

SUMMARY OF THE PROJECT IN DESIGN * (*)

NFTrees for conservation

PITCH ELIGIBILITY DATE		COUNTRY(IES)
12/14/2022		Ecuador
ALIGNED WITH COUNTRY STRATEGY?		
Yes		
PARTNER(S)		
Fundación Futuro		
PRELIMINARY CLASSIFICATION ENVIRONMENTAL AND SOCIAL IMPACT		
C (**)		
TOTAL BUDGET	IDB Lab	LOCAL COUNTERPART AND COFINANCING
US 700,000	US 350,000	US 350,000
DESCRIPTION		

The problem Rural landowners in Ecuador face significant barriers to accessing incentives or financing mechanisms designed worldwide to address climate change and halt biodiversity loss.

These mechanisms are mostly designed to be administered by transnational and national organizations that meet complex administrative standards and are entrusted with achieving results on a large scale. Many of the available financial resources are consumed in this intermediation chain, thus reducing the amount that reaches the communities. Additionally, these resources are indirectly delivered to the final beneficiaries, distancing local actors from their participation and commitment to solving environmental problems. Likewise, individuals or companies interested in promoting biodiversity conservation while mitigating climate change via compensating their carbon footprint in Ecuador face an absence of technological solutions that can significantly improve their investments' transparency, accountability and traceability, and guarantee direct benefits to the forest owners. The emergence of Web 3-based tokens and marketplaces partly address these issues allowing communities to be rewarded or compensated by individuals or companies for working to regenerate our planet.

The Andean Chocó Biosphere Reserve (RBCA for their Spanish acronym) is where Fundación Futuro (FF) has already established the Program "Zero Carbon" based on a token system for carbon footprint compensation through blockchain technology called NFTrees. The current design of the NFTrees platform presents two critical limitations: (1) it does not include biodiversity attributes of these forests, and (2) it does not establish mechanisms to reach other landowners with substantial forest remnants inside their properties. Leaving biodiversity out of the carbon compensation design is risky because: (1) while Carbon (C) sequestration on farmlands may contribute to mitigating CO2 concentrations in the atmosphere, greater biodiversity within forest remnants may ensure

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**The IDB categorizes all projects into one of six E/S impact categories. Category A projects are those with the most significant and mostly permanent E/S impacts, category B those that cause mostly local and short-term impacts, and category C those with minimal or no negative impacts. A fourth category, FI-1 (high risk) Financial Intermediary (FI)'s portfolio includes exposure to business activities with potential significant adverse environmental or social risks or impacts that are diverse, mostly irreversible or unprecedented, FI-2 (medium risk) FI's portfolio consists of business activities that have potential limited adverse environmental or social risks or impacts, FI-3 (low risk) FI's portfolio consists of financial exposure to business activities that predominantly have minimal or no adverse environmental and social impacts.

longer-term stability of C storage in landscape mosaics; (2) Carbon markets can favor other carbon sequestration mechanisms (i.e. forest plantations) that grow faster and sequester annually more carbon than natural forests, but do not provide biodiversity co-benefits. Regarding expansion to other communities, there are two aspects that have proven to be problematic: 1. Most networks use conventional proof-of-stake models, which tend to favor those with the technical and economic ability to buy and stake tokens, disadvantaging communities with less proficiency when it comes to governance, representation, and decision making, within the larger network. 2. At a community level, tokens are held in collective treasuries governed by Decentralized Autonomous Communities (DAO's), which practice internal governance to decide how those funds are used in a way that best serves the community: Establishing a DAO is a complex process, even more so for rural communities that do not possess the required technical proficiency.

The solution This project seeks to expand the scope of Zero Carbon's NFTrees digital system to deliver monetary incentives for conservation and forest restoration to a wide range of landowners in the RBCA territory through an “offline-to-online interface” that can onboard communities to make the transition from offline governance into the digital governance of DAO's. Moreover, it intends to incorporate the value of biodiversity of the RBCA into carbon footprint compensation, becoming the first model in Ecuador with a comprehensive approach that incorporates biodiversity in a carbon digital trading system. Regen Network approach will be incorporated to the system to offer the offline-to-online interface. This is a community-governed registry of ecosystem service credits which works to build ethical compensation in the form of \$REGEN tokens (and potentially other tokens).

What makes Regen Network's methodology so unique is a completely innovative approach to staking that's called the “Community Stake Model”. Through a process called “enDAOment” (the development of community DAO's with a token endowment), the Community Stake Model makes it possible for communities across the world to benefit from token-related rewards, as well as ensuring their participation in governance of the global Regen Network. A crucial part of the enDAOment process involves an initial onboarding phase during which existing “offline” community governance structures are explored in-depth, so that they can be adapted to the appropriate online systems used to govern the csDAO. The onboarding process used by Terra Genesis involves a participatory, community-driven approach that includes “Story-of-Place” work: a process that dives deeply into creating an understanding of the uniqueness of a community and the local context in which it operates.

The beneficiaries We expect that at least 20 families and 80 inhabitants of the RBCA (40% women) benefit from annual monetary incentives for conservation and sustainable livelihoods. The basis to assess this indicator are the conservation agreements; for each agreement, we need to identify the family (usually 1 family per agreement according to land tenure characteristics of the territory). We expect that at least \$70/year/ha are delivered to these private landowners as an incentive. This will be verified through the yearly TrustFund

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audited financial statements. We will additionally need to identify all family members receive benefits from the incentive, by assessing through surveys how decisions over the incentive are made and how it is invested by the family.

Environmental benefits are calculated to be around 200,000 tons of carbon sequestered in the above ground biomass of targeted forest areas. This indicator will be assessed based on a high resolution above ground carbon map based on deep-learning algorithms coupled with a network of permanent plots maintained by UDLA as part of the Carbono Cero Program. Also, 500 ha of secondary mature forest will be conserved. This indicator will be assessed through lightweight drones for community-based forest monitoring annually operated by Fundación Futuro and UDLA. At least 100 tree species are protected, including endemic species such as the Eugenia Mashpi

The partners Fundación Futuro (F.F) is a private NGO legally registered in Ecuador with more than 20 years of presence in the RBCA with vast experience in biodiversity conservation, human development and climate change. FF is part of a well reputed holding group of companies in Ecuador, Grupo Futuro, which donates 3% of their net worth annually to the foundation.

FF has the technical capacity to lead decarbonization within their business models and get other corporations involved. Its prestige within the business sector allows FF to understand the demand side of carbon offsetting. On the other hand FF owns a 3000 hectares Reserve in the territory and invest heavily in their neighboring communities, this allows them to understand the needs of local people and the threats to key biodiversity areas. FF is well placed on the supply side of the carbon offsets too.

The IDB Lab contribution will be a Non-Reimbursable Technical Cooperation of \$350,000 to expand the scope of Zero Carbon's NFTrees in order to incorporate biodiversity in a carbon digital trading system.

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