



# LANDBANKING GROUP

INSTRUMENT ANALYSIS  
SEPTEMBER 2024



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# The Landbanking Group

LAB INSTRUMENT ANALYSIS

September 2024

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## DESCRIPTION & GOAL

The Landbanking Group (TLG) is reinventing how all facets of nature are valued. With a specific focus on preserving High Integrity Forests (HIF), TLG uses the latest technology to measure and value biodiversity, carbon, soil, and water stock uplift on any polygon of land and package these into investable Nature Equity Assets.

## SECTOR

Land Use /AFOLU, Forestry, Sustainable Agriculture

## FINANCE TARGET

The Fund provides discounted lending and payments to land stewards to support regenerative agriculture and/or forest conservation. It is financed by: Concessional Debt from DFIs, Commercial Debt, ideally from local Financial Service Providers (FSPs), Philanthropic Grants (initially) into Fund, and Outcome-Based Funder (OBF) payments for Nature Equity Assets.

## GEOGRAPHY

For pilot phase: Brazil

In the future: Africa, Latin America, and Asia

The Lab identifies, develops, and launches sustainable finance instruments that can drive billions to a low-carbon economy. The 2024 Lab cycle targets three thematic areas (adaptation, high-integrity forests, and sustainable agriculture and food systems) and three geographic regions (Brazil, East & Southern Africa, Latin America & the Caribbean, and the Philippines).

#### AUTHORS AND ACKNOWLEDGEMENTS

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## SUMMARY

Of the world's remaining forests, only 40% are categorized as High Integrity Forests (HIFs), or forests that are largely untouched and unharmed by human activity. More than 70% of HIFs fall outside of protected areas and are at risk of damage from human disturbance (Grantham et al. 2020). The current economic investment system for valuing and protecting nature, either through direct commodity markets or carbon credits, only assigns value to forests once they have been chopped down.

**The Landbanking Group (TLG) has developed a nature equity financing instrument, placing financial value directly on the beneficial biodiversity, water, soil, and carbon storage properties that HIFs provide**, ensuring that land stewards, downstream ecosystem services, off-takers, and investors have aligned environmental and financial incentives to protect the integrity of forests. The instrument will take a blended finance approach, reflecting the multitude of beneficiaries and different levels of commercial potential, depending on how close the land is to a value chain.

TLG's innovative Measuring, Reporting, and Verification (MRV) technology along with the layered financial instrument and a comprehensive investor-land steward contracting mechanism allows investors to channel capital to the protection of critical natural resources, with the added incentive of holding these assets on their balance sheet.<sup>1</sup>

- **Innovative:** In Nature Equity Assets (NEAs), TLG is creating a new asset class backed by their MRV technology, scenario modeling, and contracting methodology to provide unique solutions for off-takers and land stewards alike to value the benefits of HIFs by tracking the uplift of biodiversity, water, carbon, and soil.
- **Actionable:** TLG has already identified pilot projects and local partners and established Willingness-To-Pay (WTP) from key stakeholders across the soy and cacao value chains. Other value chain/value chain adjacent projects in the pipeline can be fully developed and implemented once the pilot phase proves the concept.
- **Financially Sustainable:** Projects with clear value chain links will reach commerciality quickly, while those beyond value chains will require more concessional capital initially, with commerciality reached as investor willingness to invest in nature assets increases.
- **Catalytic:** The development of an asset class that values biodiversity, carbon, water, and soil uplift in such a manner that companies can hold it on their balance sheets, has replication potential globally, not just for HIFs, but for any beyond value chain habitats.

**Next Steps:** The next steps are to secure investment and agreements with all stakeholders for the two pilot projects in Brazil before implementing these as proof of concept.

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<sup>1</sup> Further information about The Landbanking Group can be found in Annex A.

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## CONTEXT

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*There has been a lack of financial incentives for investors and land stewards to protect and uplift priority conservation landscapes. The Landbanking Group's Nature Equity Assets aim to fill this gap.*

**The ecosystem services provided by High Integrity Forests have historically been difficult to monetize**, with value only assigned to them when they are converted to make way for infrastructure, agriculture, pasture, or extractive industries. Stronger financial incentives are needed for governments, investors, and other stakeholders to protect and/or restore forests.

**Yet HIFs provide critical environmental ecosystem services** such as carbon sequestration and storage; biodiversity uplift; preservation of water tables that support the climate resilience of surrounding areas; and extreme weather mitigation through the absorption of heat, prevention of soil erosion, and promotion of soil fertility in surrounding areas helps to prevent land damage from wildfires and rainstorms; non-timber forest products (economic); and social and cultural benefits for indigenous peoples and local communities (IPLCs) (Käfer et al. 2023).

**A range of solutions are needed to protect and enhance HIFs**, including commercial investment to increase the flow of finance to these forests. TLG is working with best-in-class financial and scientific institutions to develop a mechanism to share risk, guarantee outcomes, and channel private capital into nature. This involves a new, technology-based asset class—a **Nature Equity Asset**—that values nature for biodiversity, carbon, soil, and water uplift, providing investors with clear incentives to invest.

The Amazon Biome is home to the largest proportion of global HIFs. TLG will focus its initial pilot projects in the Brazilian Amazon, working with a local project partner and key stakeholders across soy and cacao value chains. While Brazil's deforestation rates dropped in 2023, primary tropical forest loss in the country remains the highest in the world (Statista, 2023) and Brazil must continue to play a leading role in the protection of these priority conservation landscapes. Despite President Luiz Inácio Lula da Silva's goal of reaching zero deforestation by 2030, Brazil faces a high risk of land degradation and deforestation from cropland expansion and livestock grazing.

Other pipeline focus areas include beyond value chain projects with the conservation NGO African Parks, primarily in the Congo Basin, the second largest rainforest in the world, as well as a value chain adjacent<sup>2</sup> project in Suriname.

