# The Future of Biodiversity Credit Markets

Governing High-Performance Biodiversity Credit Markets

Consultation Paper March 2023





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NatureFinance is the next phase of impact of the Finance for Biodiversity Initiative (F4B), established with support from the MAVA Foundation. The work also benefits from partnerships with, and support from, the Children's Investment Fund Foundation (CIFF) and the Finance Hub of the Gordon and Betty Moore Foundation.



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Our use of Fibonacci sequence imagery is inspired by the association of this unique ratio with the maintenance of balance, and its appearance everywhere in nature- from the arrangement of leaves on a stem to atoms, uncurling ferns, hurricanes and celestial bodies.

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NatureFinance is a Geneva-based, international not-for-profit committed to aligning global finance with equitable, nature positive outcomes and thereby accelerating climate goals and a just transition to sustainable development. Our work spans initiatives that are building and using biodiversity data to better manage nature related risks, developing purposeful nature markets, advancing financial innovations including in sovereign debt markets, strengthening nature related liabilities and accelerating citizen action on nature.

#### Taskforce on Nature Markets

The Taskforce on Nature Markets was established in March 2022 in response to a rise in nature markets - those markets that explicitly monetise and trade nature. The Taskforce is shaping a new generation of purposeful nature markets, including the establishment of nature-centric governance arrangements, as endorsed by its members, knowledge partners and broader knowledge ecosystem. It is critical to advance governance arrangements that both protect nature from extractive economic activities and ensure that surging nature markets, from well-established food commodity markets to rapidly emerging nature credit markets, deliver equitable, nature positive outcome.

## **About this Paper**

For biodiversity credit markets to make a meaningful contribution to advancing equity, nature and climate goals, they must deliver in terms of price, scale and impact. This paper provides both framing and practical proposals for these markets to produce the scaled financing and incentives needed for businesses and economies to better align with the Global Biodiversity Framework and the Paris Agreement. It draws on NatureFinance's roles in the GEF's Working Group on Innovative Mechanisms to Address the Biodiversity Financing Needs, the collective commentary that Nature-Finance has assembled on the Australian Government's Nature Repair Market Bill draft legislation (February 2023), as well as the broader work of NatureFinance and of the Taskforce on Nature Markets. We welcome comments and suggestions enabling us to continue building a broadly embraced approach to the design, governance and execution of high-performance nature credit markets.

## Acknowledgments

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36

# Table of Contents

- Executive Summary 6
   Historic Pivot to Nature Markets 12
   The Rise of Nature Credit Markets 16
   Governing Biodiversity Credit Markets 24
   Building High-Performance Biodiversity Credit Markets
   Collaborative Design 39
- Endnotes 42





# **An Invitation**

Nature credit markets are emerging across the global economy. Their public purpose is clearly to deliver equitable, nature positive outcomes aligned with climate goals. Insights are being crowded in through experimentation and co-designed initiatives. This includes initiatives being led by governments, multi-stakeholder processes, business-led innovations, with growing voices and design approaches advanced by indigenous peoples and local communities.

Such efforts are exemplified by the contribution of the Global Environment Facility (GEF) Expert Panel to the OneForest Summit in Libreville, Gabon, in early March 2023. Similarly, the Australian Government has taken leadership in advancing what would be the first national regulatory framework for biodiversity credit markets. Other key collaborative initiatives include the Biodiversity Credit Alliance and the World Economic Forum's Working Group on Biodiversity Credit Markets, both of which NatureFinance is a part of.

The opportunity is to develop an impactful generation of biodiversity credit markets that drive investment into the efforts by nature's steward's to protect and regenerate nature. The risk is that such efforts will prove underwhelming, or worse still, part of the problem. Recent experience with voluntary carbon markets has not been encouraging. A phase shift is needed in the ambition, design, governance and practice of nature credit markets.

The high-level Taskforce on Nature Markets, supported by NatureFinance, was established in March 2022 to advance efforts to ensure that the historically unprecedented growth of 'nature markets' delivered equitable, nature positive outcomes. In addition to engaging intensively in the wider efforts of the Taskforce, NatureFinance has contributed focused insights and practical approaches to the effective governance of these markets, including nature credit markets.

