GreenAnt

Making carbon sequestration trustworthy, profitable, and accurate with Decentralized Finance and AI

Whitepaper

Version 1.6.1

20th of April 2022

GreenAnt.farm

Abstract

Carbon sequestration projects are necessary for the survival of the planet and cannot be founded through inaccurate and donation-based projects. At GreenAnt, we try to solve this by involving decentralized finance in the fight against climate change. By improving the ways we store carbon through nature-based solutions, we aim to achieve the maximum benefit for people and for nature. We currently focus only on tree planting and preservation.

We believe that each tree matters, and each tree is unique. Each tree must be valued and monitored individually. Thus, we tokenize every tree into Non-Fungible Tokens (NFTs). We use machine learning and satellite images to monitor the tree's carbon storage capacity over time. Thus, our native cryptocoin's tokenomics is very simple: One alive tree is a GreenAnt active NFT. One GreenAnt NFT or virtual tree generates one GreenAnt cryptocoin for each kilogram of carbon stored in the tree. NFTs' holders are the members of GreenAnt's network.

GreenAnt's network shares knowledge and skills with the interest of reducing climate change and is rewarded through NFTs. Our NFTs compose a blockchain virtual forest to stimulate profit for nature and communities supporting sustainable and long-term reforestation.

GreenAnt offers a financial gateway for all climate-conscious individuals, farmers, institutions, and businesses to profit from their environmental efforts.

This is an open whitepaper, and we look forward to receiving contribution from readers. If you want to contribute you can do so scanning this QR code or clicking here to add reactions to our text or scheduling a meeting with us. Otherwise, you can write us an email at info@greenant.farm. Thank you!

GreenAnt B.V., a private limited company duly organized and validly existing under the laws of the Netherlands, registered with the Dutch Trade Registry under registration number 82892121 and having its registered office in The Hague, the Netherlands.

Anna van Buerenplein 657, 2595 DGK Den Haag, Netherlands

Contents

Glossary

Organic	GreenAnt aims to reduce pesticide usage in agriculture, by only *tokenizing* trees that are pesticide free. To facilitate the achievement of this goal, GreenAnt stimulates the application of nature-based solutions, such as *weaver ants,* and partners with *institutions* to invest in *research*.
Weaver Ants	GreenAnt is named after the weaver ants which are its first ally and a raw model for our business. Their ability to serve as a biocontrol and sustainable protein source supports tree growers to achieve the goal to reforest *organically*. GreenAnt offers courses to train farmers to use weaver ants as a biocontrol and alternative protein source.
Monitored	GreenAnt partners with tree-growers to gather data on the state of health of trees from images connected to a *machine learning* software that extrapolates the necessary data from the images. GreenAnt also partners with *remote sensing companies* to verify tree-growers' assessment. This cross-analysis gives GreenAnt the possibility to constantly monitor trees and determine the amount of carbon stored in each tree.
Remote Sensing Companies	GreenAnt partners with remote sensing companies around the world to verify data gathered from tree-growers.
GreenAnt's ML	Our *machine learning* algorithm extracts data from the tree's status and size by analyzing pictures taken by tree-growers. Our *machine learning* algorithm verifies their authenticity by comparing trees' reported growth with their expected growth, verifying picture-takers' location, and cross-comparing data with the ones collected through remote sensing. Once data is gathered, the algorithm will determine the amount of carbon stored by applying standards for each kind of tree and communicate the number of crypto coins to the related NFT to be generated and distributed.
Institutions and Research	GreenAnt partners with institutions such as the Thailand Institute of Scientific and Technological Research and Aarhus University to further research innovative ways of sequestering carbon and supporting *organic* agriculture. Furthermore, GreeenAnt partners with international institutions to provide community members with know-how and best practices for sustainable tree farming.

GreenAnt's Community / Network	Behind the achievement of the goal to plant and preserve more than 1 trillion trees in 30 years, there is a diversified community of tree growers, developers, monitoring partners, tree planters, validators, institutions, marketing agencies, NGOs and others. All of them obtain value from GreenAnt's tokens and network.
Tokenized	Tree-growers who join GreenAnt's community tokenize their trees, adding them to GreenAnt's virtual forest, therefore generating 1 NFT for every tree monitored and planted by the network. In the text, token and NFT are used as synonymous.
Trading NFTs	GreenAnt and its community trade NFTs with investors and buyers. The trading of NFTs' generates and distributes value and includes more actors in the mission.
GreenAnt's Virtual Forest	Every tree planted, monitored, and tokenized by a GreenAnt community member is added to a collection, which is marked by the year the NFT has been listed. All NFTs compose GreenAnt's virtual forest, which aims to count more than gross 1 trillion sequestering items in 30 years.
Coin	GreenAnt's native crypto coin. 1 coin for each kg of carbon stored by a tokenized tree. In the text, it will be referred to as 'coin.' Its symbol is GA$.

Introduction

One of the biggest challenges facing humanity is climate change. Climate Change is a global problem that should be combatted by actors who are able to interact, coordinate and profit through a network. One of the main strategies implemented to reduce the impact of carbon emissions has been stimulating reforestation to increase carbon sequestration. However, global reforestation projects pose five problems. 1. Limitations to verification 2. Lack of trust among actors 3. Local peculiarities 4. Coordination problem 5. Lack of profitability. To boost reforestation globally by making it profitable and effective for everyone, GreenAnt's network provides solutions to these five problems.