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<sup>2</sup> Projects are considered "beyond value chain" if they derive their revenue entirely from forest or land conservation activities (Nature Equity Assets), without any regenerative agriculture activities. Projects are "value chain adjacent" if they derive revenue from both conservation and agriculture.

# CONCEPT

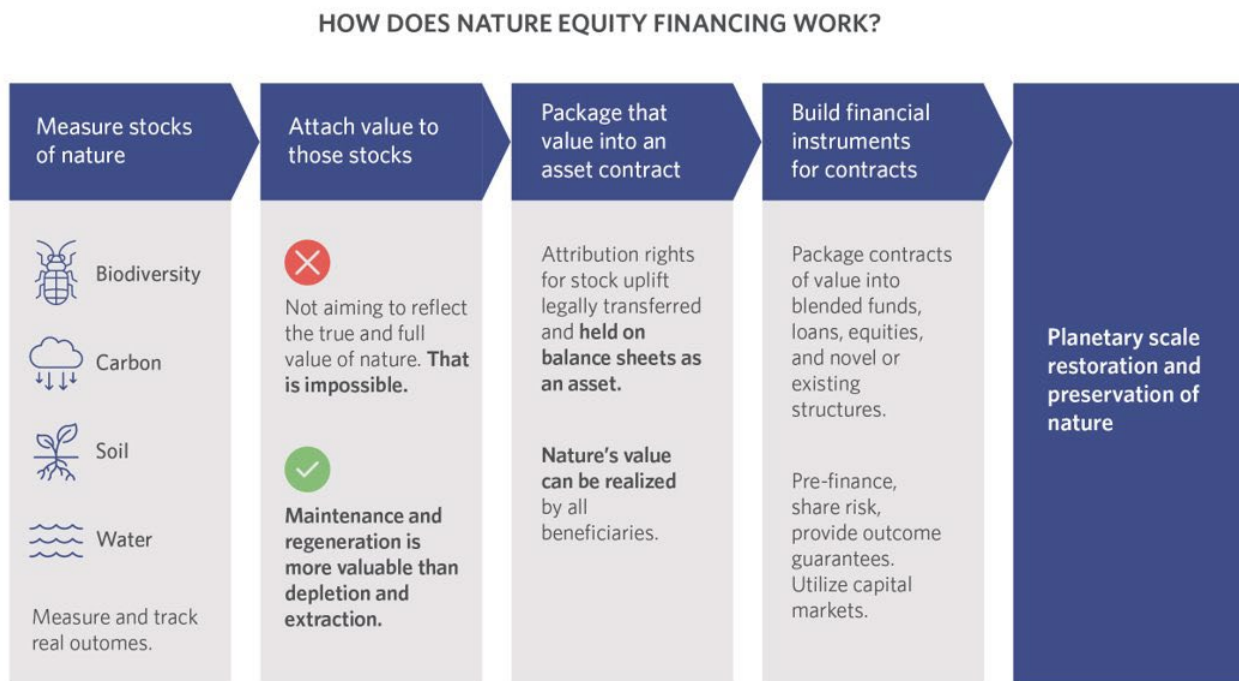
## 1. INNOVATION

*This instrument provides a commercial solution to the challenges of measuring and putting a value on the uplift of various facets of nature, providing incentives to investors to support land stewards in protecting and restoring these critical elements of their land.*

**TLG is creating a new asset class - Nature Equity Assets - with the potential to change how nature is valued and monetized.** Current nature investment approaches have traditionally been limited to carbon and biodiversity credit markets, but TLG's Nature Equity Assets value all facets of nature. Assigning a value to the uplift of biodiversity, carbon, soil, and water outcomes for any polygon of land, monitored with innovative MRV technology in real-time, means that these benefits can be packaged as Nature Equity Assets, providing much-needed incentives to investors to channel private finance to nature.

**TLG has a global outlook from the outset**, already well on the way to securing partnerships with both on and off-value chain projects in priority conservation areas around the world.

**Figure 1: Nature Equity Financing Process Flow**



## 1.1. BARRIERS ADDRESSED: VALUING AND INVESTING IN NATURE

The following table outlines some of the barriers to valuing and investing in nature and what TLG is doing to overcome these.

**Table 1: Addressing barriers to valuing and investing in nature**

Barrier	Solution
Land stewards <sup>3</sup> lack access to affordable credit to adopt more efficient practices, continue protecting HIFs and improve their climate resiliency	The Fund provides the upfront financing necessary to adopt more efficient practices (technology, regenerative agriculture methods, pathways to land acquisition, etc.). Land stewards receive outcome payments when results are achieved.
Investors lack clarity on the value of investment into HIFs	TLG and partners have developed the statistical basis for the importance of upstream and downstream actors investing into nature preservation to ensure long-term supply chain sustainability. Putting “nature on the balance sheet” with contracts confirming the investments into nature uplift as a fiduciary grade asset provides incentives to investors with CSR and sustainability motivations (Sustainable Markets Initiative & Green Finance Institution 2024). The blended finance vehicle reduces risk to commercial investors.
Technology not developed to measure all facets of nature	TLG has developed an innovative MRV tool <sup>4</sup> to accurately and objectively measure the uplift of biodiversity, carbon, soil, and water on any polygon of land to calculate the value of each Nature Equity Asset. Nature Equity Assets are monitored in real time and the data can be accessed by land stewards and investors.
Complex legal and local regulatory landscapes result in complex stakeholder contracting	TLG works with local delivery partners on a project-by-project basis to ensure context specificity (e.g., land rights / tenures.) The platform is an ecosystem marketplace through which to monitor and aggregate contracts globally. A chartered accountant determined that nature equity contracts follow IFRS guidance on intangible assets (IAS38). Social and environmental safeguards as detailed in section 5 have been implemented. Strict measures to ensure that third party intermediaries are verified and legitimately represent land steward interests (see Annex C).