Within this frame, "The Future of Biodiversity Credit Markets" is intended to provide the wider community of actors with a landscape and some practical proposals that we hope will contribute towards collective efforts. It draws on our roles in the GEF Expert Panel, our involvement in the OneForest Summit, the collective commentary that NatureFinance has assembled on the Australian Government's proposals, as well as the broader work of NatureFinance and of the Taskforce on Nature Markets.

This paper reflects work-in-progress. As such, it is an invitation to contribute extended to the many expert, experienced stakeholders shaping the future of nature credit markets. We welcome your comments and suggestions that will enable us to continue to build out a broadly embraced approach to the design, governance and execution of high-performance nature credit markets.

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# **Executive Summary**









## **1 Executive Summary**

*Nature's bounty underpins every aspect of our lives, yet we are depleting nature through over-extraction and destructive practices*. Channelling finance into businesses and economies that protect and regenerate nature is urgently needed. That this requires the effective pricing and adequate payments made for nature's services is long understood, notably to indigenous peoples and local communities in nature abundant countries, and particularly in the Global South.

Addressing nature's destruction has become critical. The consequences of nature's deterioration are increasingly visible, including impacts on food security, and wider security outcomes. Moreover, there is a growing appreciation of nature's role in achieving climate-goals.

Repeated cycles of policy commitments and market innovations by the international community have not delivered meaningful financial flows to enable nature's stewards to secure the protection and regeneration of nature. Despite widespread understanding of the need to act ambitiously, repeated cycles of policy and market innovations have to date proven to be disappointingly inadequate. We are now in the latest innovation cycle. Nature credit markets are being promoted as a candidate for delivering the scaled financing and incentives needed for global finance to better align with the recently agreed Global Biodiversity Framework and the Paris Agreement.

For nature credit markets to make a meaningful contribution, they must deliver on their core purpose in terms of scale, price and impact. The indivisible purpose of nature credit markets must be to deliver equitable, nature positive outcomes, and contribute to addressing climate challenges.

Delivering on this purpose requires characterising nature credit markets in practice by:

(a) scale: timely generation of significant financial resources;

(b) *price:* prices paid for credits are sufficient to secure nature's protection and drive its regeneration, and that sovereign and local stewards of nature are the main beneficiaries:

(c) *impact:* that these market's results have credible, measurable and significant positive impacts on nature, climate and people.

*Nature credit markets come in many forms and shapes.* Carbon markets, both compliance and voluntary, are the dominant form of nature credit markets today. Beyond carbon, there is an emerging array of biodiversity credit markets, each with potential advantages and disadvantages given the performance requirements of timely scale, price, impacts and equity. At one end, voluntary markets are channelling philanthropic and reputation-seeking funding into biodiversity. Many countries are implementing localised biodiversity credit compliance markets, so far with no secondary trading, and productivity-enhancing inset markets that are driving value chain investments. At the other end of the spectrum are carbon markets that are incorporating biodiversity, and the contested prospects of full-on biodiversity offset markets with secondary trading.





**Early nature credit market experiences have not been encouraging.** Early stages of nature credit market innovations have not demonstrated how market-based solutions can deliver on performance-based outcomes. The reverse has occurred in the high-profile case of voluntary carbon markets beset by recent scandals pointing to 'phantom credits'. They have delivered low prices paid to nature's stewards which are then often traded at far higher prices, and to date, traded globally insignificant volumes.

**Public purpose markets everywhere, and always, only deliver when underpinned by comprehensive and effective governance**. Purposeful nature credit markets need to be framed by their indivisible public purpose, set out in integrity principles that inform every aspect of their design and practice. Credible product quality is a central need, but it is not sufficient by itself. Even markets with contested reputations, such as finance and pharmaceuticals, have rules that go beyond certifying the quality of the goods traded to ensure some transparency and accountability of market actors and, often, to set the prices that they can charge.

**A more radical approach to transparency and accountability is needed**. High-integrity markets need more transparency on what deals are being done, on what terms and by whom. Traders need to be accredited, not least to end the 'carbon-cowboy' phenomenon. There must be visibility of voices of affected, and interested stakeholders. This is not only as a point of principle but to provide market signals that will reduce the desirability and valuation of poorquality offsets and flawed certification, while protecting human rights.

