GainForest Primer

VERSION 1.0.0 "COTINGA"

GainForest Association

PUBLISHED BY GAINFOREST ASSOCIATION

GAINFOREST.NET

First printing, April 2021

Primer

Figure 1: Illustration of *GainForest NFTrees.*

To reconnect with nature is key if we want to save the planet.
— Jane Goodall

Abstract The *NFTrees* continuous funding model in GainForest rewards investors who commit to long-term payments for conservation projects with governance tokens to the platform. Conservation projects can raise funds by selling virtual ownership of their protected area on the blockchain. GainForest releases funds to reward sustainable stewardship and works together with local communities to help transparently measure and report their restoration and conservation progress.

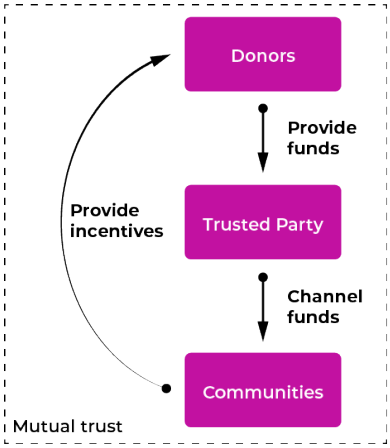

Figure 2: The reliance on mutual trust between all parties, discontinuous transactions through a trusted third party and missing incentives cause a lack of sustainable funding for climate action.

1. *Why are we doing this?*

The problem. Protecting and restoring our natural world is a resource-intensive task and conservation projects around the world depend on sustainable funding. Unfortunately, traditional donations require mutual trust between all parties (see Figure 2). Donors must trust that communities are using their received donations for the agreed purposes. Communities on the other hand have to incentivize donors to donate to them. This usually happens through time-intensive and costly actions such as public marketing, scientific studies, expensive data collection, or third-party certification to verify impact. In addition, a middleman (such as a bank) usually sits in between the transaction of donors and communities, introducing significant legal (e.g. blocking transfers) and economic friction (e.g. large fees).

The opportunity. GainForest is an open platform that empowers sustainable conservation efforts by unifying 1) accessible and automated monitoring, 2) auditable and decentralized payments and 3) stakeholder engagement and user-focused token incentives into one system. We believe that GainForest enables payments from private citizens to local communities in need at a much faster, easier, and safer rate than existing approaches with less legal work, resulting in urgently needed and accelerated climate action (see Figure 3).

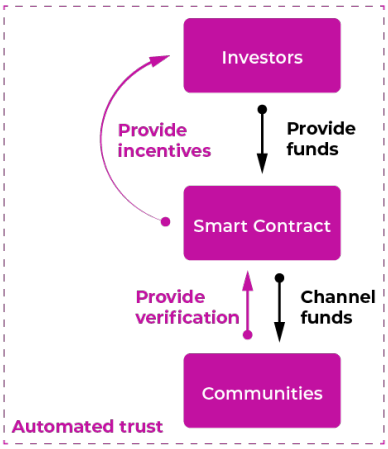

Figure 3: The GainForest platform replaces a trusted third party with a self-enforcing smart contract thus providing transparent and frictionless transactions. A programmable smart contract also creates automated trust through data-driven impact verification and novel incentives for donors to become investors through token economics.

2. *GainForest™ NFTrees make conservation tangible*

Non-fungible Trees Token. Tracing the impact of a donor's individual donation is difficult, making it hard for them to develop a sense of ownership. GainForest™ NFTrees make payments to conservation organisations more tangible. They are unique digital assets that track the ownership of virtual sites of a conservation or restoration project using blockchain technology. Virtual sites correspond to a predefined land area within the project with possibly multiple plants (see Figure 4). NFTree tokens include unique artwork from local communities and indigenous artists for each project. Each token links to a unique website at gainforest.net that provides geospatial and ecological information of the corresponding site, displaying recent drone and satellite data, current and potential tree cover, which species of flora exists, and how much carbon is currently stored, or could potentially be stored if the ecosystem was intact. The group of corresponding plants within an NFTree can change during its lifetime due to survival rates and active restoration efforts. NFTree holders can follow recent updates and progress on their respective conservation areas through the NFTree profile website.

