



15 LIFE ON LAND



MODERATORS

Rosina Bierbaum, Tom Lovejoy, and John Robinson

November 2020

The 17 Rooms initiative is convened by the Brookings Institution and The Rockefeller Foundation to stimulate near-term cooperative actions to advance the 17 Sustainable Development Goals (SDGs). This document summarizes insights and actions that emerged from the working group discussions in Room 15 during the 17 Rooms 2020 flagship process. The text was independently prepared by the Room's Moderators and participants, in response to the common question asked of all Rooms in 2020: "In light of recent crises linked to COVID-19, systemic racism, and other urgent challenges, what are 1 to 3 actionable priorities over the coming 12-18 months that address near term needs while also making a decisive contribution to protecting or advancing your Goal's 2030 results? What actions can members of your Room take to advance these priorities?" Corresponding documents prepared by all the other Rooms are available [here](#), alongside a synthesis report prepared by the 17 Rooms secretariat.

Chapeau: Ecological integrity¹ is central to SDG 15, contributes to many other SDGs, and highlights the importance of nature-based solutions in restoring human and ecological health². There are many opportunities to sustainably manage and restore natural landscapes, achieve Land Degradation Neutrality (LDN), restore degraded ecosystems, and deliver co-benefits, including biodiversity conservation, combating climate change, and maintaining human well-being. Loss of natural ecosystems and ecosystem degradation contribute to many pervasive and costly societal problems; prevention is less costly than responding to impacts such as zoonotic outbreaks, coastal flooding, and invasive species³. 2021 offers unique opportunities to address ecological integrity and the role of nature-based solutions through three treaty negotiations, the Green Recovery efforts to respond to COVID-19, and increasing concerns of the business and economic community (as identified by the World Economic Forum (WEF)).⁴

This is a unique moment in time, where the importance of ecological integrity, human health, and safe and equitable communities converge. As the world “builds back better”, nature-based solutions must be at the core to build resilience of people and ecosystems, while delivering a major contribution to climate stabilization.

The Risk (why we have to meet the SDG 15 targets):

- SDG 15 is one of the “foundational” SDGs, the Earth-Life Supporting System, which underpins progress towards a range of SDG targets. It is central to achieving the 2030 Agenda for Sustainable Development. If achieving the SDG 15 targets are at risk, the rest of the SDGs are vulnerable.
- The scale and pace of **biodiversity loss** prompted the WEF in their Global Risk Report to identify it as one of the **top 5 risks** over the next 10 years.
- Biodiversity loss (including both the loss of diversity and the loss of ecosystem function and services) is tied to increased **health risks** (emergence of zoonotic and infectious diseases⁵), **climate risks** (failure to adapt and mitigate climate change), **risks of natural disasters** (loss of wetland, mangrove and coral reef buffering), **food risks** (disruption of food stocks and commodity supply chains), to name a few.
- The significance of SDG 15 rests on its emphasis on:
 - **Protecting the integrity of natural ecosystems.** The importance of retaining the intactness of natural ecosystems is underscored in the emerging consensus of the post-2020 Global Biodiversity Framework.⁶
 - **Halting land degradation.** Achieving Land Degradation Neutrality, which involves designing socio-ecological interventions that seek to achieve no net loss of ecosystem function and services, while establishing governance and management systems that deliver on other SDG targets.
 - **Reversing land degradation/ecological restoration.**⁷

¹ Beyer et al. 2019. Substantial losses in ecoregion intactness highlight urgency of globally coordinated action. *Conservation Letters*. 13:e12692. <https://doi.org/10.1111/conl.12692> ; Grantham et al. In press. Modifications of forests by people means only 40% of remaining forests have high ecosystem integrity. *Nature Communications*.

² The CBD Zero Draft has as one of its five goals: “No net loss by 2030 in the area and integrity of freshwater, marine and terrestrial ecosystems, and increases of at least [%] by 2050, ensuring ecosystem resilience”. Maintaining ecological integrity would help address the global loss of biodiversity (SDG target 15.5). Maintaining ecological integrity contributes both to the storage of carbon and to its sequestration: Intact forests, for instance, store more carbon than logged, degraded, or planted forests, continue to function as major net carbon sinks. Additionally, intact ecosystems improve resilience to shocks such as fire, droughts, floods, pests, and invasives, thus offering adaptation advantages. Maintaining ecological integrity, therefore, is an effective “Nature-based solution” to the challenges of climate change, and can contribute to meeting SDG 13 Climate Action. (Watson, J.E.M. et al. (2018). The exceptional value of intact forest ecosystems. *Nature Ecology and Evolution* 2, 599-601; Mokany et al. (2019). Reconciling global priorities for conserving biodiversity habitat. *PNAS*. Doi/10.1073/pnas.1918373117)

³ Dobson et al. 2020. Ecology and economics for pandemic prevention. *Science* 3, 379-381

⁴ WEF (World Economic Forum). (2020). Global Risk Report 2020. Retrieved from <https://www.weforum.org/reports/the-global-risks-report-2020>. Also see <https://www.weforum.org/reports/covid-19-risks-outlook-a-preliminary-mapping-and-its-implications>

and <https://www.weforum.org/agenda/2020/01/top-global-risks-report-climate-change-cyberattacks-economic-political/>

⁵ Given the global COVID-19 pandemic, emphasizing “One Health”, of nature, people, and livestock, is an important part of the communications message. <https://www.cdc.gov/onehealth/basics/index.html>. Recognizing interconnection between people, animals, plants, and their shared environment.