*It is time to establish minimum price floors.* It cannot be accepted that payments for credits to nature's stewards are a fraction of what is being paid for the same credits in wealthier countries. It is neither equitable nor viable for the prices paid to be insufficient to sustain either the underlying biodiversity or those who steward it. Setting a price floor will crowd out poorquality offsets and actors, and advance more equitable outcomes, especially in the Global South and for indigenous peoples and local communities.

International governance arrangements must be upgraded. Current efforts to create 'soft governance' through collaborative platforms should be encouraged, as are high-level intergovernmental agreements. However, more is needed. Principles and guidelines are not enough to ensure the exclusion of poor-quality products, inequitable deals, rogue traders, and, more broadly, markets that do not comply with minimum agreed standards. Collaborative governance platforms need to be able to effectively exclude the wrong deals and dealers from cross-border markets.





Key Governance Building Blocks for Biodiversity Credit Markets						
Governance Building Block	Description	Selected Performance Enabler				
1. Purpose	Biodiversity credit markets are public interest markets designed with an indivisible purpose to deliver equitable, nature positive outcomes aligned with climate goals.	• For raising ambition to achieve interconnected biodiversity and climate goals (scale, price, impact)				
2. Integrity Principles	Normative principles that create consistent and uncompromising adherence to strong ethical values in the design of (new) markets.	<ul> <li>For achieving high-integrity, high-quality ecological and social outcomes (<i>impacts</i>)</li> </ul>				
3. Product Specification	The credits, and their markets rules, should be designed with features that achieve both equitable, nature positive outcomes as well as provide for the market viability of the underlying assets.	<ul> <li>For selecting tradeable units that can achieve meaningful investments from relevant actors (<i>scale</i>)</li> <li>For creating transparent proponent-led processes (<i>impacts</i>)</li> <li>For enabling innovation and technology improvements (<i>scale, price, and impacts</i>)</li> <li>For developing IPLC-related certificate ratings (<i>price</i>)</li> </ul>				
4. Transparency and Accountability	Markets need to visibly and clearly show all market players ´ performance along the relevant value chains and their adherence to relevant standards and rules.	<ul> <li>For maximising quality, data access and data sharing (<i>impacts</i>)</li> <li>For avoiding corporate greenwashing (<i>scale,</i> <i>impacts</i>)</li> </ul>				
5. Voices	Voices of all impacted stakeholders need to drive market design and be integral in decision- making processes.	• For breaking down embedded bias and siloed thinking on "consultations" ( <i>impacts</i> )				
6. Price Setting & Distribution of Rewards	Consideration of market-wide price floors, cost plus development dividend pricing mechanisms and profit-sharing agreements	• For achieving equitable rewards to nature's stewards while providing for the viability of the underlying assets (scale)				
7. Policy Incentives and Regulation	Whether local or global in nature - clear demand signals are needed for markets to reach scale.	• For incentivizing demand and/or setting mandatory requirements for corporates ( <i>price, scale</i> )				
8. Regulatory Oversight	National and international regulatory arrangements need to be bio-centric and reflect the interests of nature's stewards.	<ul> <li>For mandating performance standards for market service providers (<i>price</i>)</li> <li>For providing legal certainty to investors (<i>price, scale</i>)</li> </ul>				





*Impactful nature credit markets need a systemic approach to securing the right* demand and supply. Ensuring sufficient, high-integrity demand and supply cannot rely exclusively on the actions of market actors. While there are many possible sources of demand for biodiversity credits, policy and regulatory interventions can ramp up and retain adequate, timely demand. Likewise, project developers will offer high quality nature-based credits to the market, but sovereign action is needed to deliver an enabling environment for scaled and consistent quality of supply. One effective approach might be a "Sellers Club" between governments of nature abundant countries to work more closely in setting equitable prices in return for quality supply guarantees.