1. Limitations to verification

It is virtually impossible for actors involved in reforestation to verify and assess the actual impact of their investment. This is problematic because data verification is essential for a correct risk assessment and effective planning. Data is susceptible to biases when the collection method is manual and based on human observations. With the help of machine learning and remote sensing, it is possible to enforce globally trusted standards to monitor each individual tree's growth. Gathering data about the trees, the soil, and the environment gives the possibility to inform decisions and prevent failures. Storing data through blockchain technology and delivering them open source, solves the problem of limited direct verification.

2. Lack of trust among actors

In a network that exchanges data and services for a common cause, trust is necessary. However, actors cannot develop trust if they are scattered around the world. To solve this problem, we have decentralized the network by decentralizing members' incentives to work. Profit does not come from internal payments, rather it comes from the value generated by the NFTs and the coins, which are the product of the community's work. As effective and honest collaborations among actors are the only ways to generate profit, actors have no incentive to be untrustworthy. In fact, in the case actors behave dishonestly, none will menage to take advantage from the results as it would not be

3. Local Idiosyncrasies

A global problem requires a global solution. Pollution surpasses borders and global warming affects areas everywhere. However, the world is divided into sovereign nations with different regulations and multiple pre-existing conditions, such as those regarding landownership. If under-considered, local idiosyncrasies can jeopardize the success of international projects. This means that it is more efficient if projects are operated by local organizations, while knowledge and services are shared across borders. Decentralization makes the network more connected and effective, mitigating problems that can arose from local peculiarities.

4. Coordination problems

The two problems mentioned above are solved through decentralization which poses the problem of coordination. Coordinating is essential to achieve ambitious targets. For example, lack of coordination among actors can lead to poor evaluation of risks and resources waste. At GreenAnt, we believe that commonality of interest and incentives can lead to spontaneous coordination if knowledge and data are open source, easily readable, and trustworthy. GreenAnt's platform is designed to match these conditions.

5. Profitability

Decentralization and commonality of interest exist only if the activity is profitable. Nothing is long-term and self-sustainable if it is not profitable enough for all the actors involved, otherwise, it is either exploitation, waste, or both. Trees should be pillars of finance because they are among the most valuable items present on the planet. They sequester carbon and mitigate the effects of climate change, decreasing the risk of the entire economic system to fall due to a climate catastrophe. Thus, GreenAnt considers trees as an attractive vehicle for providing intrinsic value to currencies. Blockchain offers us the possibility to identify and easily trade tokens. Without this technology, trees might seem indistinguishable, and difficult to be traded globally. However, blockchain offers the technological basis for a currency whose supply is determined by the amount of carbon the community manages to save or store. Gathering data and taking care of the trees, GreenAnt's community manages to generate value for each tree planted and grown, distributing profits among its community.

Decentralized Finance and its applications in the climate change fight

Decentralized Finance (DeFi) is a type of blockchain-based finance in which actors raise capital and diversify risk trading without the need of centralized intermediaries, such as financial institutions. Blockchain technology is the technological basis for this as it offers the possibility to run decentralized, direct, and secure transactions among actors who do not trust each other without intermediaries. Accessing finance represents a way to financial independence if there is enough knowledge and stable institutions. The absence of these two conditions in certain areas/ countries, which are usually the ones most affected by climate change, means that the population has limited access to financial services. Decentralization can decrease the need for stable institutions and include environmental organizations with the willingness to educate. Decentralization can also give economic value to items and transactions that are undervalued like organic farming and tree planting. This means that farmers and rural communities can find themselves with the valuable good to be traded on DeFi market, having access to services that can reduce their reliance on illegal lenders and other forms of economical constrictions.

How are we going to do this? Steps:

1. Includeing farmers in the mission of planting and preserving trees around the world
2. Building GreenAnt's Network[1]
3. Providing the tools to grow the trees in a *monitored* system
4. Tokenization of trees and creation of a *virtual forest*
5. NFT trade to involve everyone in the global fight against climate change

[1] Explained in detail later in this docuement

Goals

Planting and growing 1 trillion trees in 30 years.

Building a network able to allocate resources and skills toward hyper-large scale global reforestation.

Developing a new decentralized economy aimed to benefit people and nature through value-creation and decentralization.

Tokenomics

GreenAnt's Network: a decentralized community

The Network, also referred as the community in this document, is composed of everyone who holds NFTs. Members are divided into two groups, active and inactive. Active members receive NFTs as a reward for sharing their services with the community. Inactive members hold tokens because they purchase them. However, the latter can always become active if they start contributing to the community, turning into NFTs' beneficiaries. Among the active members, there are tree-growers, tree-planters, monitoring services companies, NGOs, data validators, marketing strategists, institutions, researchers, governments, and others.

The network involves people from around the world and mainly interacts through Discord. It is divided into local branches that meet and share common interests, benefits, knowledge, and resources. On GreenAnt's website, members can launch a project, becoming "Launchers". Once the project is public, members can offer their services. The NFTs generated by that project will be divided among the community as in the following section. Overall, the community holds all the active NFTs generated, inactive or old NFT holders are not considered members of the network if they are inactive members.

The NFT

GreenAnt uses Polygon as its own blockchain network and it has two native products, the NFT and the coin. One GreenAnt NFT represents one tree planted, grown, and monitored by the network's actors.

We aim to generate 1 trillion tokens in 30 years, planting and/or growing an equivalent number of trees. However, tokens are insured to stay active for only 10 years.[2] In the beginning, the pace of tokenization will be slow, but is expected to increase over time. Therefore, the number of NFTs active would be $x = t - ot$ where t is the number of trees planted and ot is the trees that are older than 10 years.

