A Climate- and Nature-Positive Market-Based Instrument to Protect High Integrity Tropical Forests

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Introduction

Stabilizing the Earth’s climate depends on protecting remaining high-carbon ecosystems, such as forests, peatlands, and coastal zones. These ecosystems play critical roles in carbon dioxide (CO₂) uptake and storage and regulate temperature and precipitation locally, regionally, and globally. Loss of these ecosystems would result in catastrophic declines in biodiversity, and if they had not been removing CO₂ on a very large scale, Earth would likely be around 0.6°C warmer that it is now. Among these high-carbon ecosystems are more than 1.8 billion hectares of tropical forests, which provide global cooling not only through their role in the carbon cycle, but also from large-scale biophysical effects (primarily, evapotranspiration and the turbulent mixing of air above the forest). Losing these forests would reduce this biophysical cooling, resulting in local increases in extreme temperature comparable to increases caused by an additional 0.5°C of global warming.

Conservation of high integrity tropical forests — those that are least degraded — is essential to achieve global climate goals as well as biodiversity goals that are strongly linked to ecological integrity.

Climate and biodiversity finance have a crucial role to play in protecting high-carbon ecosystems. Without incentives to ensure the effective protection of tropical forests, degradation – often caused by selective logging and the crude roads required for log extraction – will continue to penetrate well beyond the forest-agriculture frontier. This will result in declines in the critical climate and biodiversity functions provided by the least-degraded high integrity forests, including net carbon sequestration and storage. New market-based incentive mechanisms, alongside area-based and rights-based approaches to conservation, can support the protection of high integrity forests by enabling governments, businesses, and communities to invest in the protection of ecosystems and divest from activities that result in their destruction. In addition to these direct incentives, climate and biodiversity finance can indirectly stimulate new policies, politics, and governance structures that include segments of society that have been marginalized historically (e.g., the rural poor, Indigenous peoples, and local communities).

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 developed this working document, under contract to WCS as part of the HIFOR initiative. For additional HIFOR documents, see: https://www.wcs.org/our-work/forests-and-climate-change/hifor. For further information, contact Daniel Zarin, Executive Director, WCS Forests & Climate Change - dzarin@wcs.org

High integrity forests are mostly excluded from existing policies, financial valuations, and schemes that could incentivize their maintenance and ongoing conservation. WCS is pioneering the creation of High Integrity Forest (HIFOR) Units to enhance incentives to protect high integrity forests. Through this initiative WCS seeks to catalyze a continuous stream of finance that incentivizes, in particular, developing country governments to protect their forest estates while developing prosperous landscapes and rural livelihoods. We also intend to explore opportunities to tailor co-development of the HIFOR mechanism for Indigenous Territories.

![Diagram of preventive, urgent, and remedial care for forests.](image)

**Figure 1.** Protecting forests requires investments in preventive, urgent, and remedial care

**Investment in protecting high-carbon ecosystems is analogous to financing “preventive care” for the maintenance of ecosystem functions including net carbon removal and biodiversity conservation.** This contrasts with finance to reduce deforestation emissions, which is more like paying the bill for urgent or emergency care. In this healthcare analogy, forest restoration finance is akin to payment for convalescence and recovery.
Shifting demand for climate- and nature-positive, market-based instruments

Corporate interest focused on emission reduction offset credits, which were cheap and abundant...

Demand for and investment in nature-positive carbon offset credits has grown substantially. At present, avoided deforestation and avoided ecosystem conversion projects make up 22 percent of registered nature-positive projects and are generating 78 percent of nature-positive credits from the major VCM carbon standards (i.e., ACR, CAR, GS, VCS, Plan Vivo). Projects that include forest restoration (i.e., afforestation, reforestation, improved forest management, and watershed restoration) account for 66 percent of nature-positive projects and 18 percent of nature-positive credits. No data are available for investments into mechanisms that reward ongoing protection of forests to safeguard carbon stocks and ongoing removals and thus far no standards exist to issue related tradeable units.

The rapid increase in demand for nature-positive units has been driven by private sector interest in offsetting emissions to meet corporate climate targets while contributing to other social and environmental benefits that these projects can provide. This demand has largely been met by credits from REDD projects that offer relatively cheap offset credits in great quantities. Removal credits are comparatively expensive and only available in smaller quantities. The supply of removal credits has remained constrained by factors including high upfront investment costs, time required by ecosystems to accumulate biomass and remove carbon (i.e., delay in credits being produced).

More recently, demand has shifted to removal credits but supply is limited...

Demand for carbon offset credits from removal projects is increasing. This demand is driven by, among other factors, initiatives such as the Science-based Target Initiative (SBTi,) through which companies make commitments to mitigate their emissions in line with meeting the Paris Agreement goal of no more than 1.5°C of warming. SBTi limits approved use of offset credits to neutralizing residual emissions with durable removal credits. The recent criticism of REDD projects is likely to drive further investment to forest restoration, but such projects require high upfront finance and a long-term investment horizon.

And emerging drivers of demand are moving investors beyond carbon offsets...

There is growing momentum to support nature conservation and restoration more holistically – beyond offsetting. The shifting interest by corporates is driven partly by growing consumer and observer pressure on companies to voluntarily mitigate climate change and environmental impacts beyond their value chains. Another factor is that many NGOs and initiatives such as SBTi and the Voluntary Carbon Market Integrity initiative (VCMi) discourage offsetting. However, they encourage the acquisition of carbon credits for non-offsetting purposes and investments into mitigation outside of carbon markets. Forthcoming guidance under SBTi is expected to codify Beyond Value Chain Mitigation (BVCM) and to drive further investment into nature and ecosystems.

