



A for purpose company, driving large scale ecological restoration and protection through private sector funding

Paper and pulp industry carbon offsetting or insetting

Corresponding adjustments:

- 🌳 Strong scientific evidence for the carbon pools
- 🌳 **60%** of baseline budgets benefiting local stakeholders (owners, users, managers) **PLUS** 60% of profits made on reselling the credits when issues
- 🌳 Quantified biodiversity for **co-benefits** or issued as separate **biodiversity credits**





Properly accounting for carbon benefits of restoring mangroves and restoring hydrology



Quantifying community benefits

Issuance price

25 year budgets agreed based on an issuance price of around \$10 for carbon and \$5 for biodiversity.

A minimum of 60% of these budgets must benefit local stakeholders (owners, users and managers of the site)

Bonus payments

Over the 25 years the prices of carbon and biodiversity credits are likely to rise. If prices triple then the local stakeholders would only have had 20% of the value of the credits.

So all contracts require 60% of any price rises over the issuance price is paid back as a bonus to local stakeholders

Benefits

Buyers can be confident that they won't be exposed in the media as having exploited local communities

Communities are protected against selling too early and not getting benefits of future price rises

Governments see the scheme as equitable and are likely to approve carbon rights letters

How do you define a unit of biodiversity gain?



Quantifying Biodiversity

Organisation Name	Credit Name	Organisation Name	Credit Name
BioCarbon Registry Biodiversity Standard	Biodiversity Credit	Plan Vivo Pivotal-for-PV Nature	Plan Vivo Biodiversity Certificate
Biodiversity Net Gain	Biodiversity Unit	Rebalance Earth	Nature Credit
Botanic Gardens Conservation International	Biodiversity Impact Credit	recelio	Dynamic Biodiversity Token
CarbonZ	CarbonZ Biodiversity Action Credit	Savimbo	Biodiversity Credit
CreditNature	Nature Impact Token	Single Earth	MERIT
EarthAcre	EarthAcre Restore, Nature Stewardship Credit	South Pole	Biodiversity Credit
Ekos	Sustainable Development Unit	South Pole EcoAustralia	EcoAustralia™ Credit
Environment Bank	Nature Share	Swedish University of Agricultural Sciences	Biodiversity Credit
ERA Brazil	Biodiversity Stewardship Token	Terrain NRM	Cassowary Credit
GreenCollar NaturePlus™	NaturePlus™ Credit	Terrasos	Biodiversity Credit
InvestConservation®	IC Token®	ValueNature	Nature Investment Certificate
New South Wales Biodiversity Offset Scheme	Biodiversity Credit	Verra SD VISTa Nature Framework	Nature Credit
NewAtlantis Labs	Marine Biodiversity Token	Wallacea Trust	Biodiversity Credit
Niue Ocean Wide Trust	Ocean Conservation Credit	WCS HIFOR	HIFOR Unit
Open Earth Foundation Ocean Program	Marine Ecosystem Credit	Wilderlands	Biological Diversity Unit
Organization for Biodiversity Certificates	Biodiversity Certificate		

Wallacea Trust Methodology Summary

Step-by-Step Overview of Biodiversity Credit Measurements



Implementation of Taxa Score System



Strengths of The Methodology:

- Works in all ecoregions and habitats because it is a percentage increase over the baseline.
- Using complete taxa prevents any one species skewing the data
- Unit of biodiversity change defined as a 1% increase or avoided loss per hectare in the median value of a basket of metrics
- Can be independently validated and verified by Biodiversity Futures Initiative
- Biodiversity credits can be used to quantify biodiversity gain in supplier chains, operated sites or as contributions to GBF 30 x 30 targets
- Biodiversity credits can be stacked with carbon credits if neither carbon nor biodiversity can fund the project

Calculating biodiversity units of gain

Number of claimable biodiversity units (*BDC*) is defined as:

$$BDC = b \times [B_u/B_l \times (A_p - l)]$$

$$\begin{aligned} \text{Biodiversity credits} &= 0.8 \times ((400 \times (1944-0)) \\ &= 622,080 \end{aligned}$$