The NFT's smart contract receives information from the monitoring partners in the network and generates the coin according to the equation indicated above. The coin is delivered to the respective NFTs' holders.

The tokens will be available on OpenSea and other marketplaces. There is no max supply as we hope to plant as many trees as possible, but the number of tokens is expected to increase exponentially until 2036 when the tokens' supply will stop increasing and become constant, as shown in Figure 1.

Active NFT

When the tree is alive and monitored, the related NFT is defined as active. An active NFT generates 1 coin for each kg of CO_2 stored and can be traded by paying a royalty to GreenAnt.

---

[2] As further explained later in the text, 10 years is the minimum a tree has to live to have an impact on the environment.

For 10 years after the tokenization of a tree, the tree grower as obligation to keep the tree in good health and report about its status to the community.

Deactivated and burned NFT

If one tree dies or becomes unmonitorable, the related NFT is called deactivated. The NFT is considered deactivated only if the timber is provenly used sustainably. A deactivated NFT will not generate more coins but can still be traded. An NFT is burned if the tree dies and there is no evidence that the timber has been used sustainably. GreenAnt will always assume that the timber has been used unsustainably in absence of evidence of the contrary. The owner of a deactivated or burned NFT younger than 10 years will receive a new NFT of a similar tree picked randomly from GreenAnt's virtual forest through its smart contract.

Old NFT

An NFT is called "old" when it has been active for more than 10 years, since then it can continue producing coins, but the owner is no more entitled to obtain a new one in the case the tree dies, and the tree-grower has no obligation to keep the tree in good health.

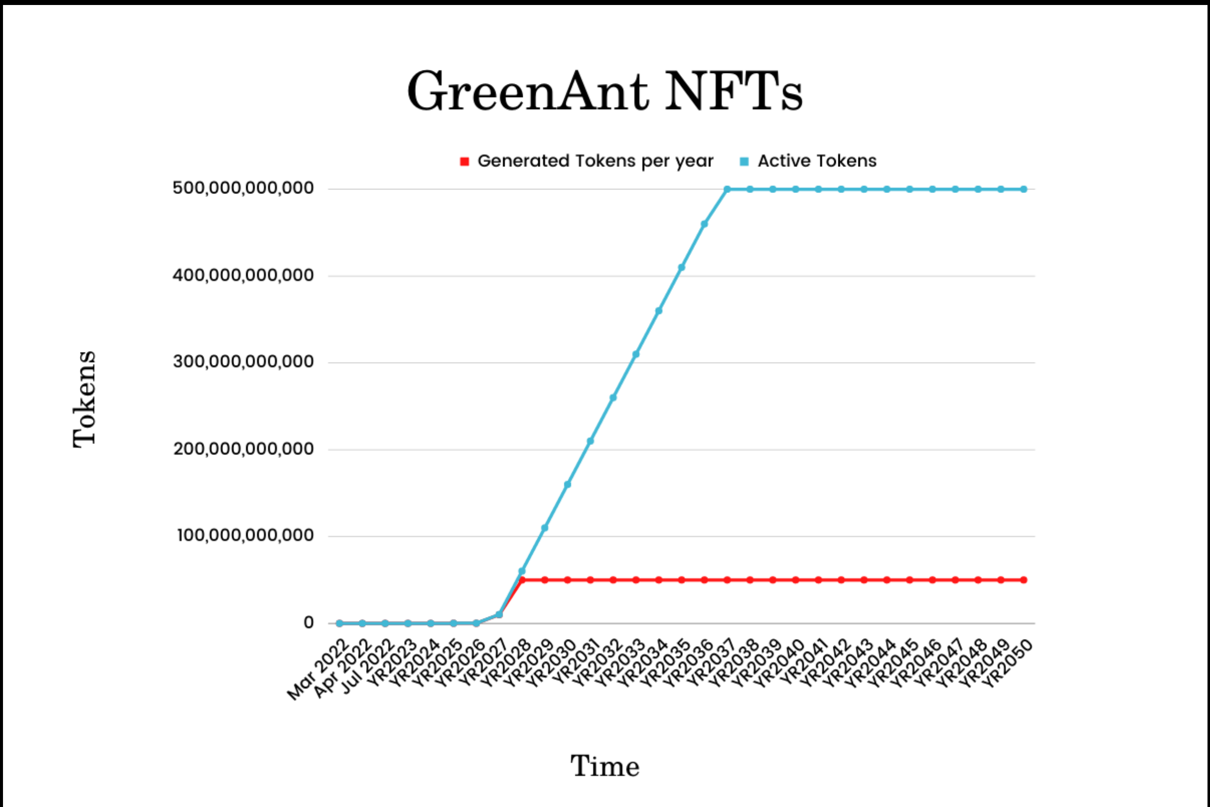

Figure 1: The above graph represents the supply of generated tokens and active tokens per year over time.

In Figure 1, the red line indicates the amount of NFTs the GreenAnt community expects to generate every year. The blue line shows the amount of NFTs that is active in the same year. In this graph, NFTs are expected to become inactive 10 years after they are generated.

Token Distribution

In order to reward the network and allocate skills efficiently, GreenAnt distributes its tokens in the following way. Receivers are always free to trade tokes as they want paying a royalty of 5% to GreenAnt.