⁶ IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services). (2019). Global Assessment Report on Biodiversity and Ecosystem Services. Retrieved from <https://ipbes.net/global-assessment>.

⁷ Aichi Target 15 calls for restoration of at least 15 percent of degraded ecosystems. UN General Assembly declares 2021-2030 the UN Decade for Ecosystem Restoration. Building on initiatives like the Bonn Challenge, which targets the restoration of 350 million hectares of degraded ecosystems by 2030.

The Opportunities (for policy engagement provided by three upcoming CoPs):

- Convention on Biological Diversity (CBD), CoP 15. Inclusion of ecosystem integrity as one of the headline goals for the new Global Biodiversity Framework. The Global Environment Facility (GEF) is the implementing mechanism and aims to maintain the global environmental commons and provide global environmental benefits.
- **UN Framework Convention on Climate Change (UNFCCC) CoP 26.** Structuring and revising the NDCs to accommodate nature-based solutions and align efforts to mitigate climate change, promote resilience and adaptation, and conserve biodiversity.
- **UN Convention to Combat Desertification (UNCCD), CoP 15.** The Land Degradation Neutrality (LDN) initiative, in particular, focuses on maintaining ecological integrity.
- In addition, we are entering the **UN Decade for Ecosystem Restoration 2021-2030**, and the European Union is launching the Green New Deal in Europe.

The Challenge of COVID-19: The loss of ecosystem integrity, ecosystem degradation, and the illegal harvesting and trafficking of wild species, all a focus of SDG 15, are the ecological and social conditions that predispose the emergence of new zoonotic diseases. COVID-19 paradoxically creates an opportunity, challenging us to “build back better”, reset our relationship with nature, and deliver on the targets of SDG 15.

Designing for Success (framed around avoiding risks as identified in the WEF, including the risks of zoonotic diseases, and creating the enabling conditions and opportunities to be able to achieve other SDG targets⁸):

- **Direct investing in nature.**
 - Maintaining ecological integrity through the establishment and management of protected and conserved areas⁹, including areas managed by Indigenous people and local communities (promoting IPLC management)¹⁰
 - Valuing and investing in protecting ecosystem services and natural capital. Fostering and implementing natural capital accounting¹¹
 - Avoiding clearance, degradation, and fragmentation of ecosystems. Implementing spatial land use planning that explicitly includes biodiversity values
 - Avoiding deforestation¹²
 - Controlling illegal wildlife trade, especially in urban markets¹³
 - Restoring and rehabilitating degraded lands and accommodating multiple functions of landscapes to ensure supply of multiple ecosystem services⁶
 - Improving the management of production forests and farms to improve sustainable production of food, fiber, and fuel, while storing more carbon in biomass and soils, and as the basis for vibrant and equitable rural economies.
- **Direct investing in jobs.** Jobs in ecological restoration, green infrastructure, and improved management of forests and farms provide both employment and ecological benefits. Such jobs are much more cost-effective than many other forms of investment.¹⁴ (Something akin to the Civilian Conservation Corps. Aboriginal Rangers, Green Army). Government-supported work programs could target vulnerable communities and youth, both groups hit hard by the pandemic.

⁸ Including SDG 1, No Poverty, SDG 2, Zero Hunger, SDG 6, Clean Water and Sanitation, SDG 7, Affordable and Clean Energy, SDG 12, Responsible Consumption and Production, SDG 13, Climate Action.

⁹ Globally, the costs of supporting the protected area portfolio has been estimated at \$76 billion/year ([McCarthy et al.](#)). Actual investments are perhaps 20% of that.

¹⁰ Garnett, S.T., Burgess, N.D., Fa, J.E., Fernández-Llamazares, Á., Molnár, Z., Robinson, C.J., Watson, J.E., Zander, K.K., Austin, B., Brondizio, E.S. and Collier, N.F., 2018. A spatial overview of the global importance of Indigenous lands for conservation. *Nature Sustainability*, 1(7), p.369.

¹¹ More than half of the world’s total GDP – \$44 trillion – is moderately or highly dependent on nature and its services. (World Economic Forum (2020). *Nature Risk Rising*. Retrieved from <https://www.weforum.org/reports/nature-risk-rising-why-the-crisis-engulfing-nature-matters-for-business-and-the-economy>).

¹² Removing subsidies that encourage deforestation, restricting private land clearing and supporting IPLC management would cost \$1.5B/year. Direct forest protection payments would cost \$9.5B/year. (Dobson A. P. et al. (2020) see above)

¹³ Monitoring wildlife trade, reducing spillovers, early detection and control, ending wild meat trade in China. Annual cost \$22 – 30 billion (Dobson A.P. et al. (2020), see above).