Metric	%age difference between paired development and project site
Beetles	100
Breeding birds	322
Forest cover	400
Reptiles	744
Amphibians	744



b = buffer

A_p = area in hectares anticipated lost



Credits produced by protecting Cusuco for 25 years

Credit type	Numbers	Price per credit	Income
Biodiversity	622,080	\$10	\$6,220,800
Carbon	524,180	\$10	\$5,241,800
Totals	1,146,260		\$11,146,260



Wallacea Trust biodiversity unit of gain methodology

- ✓ Works in all 1,500 ecoregions
- ✓ Quantifiable as a unit of uplift or avoided loss
- ✓ Can be independently validated & verified
- ✓ Can be issued as credits and traded using the same carbon credit architecture

1

Uplift

Credits issued ex-post

Same biodiversity metrics measured at start of new management programme and re-measured every 5 years

2

Avoided loss

Credits issued ex-post

Biodiversity metrics of site under threat of development is measured and compared against paired development site

Definition of a Unit of Biodiversity Change

*“A unit of biodiversity change is a **1% gain per hectare in the median value of a basket of taxa** that encompass the conservation objectives for the site and has permanence and additionality”*

Companies reporting on investment towards their **nature positive targets** can quantify it as having achieved an average biodiversity gain of say **20% over say 2000 hectares in the last year**. This could be linked to global targets by identifying how much of that biodiversity gain was achieved in 30 x 30 estate sites.

Can be used to quantify the **overall biodiversity benefit** of expenditure on conservation projects.





The Biodiversity
Futures Initiative



Independent Verification of Claims

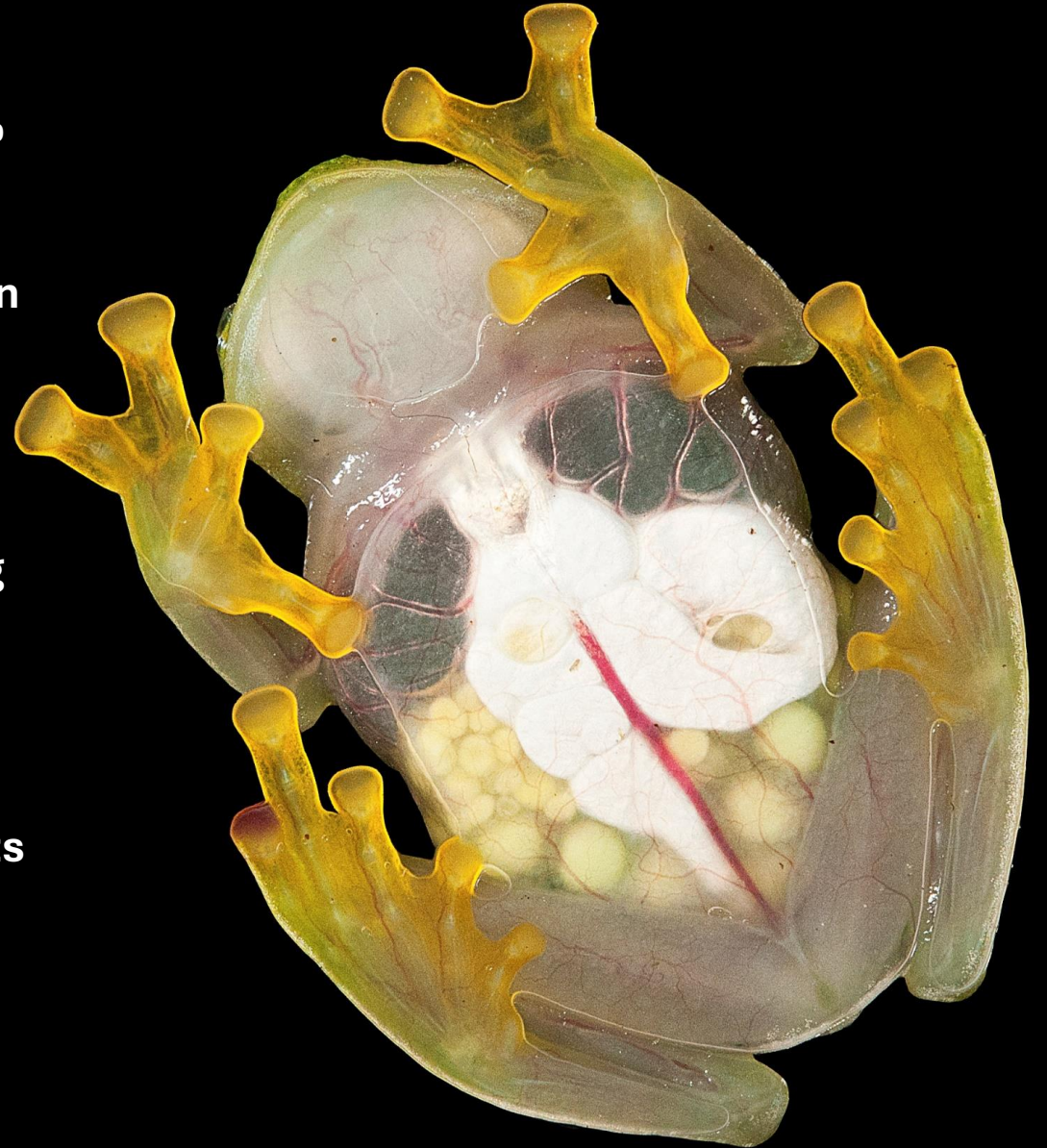
Academic peer review is required for the verification of biodiversity claims.