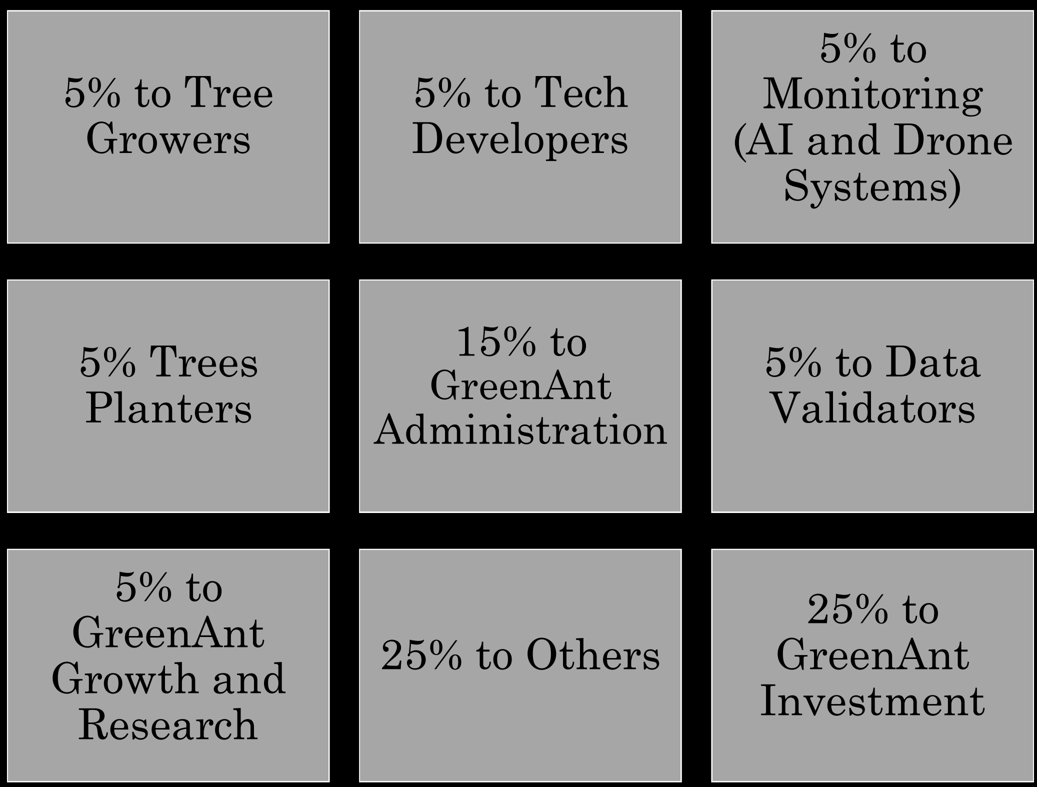

Figure 1: Token distribution by precentage.

5%	Tree Grower	The grower takes directly care of the trees and is responsible for their survival
5%	Tree planter	The planter makes the investment and the project to plant the trees.
5%	Tech Developers	The developer belongs to the GreenAnt tech community and works with the others to constantly improve our products
5%	AI Data Analysis	Usually companies, but also individuals who focus on AI development for carbon analysis.
5%	UAV Monitoring	Usually companies, but also individuals who focus on UAV development for carbon analysis.
5%	Satellite Monitoring	Companies and agencies providers of satellite imagery and their analysis
5%	Data Validators	The community, which is able to third-party validate data and coin allocation.
5%	Research and Development	Institutions, NGOs and organizations who support related research and innovation around the world.
25%	GreenAnt Investiment	Investment found intended to support related profit and non-profit projects. Investiment decision-making is community-based.
15%	GreenAnt Administration	GreenAnt Team and set-up costs
20%	Others	Supporters, community-builders, marketing agencies and others

Coin Generation Process

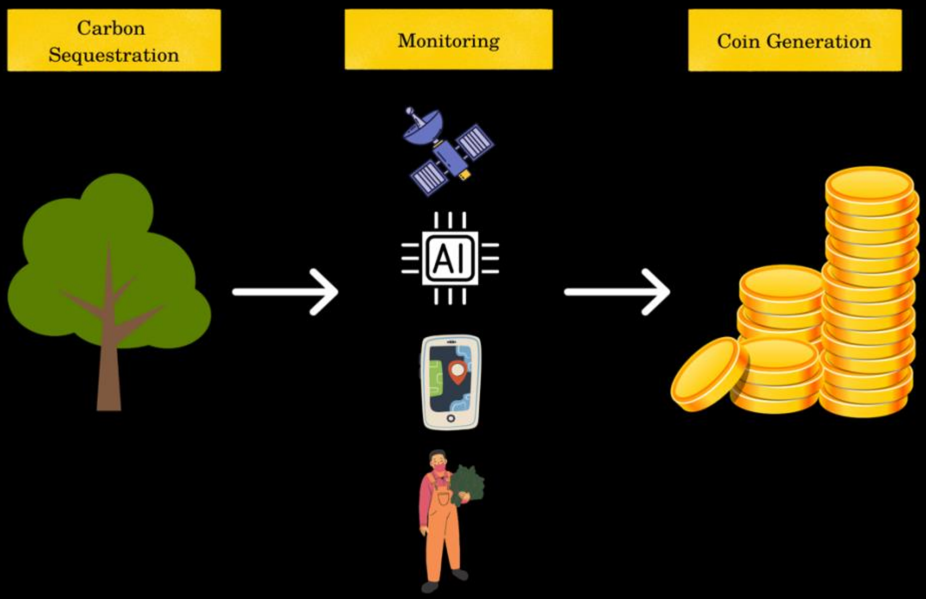

Figure 2: Coin generation from the tree to the coin.