## 1.2. INNOVATION: LEVERAGING MRV TECHNOLOGY TO ALIGN HOST GOVERNMENT, INVESTOR, AND LAND STEWARD INCENTIVES TO PROTECT HIFS

Table 2 outlines some of the instruments that are working to overcome similar barriers to TLG. Some of the overarching distinctions of TLG’s approach when compared to all of these

<sup>3</sup> Land Stewards: can be individuals, a community, an organization or government.

<sup>4</sup> See Annex A for further details of the Landler Platform and MRV technology.



instruments are the production of Nature Equity Assets, TLG's focus on multiple facets of nature and its global replication potential.

**Table 2: Comparable Instruments**

Similar Instruments	Description	Differentiation
Soil and Water Outcomes Fund – Quantified Ventures	Outcome Based-Funders provide incentives directly to farmers who transition to on-farm conservation practices.	Only targets USA. Focuses on agriculture. Does not use latest technology or leverage private capital as OBFs. Government pays for the outcomes.
Forest Resilience Bond - Blue Forest Conservation	A blended finance instrument to fund forest restoration projects.	Only targets USA. No measure of multiple ecospheres. Focus on restoration rather than preservation.
Pivotal Earth	Biodiversity data capture tech to inform financial mechanisms.	Only measures biodiversity. Only provides technology.
Natural Asset Companies (NAC) from Intrinsic Exchange Group	Companies formed around natural assets (ecosystems and ecosystem services) to be listed on capital markets.	TLG carries out “real” transactions whereas NAC's value is based on holding the rights to “sell” nature assets in the future.
Biocredit Investment Operations (BIO)	Pilot biocredit scheme, a financial asset to finance community-led conservation, reduce poverty and protect biodiversity.	Only functions in East Africa. Biodiversity focus.

## 2. INSTRUMENT MECHANICS

*TLG will operate as a standard marketplace for the development and trading of Nature Equity Assets.*

The instrument will start as a series of special purpose vehicles (SPV), eventually becoming a Fund that will act as an intermediary between investors, Outcome-Based Funders (OBFs), and land stewards to support the investment in Nature Equity Assets. This Fund is supported by the Landler Platform<sup>5</sup> which monitors and verifies conservation efforts.

### Step-by-step mechanics

Figure 2 below depicts the instrument mechanics for the Fund. Starting on the left side, financial services, commercial and impact investors, and philanthropists provide capital, in the form of debt, equity, or grants to the Fund (center). This capital is then provided to the land stewards in the form of discounted (blended) loans to develop and fund nature conservation projects.

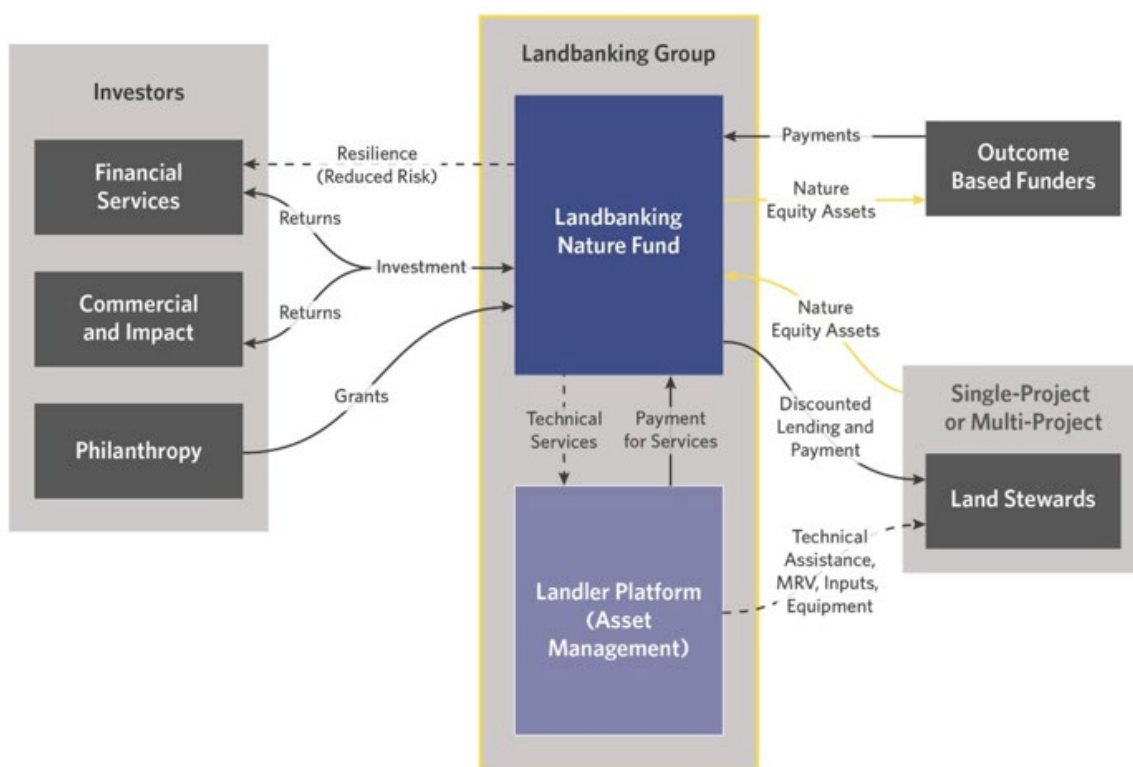
<sup>5</sup> Further information about the Landler Platform can be found in Annex A.

These project areas are monitored by the Landler Platform based on defined polygons (stocks) of land that will be valued and monitored for the critical services provided by their natural assets. Grant capital provided by philanthropy will fund the Landler Platform to support land stewards with MRV, equipment, and technical assistance to develop and maintain Nature Equity Assets.