Emerging regulations in some jurisdictions could further limit or forbid the use of carbon offsets by companies making climate-related claims. The European Commission is developing the Corporate Sustainability Reporting Directive to include mandates for companies to disclose the use of carbon

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3 Climate Focus VCM Dashboard
credits in meeting corporate climate targets and it is revising its Product Environmental Footprint calculation method to exclude the use of carbon credits from climate-neutral claims. Similarly, the United States’ Securities and Exchange Commission (SEC) proposed rulemaking, “The Enhancement and Standardization of Climate-Related Disclosures for Investors,” includes requirements that companies disclose the use of carbon offsets in their business and emissions reduction strategies. Both the growing scepticism and possible legislation on offset use and associated claims may eventually dampen demand for offsets, with avoidance credits expected to be more severely impacted than removals.

New types of market-based instruments are on the horizon...

The Global Biodiversity Framework adopted at the end of 2022 may spur emergence of nature and biodiversity certificates. A recent Global Environment Facility report on on Innovative Finance for Nature and People focused on biodiversity-positive carbon credits and “nature certificates,” emphasizing the latter as distinct from existing regulatory approaches that require businesses to mitigate and/or offset direct site specific impacts on biodiversity, such as those caused by the construction of industrial infrastructure. While doubts about vague definitions and a range of metrics for quantifying biodiversity persist, growing interest in finding ways to incentivize its protection through market-based instruments is undeniable. Among the more daunting challenges is biodiversity’s lack of “fungibility” from one place to another, i.e. unlike carbon, a “unit” of biodiversity is not the same thing in different regions, or in different biomes within the same region.

In the context of the UN Framework Convention on Climate Change, the intergovernmental Forest and Climate Leaders Partnership identified a specific Action Area for building international partnerships and incentives to preserve high integrity forests as follows:

Forests largely free of significant modification – known as high integrity forests – make up about 40% of remaining forests. It is well acknowledged that these forests perform essential services: carbon sequestration, climate regulation, biodiversity preservation and support to livelihoods. Current mechanisms for financing the preservation of the planet’s remaining high integrity forests are proving insufficient and/or unsustainable for many lower income countries. New forms of incentives that can mobilize public and private sector finance are needed at the scale to ensure the essential services provided by high integrity forests are preserved and increased.

The Market Niche for a High Integrity Forest (HIFOR) Investment Initiative

The conservation of existing forests is essential for the stabilization of our climate but has been missing from market-based climate finance. High integrity tropical forests are estimated to remove around 1.76 Gt CO₂ per year from the atmosphere and store a vast amount of carbon in their trunks, branches, and roots. Preserving existing forests in the long-term is essential to decelerate further warming. High integrity tropical forests contain essential reservoirs of stored carbon, representing 91-103% of the remaining carbon budget of 114 Gt C. In addition, high integrity forests play an essential role in regulating local climate by modulating the land-atmosphere fluxes and exchanging moisture and

EFRAG - Basis for Conclusions, ESRS E1 Climate Change. (2022, May). July 14, 2022,
energy between the land and the atmosphere. In practice, this means an important cooling effect provided by tropical forests. 

**Efforts to preserve high integrity forests and incentivize long-term forest conservation can be described as “preventive care” for forests.** Such investments support local conservation activities as well as investments in non-destructive economic activities. The goal is to anticipate and neutralize future drivers of deforestation by pioneering green economies. Investments in high integrity forest conservation ensure that direct and imminent threats to forests – leading to the need for urgent care through REDD – are preempted. As with REDD, HIFOR investments can target forest landscapes at project or jurisdictional levels, with a stepwise transition to larger-scale investments.

The **underlying HIFOR unit** is a measured and verified net ton of CO₂ removed from the atmosphere. The unit also delivers other nature-positive ecological services linked to its high ecological integrity status, including biodiversity conservation. While the net carbon removal forms the “metric” of each HIFOR unit, the forests’ ability to store carbon, regulate temperature, provide additional ecosystem services, and conserve biodiversity are all embedded in the HIFOR unit. CO₂ removals are chosen as the metric for HIFOR units because they are comparatively easy to quantify and globally exchangeable.⁵

Table 1. Uses and claims linked to the units that underpin climate- and nature-positive market-based instruments in the forest sector.

<table>
<thead>
<tr>
<th>Units</th>
<th>Uses</th>
<th>Claims</th>
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</thead>
<tbody>
<tr>
<td><strong>Compensatory climate credits</strong></td>
<td>GHG emissions reduction and removal credits (VCS, ART/Trees, Gold Standard credits)</td>
<td>Offset or non-offset uses possible</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evolving: carbon neutrality or net zero, and neutralizations claims in addition to emerging ‘contribution’ (non-compensatory) claims</td>
</tr>
<tr>
<td><strong>Non-compensatory (contributory) climate or nature credits</strong></td>
<td>HIFOR units</td>
<td>Non-offset uses</td>
</tr>
<tr>
<td></td>
<td>Future “nature credits”</td>
<td>Evolving: BVCM, global net zero or nature positive claims</td>
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⁵ 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. FLII scores range from 0 (lowest integrity) to 10 (highest). Anthropogenic modification of forests means only 40% of remaining forests have high ecosystem integrity. There is a strong correlation between the FLII and a broad range of corresponding ecosystem services and environmental attributes, such as species richness and abundance, provision of non-timber forest products, cultural significance to local communities, and water quality and quantity regulation, to name a few.