The coin is based on every kilogram of CO_2 sequestered by each tree. Data is gathered and verified through several layers of monitoring including satellite imagery, machine learning technology, and specialized personnel.

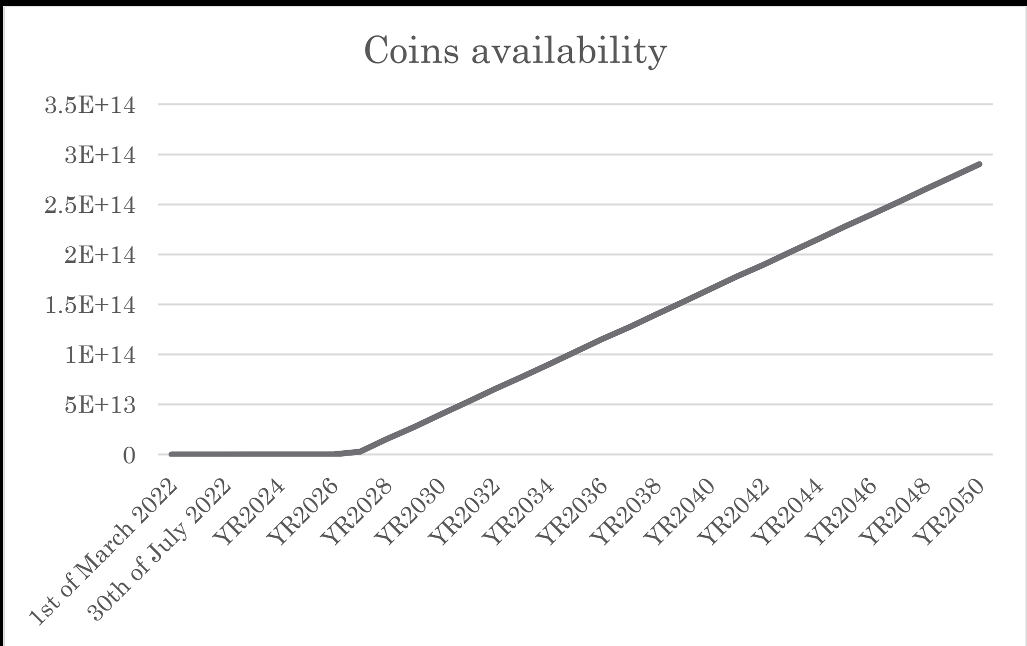

Figure 3: The graph illustrates the availability of the tokens over time. By 2050, the coin availability will be GA$ $2,9^{14}$

Calculations in Figure 2 are based on an average carbon sequestration of 250kg per NFT per year. However, this is a conservative average which will largely vary on basis of many factors.

NFTs burn, deactivate, and are generated by human willingness to counteract climate change. Coins are generated by Smart Contracts based on calculations and cannot be burned. Once they are generated, they can be exchanged, their supply is unlimited, and we hope to generate as many as possible because their increase means an increase in carbon sequestration. However, coins can become empty if the tree that generated them dies and the timber is used unsustainably because the CO_2 is released again into the atmosphere. Empty coins have the same value as full coins, as GreenAnt will not sell an increasing number of its NFTs to compensate for these kinds of CO_2 release. These not-sold NFTs are part of the virtual forest and are called “buffer NFTs”.

GreenAnt Investment

GreenAnt Investment refers to the destination of 25% of the overall generated NFTs. GreenAnt uses them to invest in other projects around the world to promote sustainability, social justice, and peace. GreenAnt will consult with the community in making these investments.

Carbon Sequestration Process

GreenAnt's mission is to make reforestation sustainable and long-term to have a real impact on combating global climate change. By using blockchain technology, individual trees can be monitored, guaranteeing the existence of each tree. Newly planted or young trees that are suitable for farming weaver ants and are free of pesticides can be tokenized. For this purpose, the GPS position of each individual tree is recorded. The species and planting date are also documented. This data is used to list the NFTs.

This chapter provides an overview of the calculation of carbon stocks of trees tokenized by GreenAnt. It is intended only for illustrative purposes and does not aim to be an academic paper.

Carbon sequestration potential based on the example of a Mango plantation

The carbon storage capacity of a tree depends, for example, on the tree species, age, cultivation system, climate, and management. In a typical cultivation system in Thailand where mango is cultivated in a plantation, approximately between 200 and 400 trees are planted in one hectare (wa.gov.au, 2017). Carbon stock is the carbon stored in the biomass of a tree, which is all parts of the tree, such as the trunk, branches, foliage, and roots (Krisnawati et al., 2012).

There are different ways to calculate the carbon storage of a tree. Naik et al. (2019) compare different models to determine the biomass of mango trees. The study was selected as representative because it is based on the cultivation of mango in a plantation system, which is closest to the actual situation in Thailand. The graph below shows an overview of the amount of carbon dioxide a mango tree removes from the atmosphere (Figure 5). The figures are based on the study by Naik et al. (2019), who selected the Gompertz model as the most reliable among 10 different models.

Gompertz model $Y = a \times \exp(-b \times \exp(-c \times X)) + \varepsilon$

A more detailed description of the different parameters used to determine the carbon content of the different plant parts can be found in the mentioned paper.