Voluntary credit markets can play a key role as a trading bridge between assured demand on the one hand, and price and quality-setting supply-side coalitions on the other hand. Voluntary markets are too often seen as an alternative to sovereign-directed markets, or at best, a transitional arrangement. They could, however, be the key bridge between the sovereign-overseen demand and supply sides. To play such a critical role, voluntary credit markets would need to be underpinned by a governance framework and process ensuring that both demand and supply side integrity conditions are met whilst allowing for diversity of contexts, credit and market forms, and approaches to oversight.

A coherent, systemic design process is needed, that is both responsive to performance requirements and to a diverse, evolving context. Experimentation and content-sensitive diversity of approaches are needed, but allowing all flowers to bloom will open the door to low quality, inequitable, weak impact outcomes. A public purpose platform is needed to build out market policies and designs, and execution pathways for high integrity nature credit markets. Much can and should be learnt, positively and negatively, from early-mover equivalents, such as voluntary carbon markets. The potential for combining compliance and voluntary markets is worth exploring, including options for a sellers' club and new approaches to price setting as well as more radical approaches to transparency and accountability. Moreover, the evolution of such approaches needs to draw from the practical realities and needs of nature's stewards, indigenous peoples and local communities, which in turn must be involved in both the design and execution of longer-term governance arrangements of these markets.

**Proposal to launch a platform initiative to advance the effective governance of biodiversity credit markets**. What is now needed is a coherent, multi stakeholder and multi layered approach to designing and overseeing the development of biodiversity credit markets. This approach would address the multifaceted nature of heterogenous biodiversity credit markets, while incorporating market performance specifications, including governance. Such an initiative would build on the core elements outlined above, and would include sovereign developments such as in Australia, indigenous and community led initiatives from the Amazon to Canada, existing coalitions of experts and practitioners, and those working to evolve highintegrity carbon offset markets. One option is for this initiative to emerge from the One Planet Summit in Gabon, building on the work of the related work of the Global Environment Facility's Working Group on Innovative Mechanisms to Address Biodiversity Financing Needs.





*The Terms of References of such a platform or partnership could read as follows.* "Develop and advance designs for biodiversity credit markets that meet the objectives of timely scale, fair price and credible nature, climate and equity outcomes:

- Consider the relative merits of different forms of markets and credits, allowing for heterogeneity in forms of both reflecting cultural expressions and scientific realities.
- Assess options for bounding the scope of biodiversity credit markets, including by biomes, geographies, and market actors.
- Amplify and draw on the perspectives and experience of indigenous peoples and local communities, in defining market boundaries, credits and governance arrangements.
- Advance the design, prototyping and deployment of key governance instruments and processes, including boundaries, transparency and accountability, voice and regulatory arrangements.
- Consider options for scaling demand, covering the market taxonomy and options for voluntary, regulatory and combined approaches.
- Design options for scaling quality supply of credits, including configurations of seller's clubs at the sovereign, sub-sovereign or combined.
- Assess technical options for collective price setting, drawing on experience elsewhere of absolute price floors and cost-plus formulas.
- Consider technical options for a common approach to the collection, analysis and use of biodiversity data.
- Determine technological options for improving transparency and accountability, including contract disclosure and traceability, and covering both credits and markets actors.
- Consider institutional options for the governance of both national and cross-border transactions and markets, including how best to involve indigenous peoples and local communities."









# **2** Historic Pivot to Nature Markets

*The global economy is, and always has been, 100% dependent on nature*. Our entire economy — from food production and water supply through to nature's enablers of advanced technologies — rests on an increasingly fragile foundation, nature's bounty. The unsustainable use of nature in delivering economic growth and prosperity is endangering the future of millions of ecosystems and species, including ourselves.

An historically unprecedented pivot is taking place towards the explicit financial valuation of nature. Multiple factors are driving this pivot, including the critical role of nature in our efforts to address climate challenges and, more broadly, sustainable development, and the increasingly visceral and publicly visible manifestations of nature's decline. This trend is also supported by the explosion of affordable data supporting quantification of risks, impacts and dependencies.