Land stewards will repay the loans from investors through one or more revenue streams, depending on whether the projects involve a regenerative agriculture component. For those that include regenerative agriculture, revenue will include both the sale of commodities (e.g., cocoa, soy, etc.) and outcome-based payments from OBFs for the NEAs generated (upper right side). OBFs will pay the land stewards as the conservation milestones (outcomes) are achieved, and capture this value through the NEA contract held on their balance sheet.

The Landler Platform then monitors the land to track changes to natural capital, generates Nature Equity Assets where valid, and tracks the quality (and hence the value) of the Nature Equity Assets for the lifetime of the project. Currently, NEAs would fully depreciate over the determined time period, most likely linked to the length of a commodity offtake agreement.

**Figure 2: Instrument Mechanics**



**Key Stakeholders**

**Investors** include a blended structure of private and public entities comprising financial services, commercial and impact investors, and philanthropic organizations with environmental conservation, climate action, and IPLC support objectives. Their investments provide long-term stability and resilience against market volatility and the opportunity to align investment strategies with climate goals.

**Outcome-Based Funders (OBFs)** are primarily **corporates** (agri-food, insurance, real estate) who purchase Nature Equity Assets to either lower their own supply chain risk (for those in agricultural value chains) and/or to demonstrate a positive environmental footprint and meet their international climate obligations. Similarly, investment by domestic and international **governments** into nature capital reduces their future costs and helps to meet their climate mitigation obligations. **Industrial sites and utilities** also have an interest in investing in verified nature units given the downstream benefits of the consequent improved water quality. Other OBFs include organizations committed to conserving HIFs, improving IPLC livelihoods, and achieving climate goals. Further details on OBFs are found in Annex B.

**Land stewards** can be individuals, a community, an organization, or governments. They receive discounted loans to implement the projects and repay these loans through sales of crops (for value chain projects) and/or from ongoing payments from OBFs for managing the land and maintaining its ecological value (via the NEA contracts). Through the Landler Platform, philanthropic capital funds technical assistance (TA) to land stewards to assist in training, resources, or expertise to help them manage the land sustainably and maximize its ecological benefits. In TLG's initial target regions, land stewards will largely be IPLCs (see below).

**Indigenous Peoples and Local Communities** are core to TLG's approach. They are the land stewards of the projects and will be engaged and supported through the training and resources mentioned above. TLG is in the process of developing a set of metrics and engagement practices, which are outlined in Annex C.

## 2.1. POTENTIAL CHALLENGES TO INSTRUMENT SUCCESS

**Table 3: Challenges to Instrument Success**

Challenge	Description	Mitigation
<b>Scaling / Commerciality</b>	Reaching commerciality at scale for projects that are fully beyond value chain will require significant time for proof of concept and scaling.	Beyond value chain projects will likely always require some degree of concessional finance unless regulatory / net zero targets provide external incentives for companies to invest in these nature assets (similar to carbon offsetting). However, as TLG and its partners continue to develop the economic and scientific case to quantify biodiversity uplift, commerciality of these projects should increase.
<b>Regulatory</b>	There could be regulatory challenges including IPLC contracting, compliance, and unique operational contexts.	Clear contracting and compliance mechanisms will be in place with all stakeholders and work with local implementing partners. There is increasing regulation (globally) and at multiple levels of the economy. This actually presents a great opportunity for TLG.
<b>IPLC relationships</b>	Land steward communications and contracting efficacy, particularly with smallholder farmers or	While the initial pilot projects will be costly and time consuming to prove the model, eventually TLG will work with cooperatives, developers, and other aggregators with existing local connections who will drive the contracting process while TLG focuses on

	small, dispersed communities can be challenging, costly, and time consuming.	providing the technical and payment solutions. This should help create economies of scale while also building strong local relations through partnering with trusted entities on the ground.
<b>Pricing</b>	This is particularly relevant for value chain projects where market volatility could affect price forecasting.	Contracting will have to be context specific and ensure that there is sufficient flexibility in land steward payment values and investor returns. TLG does this by focusing on standardized, replicable, and transparent pricing methodologies, rather than globally standardized pricing of Nature Equity Assets.
<b>Project Pipeline</b>	Lack of developed projects that could be onboarded on TLG's platform.	Sustainable project development requires strong partnerships with public and private sector entities to create a robust sourcing network, as well as collaboration with NGOs and foundations who have worked extensively in the local context.
<b>Land Ownership System</b>	Land ownership problems include unclear land titles, overlapping claims, and illegal land grabbing, affecting Nature Equity Asset development.	Mitigation strategies include collaborating with local governments and communities to clarify and secure land titles, engaging in transparent and participatory land-use planning, and supporting legal frameworks and enforcement mechanisms to protect land rights.

## MARKET TEST AND BEYOND

### 3. IMPLEMENTATION PATHWAY AND REPLICATION

Brazilian pilots will generate Nature Equity Assets (NEA) in managed forests within soy and cacao value chains, situated in key buffer zones between agricultural expansion and High Integrity Forest (HIF) areas. These pilots aim to establish NEA as a viable financial instrument before scaling up to HIF conservation areas beyond the initial value chains.