¹⁴ McElwee, P., et al. (2020). Ensuring a Post-COVID Economic Agenda Tackles Global Biodiversity Loss. *One Earth*. <https://doi.org/10.1016/j.oneear.2020.09.011>

- **Structuring other financial investments to avoid negative impacts on SDG 15.**
 - Removing perverse and negative financial subsidies. Environmentally harmful subsidies include those that support emission-intensive agriculture¹⁵ and fossil fuel extraction¹⁶.
 - Ensuring that investments in infrastructure both provide development benefits and minimize environmental impacts (E.g., the “Belt and Road” is looking at a huge investment in infrastructure; there is also great interest in infrastructure investments in stimulus packages). “Doing things right” could promote a focus on climate-resilient, green infrastructure.
- **Structuring financial investment to build biodiversity and ecosystem conservation into the entire financial system**, including considering biodiversity/ecosystem risk in loans, tele coupled global trade, increase in financialization.
- **Structuring financial interventions associated with bailout/stimulus funds**
 - For countries assuming sovereign debt associated with the economic challenge and COVID-19, linking the cost of that debt to protecting a country’s biodiversity¹⁷ Nature Performance Bonds.
 - For corporate entities receiving stimulus and bailout funding, linkage with the need to address biodiversity/ecosystem risk.

Actions:

NEAR-TERM Actions:

- CBD. Ensure a coherent set of goals and action targets that motivate all countries to protect their most intact ecosystems, improve the overall integrity of all ecosystems and allow the full participation and involvement of indigenous peoples.
- UNFCCC. Ensure full representation of nature-based solutions to climate change, especially those that secure or enhance ecological integrity in all NDCs, with enhanced international financing when needed. This is relevant for both mitigation and adaptation.
- UNCCD. LDN target setting program that 124 countries already embraced, incorporating the Great Green Wall Initiative, the 3-S initiative (Sustainability, Stability, Security) with a focus on youth and environmental security. Implement the UNCCD 2018-2030 framework with a commitment to achieve LDN in order to restore productivity of degraded land, reduce the impact of drought on vulnerable populations and safeguard livelihoods.
- Private Sector. Provide guidance for positive action by the private sector, for both corporate action and investments beyond their footprint that protect, restore, and improve management of ecosystems. This should be done in a way that links biodiversity climate, human health, rights, equity, etc. without distracting from the urgent need to reduce corporate fossil fuel emissions.
- COVID-19 recovery packages must address the risks to biodiversity, ecosystem functioning and services, and access to nature. Promote the idea that 30 percent of the multilateral and bilateral funds targeted for sustainable development be directly aimed at biodiversity conservation, and the remaining 70 percent ‘do no harm’ to natural ecosystems.
- GEF-7 \$4.1 B replenishment (2018-2022) is effectively implemented to better protect the future of the planet and human well-being, to help safeguard the world’s forests, land, water, climate, build green cities, protect threatened wildlife, and advance nature-based solutions.

LONG-TERM Actions:

(these may include traditional “change the incentives”, improve valuation, PES, etc.; candidate actions)

- Environmental and Natural Capital Accounting. All countries put an accounting system in place that establishes realistic environmental targets to account for externalities and value “avoided” environmental degradation.
- Biodiversity Management. All countries have access to reliable and up-to-date information for the sustainable use and effective management of biodiversity. Mapping nature to create a global biodiversity framework.

¹⁵ Of the \$700 billion/year, some \$220 billion/year goes into supporting the production of emission-intensive goods, such as livestock, soy, and palm oils, which in turn support natural land conversion and only about 15% are aimed at public goods, supporting services, including ecological services, that create the enabling conditions for the agricultural sector. The Food and Land Use Coalition (2019). Growing better: Ten critical transitions to transform food and land use. Retrieved from <https://www.foodandlandusecoalition.org/global-report/>

¹⁶ “Fossil fuel subsidies, which generate both end carbon emissions and water and land pollution at sites of extraction, processing, and disposal, range between US\$300 and \$680 billion per year globally and result in estimated global damages of at least \$4 trillion in externalities...” (McElwee, P., et al. (2020), see above)

¹⁷ Finance for Biodiversity Initiative (“F4B”). Mava Foundation

- Ecological Integrity is mainstreamed in all national land use and development planning.
- The concept of Land Degradation Neutrality is expanded and adapted to foster avoiding loss of natural capital, ecosystem services, and improving human well-being.
- Private Sector. The sector partners with governments, and new biosphere entrepreneurs emerge that add value to the biosphere and improve human well-being, while safeguarding natural ecosystems, and use ecosystem services so that returns to nature are neutral or net positive. Access to information on biodiversity similar to the Carbon Disclosure Project would help companies, investors, and consumers make environmentally appropriate decisions.
- Adopt a carbon tax, especially to help protect tropical forests.¹⁸

¹⁸ [Barbier et al. 2020](#). Nature 578, 213.