The **Biodiversity Futures Initiative (BFI)**, a grouping of academics from a range of universities, externally verifies biodiversity claims, offering:

- **Stage 1 Reviews:** Basket of metrics, methodologies and sampling strategy £2000
- **Initial Pre-screening Option:** £500
- **Stage 2 Reviews:** Audit of data sets, recalculations and issuance of certificates to confirm biodiversity gain £5000

Biodiversity credit issuance via registries (e.g. blockchain) or through traditional certification bodies.

- **For carbon-led projects biodiversity quantified calculate biodiversity gain which is used to enhance the carbon prices**
- **High quality mangrove restoration funding is about 90% carbon and 10% biodiversity**
- **Restoration of native forest funding is about 60% carbon and 40% biodiversity. In these cases, the biodiversity is either quantified to enhance carbon values or issued separately as biodiversity credits**
- **Funding not an issue because investors can get funding back after 5 – 9 years with an IRR of 12 – 15%**
- **For many high nature value projects, (restoration of grassland, open sea marine reserves (or where govts control the carbon then issuance of biodiversity credits is required**
- **25 projects being developed in Costa Rica, Panama, Colombia, Mexico, UK, Romania, Spain, Indonesia**



Market Ready rePLANET Projects

Project Type	Countries	Number of Carbon Credits	Number of Biodiversity Credits	Carbon Credit Prices	Biodiversity Credit Prices
Riparian Forest Restoration <i>(Uplift)</i>	Costa Rica, Panama	10,000,000	6,500,000	\$10	\$5
Mangrove Restoration <i>(Uplift)</i>	Costa Rica, Indonesia, Mexico	6,000,000	1,800,000	\$45	\$5
Rewilding a Scottish Island <i>(Uplift)</i>	UK	60,000	236,000	\$45	\$30
Re-Introducing Extinct Species Onto a Galapagos Island <i>(Uplift Biodiversity Only)</i>	Ecuador	0	2,750,000	N/A	\$12
Protecting a Marine Reserve <i>(Uplift Biodiversity Only)</i>	Anguilla	0	1,200,000	N/A	\$10
Restoring a Wetland <i>(Uplift Biodiversity Only)</i>	Spain	0	199,000	N/A	\$30
Greening the Desert <i>(Uplift Biodiversity Only)</i>	Egypt	0	336,900	N/A	\$5
Protecting High Value Grasslands <i>(Avoided Loss)</i>	Romania	484,000	420,000	\$25	\$18
Protecting a Cloud Forest with Many Endemic Species <i>(Avoided Loss Biodiversity Only)</i>	Honduras	524,180	622,080	\$10	\$10
Protecting the Buffer Zone of a National Park <i>(Avoided Loss)</i>	Mexico	1,750,000	600,000	\$8	\$15
Totals		19,266,000	15,141,900		



Monetizing Biodiversity

Biodiversity Net Gain. Landscape Recovery programmes enable private and public sector blending.