#### 100% of the economy is 100% dependent on nature, but not Nature and all of nature's value is recognized the economy in economic activity **Priced nature** Some of nature is priced in the economy via policies and markets, although not Nature markets necessarily correctly Nature markets are a growing set of markets where nature is explicitly valued and traded Nature-positive and equitable nature markets Some, but not all nature markets are currently designed to achieve nature positive and equitable outcomes

#### Exhibit 1: Understanding Nature Markets

Source: "Nature in an Era of Crisis: Taskforce on Nature Markets, 2022

*This pivot towards 'nature markets' creates both potential and risks*. The Taskforce on Nature Markets points out that trying to protect nature by shaping a new generation of nature markets is akin to 'fighting fire with fire'<sup>1</sup>. After all, the global economy is the main driver of nature's destruction. The risks are that markets result in greenwashing and at best value only aspects of nature that offer short term economic rewards<sup>2</sup>. At the same time, the Taskforce points to the opportunity in pricing nature's scarce stock in shaping the next generation of high-integrity business activities, markets, and economies, and in channelling investment to better protect, invest in, and regenerate nature.





#### **Exhibit 2: Nature Market Taxonomy**

Туре	Description	Category	Traded element	Segments
Asset Markets	Markets in which the right to use ecosystem assets with long-lived value are traded	Real assets	Rights to use an entire ecosystem asset and resulting services	Agricultural land, timberland, water rights, <i>biodiversity IP, additional</i> ecosystems assets
Intrinsic Markets	Markets in which provisioning, regulating, or cultural ecosys- tem services are traded	Products	Use of provisioning services	Hard and soft commodities, legal and illegal wildlife, genetic materials, water rights leases
		Conservation	Conservation of nature for direct economic benefit or altruistic value	Payments for ecosystem services, overseas development aid, philanthropic grants, sustainability-linked debt
		Access	Access to/use of cultural services	Wildlife tourism
Credit Markets	Markets in which credits that reflect efforts to enhance or conserve ecosystem assets or services are traded	Nature-specific credits	Credits that reflect the value of ecosystem services	Mitigation banks, water quality credits, voluntary biodiversity credits
		Nature-related carbon credits	Credits that reflect the value or carbon seques- tration or storage	Nature-related voluntary carbon credits, AFOLU sector compliance carbon allowances
Derivative Markets	Markets for financial products which directly reflect ecosystem values or ecosystem risks	Financial products	Financial products directly tied to ecosys- tem assets or services	Commodity derivatives, nature-related insurance, wildlife NFTs, biodiversity loss insurance, securitization of ecosystem assets, water futures

Source: "Nature in an Era of Crisis: Taskforce on Nature Markets, 2022

*Nature markets are on the move and require direction to become one part of the solution*. There are many ways to protect and regenerate nature, with non-market mechanisms needing to be a major part of any viable approach, such as the 30x30 strategy recently endorsed by the Convention on Biological Diversity (CBD).<sup>3</sup> That said, nature markets already account for a significant part of the global economy. There is no prospect of making them go away – so they need to be shaped to the broader public interest<sup>4</sup>.

After all, nature, biodiversity, and the economy are, and will remain, inextricably linked.





#### **Exhibit 3: The Rise of Nature Markets**

Strength of evidence to support likely market growth 📕 Weak 📕 Medium 📕 Strong Historic trends Demand factors Supply factors Nature-related carbon credits Nature-related insurance Entering growth at scale Sustainability-linked bonds and loa Payments for ecosystem services Potential to scale Nature-specific credits Very immature with yet-to-be Non-fungible tokens for wildlife determined scale potential Bilateral grants and philanthropy Markets with likely more Water quality credits limited scale potential Water rights

Source: "Nature in an Era of Crisis: Taskforce on Nature Markets, 2022

The Future of Biodiversity Credit Markets | 15









## **3** The Rise of Nature Credit Markets

*Market based solutions increasingly feature in policy-based developments for nature conservation.* Previous international efforts dedicated to biodiversity conservation have relied predominantly on policy action and public financing. Whilst well intended, none have successfully mobilised the required funding. Moreover, none have been effective in shifting economic incentives to reverse biodiversity loss<sup>5</sup> or enhanced efforts to address and halt climate challenges<sup>6 7 8</sup>.