Figure 3: Target Market Pilot Projects Map

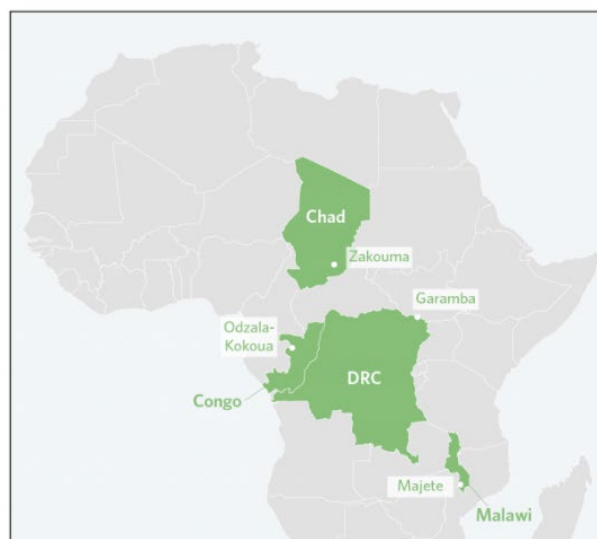
#### South America



**Initial Focus**  
Value Chains: Soy and Cacao

**Near-Term Focus**  
Value Chain Adjacent: Bioeconomy

#### Sub-Saharan Africa



**Near-Term Focus**  
Beyond Value Chain: Biodiversity Nature Units

Growing optimism around NEAs has driven an USD 11 million seed raise to support the development of the Landler Platform. The TLG team has consistently engaged with investors and Outcome-Based Funders (OBFs) both in Brazil and globally, resulting in increased confidence in the market demand for this instrument. The instrument will launch with an initial pilot of approximately USD 50 million in cacao and soy projects adjacent to high integrity forests in Brazil. OBFs within the value chain have a commercial incentive to finance NEAs because of the direct benefit of ensuring the sustainability of the land.

These projects will integrate regenerative agricultural practices with NEAs derived from conservation efforts to diversify revenue streams. Land stewards will benefit from both the proceeds generated by agricultural yields, and the outcome-based funding provided by the buyer in exchange for NEAs. Over time, TLG will leverage data and insights from these pilot projects to refine NEA valuation, and expand to projects that focus solely on HIF conservation.

#### Short Term: Value Chain Pilots

Agroforestry systems financed through the **cacao pilot** will provide an economic and physical buffer zone between agricultural land and HIFs. TLG has initial commitments from large agribusinesses including Mars, Olam, and Mondelez, who are incentivized to support regenerative practices to ensure supply chain sustainability. TLG has also confirmed its first partnership with respected project developer Belterra which specializes in agroforestry and is seeking to scale its activities quickly over the next two years. TLG is currently working to confirm the assumptions and costs at the project level before beginning implementation.

TLGs **soy pilot** will allow farmers to convert to more efficient practices. As global demand for soy increases, conventional practices continue to drive deforestation in the Amazon. This degrades available cropland, limiting production potential over time. Brazil's soy farmers, particularly smallholders, must adapt regenerative practices to remain profitable. TLG is in conversation with some of Brazil's largest soybean purchasers, including Bunge, Cargill, and Scheffer, and has other brands in the pipeline operating primarily in the states of Pará, Amazonas, Mato Grosso, and Bahia.

**Medium Term: Beyond Value Chain Projects**

TLG is partnering with conservation NGO, **African Parks**, to pilot an investment proposition into “Verifiable Nature Units” in priority conservation areas in Malawi (Majete), DRC (Garamba), Congo (Odzala-Kokoua), and Chad (Zakouma). In **Suriname**, TLG is developing a bioeconomy project as a financially viable alternative to converting hundreds of thousands of hectares of forest into agricultural land.

After the successful implementation of the pilot (and subsequent) projects, TLG will seek to replicate, eventually rolling projects into a Fund supported by the Landler Platform. TLG will use the pricing, technical, and scientific data generated to continue to refine and support the valuations of nature and biodiversity conservation activities. This will improve pricing for NEAs and make fully beyond value chain (i.e., High Integrity Forest) projects economically viable.

**4. FINANCIAL IMPACT AND SUSTAINABILITY**

**4.1. QUANTITATIVE MODELING**

The quantitative analysis focused first on a comparison of a “business-as-usual” cacao plantation to a similar plantation employing regenerative agriculture and ecosystem services practices. Table 2 summarizes the key characteristics of both scenarios. The analysis revealed that regenerative agriculture is not only more profitable for land stewards (cocoa producers) but also achieves a shorter payback period. This is primarily due to the regenerative systems' ability to avoid rising costs, such as the need for increased fertilizer inputs to maintain stable yields and reduced pesticide use.

**Table 4: Conventional Versus Regenerative Agriculture Illustrative Project Results**

Item	Unit	Conventional Agriculture	Regenerative Agriculture
Hectares of Land	Ha	10,000	20,000 (10K for crop, 10K for conservation)
Source of Revenue Stream		Crops (Cacao)	Crops (Cacao) and Nature Equity Contract
Input Expense	\$/Ha	180	173
Opex	\$/Ha	580	565
Total Loan Size	\$	26,000,000	38,500,000
<b>Results</b>			
IRR to Land Stewards	%	2% -7%	20- 25%
Payback years	years	14	7

The illustrative model assumed funding to be sourced exclusively through debt facilities with the characteristics layout in Table 3.

