

IRRECOVERABLE CARBON IN THE POST-2020 GBF

Policy Brief—November 2021

The post-2020 Global Biodiversity Framework (GBF), while delayed because of the COVID-19 pandemic, remains as important as ever to set the global trajectory for the efforts needed to reach a nature-positive world by 2030. There is much that needs to be done between now and COP 15 Part 2 in 2022.

This policy brief summarizes new scientific developments that allow us to identify the places providing the highest levels of ecosystem services at global and national levels. If we want to sustain nature’s many contributions to humans, then **these places must be prioritized for conservation, sustainable use and/or restoration in the GBF.**

Prioritize the places that provide Nature’s Contributions to People

Nature provides a range of goods and services to people, such as supporting economic growth, sustaining livelihoods, and providing the basis for food, water, and climate security. These are collectively described here as ecosystem services or “Nature’s Contributions to People” (NCP).¹ We recommend that Goal B and targets 8-11 of the GBF be restructured so that they explicitly call for the conservation, sustainable use, and/or restoration of the **places most important for delivering nature’s contribution to people.**

Knowing where to take action is key to this approach. Recent scientific advances have produced maps showing the global distribution of ecosystems providing services² related to water quality regulation (nitrogen, sediment), food provision (pollination, grazing, riverine and marine fish), timber and fuel production, flood regulation and coastal risk reduction, and access to marine and terrestrial areas for recreation and gathering of resources. These maps allow us to know exactly where the places are that are most important for delivering ecosystem services. This information can then guide choices for how different resources are managed to ensure that these places remain healthy—both at global and national scales.

Maps showing the global distribution of irrecoverable carbon, the carbon in ecosystems that must be maintained to meet global climate goals, were recently published in the November 2021 issue of *Nature Sustainability*.³ The maps are available for decision makers to explore at the [Conservation Resilience Atlas](https://irrecoverable.resilienceatlas.org/).⁴

These maps can be used in conjunction with existing data, allowing decision makers to prioritize the conservation, sustainable use and/or restoration of areas based on several

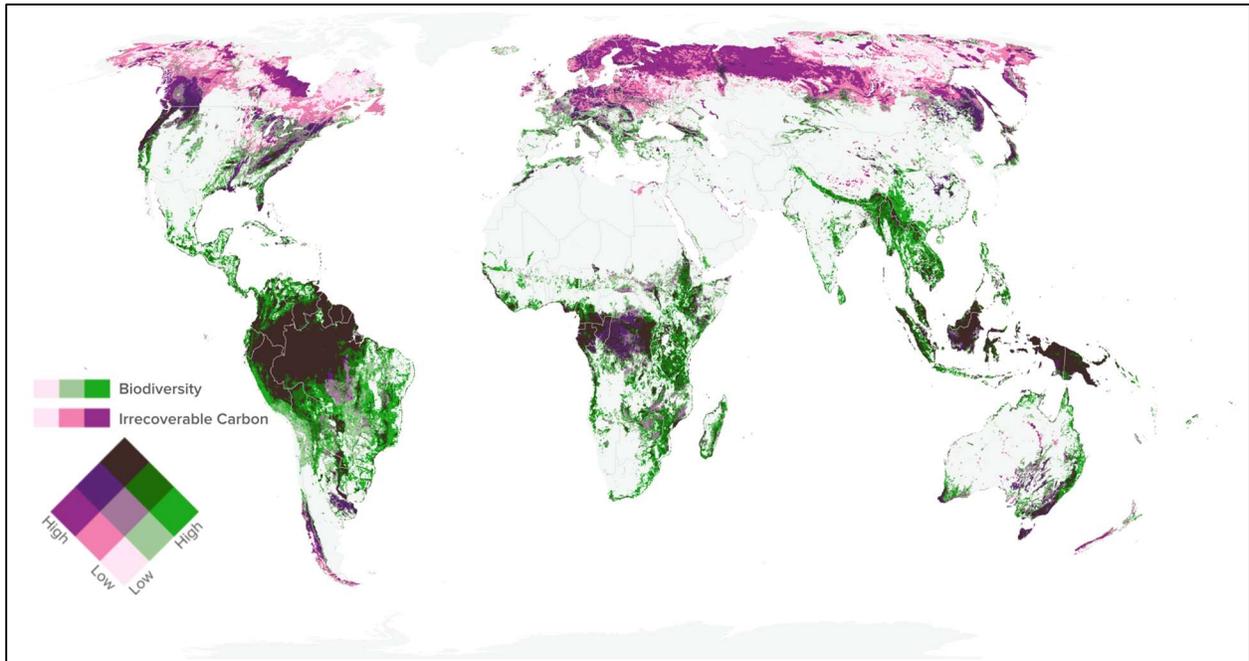
¹ Nature’s contributions to people include a range of benefits. While recognizing there are some differences in interpretation, we use the terms “nature’s contributions to people and “ecosystem services” synonymously in this paper.

