Climate & Nature Equity aligned with sustainability goals

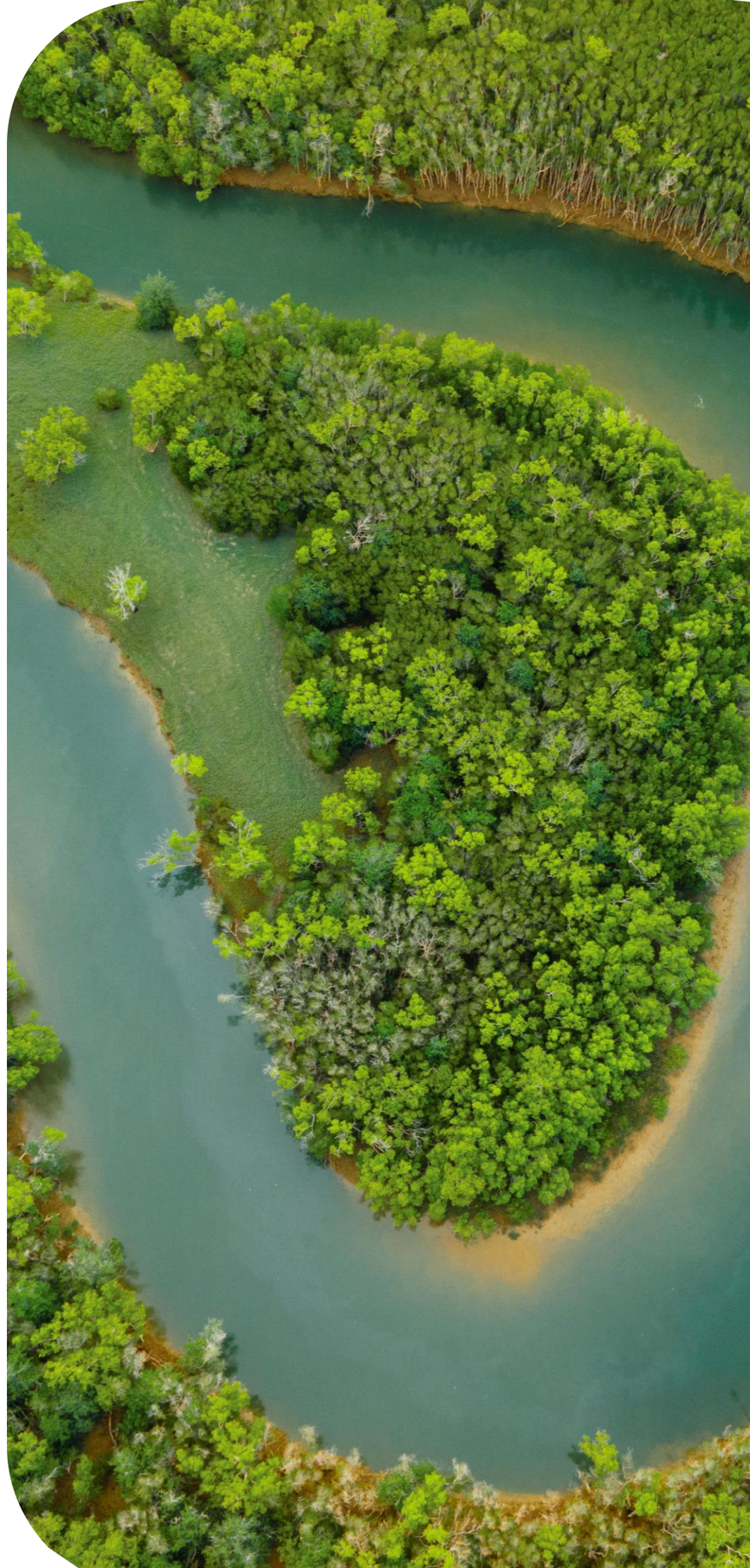
bluebell index

Traceability, integrity and transparency

The Problem: Earth's Nature Capital stock is dwindling—endangering humanity and many economic activities—due to insufficient investments in Nature