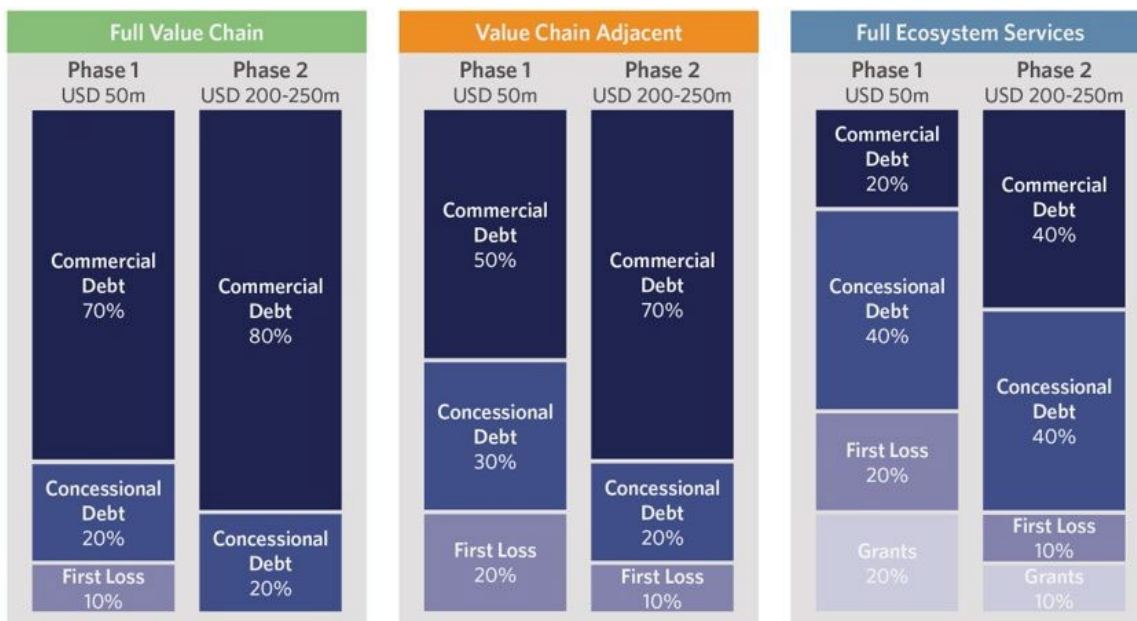
**Table 5: Capital Structure Characteristics Assumptions**

Capital Structure				
Tranche	Allocation	Coupon	Tenor (Years)	Grace period (Years)
Senior	50%	8%	12	4
Subordinated	10%	10%	12	4
First Loss	40%	12%	12	4

\*Further details on the illustrative model setup and assumptions are available upon request.

Having demonstrated viability on both the lender and borrower side from switching to regenerative agricultural practices, analysis was shifted to determine the different return profiles given the incorporation of increased acreage for HIFs, reducing the proportion of revenue from regenerative agriculture commensurately. Three additional project scenarios were tested, each with a progressively lower proportion of value chain revenue relative to the Nature Equity contract, and were run to try to provide an indication of the optimal composition of the capital stack for each scenario. The current structure of the Fund includes capital from three tranches: senior (commercial), subordinate (concessional), and first-loss.<sup>6</sup> The results are shown in Figure 4.

**Figure 4. Optimal Capital Stack Results for Value Chain to Natural Capital Revenue Ratios**



The results indicate that as the proportion of revenue shifts from Value Chain activities to NEA revenue, the need for concessional and grant funding increases accordingly. Both “full value chain”—where the project is 100% regenerative agriculture, and “value chain adjacent”—where the project is a mix of regenerative agriculture and HIF conservation are both viable with the concessional capital stack ratios shown above. At present, modeling shows that current pricing for NEAs (based on initial discussions with potential OBFs) is not sufficient to support standalone conservation projects (“full ecosystem

<sup>6</sup> The first loss in the capital stack can serve as a guarantee against performance and economic risk of the NEAs

services"). As such, concessional capital (mostly grants) from investors or price subsidies from OBFs<sup>7</sup> will be required. As mentioned, TLG will take the data and learnings from the pilot projects to inform the valuation of the NEAs and command a higher price for NEAs in high integrity forest projects, eventually reducing the need for grant capital.

## 4.2. PRIVATE FINANCE MOBILIZATION AND REPLICATION POTENTIAL

The market potential for value chain implementers of NEAs is vast. For example, the regenerative agriculture market was valued at USD 10.1 billion in 2023 and is projected to grow at a compound annual growth rate of 14.7% over the next decade (Emergen Research, 2023). If the Landbanking Fund captures just a small share of this market, it has the potential to mobilize substantial private finance.






As the Fund matures and demonstrates successful outcomes, it will be well-positioned to replicate its model and advance the global development of Nature Equity Assets. This will certainly enhance its ability to support large-scale, value chain-independent projects, including targeting the stewardship of the existing global 17.4 million km<sup>2</sup> of High Integrity Forests.

## 5. ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACT

*A new asset class will incentivize investment into nature, decreasing pressure on HIFs through more sustainable land productivity, bringing about improved climate resilience and livelihoods for land stewards.*

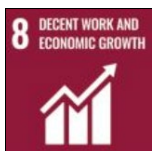
The SDGs addressed in these projects are as follows:

**Table 6: SDG Goals Aligned with TLG Objectives**

	<p>Improving livelihoods and sustainable agricultural long-term outlooks for land stewards reduces poverty rates in vulnerable communities.</p>		<p>For its value chain projects, TLG's support of regenerative agriculture and innovative technology will increase agricultural efficiencies and sustainable food production.</p>
	<p>Ensuring women's fair representation in contracting processes increases their independence.</p>		<p>The instrument is channeling finance into HIF protection, restoring the key natural facets of land including protecting valuable carbon sinks.</p>
	<p>Preserving the integrity of upstream land supports downstream services, avoiding water source degradation from deforestation-driven erosion.</p>		<p>TLG's goal is protecting, restoring and valuing all facets of nature, fighting deforestation, biodiversity loss, and desertification, while promoting sustainable land use.</p>

<sup>7</sup> To attract investors, the fund will pursue one of two approaches: either securing upfront seed funding from OBFs (offering a discount on the NEA in this scenario) or obtaining a guaranteed payment from OBFs after the NEA has been delivered. In the latter case, an escrow account will be opened to ensure payments are made upon the delivery of the NEA.





Transparent contracting mechanisms and local partnerships ensure that land stewards can access finance to increase land productivity, improve work standards, and drive economic growth.