Carbon-led projects that are improving biodiversity are the easiest to sell.

For biodiversity led projects developing a **Special Purpose Vehicle** for ecosystem service rights which issues shares which represent either one carbon or one biodiversity credit to be issued on an agreed date is the best option. Credits issued on block chain. Allows multiple smaller philanthropic investors who spread the risk and receive biodiversity and carbon credits they can monetize in the future. This approach used for Transylvania and Scottish rewilding sites

Getting credits onto trading platforms by registering the SPV's with an ISIN number and then listing on the Swiss stock Exchange. This approach being used for the Galapagos project

Biodiversity Baseline Monitoring and Monetisation for Farms and Estates

rePLANET and Mozaic Earth have developed a:

“Biodiversity baseline monitoring package for farms and estates that costs £10,000”

Monitoring utilises:

- Artificial Intelligence (AI)
- Remote Sensing
- Metabarcoding
- Farm Team Training and Data Collection on the Mozaic App

Biodiversity quantification uses the **Wallacea Trust Methodology** and generates data in formats submissible for **BFI Stage 2 Reviews**.



SCAN ME

Biodiversity Baseline Monitoring and Monetisation for Farms and Estates



1 The Opportunity *Monetize a thriving nature*

Whilst food production remains the main income stream for most farms and estates, there is significant opportunity to monetise **additional ecosystem services through biodiversity and carbon credits**. Projects that demonstrate biodiversity uplift and carbon sequestration attract substantial interest from **private sector investors**.

Monetising ecosystem services requires **baseline biodiversity quantification** and **external verification**; this is critical for all biodiversity methodologies. So, how does one do this **cost effectively** and in **formats accepted** by verification bodies?



2 Our Solution *Holistic biodiversity monitoring*

To overcome this challenge, **rePLANET**, in conjunction with **Mozaic Earth**, have developed a:

Biodiversity baseline monitoring package that costs £10,000* to quantify baseline farm and estate biodiversity in a format that can be submitted for a Biodiversity Futures Initiative 'Stage 2 Review'.

This high quality, verifiable package is at least **3X cheaper** than alternative site-based ecological surveys and it combines **AI with remote sensing, metabarcoding and farm team training** for data collection and ecological survey equipment usage.



Advantages of this approach: (1) Independent academic verification, (2) Quantification and verification in agreement with the leading biodiversity credit methodology, (3) Internationally recognised biodiversity credit generation.

3 The Monitoring Process *Simple to implement*

Professional ecologists co-ordinate the entire process remotely and package costs include:

- Provision of **equipment** for data collection (excl. smartphones)
- Farm team **training** for: data collection and Mozaic app use
- Expert ecologist **data analysis** (photos, audio files and trap samples)

The output provides data on **five metrics**: habitat structure (DEFRA biodiversity metric 4.1) and the species richness, conservation value and relative abundance of higher plants, ground beetles, pollinators and breeding birds. Data is then packaged for independent academic verification and biodiversity uplift quantification using the **Wallacea Trust Methodology**.



4 External Verification *The Biodiversity Futures Initiative*

The **Biodiversity Futures Initiative** (BFI), a grouping of academics from a range of universities, offers the **most cost effective** way of externally verifying the package's biodiversity claims (e.g. project 'A' has achieved a 100% increase in biodiversity across 1000 hectares compared to the baseline).

BFI verified biodiversity uplift claims can be used to:

- **Increase carbon credit sale price** through quantification of their biodiversity co-benefits
- Generate separate **biodiversity credits via a block chain registry**
- Support **corporate nature-positive strategies and reporting**



For further information on whether this package is suitable for your site please contact Dr Max Bodmer

Email: max.bodmer@replanet.org.uk

Telephone: +44 1790 763194

*Package assumes that the land is <500 hectares and that it can be stratified into a maximum of 5 habitats with 50 replicate quadrat photos taken once in May/June and again in July/August for higher plants, 40 X 5 day pollinator samples each month from May to September, 200 x 5 day pitfall trap samples, 100 x 10 minute audio recordings in May and June. Costs can be adjusted for larger sites or for those with more complex habitat structure.