Today's funding streams for nature mainly come from Gov, philanthropy, land purchases and PES/env. compensation) are insufficient. Only **$200B** of annual investments in nature capital vs. UNEP's estimated **annual need for $700B.**

- Over 550 PES programs deliver only $36-42B / year
- Voluntary nature-related carbon offset markets generate only about $2B per year
- The private sector contributes only $35B / year, while extracting **~$7T** of value (200x)
- Despite the advancements of the Kunming-Montreal Global **Biodiversity Framework** and new nature-positive pledges, investments and biodiversity are still only miniscule.



Compensation framework (carbon offsets) continues to have various limitations:

- Accounted as **CSR expense on P&L**, hence limited to compensation budgets/pollution; this reflects how businesses view and integrate nature remediation in their financial planning.

- This is not aligned with investments in nature, which do not expire.

- Most NBS are based on counterfactual scenarios (e.g., deforestation rates for REDD+ or nature regeneration for ARR); weakness of REDD+ projects in particular, has been exposed and received market criticism, causing a migration to high integrity offsets (ICVCM).

- **Additionality** increasingly **harder to justify** within context of broad climate change.

- **Permanence less predictable** in a rapidly changing climate situation.

We should NOT apply the same limits of carbon offsets to biodiversity, water and soil, as equivalence is much harder to calculate between different land types as well as between corporate impact and compensation on land.

Hence, the need for a new **Asset Class** connected to **Nature Equity**, linked to the Natural Capital Account, and a call for some **pioneering corporates and FIs** to lead this movement.

About us

Bluebell Index ("BBI") is a **climate tech** that **values, certifies and monetizes environmental assets,** incentivizing landowners to pursue **regenerative, climate** and **nature positive land use practices,** while **allowing corporates, investors and FIs** to **invest in Nature** and **complement climate strategies, beyond emissions reductions.**

BBI allows companies to not only mitigate the consequences of **climate change** via carbon, but also to quantity **positive contribution to Nature through biodiversity, soil and water attributes and enhancements**.

Bluebell's blockchain-based **tokens,** aligned with international **science-based frameworks** and proprietary **algorithms,** provide The needed **integrity** and **robustness** to catalyze the emerging **environmental assets class** linked to **Nature Equity.**

Executive Team

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Ludovino Lopes
Legal Committee

Thelma Krug
Scientific Committe

On May 18th, 2023 **Minerva Foods has invested US$ 2 million in the **seed round** of Bluebell index.*

Complete Environmental and Climate Solution

We are focused on offering **high class Environmental Tokens**, a broader and more complete climate mitigation solution. The **tokens are the result** of our **science-based methodology** that evaluates and certifies **environmental assets** measuring not only **carbon balances, but also other attributes such as water, soil and biodiversity.**

By utilizing technology to efficiently unite third-party data from multiple sources, BBI has created a disruptive environmental framework capable of unlocking a new Natural Climate Solution asset class that can **enhance economic productivity, climate mitigation and adaptation.**

Carbon

BBI firstly calculates carbon emission equivalence based on avoidance processes and monitoring, thus allowing landowners to engage in carbon sequestration procedures aligned with their crop and livestock production. Sequestration is also addressed based on forest growth and increased regenerative agricultural processes.

Soil

As the most endangered asset in terms of loss-to-recovery ratio, soil is fundamental to agriculture and natural restoration. By avoiding erosion, degradation and negative changes from conventional farming, BBI promotes sustainable soil use of and preservation.
Soil also represents the **largest untapped potential** for carbon sinks and stocks.

Water

Conserving and balancing water use is critical to fighting climate change and preserving our planet's water supplies, avoiding irrational use, pollution and desertification processes, allowing for hydrological balances to be sustained year after year. These practices also enhance the underground aquifers.