Such shortfalls have led to a generation of public interest, market-based solutions. Results to date has not been encouraging. The performance of most existing nature credit markets<sup>9</sup>, notably voluntary carbon markets<sup>10</sup>, have not lived up to intended ideals. There is growing evidence of these markets being riddled by regional price disparities and green washing. Moreover, despite some growth in investments into the supply of future nature-based carbon offset projects<sup>11</sup>, the expected volumes of finance through nature credit markets have not been mobilised<sup>12</sup>.

#### What are Nature Credit Markets?

*Nature credit markets provide a way to embed financial values for nature into businesses, markets, and economies.* Nature credits are essentially a means of rectifying current market failures where financial values for a scarce good are either entirely absent or diverge from a social or public interest view of the good's value.

This may, and in many instances should, lead to more investment in protecting and regenerating nature. Nature credit markets can be viewed as one of the instruments in the nature market taxonomy depicting four types of nature-specific trade.

The term 'credit' is broadly used to imply that the owner can make a 'claim' regarding something they have done or that is embodied in a 'credit' (or certificate) that they have purchased. Such a claim may be financial, offer the opportunity for profit through trade, or be more of a reputational claim ('bragging rights'), as discussed further below.

*Carbon offset markets are today's most visible example of nature credit markets*. In principle, they incentivize businesses to buy carbon credits on the voluntary carbon market to account for the fact they emit carbon emissions. In doing this, such businesses, and the markets within which they operate, respond to this priced-in cost of carbon by transitioning their business models towards a low and ultimately zero carbon footprint.

Some companies are leading the way for carbon credits to counterbalance yearly unabated emissions in line with their climate strategies, in other words, to go beyond using the credit as an offset.<sup>13</sup> The idea, and hope, is that by embedding carbon offsets in markets that enable them to be actively traded, their volume, price, speed of implementation and positive impact increases.





*Nature credit markets remain a small but rapidly growing sub-set of nature markets.* Recent estimates from a study commissioned by the Taskforce on Nature Markets indicates that all nature credit markets, including carbon markets, are currently valued at over US\$5 billion per year. More than two thirds of this comes from compliance-driven mitigation banks.<sup>14</sup> Some growth in demand in voluntary carbon markets is predicted, with estimates as high as a 15-fold increase in demand by 2030 and 100-fold increase in demand by 2050.

Notwithstanding the optimism of such estimates in the context of the current credibility meltdown in these markets, growth in today's forms of nature credits markets would not guarantee nature-positive, climate positive or equitable outcomes.<sup>15</sup>

#### What is the Ambition of Nature Credit Markets?

**Engaging in yet more nature credit market development will be ineffective without a** *'phase shift' in what these markets can deliver.* Despite disappointments, nature credit markets are increasingly being talked about as a next generation approach to delivering ecosystem service payments<sup>16</sup> <sup>17</sup>. Whilst innovation and experimentation is broadly to be welcomed, there is a need to focus on delivering the requisite performance of nature credit markets rather than allowing yet another round of innovation to create further distraction, dilution of purpose, and underwhelming results.

*Meaningful performance outcomes would be three-fold – scale, price and impact.* Although it is possible to be nuanced in defining and building high performance nature credit markets, what is needed at their core ultimately comes down to three, linked sets of outcomes.

• Timely Scale

Developing a new set of markets is pointless unless there are clear ways to rapidly scale the volume and value of what is traded, and so scale the value of investment flows into protecting and regenerating nature, as well as equitably benefiting nature's stewards.

#### • Distributed Value

**N**ature credit markets would need to systematically deliver a fair price to nature's stewards commensurate with what is needed to protect and regenerate nature and support broader sustainable development outcomes, both at the sovereign level and to indigenous peoples and local communities.

#### • Credible Impact

The core purpose of public interest needs are to be credibly delivered on, in this case an indivisible three-part purpose concerning equitable nature positive outcome that contribute effectively in addressing climate challenges.

Without agreeing to this performance specification and having a credible way to deliver the requisite outcomes and impact, it is questionable whether too much effort should be spent in designing, developing and implementing nature credit markets.