OUR TEAM

rePLANET Senior Management



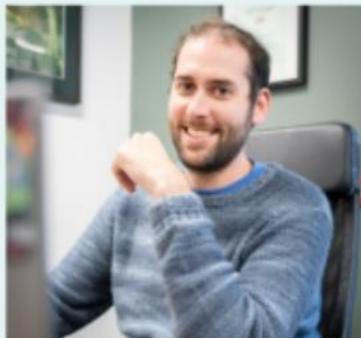
Dr Dan Exton
Director of Strategy

Identifies and develops pipeline projects that fit rePLANET criteria | Engages funders and investors and works on overall strategy with the board of directors | 15 years of experience working on biodiversity research and conservation



Max Hobhouse
Head of Strategic Finance

Leads on rePLANET business development | Former Renewable Investment Consultant | MSc in Climate Change, Management and Finance | Extensive experience in business strategy and TCFD reporting



Dr José António L. Barão-Nóbrega
Director of Project Development & Analytics

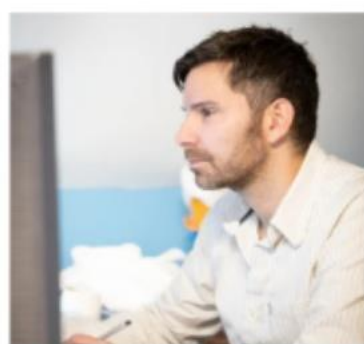
Leads on biodiversity credit applications and measurement reports, PDD development and rePLANET innovation | Extensive experience in satellite imagery analysis and herpetology | Leads GIS site screening to identify new projects

Board & Senior Management



Dr Tim Coles
Director & CEO

Founder and Chair of Operation Wallacea | Founder of The Wallacea Trust | Established the Institute of Environmental Management and Assessment | BCA Taskforce Member | Over 50 publications on environmental impact assessment and management systems



Alex Tozer
Director & COO

Leads on resource allocation, financial management and project appraisal | Extensive experience working with international partners and stakeholders



Dr Mathis Wagnackel
Director

Co-Creator of the Ecological Footprint | Founder of Global Footprint Network | Winner of the 2018 World Sustainability Award, the 2015 IWA Global Environment Award and the 2012 Blue Planet Prize



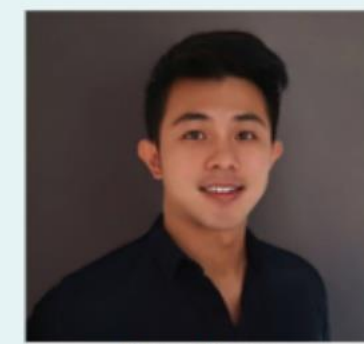
Isabel Hoffmann
Director

Co-Founder and Equity Investor at rePLANET | Active Board Member of Tour du Valat Wetland Research Institute | Member of Scientific and Technical Committee of the Prince of Albert II Monaco Foundation



Louis de Montpellier
Chair

Independent Board Member and Senior Advisor of Pury Pictet Turrettini & Cie, Millennium Associated AG, GVE, Finance for Biodiversity | Former Global Head of State Street Global Advisors | Former Banking Department Deputy Head of Bank for International Settlements, Basel



Bernard Young
Director

Corporate Strategist and Solicitor | Former APAC Strategy Lead for RICS | Former Capital Markets Lawyer with Baker & McKenzie | Business Strategist for Amazon Web Services

rePLANET Board



Sir Charlie Burrell
Vice-Chair

Chair of Carpathia in Romania | Chair of Nattergal | Member of the Advisory Board of Arcadia | Former Chair of the Board of Rewilding Britain | Rewilding Pioneer



Angelo Salsi
Director

Former European Commission Head of Department of 'Natural Resources, Climate, Sustainable Blue Economy and Clean Energy'