Biodiversity

Biodiversity and ecosystem services are critical to ensure human well-being, maintain and improve production systems. Several species are key for maintaining a balanced natural and human environment and also preserving undiscovered genetic banks with future potential importance for humanity.

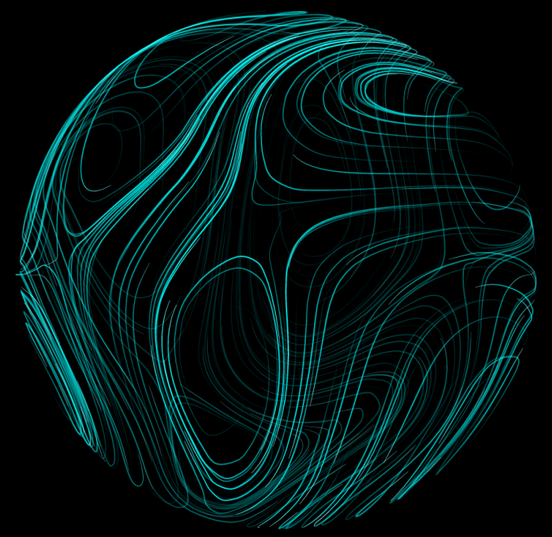
certificated via blockchain: ETHEREUM CLASSIC

certification partner: ISO 9001 ISO 14001 BUREAU VERITAS Certification

Our frameworks

Environmental assets are the result of combining measurable natural attributes and environmental commitment instruments from a particular area of land at a determined point in time. This combination can be understood to be the resulting actions of human interference that generates positive natural attributes at a given space and time, and the value of the environmental asset is calculated mathematically using the concept of spatio-temporal random fields. The current version assesses natural values of carbon stocks and sinks, hydrologic cycle and water availability, biodiversity density and stability, and soil physical integrity.

The carbon framework applies an integrative approach for calculating the net carbon balance (in tCO2e) of the entire farmland, by combining multiple VCM project types (e.g, avoided deforestation, restoration, agricultural land management, etc.). This approach maximizes the overall carbon sequestration potential and promotes ecosystem restoration across the entire property. Our specialized models utilize machine learning algorithms and remote sensing data to estimate carbon stocks in natural cover areas (considering native biome and vegetation type present). We also evaluate the land use and cover change impact on the carbon cycle and GHG (including NOx and CH4) emissions due to the agricultural and/or ranching activities in practice. The resulting net carbon equivalent value (stocks - emissions) is expressed in tons of CO2e per area per year, and defines the number of bluebells to be generated.



The water (hydrologic) framework evaluates historical water availability cycle data along with the impact of human actions (e.g., irrigation, perforation, land use cover changes, agricultural inputs, etc.) on the distribution and movement of water, both above and below ground, in a given area during a specific time period, at the micro (landowner), meso (comparable to neighboring lands) and macro scale levels (regional vulnerability). These analyses result in a score for the land's water health/stress, which contributes to the environmental asset index.

Our frameworks

The biodiversity framework assesses the positive and/or negative impacts of human interventions, in particular land use cover change, in a given area during a specific time period, measurable in terms of (i) species density and (ii) landscape resistance & connectivity (reflecting ease of movement for species). The framework considers the current knowledge of key species in the corresponding biome and the diversity levels associated with agricultural and ranching activities, as well as landscape resistance and connectivity. The weights obtained from the correlation of these measures yields the biodiversity value contribution to the environmental asset index.

The soil framework compares physical parameters (chemical, physical, biological) of soil quality to the native state values in a given area during a specific time period, considering the agricultural and ranching land use activities in practice. The indicators, which reflect soil erosion and current soil conditions, result in an avoided soil loss score that contributes to the environmental asset index.