² Chaplin-Kramer, et al., Nature’s Critical Natural Assets. *In peer review.*

³ Noon et al. (2021) Mapping the irrecoverable carbon in Earth’s ecosystems. Goldstein et al. 2020. Protecting the irrecoverable carbon in Earth’s ecosystems. *Nature Climate Change*. <https://www.nature.com/articles/s41558-020-0738-8>.

⁴ Full URL available here: <https://irrecoverable.resilienceatlas.org/>

sets of criteria. For example, the map shown below overlays the global distribution of irrecoverable carbon with biodiversity data on habitat ranges of all known birds, mammals, amphibians, and reptiles, collected by hundreds of scientists over decades. In this case, 75% of irrecoverable carbon and habitat for 87% of threatened species can be found in **less than 14% of Earth's land**, with key overlap in the tropics.



Global Irrecoverable Carbon & Biodiversity

Source: Noon et al. 2021 for Irrecoverable Carbon. BirdLife and IUCN Red List spatial data for birds, mammals, amphibians, and reptiles.

Using this Science to Inform GBF Targets

Goal B and targets 8-11 focus on ensuring that nature's contribution to people – food, water, and climate – are maintained. Recognizing that financial and human resources are limited, it is necessary to prioritize certain places for action. The places identified in the maps described above are the places most important for delivering nature's contribution to people, and should be prioritized for action. Therefore, we recommend that Goal B and targets 8-11 be restructured so that they explicitly call for the conservation, sustainable use, and/or restoration of these places that are most important.

The following table summarizes CI's text recommendations based on this approach.

Suggested Text for the Global Biodiversity Framework

Goal/Target	Current Text (CBD/WG2020/3/3)	Suggested Text
Goal B	Nature's contributions to people are valued, maintained or enhanced through conservation and sustainable use supporting the global development agenda for the benefit of all.	Nature's contributions to people are valued, maintained or enhanced through conservation and sustainable use, <i>and/or restoration of the places most important for delivering these contributions</i> , supporting the global development agenda for the benefit of all.
2030 Milestone B.1	Nature and its contributions to people are fully accounted and inform all relevant public and private decisions.	<i>All financial flows are aligned with the Convention through accurate valuation of nature and its contributions to people</i> are fully accounted and <i>in national accounts and financial disclosures</i> , to inform all relevant public and private decisions <i>and support the conservation, sustainable use and/or restoration of the places providing key ecosystem services.</i>
2030 Milestone B.2	The long-term sustainability of all categories of nature's contributions to people is ensured, with those currently in decline restored, contributing to each of the relevant Sustainable Development Goals.	The long-term sustainability of all categories of nature's contributions to people is ensured, with those currently in decline restored <i>and places most important for providing these contributions are conserved, sustainably used, and/or restored</i> , contributing to each of the relevant Sustainable Development Goals.
Target 8	Minimize the impact of climate change on biodiversity, contribute to mitigation and adaptation through ecosystem based approaches, contributing at least 10 GtCO ₂ e per year to global mitigation efforts, and ensure that all mitigation and adaptation efforts avoid negative impacts on biodiversity.	Minimize the impact of climate change on biodiversity, contribute to mitigation and adaptation through ecosystem based approaches <i>and through the conservation, sustainable use, and/or restoration of the places most important for delivering these contributions</i> , contributing at least 10 GtCO ₂ e per year to global mitigation efforts, and ensure that all mitigation and adaptation efforts avoid negative impacts on biodiversity.
Target 9	Ensure benefits, including nutrition, food security, medicines, and livelihoods for people especially for the most vulnerable through sustainable management of wild terrestrial, freshwater and marine species and protecting customary sustainable use by indigenous peoples and local communities.	Ensure benefits, including nutrition, food security, medicines, and livelihoods for people especially for the most vulnerable through <i>the conservation</i> , sustainable management, <i>and/or restoration of the places most important for delivering these contributions</i> of wild terrestrial, freshwater and marine species and protecting customary sustainable use by Indigenous peoples and local communities.
Target 10	Ensure all areas under agriculture, aquaculture and forestry are managed sustainably, in particular through the conservation and sustainable use of biodiversity, increasing the productivity and resilience of these production systems.	Ensure all areas under agriculture, aquaculture and forestry are managed sustainably, in particular through the conservation, and sustainable use, <i>and/or restoration of the places most important for providing ecosystem services</i> , increasing the productivity and resilience of these production systems.
Target 11	Maintain and enhance nature's contributions to regulation of air quality, quality and quantity of water, and protection from hazards and extreme events for all people.	Maintain and enhance nature's contributions to regulation of air quality, quality and quantity of water, and protection from hazards and extreme events for all people <i>through the conservation, sustainable use, and/or restoration of the places most important for delivering these contributions.</i>

Conservation International's comprehensive policy recommendations on the other goals and targets in the post-2020 GBF will be posted [here](#).

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