

Creating Economic Incentives for the Conservation of High Integrity Tropical Forests¹

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The Wildlife Conservation Society (WCS) proposes the creation of a novel instrument to incentivize conservation of high integrity tropical forests on the basis of the essential climate services those forests provide. The incentives are based on a new market-based, tradable certificate: the High Integrity Forest Removals (HIFOR) unit. This instrument complements but does not compete with existing financing instruments that credit reductions in climate-heating emissions from tropical deforestation (e.g. REDD+).

High Integrity Forests Why do they merit attention?

High integrity tropical forests are essential for a stable climate. A recent study showed that without forests' CO₂ removals the world around 0.4°C hotter than it is today, placing us already well above the goal of the Paris Agreement to keep average global warming below 1.5°C degrees above pre-industrial levels by the end of the century.² High integrity tropical forests are estimated to remove around 3.6 billion tons of CO₂ per year (net) from the atmosphere and store this carbon in their trunks, branches, and roots.³ These annual removals represent a critical climate cooling service that is largely overlooked or taken for granted. In addition, high integrity tropical forests play an essential role in regulating climate by exchanging moisture and energy between the land and the atmosphere, leading to a further cooling effect.⁴

However, high integrity forests have declined by 12% between 2000 and 2020 and are increasingly vulnerable to fragmentation, encroachment, and degradation (Figure 1). Between 2000 and 2013 alone, damage to high integrity forests embedded an increase of approximately 7.7 billion tons of CO₂ to the atmosphere, nearly 1.5 times the annual emissions of the United States.⁵ If fragmentation, encroachment, and degradation continue to advance the climatic and ecological services that high integrity forests provide will erode further.

The HIFOR initiative focuses on high integrity tropical forests. The world's remaining intact forests are found mainly in the North American Boreal, North Eurasian Boreal, Southeast Asian Archipelago, the Congo Basin, and the Amazon Basin, regions that present varying patterns of ecological integrity (Figure). In high integrity tropical forests, the climate mitigation impact of forest protection is strongest due to the combination of higher annual uptake of CO₂ and higher biophysical cooling than occurs in other latitudinal belts.

¹ This working document was produced as part of the High Integrity Forest (HIFOR) Investment Initiative within the WCS Forests & Climate Change Program. Together with WCS, Climate Focus and Systemiq co-led development of this working document, under contract to WCS as part of the HIFOR initiative. For further information, contact Daniel Zarin, Executive Director, WCS Forests & Climate Change - dzarin@wcs.org

² Rockström et al. (2021): <https://www.pnas.org/doi/10.1073/pnas.2115218118>

³ Hubau et al. (2020): <https://www.nature.com/articles/s41586-020-2035-0>

⁴ Lawrence et al. (2022): <https://www.frontiersin.org/articles/10.3389/ffgc.2022.756115/full>