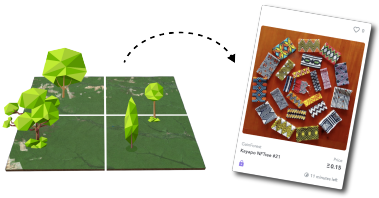

Figure 4: Real-world project areas are represented virtually through an NFTree, allowing conservation projects to continuously raise funds for sustainable stewardship.

Unlocking funds through milestones. To trace the impact of investors, investments raised from NFTrees are first parked in a decentralized fund. Payments are automatically released to conservation organizations after achieving specific milestones during the verifiable "Proof-of-Care" stage (e.g. increase in tree cover or carbon stored).

Supercharging parked funds through interest rates. Parked funds earn interest (see whitepaper for details) that will be used to support the development of the platform, local communities, and artists.

3. *Market design ensures optimal sustainable funding*

Continuous auction for conservation. Continuous auctions ensure that the investor who offers the highest value is always the holder of the NFTree. When an investor purchases an NFTree, they also have to set a new price for the NFTree that they are willing to resell it for again. If a new investor offers a higher price, GainForest will provide the current NFTree holder with a notice period to either sell or increase the price in order to keep their NFTree.

Stewardship fee. Stewardship fees provide local communities with sustainable and continuous funding. To hold an NFTree, the holder has to transfer a regular stewardship fee to conservation projects. The contribution amount is a small percentage of the self-assessed auction price, previously set by the holder (also known as Partial Common Ownership, more technical details in our whitepaper).

4. *Proof-of-Care verifies ecological impact*

GainForest governance tokens. Each NFTree mints GainForest governance tokens over time through a process called "Proof-of-Care". Governance token holders have an influence on strategic decisions within GainForest (e.g. length of notice period or stewardship subscription fee). Governance tokens can also be used as digital assets, are freely traded on crypto markets but can only be created through "Proof-of-Care". Minting governance tokens provide investors with an additional incentive for holding an NFTree.

Leveraging artificial intelligence for monitoring. Traditionally, linking corresponding payments with carbon emissions and ecosystem restoration is a labor-intensive and complex task without clear consensus and standards. Together with our technical collaborators, we aim to provide NFTree-issuing conservation and restoration projects

Figure 5: Example data submitted and analyzed during Proof-of-Care.

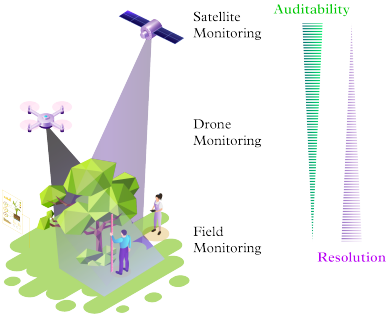

Figure 6: In Proof-of-Care, forest stewards are able to monitor their conservation site and collect data through digital tools that are synced with the GainForest platform. If trees reach a certain size, the platform can verify citizen-science data with public satellite monitoring.

with digital tools to transparently monitor their sites. Newly planted seedlings and small trees are registered and monitored through the Tree App. Plants that reach a certain size can be scalably monitored and tracked through drone and satellite imagery (see Figure 5). GainForest uses TrueBranch to enable landowners to submit and verify their own drone imagery (see Figure 6). Measured progress for each NFTree is verified through our system and securely streamed to the blockchain to release funds for conservation projects and mint new governance tokens for NFTree holders.

5. *What is next?*

Figure 7: Illustration of the *GainForest Roadmap.*

The first year. Release of our whitepaper and our first NFTrees with pilot projects across the world (starting June 2021). Provide a decentralized Proof-of-Care service with our forest analytics partners for other cryptotokens (Q3 2021). Enable a local community marketplace that accepts governance tokens (Q4 2021).

The second year. Develop secure hardware to enable end-to-end Proof-of-Care (Q1 2022). Fully decentralize governance of GainForest platform to local communities and investors (2022 onward).