer different avenues for bringing private sector investors into the game.

The Evergreen Alliance officially launched its Evergreening the Earth campaign at the GLF event. The campaign aims to sequester 20 billion tonnes of carbon dioxide from the atmosphere by 2050 through improved smallholder farming methods in the developing world. Methods include agricultural intensification, regenerative farming and agroforestry. The Alliance believes that sustainable changes made to food production locally can feed a growing population while also restoring degraded landscapes.

4. The youth movement is growing and the voices of youth must be responded to with clear actions to secure a more sustainable future.

The global restoration agenda requires urgent action near-term and the consequences of those actions will have long-term implications. In recognition of this, the global youth movement on climate and environmental issues has galvanized in recent years and is increasingly recognized as a positive force for change. The GLF has consistently mainstreamed youth engagement within its agenda and this event continued and escalated this trend. Challenging the traditional narrative of top-down leadership, these youth beckoned the audience to support them in their efforts – to imagine life as a child without running water, to be conscious of purchases, to download an app that makes treeplanting as easy as pressing a few buttons, and to put aside competing political and business agendas to unite in the fight against climate change.

The GLF conference began with a young Canadian activist, Autumn Peltier, delivering an emotional address about the dire state of the world's water and the necessity for restoration. As Chief Water Commissioner for the Anishinabek First Nation in Ontario, Canada, the 15-year old is at once an advocate for clean water security and for Indigenous rights.

While youth empowerment has been a core component of the GLF since its inception, the global youth movement around climate change is capturing the gaze of high-level leaders and decision-makers. It's also raising awareness of the power of young people, and the necessity of listening to - rather than merely hearing - their calls for a sustainable future and ideas on how to create one. At the GLF event, Peltier was joined by other leading youth activists including Filipino award-winning chef and sustainable agriculture advocate Louise Mabulo; Felix Finkbeiner, founder of Plant-for-the-Planet with a mission to plant 1 trillion trees; Alexandria Villaseñor, co-organizer of U.S. Youth Climate Strike and founder of youth activist organization Earth Uprising; and Jolene Marie Cholock-Rotinsulu, who was named Miss Indonesia 2019 in large part for her environmental conservation efforts.

From cleaning waterways to ensuring the future of chocolate to provoking political action, youth around the world are choosing to lead significant efforts to create the solutions they know their futures depend on.





Autumn Peltier Chief Water Commissioner, Anishinabek Nation

Communications and Outreach





The GLF Digital Edition was streamed live to **4,050** people from **138** countries.

Outcome Statement

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Conclusion

The Global Landscapes Forum event in New York in September 2019 was convened to engage a diversity of actors in reviewing a broad spectrum of global ecosystems, and identifying viable strategies for large-scale ecosystem restoration. It has become very clear that the time for ecosystem restoration has arrived, to be built upon broad agreement concerning the essential role of healthy, productive and resilient ecosystems in achieving all 17 Sustainable Development Goals and responding to the climate crisis. Indeed, the UN Decade for Ecosystem Restoration (2021-2030) could streamline the many existing initiatives, mobilize financial and political support for restoration, and accelerate action.

An essential element of this work involves Indigenous peoples and communities, who are custodians of many of the world's most important landscapes. Without secure rights to these lands, people have little incentive to protect and conserve them – further placing their livelihoods and cultural heritage at risk of economic exploitation. Furthermore, the importance of Indigenous knowledge cannot be overstated. When paired with modern science, new solutions can emerge that empower local and Indigenous communities to create value while conserving their landscapes.

With privilege and opportunity also comes responsibility. The science of climate change is clear, as is the increasing voice of the world's youth. We need to listen to them. We need to act."



Frank Mars Board member, Mars Incorporated Being deeply courageous is what we need right now. Courageous enough to let go of a mistake that you might have built your whole life around. Courageous enough to face the hardest of complexities."



Taylor Rees Mountain Climber, Filmmaker and Photojournalist

Ecosystem restoration alone cannot solve the climate crisis. We must decarbonize and significantly reduce global emissions. Innovations in the global food production system are also urgently required, including an increased focus on distribution and consumption patterns. Such transformational shifts to current systems, norms and practices will, at least initially, require significant financial investment in food companies.

These changes represent both opportunities and risks to private investors. While much thought is given to how to reduce investor risk and make investments in sustainable landscapes and ecosystem restoration more attractive, more thought must be given to ensuring that the impact of climate change solutions does not negatively affect Indigenous and local communities. We must also rethink macro-economic and fiscal tools, so they support climate solutions and decarbonization.

Refusing to wait for slow political leadership to change, youth today are proving to be some of the fastest-moving and most passionate actors on climate and restoration. Their stake in the UN Decade should be supported in full, through inclusion of youth voices in decision-making processes, financing for young entrepreneurs, and overall efforts to achieve the scale of change that youth are demanding for their future.



Cover photo: Alexandria Villaseñor, Founder, US Youth Climate Strike and Earth Uprising speaks at GLF New York 2019. All photos by Justin Davey/GLF, unless otherwise credited.

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THE GLOBAL PARTNERSHIP ON FOREST AND LANDSCAPE RESTORATION



Initiative

20x20



GREEN