⁵ Maxwell et al. (2019) <https://www.science.org/doi/10.1126/sciadv.aax2546>

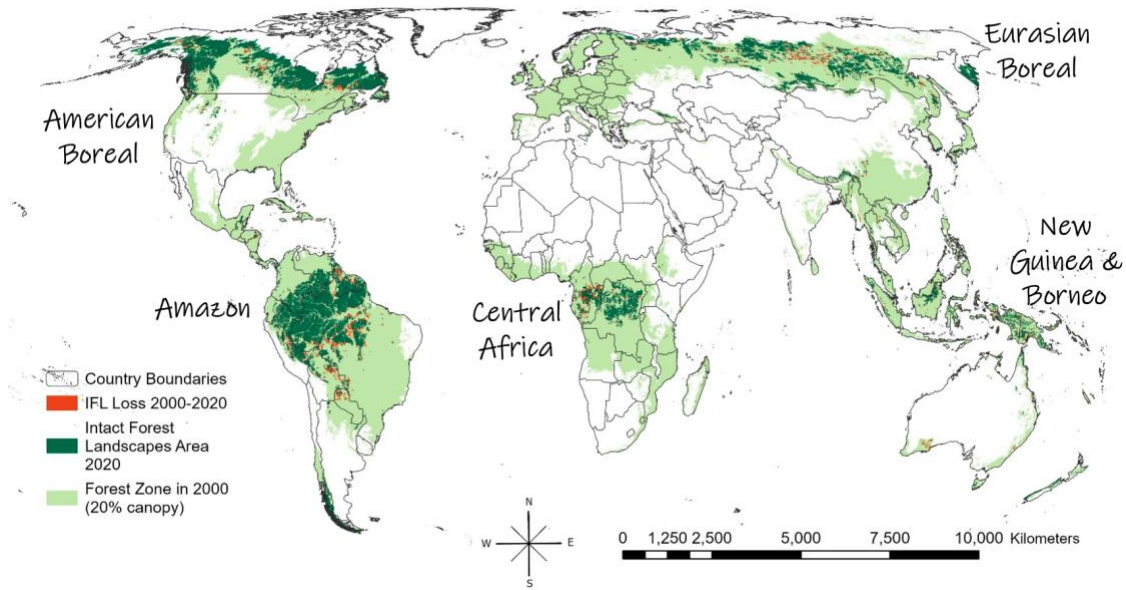


Figure 1: Intact Forest Landscapes of exceptionally high integrity still cover large areas and require incentives for protection.⁶

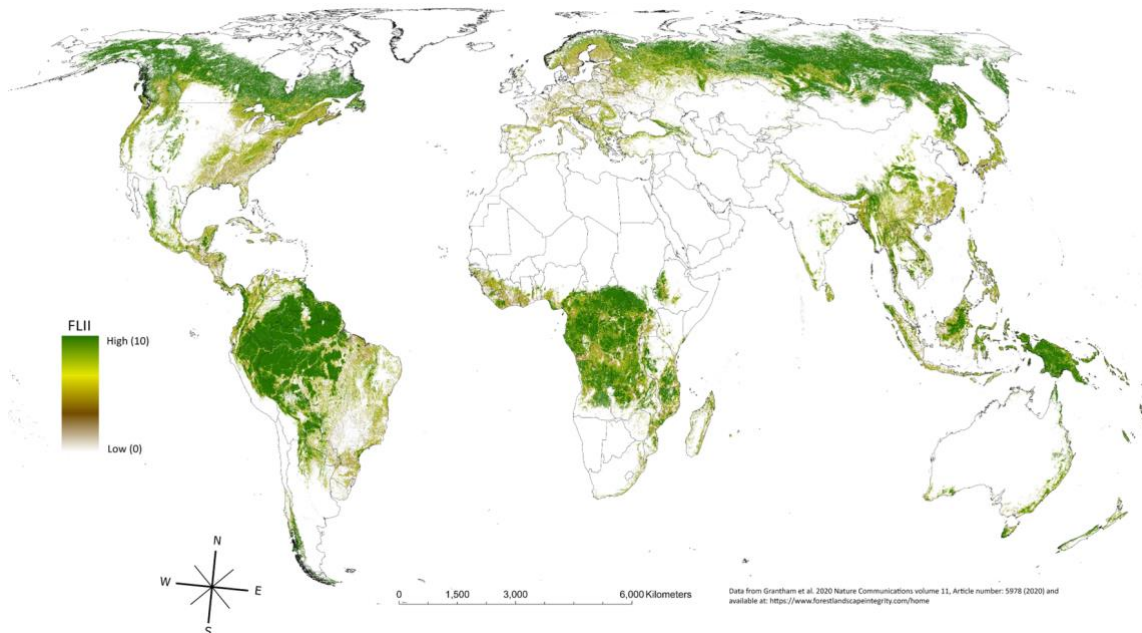


Figure 2: Forest Landscape Integrity Index:⁷ a wide range of ecological integrity is observed across forests globally. Only 40% of remaining forests have high ecosystem integrity.

Current climate financing mechanisms for tropical forest conservation are not designed to incentivize protection of high integrity forests. High integrity forests are mostly excluded from policies, financial valuations, and investment schemes that could fund their maintenance and ongoing conservation. Over the last decade, international cooperation on forest conservation, and particularly on climate finance for forests, has evolved largely around REDD+ which inherently prioritizes areas of high historic deforestation. Less attention has been directed to the long-term protection of high integrity forests that are not at the deforestation frontier. Financing the conservation of high integrity

⁶ Potapov et al. (2017): <https://intactforests.org/>. Updated in 2021 with 2020 data.

⁷ Grantham et al. (2020): <https://www.nature.com/articles/s41467-020-19493-3>

tropical forests has been limited mainly to philanthropic donations, tourism income, and the resources afforded by domestic government budgets.

To address this financing gap, WCS has proposed a new financial instrument that creates incentives for the conservation of high integrity forests. The proposed HIFOR finance is complementary to REDD+, in the same way that investments in preventive health care initiatives complement investments in urgent/emergency care.

High Integrity Forest Removal units What are they?