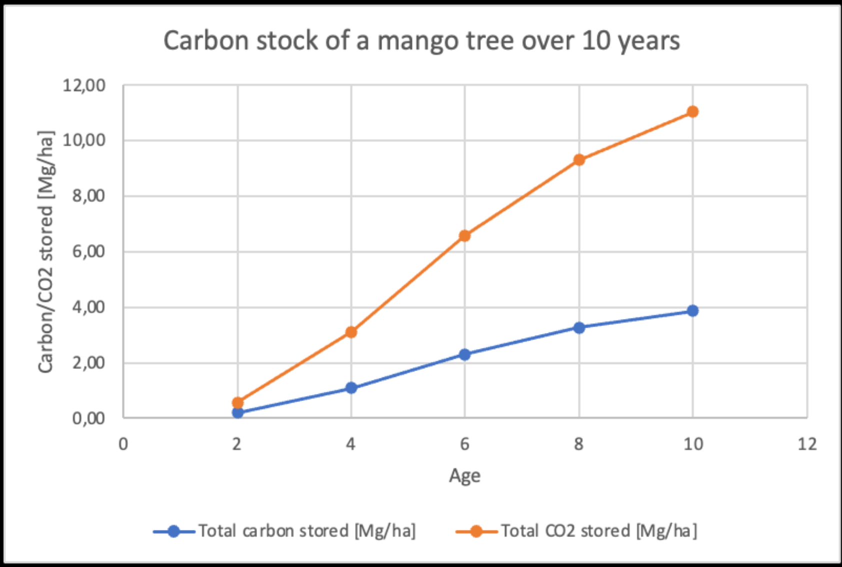

Figure 4: Carbon sequestration potential of a Mango tree over 10 years (Naik et al., 2019)

The carbon storage potential of a mango plantation is estimated to be 11.04 Mg/ha CO_2 in 10 years. This is 11040 kg/ha in a 5 x 5 meter cultivation system with 400 trees per hectare. After 10 years, a mango tree has stored 27.6 kg of CO_2 (Naik et al., 2019). The Clinton Development Initiative study states that a mango plantation captures 106 tones of CO_2 per hectare (Figure 6). The study refers to a 7 x 7 meter cultivation system with 204 trees per hectare. This results in a CO_2 storage capacity of 520 kg per tree. However, this study is an assessment over a period of 50 years (Clinton Development Initiative, 2011). The following graph shows the carbon storage of a mango plantation over 50 years. Here, an average of 29 tC/ha is given, which corresponds to 106 tCO_2/ha. As shown by this graph, 10 years in the minimum time a tree must stay alive for having an effect on the environment.

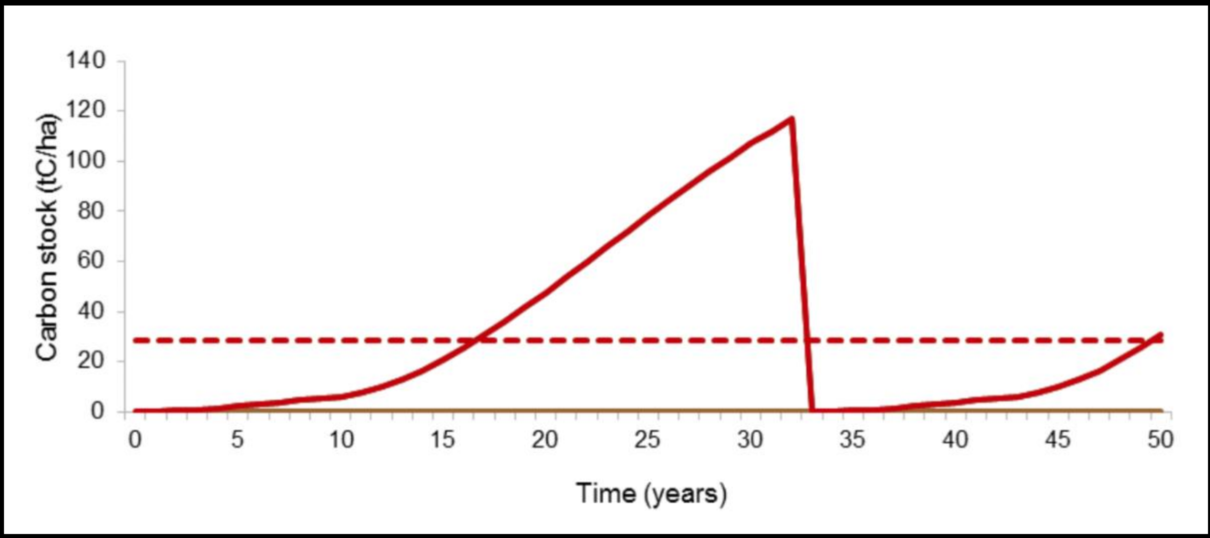

Figure 5: Carbon sequestration potential of a mango orchard over 50 years (Clinton Development Initiative, 2011).

Each tree species is different and even among the same species, trees can store significantly different amounts of carbon. This is due, for example, to whether the trees are grafted or "wild", as the growth of the tree is strongly influenced by this (Ganeshamurthy et al., 2016).

Carbon sequestration potential of individual tree species

GreenAnt has a number of tree species that can be tokenized. This selection is based, for example, on the preference of the weaver ant farmed on the trees. The ants' presence guarantees that the cultivation system is grown free of pesticides. On the one hand, the ants can serve as an indicator for the use of agrochemicals, and on the other hand, GreenAnt is interested in additionally rewarding the farmers who take care of the trees. This means that the farmers can sell the weaver ants as a sustainable source of protein for humans and animals and thus generate an additional source of income besides the harvest of the trees.