## 5.1. ENVIRONMENTAL IMPACT

Beyond its financial advantages, regenerative agriculture and HIF preservation play a crucial role in addressing climate change, reducing deforestation, and supporting conservation efforts, especially in sensitive ecosystems like the Amazon. By restoring soil health, increasing water holding capacity, enhancing biodiversity, and sequestering carbon, regenerative practices and HIF preservation contribute to climate resilience and lower greenhouse gas emissions. These methods help prevent deforestation by promoting sustainable land use, reducing the pressure to clear new land for farming.

The pilots in Brazil aim to decrease deforestation by connecting land stewards with OBFs to provide them with the financing necessary to increase productivity on existing land, as well as regenerate degraded land, thus valuing forests for remaining standing, avoiding deforestation. The projects will educate all stakeholders on the strategic importance of HIF protection for value chain financial sustainability. The key indicators for the pilot projects are outlined below:

**Table 7: Environmental Impact Metrics Indicators**

Environmental Metrics	Impact
Biodiversity Uplift	31% improvement in species richness and abundance across 20k ha of land <sup>8</sup>
Soil Health	6% reduction in erosion: 5.2 Mg ha <sup>-1</sup> yr <sup>-1</sup> to 4.9 Mg ha <sup>-1</sup> yr <sup>-1</sup> (for all 20k of area converted to agroforestry)
Carbon Sequestration	8.4 tonnes per ha (average over a 20-year period)
Water Holding Capacity	81% improvement: 723 m <sup>3</sup> /ha to 1,308 m <sup>3</sup> /ha

## 5.2. SOCIAL AND ECONOMIC IMPACT

IPLCs play a critical role in protecting nature, but currently receive just 1% of climate finance flows (Hatcher et al. 2021). On average, only 17% of finance destined for IPLCs reaches them (UNFCCC, 2024). Regenerative agriculture empowers IPLCs, respecting their traditional knowledge, securing land rights, and supporting their stewardship in conserving one of the world's most vital ecosystems. Through its blended finance approach, the instrument will increase IPLC financial inclusion, working with them directly or with third-party

<sup>8</sup> Calculation of quantitative metrics for biodiversity involve a combination of various species' richness and abundance along with habitat suitability metrics. This includes information on bird, bat, amphibian, reptile, butterfly richness and abundance along with canopy openness, density and complexity.

intermediaries. TLG has a dedicated team focused specifically on IPLC engagement and ensuring that social and environmental safeguards are put in place to protect more vulnerable land stewards from exploitation from third parties and ensure that finance is well received by the intended beneficiaries.

Through TLG’s IPLC engagement process, land stewards will gain a greater understanding of more sustainable farming techniques and increase their access to efficiency-driving technologies. Ultimately, land stewards’ financial literacy should increase to the point where they can advocate for their own contracts with investors in the future, without financial intermediaries. Although the project lacks a specific gender focus, women, who are more likely to be smallholder farmers and lack access to traditional finance, are set to benefit indirectly through financial inclusion and empowerment in decision-making and financial independence.

**Table 8: Socio-Economic Impact Metrics Indicators**

Social and Economic Impact Metrics	Impact
Improved livelihoods	The sale of Nature Equity Assets opens new revenue streams for farmers. The focus on protecting and uplifting the corresponding natural facets also increases long term revenue and therefore livelihoods, driven by improved soil health, reduced costs, higher yields and crop quality, and access to premium markets.
Concessional loans granted	Significant access, particularly through sustainability-focused programs and development banks. Greater access for first-time land stewards, supported by programs that encourage sustainable practices.
Gender lens	Significantly higher than traditional agriculture due to more inclusive policies and gender-focused initiatives in regenerative projects. A 2024 lab instrument, Regenera Ventures Fund is providing concessional capital to women led investment that contributes to regeneration of the Mexican ecosystems.

### 5.3. SECTORAL IMPACT

**Table 9: Sectoral Impact Metrics**

Workstream objectives	Instrument activity
Mobilize finance to secure HIF	This is the instrument's main objective - creating a new asset class to channel private sector finance into nature preservation and restoration.
Decrease risk to HIF investors	The blended finance mechanism with a “stack” of investors ensures that risk is lowered for commercial investors. TLG is working with OBFs to educate them on the financial risk of NOT investing into nature.
Support IPLCs	TLG has a dedicated team working to ensure that IPLCs have transparent contracting mechanisms and that their feedback is incorporated into the instrument's iterative design process.

## NEXT STEPS

TLG is currently focused on structuring and launching the pilot projects in Brazil, followed by Suriname and four African Parks. The first pilot will be a partnership with Belterra, a regenerative agriculture company in Pará state, to implement the value chain adjacent scenario whereby one part of the land is devoted to regenerative agriculture while the remaining part is fully conserved. Nature Equity Assets will be generated from the nature improvements on regenerated land and the natural capital on the conserved portion of the land. The pilot project, as well as future pipeline projects will be developed as SPVs, each with their own financing needs, per the capital stacks in Section 4. The pilot phase projects will act as a catalyst for knowledge sharing that will be used to enhance later projects and overall effectiveness for replicability.

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## ANNEX A: ABOUT THE LANDBANKING GROUP

The Landbanking Group (TLG) is a Nature Fintech company with a vision to transform global land use at scale. It has introduced Nature Equity as a new asset class to finance conservation and restoration, and developed a Nature Equity management platform, Landler.io. Using the latest technology and expertise in the measurement, reporting, and verification (MRV) process for nature, TLG is making nature investable and aiming to establish Nature Equity as a new currency.

As a fast-growing startup founded by Prof. Dr. Martin Stuchtey, former McKinsey Senior and Managing Partner and Founder of SYSTEMIQ, and Dr. Sonja Stuchtey, technology investor, social entrepreneur, and one of this year's Trailblazing Women in Climate (Reuters), TLG is building on a strong network of experts in the field of nature finance and corporate sustainability.