#### **From Performance Needs to Principles**

Moving from performance needs to principles establishes a framework that can guide market design and governance. While principles are not in themselves market guard rails or performance drivers, they do set the normative frame within which markets can be more effectively designed and governed.

The following six principles can be considered to frame the design, governance and *ultimately, the assessment and continued legitimacy of nature credit markets*. This builds on the existing body of work on the topic.

- **Public purpose markets**: often said, but important to have front and centre that these markets only should exist in order to, and if they prove to, deliver a defined public purpose.
- **Indivisible public purpose**: this public purpose is specifically the indivisible requirement that these markets deliver equitable, nature positive outcomes, and in so doing contribute to addressing climate goals and sustainable development goals more broadly.
- **Nature's stewards:** beyond governments and market actors, indigenous people and local communities are central to the success of nature credit markets and must be core to the design, development, and governance of these markets.
- *Heterogeneity:* although carbon markets have an undifferentiated, commoditised notion of a 'carbon ton', most nature credit markets will need to account for different landscapes, cultures, and interests. This implies 'branded differentiation' rather than singular, commoditised credits.
- Accountability: market actors need to be guided to deliver and be accountable for the public interest in their behaviour and impacts. Accountability mechanisms and institutional arrangements need ultimately be rooted in the perspectives and needs of nature's stewards.
- **Broader governance:** nature credit markets cannot be the only mechanism to achieve biodiversity conservation, and so need to be bounded in their scope of application given other means society uses in the global financial and economic system to express its valuation of nature.

These principles may well not be an exhaustive characterisation of nature credit markets. What it does highlight, however, is the need to take an equitable, bio-centric approach. This approach should embed the role of nature stewards in the design of market functioning, rather than adopting traditional market approaches in the hope that they will do the job in enabling public interest nature and climate outcomes.





#### The Rise of Biodiversity Credit Markets

*There is growing momentum to advance a broader range of biodiversity credit markets.* Enthusiasm for biodiversity credit markets is surging<sup>18</sup>, although there remains little to date by way of trading and associated investment in biodiversity outcomes. Reasons for this surge are as diverse as the credits themselves. Some are driven by a genuine drive and committment to do the right thing, others are a mandatory requirement. Others again are keenly aware that their value-chains- and thus their balance sheets and commercial value - will suffer if biodiversity isn't better cared for<sup>19</sup>. Global outcomes such as the Global Biodiversity Framework by the Convention on Biological Diversity (CBD) and its finance related targets (19-23) will require an international response. Biodiversity credits are included in these targets, in Target 19 in particular, to jumpstart even further private action from start-ups and conglomerates alike.

**Enthusiasm for biodiversity credit markets is contested**. The inherent complexity of biodiversity poses greater challenges as compared to the simpler measure of a carbon ton in carbon offset markets. Moreover, there is much debate about the merits (or otherwise) of offset markets, secondary trading, diverse variants of credits and the means of certification, and of course whether market-based solutions are a distraction or worse part of the problem<sup>20</sup>.





#### **Exhibit 4: Troubled Carbon Markets**

Issues emerging across voluntary carbon markets illustrate the importance of setting performance requirements, strategically choosing measures of success, and having a clear understanding of the drivers, and inhibitors, of such success.<sup>1</sup>

Voluntary carbon offset markets have to date focused on the nexus of two primary drivers.

- First, and at their core has been a credible definition of a credit and a credible way of ensuring that a credit is indeed what it purports to be, principally through third-party verification and ultimate certification.
- Second has been to insert these credits into a market approach that most closely approximates financial or commodity markets, with a premium placed on liquidity and ease of price discovery. In short, adherence to the merits of the 'market efficiency hypothesis'.

With these two pillars at the forefront of design considerations, less attention has to date been placed on other potential features (and criteria of success) of high integrity, public purpose markets. This might include, for example, matters of social and economic equity, transparency and voice, as well as frequently adopted features in other public purpose markets, such as trader accreditation.

Moreover, carbon market adoption parallel to financial and commodity markets has resulted in hastily translated norms of associated regulators. These are largely restricted to ensuring an important but rather narrow interpretation of market stability and integrity. Such an approach in design and practice sits uneasily with the focus on top-down certification schemes. Certification schemes, across other markets, have been shown to provide product surety only with adequate oversight and effective bottom-up feedback mechanisms.