Bluebell Index Process

Start

1 Land Diligence

2 Conclusion of Contracts

3 Data and Documentary Diligence

4 Paralegal Diligence

5 Legal Diligence

6 Envrironmental Science

7 Asset Reports

8 Revision

9 Digital Notarization

10 Certification Issuance

11 Deed Registration

12 Registry

13 Tokenization

Companies

14 Purchase Contract

15 Token Deposit in Wallet

Finish

Bluebell Frameworks

In this stage, we use our science-based methodologies to evaluate and certifiy the environmental assets measuring not only carbon balances, but also other factors such as water, soil and biodiversity.

Environmental and Financial Accounting

Benefits of token accounting for ESG: By tangibly valuing initiatives that preserve natural resources, companies can both more effectively communicate their commitment to environmental concerns and closely accompany landowner's environmental performance.

Why Choose us?

In addition to **traceability, integrity** and **transparency,** Bluebell's solution offers various benefits:

Security tokens using Blockchain: The Bluebell model treats the environmental asset as a security token representing a **specific amount** of environmental assets (e.g., **1T CO2e**) and creating **safeguards and security** for contracts and **traceability** of all project and token information.

ESG accounting linked directly to farms: By placing tangible value on initiatives that aim to preserve natural resources, companies can effectively communicate their environmental commitment and **trace them directly** to the origin, the environmental performance of **specific landowners**.

Factual Basis and Immediate Behavior Impact: Our frameworks avoid counterfactual scenarios (e.g., speculative deforestation rates) and reward current positive environmental impact, adjusting payments for all subsequent changes, creating a **real incentive** to reward best land use and conservation practices.

Auditable and reliable processes: Our **environmental frameworks** have been reviewed by our certification partner **Bureau Veritas,** and our environmental assets accounting methodology has been validated by **KPMG.**

Holistic environmental approach: Our holistic approach considers not only carbon balances, but also reflects key Nature attributes (water, soil integrity and biodiversity), allowing companies to proactively move ahead of the curve addressing **ESG targets beyond simplistic carbon balances**, while supporing the maintenance and regeneration of natural ecosystems.

Insetting potential: Bluebell tokens can be utilized as a mechanism for corporates to finance scope 3 emissions reductions—with up-front and then ongoing payments over 10 years) by landowners who implement conservation / regenerative agricultural processes, while creating an intangible asset on their balance sheet (not reducing EBITDA or earnings)

Scalable solution: Given our use of remote sensing and algorithms, we are able to assume the up-front costs of analyzing the farmlands and issuing environmental assets, allowing us to scale up faster.

Benefits for landowner partners:

- Additional revenues
- Productive areas enhanced outputs
- Efficiency and agility
- Initial Investment by Bluebell
- Whole property area analysis
- Tokens with more economic value
- Raise Environmental awareness for landowners
- Path for adoption of Regenerative Practices

Our Social Impact

2% of Bluebell's revenue will be invested in social impact in the communities where we operate, with the following objectives:

- Empowering small producers
- Offer love and care to struggling communities
- Provide families with access to new income streams
- Stimulate the environmental economy
- Applied environmental education and awareness
- Catalyze sustainable practices

Tokenization strategy

Proof of Stake: The proof of stake model offers a more efficient way for the data mining process and has generates much lower emissions related to electricity consumption.

Token composition: The token embeds one or more Bluebell credits identifications via smart contracts. This strategy focuses on reducing the consensus process.

Reduced token custody: Our process is segregated between generating the credit and making the sale. The token is minted only upon sale, resulting in less complexity on the token custody.

Integrate your ESG strategy chain in a simple, flexible and reliable way with Blockchain

The BBI technology enables the recording of transactions supported by the issuance of digital certificates, **guaranteeing the secure sharing of information and the generation of an audit trail.** All this is performed through a secure, reliable P2P network and without the need for a third party to carry out the validation.

Technology partner:

CPQD operates oriented towards trends with the poten- tial to transform people's lives and the business world, such as IoT, Artificial intelligence, Blockchain, Connectivity Technologies, Smart Cities and Smart Agribusiness.

bluebell index

www.bluebellindex.com