Beyond the ant and the harvest, the farmers also benefit from the carbon stored in the trees. The tree growers themselves receive a share of the tokenized trees and thus receive carbon coins for their own NFTs. A list of the most important tree species recognized as habitats by the weaver ant can be found in the annex. Among all species, the following tree species were selected as examples to demonstrate carbon storage.

- *Mangifera indica* (Mango)

  $$\text{Biomass} = (-2.43)+0.154*(DBH)+0.193*(H)$$

- *Persea americana* (Avocado)

  $$\log10\ \text{Biomass} = (2.88659*\log10((DBH)))+0.11409$$

- *Theobroma cacao* (Cocoa)

  $$\text{Biomass} = 0.0202*(DBH)^{2.112}$$

- *Durio zibethinus* (Durian)

  $$\text{Volume} = 0.27984+(-0.021341*DBH)+(0.0009273*DBH^2)$$

Where

- Biomass: Total dry weight of living organism, stated in kilograms or tons
- Volume: The quantity of three-dimensional space of an object, stated in cubic meter
- DBH: Diameter at breast height
- H: Height of the tree (GlobAllomeTree, 2022; Krisnawati et al., 2012)

The equations listed here are initially for illustrative purposes only. A more detailed evaluation of the best fitting equation per tree species will be carried out after the monitoring has started. Krisnawati et al. (2012) provide a detailed overview of existing allometric models for calculating forest biomass. The equations presented here were derived from various studies and from GlobAllomeTree (GlobAllomeTree, 2022). With the start of monitoring, different equations are tested and compared with the manually collected data on carbon storage. The information gathered is collected per species for a long enough time to determine the most appropriate equation for each tree.

Calculation of carbon sequestration

There are different ways of calculating the carbon storage of individual tree species. For most tree species, allometric equations are the best way to calculate. In most cases, the height of the tree and the trunk diameter is needed. In the start-up phase, data on the most common tree species are collected manually. This means that a data set is created that documents the species, the height, the trunk diameter, and the canopy width. The aim of this data collection is to develop an AI that links these four components. Since there are only four parameters involved, the training of an AI is comparatively simple, and no large data set is necessary. Nevertheless, GreenAnt plans to sample the data collection over a long period of time and with geographical variance to maximize the accuracy of the calculations.

The trunk diameter cannot be measured directly, but it can be predicted with the help of models. Jones et al. (2020) show a very similar approach, using aerial photography to determine the biomass and carbon content of mangroves in Australia. A model is used to derive tree height and trunk diameter from tree canopy diameter. GreenAnt's AI will be trained so that in the future up-to-date satellite images can be given as input data to the software and it will measure the canopy width. The canopy width is then derived into tree height and width. The software then calculates the amount of carbon stored in each tree.

Difficulties can arise in monitoring the trees if, for example, parts of the tree canopy are covered by other trees. Only the width of the tree canopy at one point is necessary for the calculation. This means that a partial cover is not necessarily disadvantageous if the diameter of the tree crown is visible on the satellite image. However, if a tree is completely covered and it is not possible to derive the diameter of the trunk in any other way, this tree will be removed from GreenAnt's virtual forest. The use of drone images would also be interesting in the future, which would make it possible to determine the tree dimensions even more precisely. This could solve the problem of uncertain satellite images.

Another difficulty in determining the carbon content in the tree can occur due to the altered growth of the trees through grafting. Depending on the height of the grafting point, the trunk diameter can be difficult to measure. There are modified allometric equations that specialize specifically in grafted trees (Ganeshamurthy et al., 2016). In addition, the diameter of all branches can be measured to determine the biomass of the tree (Smiley et al., 2008).