The creation of HIFOR units is at the core of this new initiative. Through the creation of an investable unit representing an environmental service, the proposal seeks to unlock a continuous stream of finance that incentivizes developing country governments and supports Indigenous Peoples and local communities (IPLCs) to protect their high-integrity forests while developing sustainable, low-carbon rural economies and livelihoods. Public agencies and IPLCs can enter into partnerships with NGOs and private land managers to ensure that necessary conservation measures are taken. To ensure efficient use of resources, funding is contingent on maintaining forest protection and long-term conservation commitments, with performance quantified using average annual net CO₂ uptake. HIFOR finance will contribute to the costs of conservation and development opportunities for rural communities.

The underlying environmental service represented by a HIFOR unit is a measured and verified net tonne of CO₂ removed from the atmosphere, together with the provision of other ecological services. While net carbon removal forms the basis of each HIFOR unit, the ability of the forest to store carbon, regulate temperature through biophysical processes, conserve biodiversity, and provide additional ecosystem services will also be featured and incorporated. Carbon removals are chosen as the basis for HIFOR units because they are comparatively easy to quantify and represent a measurable and critical global service that currently lacks any financialization.⁸ To ensure that other environmental attributes of high integrity forests are considered, the Forest Landscape Integrity Index (FLII) will be used to grade areas as “low”, “medium”, and “high” in their ecosystem contributions beyond carbon. Biodiversity, for example, is closely linked to ecosystem integrity.⁹ Each HIFOR unit will be expressed as an electronic unit, serialized with a unique identification, indicating the interventions, the locations, and the year of the net removal and other ecological services.

A HIFOR unit is a non-compensatory tradeable asset. This means that HIFOR units cannot be used for offsetting purposes, and they cannot be used to underpin individual claims of carbon neutrality, net zero, or nature-based offsetting strategies. HIFOR units are not carbon credits and do not reflect an additional greenhouse gas removal against a short-term baseline scenario. Instead HIFOR units reflect the ongoing climate service of a forest: the removal of carbon that leads to gains in carbon stock over time.

When it is retired, the user of a HIFOR unit can claim a measurable and verified contribution to achieving global net zero and global nature positive goals. This is because the continued

⁸ Careful framing of HIFOR communication will be necessary to ensure that HIFOR greenhouse gas (baseline) removals are not confounded with (additional) carbon market removals.

⁹ The FLII integrates data on observed and inferred forest pressures and lost forest connectivity to generate the first globally consistent, continuous index of forest integrity as determined by degree of anthropogenic modification.

functioning of the high integrity forest carbon sink is needed to underpin all feasible net zero pathways. The focus on a ‘*global* (net-zero or nature positive) goal’ means that companies are supporting *society* to transition and achieve these goals by mid-century (as opposed to solely offsetting their *own* emissions). While HIFOR units cannot be used as a substitute or replacement for within-value-chain (mitigation or nature-positive) actions, they can potentially be used in ‘beyond-value-chain’ mitigation action by companies.

High Integrity Forests Which areas are eligible?

HIFOR payments are designed to benefit large, actively protected forest areas that retain a high level of ecological integrity. Investments into HIFOR units ensures the maintenance of forests’ global and local climate cooling and contributes to low-carbon development pathways that do not depend on forest conversion or degradation. HIFOR payments can help to protect forests and keep deforestation frontiers at distance. Eventually, HIFOR payments could also provide ongoing finance for areas where deforestation has been halted. Within large jurisdictions, HIFOR finance may also be possible a supplement to jurisdictional REDD+ finance by supporting high integrity forest areas within those jurisdictions.

HIFOR Crediting Areas (HCAs) are specified areas of forest that have been designated for the generation of HIFOR units. HCAs are largely free from substantial anthropogenic disturbances (other than subsistence and low impact activities such as traditional practices by IPLCs, tourism, or research activities). The following criteria, among others, would apply:

- At the start of a crediting period, to be eligible the HCA will have to meet a minimum threshold level of ecological integrity.
- To ensure a clear link between outcomes and investments in management activities, HCAs must lie within defined management units, including units with government-approved forest conservation and management regimes or (where IPLCs are involved or reside in the area) units with collective forest management or co-management regimes.
- To be eligible an HCA would also need to meet other requirements, e.g. regarding social safeguards, removals accounting, and legal tests.