### The Landler Platform

Landler.io is a Nature Equity management platform. It deploys the latest earth observation, remote sensing, and in-situ (bio-acoustics, image recognition, eDNA) data-gathering technology to track the performance of natural capital stocks (biodiversity, carbon, soil, and water), for any polygon of land. This continuous monitoring allows Landler to track increases, decreases, or maintenance of natural capital stocks. Increases or maintenance of stocks generates Nature Equity Assets, which are then purchased by Outcome-Based Funders via an investment contract. These contracts are asset-grade, meaning they can be held on the balance sheet of the investing entity. Landler continually monitors the land, enabling ongoing performance monitoring of Nature Equity Assets, informing accountants of their appreciation or impairment.

## ANNEX B: OUTCOME-BASED FUNDERS

Type of OBF	Examples	Reason for purchasing NEAs. Increasing natural capital within agroforestry system and preservation of forest provides:
<b>Corporate that sources from agroforestry site.</b>	Cargill Mondelez	<b>Avoided future costs and increased revenue:</b> Resiliency services that lower likelihood of crop failure, <b>lowering supply chain risk.</b> Potential to sell commodity with a <b>green premium.</b>
<b>Agricultural value chain adjacent to agroforestry system (within approx. 200km).</b>	Bunge Amaggi	<b>Avoided future costs:</b> Temperature and water regulating services that help to buffer climate shocks, <b>reducing supply chain risk.</b>
<b>Industrial site or utilities adjacent to agroforestry system (within approx. 200km).</b>	Vale Companhia Energética de Minas Gerais (CEMIG)	<b>Reduced cost and working conditions:</b> Reduction of soil erosion improves water quality for industrial users, reducing operational costs as pumps and pipes need <b>less frequent maintenance.</b> Temperature and water regulating services <b>create or maintain suitable working conditions for site workers.</b>
<b>Corporate or investor with no geographical proximity to site</b>	Amazon Bank of America	<b>Ability to meet climate and nature goals:</b> Investing into verified natural capital outcomes mitigates operational impact on climate and nature.

<b>Government</b> (domestic and international)	Brazilian Government  German Government	<b>Reduced future costs and ability to meet international climate and nature obligations:</b> Investing into verified natural capital outcomes contributes to meeting UNFCCC Paris Agreement and Kunming-Montreal Global Biodiversity Framework obligations.
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## ANNEX C: IPLC METHODOLOGY

The below graphics are part of TLG's IPLC Methodology.

How do we ensure that IPLCs are part of TLG framework?

THE  
LANDBANKING  
GROUP



## The Landbanking Group Way

Principle	
Pursue excellence	Landbankers <b>think big</b> and hold relentlessly <b>high standards</b> for themselves and others (the planet demands no less!) <b>We are far sighted</b> , and do not sacrifice for short-term results.
Constantly promote growth	Landbankers are <b>curious</b> , never stop <b>learning</b> , and seek continuous improvement – building on <b>the power of “yet”</b> . We are a team of self-starters and take pride in <b>helping each other grow</b> . We seek and internalise critical feedback and celebrate success.
Interact with generosity and trust	Landbankers embody <b>empathy</b> , are staunchly <b>reliable</b> and constantly earn each other’s trust. To build the foundation of trust, and allow everyone to begin working with a full trust battery, we recognise and hire exceptional talent.
Embrace ambiguity	Landbankers thrive where others don’t – in ambiguity. We <b>challenge the status quo</b> , embrace the details of a problem, take ownership, <b>and source intelligence from our peers</b> .
Simplify and seek clarity	Landbankers operate in a complex environment and understand that simplicity is the key to success. We <b>seek clear communication, roles and responsibilities</b> and we will not stop <b>asking questions</b> until we make sense of a situation.

We use our shared leadership principles every day, they guide how we think and act internally and externally, they are the glue that holds us together and allow us to excel when we all embody them.

## Environmental and Social Safeguards

- **Environmental safeguards:** how do we ensure that the nature unit system does indeed result in more ecologically intact land?
  - Good and transparent monitoring system
  - Aiming for a verified method
- **Social safeguards:** how do we ensure that the nature unit system includes, protects and benefits IPLCs?
  - Free, Prior and Informed Consent of all stakeholders
  - Fair benefit sharing
  - Respect for rights
- **Economic safeguards:** how do we ensure that the nature unit system meet international market requirements?
  - Checking profile of intermediaries and investors: i.e. anti-money laundering checks, etc.
  - Transparency of what the investors are purchasing: what are the outcomes? how are they measured?
  - Accountability outlined clearly in the agreement

## ANNEX D: ENVIRONMENTAL IMPACT METRICS

**Biodiversity uplift** in the form of an increase in diverse plant and animal habitats recorded on land with pure conservation efforts and regenerative practices. Regenerative practices improve biodiversity, especially in pure uplift zones. Research by the National Institute of Health shows that there is a win-win opportunity combining high yield with multi-taxa biodiversity in tropical agroforestry (Wurz et al 2022)

**Soil Health:** No-till farming and cover crops promote soil health by restoring the soil's organic carbon. Soil organic matter and microbial biomass improve significantly under regenerative practices, with pure uplift areas seeing the highest gains in health metrics. Regenerative practices enhance the organic carbon content of the soil, which is crucial for soil structure, fertility, and overall ecosystem health.

**Carbon sequestration** increases, particularly in pure conservation zones with up to 50% increase in carbon sequestration given that conservation efforts are more intensive. If management of all current cropland shifted to a regenerative system, 32% of annual CO<sub>2</sub> emissions could potentially be sequestered (WRI).

**Water retention** improves, especially in areas with regenerative practices. Pure conservation zones exhibit higher increases in water-holding capacity due to better soil structure. A "regenerated" clay soil with the same texture but a better structure could improve water holding capacity by up to 150% (Bruce L. and Stuart O. 2022).