Roadmap

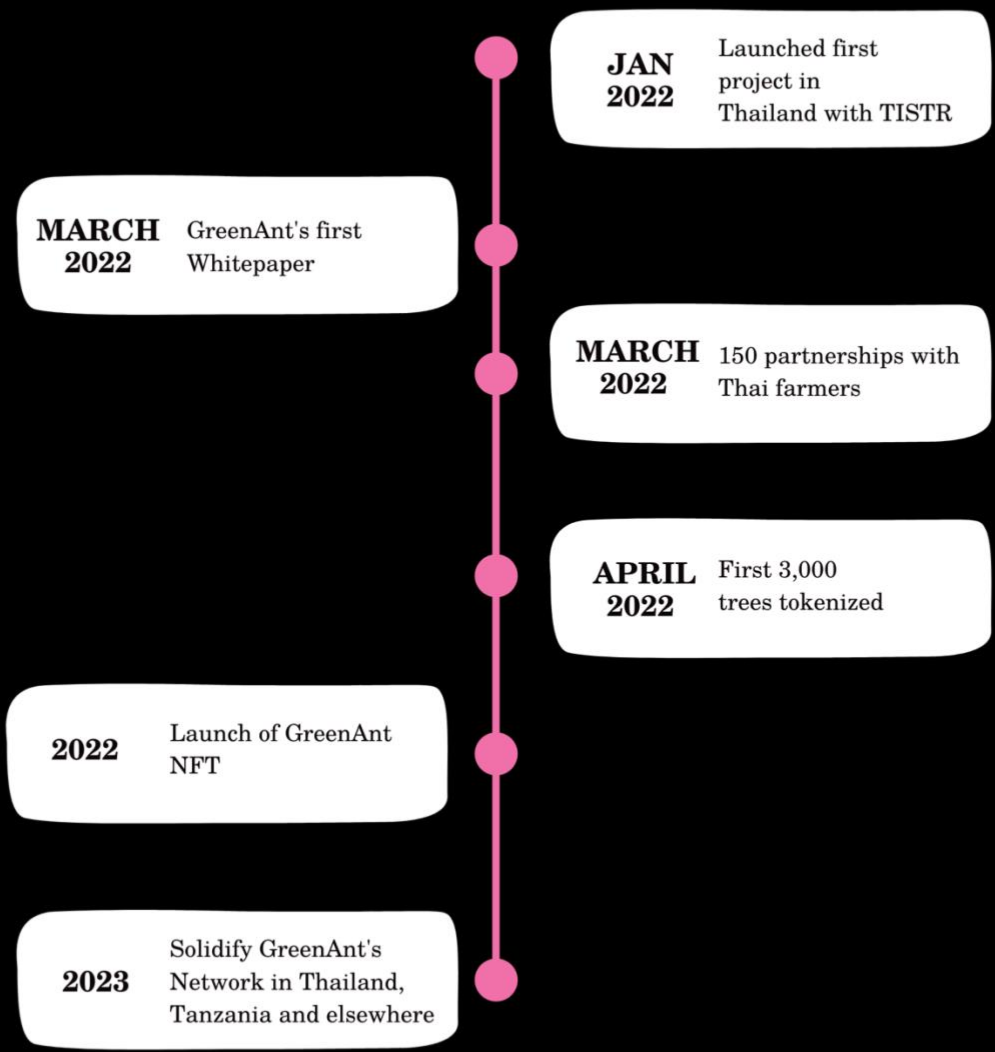

Figure 6: The Roadmap provides an outline of GreenAnt's first steps this year, and the ones to follow.

Team

Mario Simmaco
CEO

Chiara Schulte
Carbon Offset Manager

Joachim Offenberg
Entomologist expert

Luca Marruzzo
Corporate lawyer

George Gbenle
Blockchain Developer

Javier Aleuanlli
IP Lawyer

Sarah Lewis
Communication Manager

Sinan Lahur
Corporate Lawyer

Jesper Nygaard
Business Advisor

Syed Rahman
CFO

References

Clinton Development Initiative (**2011**) *Mango Orchard Technical Specification - Trees of hope project*. Malawi. Available at: http://cotap.org/wp-content/uploads/_proj_add_doc/Malawi - TS - Mango Orchard - 2011.pdf.

Europe's carbon price nears the 100 euro milestone | Reuters. (**n.d.**). Retrieved March 9, 2022, from https://www.reuters.com/business/energy/europes-carbon-price-nears-100-euro-milestone-2022-02-04/

Ganeshamurthy, A. N. *et al.* (**2016**) 'Biomass Distribution and Development of Allometric Equations for Non-Destructive Estimation of Carbon Sequestration in Grafted Mango Trees', *Journal of Agricultural Science*, 8(8), pp. 201–211. doi: 10.5539/jas.v8n8p201.

GlobAllomeTree (**2022**) *GlobAllomeTree: Assessing volume, biomass and carbon stocks of trees and forests.*

Jones, A. R. *et al.* (**2020**) 'Estimating Mangrove Tree Biomass and Carbon Content: A Comparison of Forest Inventory Techniques and Drone Imagery', *Frontiers in Marine Science*, 6(784), pp. 1–13. doi: 10.3389/fmars.2019.00784.

Krisnawati, H., Adinugroho, W. C. and Imanuddin, R. (**2012**) *Allometric Models for Estimating Tree Biomass at Various Forest Ecosystem Types in Indonesia*. Research and Development Center fpr Conservation and Rehabilitation, Forest Research and Development Agency.

Naik, S. K. *et al.* (**2019**) 'Biomass production and carbon stocks estimate in mango orchards of hot and sub-humid climate in eastern region , India', *Carbon Management*. Taylor & Francis, 10(5), pp. 477–487. doi: 10.1080/17583004.2019.1642043.

Smiley, G. L. and Kroschel J. (**2008**) 'Temporal change in carbon stocks of cocoa–gliricidia agroforests in Central Sulawesi, Indonesia', *Agroforestry Systems*, 73(May), pp. 219–231. doi: 10.1007/s10457-008-9144-3.

State and Trends of Carbon Pricing 2021. (**n.d.**). Retrieved March 9, 2022, from https://blogs.worldbank.org/climatechange/state-and-trends-carbon-pricing-2021

wa.go.au (**2017**) *Spacing, soil preparation and planting mangoes*, *Department of Primary Industries and Regional Development*. Available at: https://agric.wa.gov.au/n/2118 (Accessed: 14 March 2022).

Annex

List of trees that are suitable for farming weaver ants and can be tokenized.

Botanical name	English name
Persea americana	Avocado
Acacia mangium	Brown salwood
Senna siamea	Siamese Cassia
Anacardium occidentale	Cashew
Antidesma bunius	Chinese laurel
Citrus	Citrus
Theobroma cacao	Cocoa
Durio zibethinus	Durian
Artocarpus heterophyllus	Jackfruit
Litchi chinensis	Lychee
Dimocarpus longan	Longan
Swietenia mahagoni	Mahogany
Pithecellobium dulce	Manila tamarind
Mangifera indica	Mango
Azadirachta indica	Neem
Syzygium samarangense	Java rose apple
Dalbergia cochinchinensis	Rosewood
Sandoricum koetjape	Santol

Annona muricata	Soursop
Tamarindus indica	Tamarind
Tectona grandis	Teak
Fagraea fragrans	Tembusu