The HCA would be required to be nested within a larger area of substantially ecologically intact forest, the Eligible High Integrity Forest Area (EHIFA). This would help to ensure the environmental benefits of protecting the HCA. An EHIFA could be defined as a large, contiguous area of forest with high overall levels of forest integrity, and containing, at most, limited areas of degraded forest. EHIFAs would typically be comprised of a variety of land designations controlled by governments and/or IPLCs (Primary HIFOR Owners). Host countries would be expected to have in place forest-related conservation goals that relate to the EHIFA. HCAs within such an area could be managed directly by these Primary HIFOR Owners, in which case HIFOR units would be issued to them. Alternatively, the rights to manage forests and monetize HIFOR units could be assigned to public or private Authorized Land Managers. In this case, a sharing of proceeds between the Primary HIFOR Owners and Authorized Land Managers would be required.

The proceeds from the sale of HIFOR units would support a range of conservation and development activities. The proceeds must be used to finance specific actions and activities implemented by Primary HIFOR Owners or Authorized Land Managers in HCAs. Specific allocations

will be responsive to particular needs. Proceeds may be used for area protection and forest conservation, community engagement and benefit sharing, ecosystem services, or support for IPLCs. Part of the proceeds could also be set-aside for investment in sustainable development activities outside the HCA. Within the national or subnational jurisdiction in which the EHIFA is located, the government is encouraged to strengthen government forest monitoring and governance capacities and improve the legal framework for forest conservation, as well as investing in green growth pathways.

Piloting HIFOR

What are the next steps?

Over the course of 2023, WCS intends to pilot HIFOR at a number of sites. The piloting aims at testing and strengthening the HIFOR concept. This will include testing and confirming existing assumptions and design features, adjusting those where necessary, and addressing pending questions (e.g., among others, the areal overlap with voluntary carbon market and results-based payment programs, pricing of HIFOR and economic viability, and clarification of HIFOR-related claims by users.)

HIFOR will be tested initially in WCS priority sites. WCS will coordinate these activities with the host government and in some cases WCS and/or partners may act as Authorized Land Manager. The aim of the pilot phase is to demonstrate viability of the financial instrument in support of protected areas and beyond, including both willingness and ability of forest managers to engage in HIFOR and demand from buyers. Several sites are currently under consideration.

Piloting of HIFOR is also possible in non-WCS sites. Partners, in particular tropical forest governments and development partners, may want to pilot HIFOR in other governance contexts. This could be done in areas managed by government agencies, IPLCs, or non-governmental organizations.

What are the essential ingredients for a pilot HIFOR transaction?

- A Primary HIFOR Owner or Authorized Land Manager and a buyer are the two most basic requirements for a pilot transaction.
- Project partners, for instance an NGO or coalition of actors (including WCS as well as potential donors & development partners), are important at the pilot stage to facilitate the initial collaboration between Primary HIFOR Owner or Authorized Land Manager and buyer, and as the case may be serve as the authorized seller. Such partners will also be necessary to engage with potential buyers to support demand generation for HIFOR units.

During the pilot period, it would be helpful to engage a standard-setting body that supports the testing and elaboration of the HIFOR concept. While early pilot transactions will be audited individually, without the existence of a third-party standard, engaging a standard-setting body early in the development process will be necessary as we start to move towards developing a broader and more formalized market.

From pilot areas to large-scale conservation How to achieve scale

Scenarios for HIFOR and implications for scaling

There are several different scenarios for how HIFOR units can move from an initial set of pilot transactions to scale. Here, 'scale' is understood to mean where a marketplace is created in which units are standardised, with several primary sellers and buyers, and where intermediaries and investors are ready to invest into HIFOR unit portfolios. To achieve such a marketplace, investors will require a relatively secure and diversified portfolio, which will also have implications for the number and geographic size of HIFOR Crediting Areas and Eligible High Integrity Forest Areas.

Moving from individual pilots towards a marketplace requires multiple large areas of high integrity forest. This could involve the replication of the model to (a) a large number of sites, and (b) the expansion to larger areas of forest, combined with government commitments – potentially corresponding to political jurisdictions.

WCS intends to explore and assess both potential scaling pathways with an eye toward shifting from a small set of “proof-of-concept” pilot HIFOR projects in 2023-24 to a more systemic intervention underpinned by adequate “market infrastructure” in 2024-25. This would include one or more HIFOR financial intermediaries and an evolved HIFOR standard, along with growth in “transaction-ready” supply and demand based on recognition of the underlying value proposition for tropical forest governments and IPLCs, as well as to investors. The HIFOR pilots are intended to provide an empirical basis for that value proposition.