#### Heterogeneity of Biodiversity Credit Markets

**Debate and practice is confounded by biodiversity credit markets meaning different things to different actors.** In order to understand and develop approaches to such markets it's essential that the different approaches are well defined.<sup>21</sup> Being explicit about the characteristics of the various credits currently available and emerging will offer greater prospects for discussing the full suite of risks and opportunities. This in turn will help in finding adequate solutions, either cross-cutting or specific to the credits in question.

In supporting a more coherent conversation and development process, we have developed a simple taxonomy of different kinds of biodiversity credit markets, summarised in Exhibit 5. The taxonomy is not an endorsement of specific approaches, but intended to help stakeholders including:

- **Governments** to define appropriate response and incentive measures for market related legislative and policy instruments.
- **Project developers, issuers and verifiers** to focus their principles, standards, methodologies and metric developments to become more effective.
- **Interested stakeholders** to be on a level playing field when debating design, performance and governance solutions.





#### **Exhibit 5: Biodiversity Credit Markets Taxonomy**

- Philanthropic claims/certificate markets: the simplest version of a biodiversity credit is the name given to a certificate/claim indicating that an entity has done something, generally involving a financial contribution/investment, to protect or regenerate a defined biodiversity landscape (including ocean). Here the credit provides the 'right to brag' but not to attribute the credit with a tradable financial value, or to assert its value as part of legal compliance requirements.
- Regulatory (mandated) offset markets: increasing numbers of countries have legislation
  requiring companies to compensate for any not-avoided land- or seascape damage
  associated with their operations. Biodiversity credits are then the certified proof that the
  business has complied with its regulatory requirements, effectively offsetting an associated
  legal and so also financial liability, but not providing a credit that can be monetarised through
  trade. What could develop is the potential, like in the carbon space, for auctions to emerge
   thus entering a more competitive market space.
- In-setting credit markets: there is a growing practice in investments in enhancing sustainable nature resource productivity, often along food value chains by a financial institution or the commodity or brand buyer (e.g., could be a Nestle or a Cargill). Such investments are largely profit seeking and can be termed 'inset credits' that can be placed on a balance sheet as a financial asset, and potentially be traded if there are direct financial returns and/or the value chain linked financial returns are of transferable value to a third party.
- Biodiversity-linked carbon offset markets:<sup>1</sup> of the many shortfalls in carbon offset markets, a key one is the current lack of system wide consideration of their broader biodiversity impacts. In recognising that carbon credits linked to nature assets can enhance or unintentionally lead to the deterioration of biodiversity, a second generation of carbon credits are emerging. These are credits that incorporate biodiversity considerations<sup>xvi</sup>, with an open question as to whether this will significantly alter the carbon credit valuation or/and lead to changes in the management of the underlying nature asset. The stacking of different kinds of ecosystem services, and their role in achieving multiple goals (biodiversity, climate, sustainable development) will shape future valuation and financing considerations.
- Biodiversity offset markets: the most difficult, and so contentious, are full-blown biodiversity offset markets, which may be voluntary or regulated. This approach would allow businesses to offset damage done to biodiversity, in some cases only after having applied the mitigation hierarchy<sup>1</sup>, through their operations by buying and being able to trade credits related to improvements being made to comparable biodiversity landscapes elsewhere. Terrasos, a Colombian based platform, is expanding its work around mandatory offsets into the voluntary space.<sup>1</sup>
- Biodiversity financial assets: there is a growing demand by the global asset management sector for financial assets that can adequately value nature within portfolios and help diversify and mitigate climate and nature risks as portfolio management tools. This is as part of their efforts to try and meet ESG and impact investment criteria. Biodiversity credits, if properly designed, issued, valued, and traded (i.e. "securitised") could answer some of the needs of these fast-growing asset management trends, and therefore become a new, significant financial asset class.

<sup>1</sup> The mitigation hierarchy refers to the four steps that have to be followed in order: Avoid, then Minimise, then Restore impacted areas and finally Offset any impacts that remain.

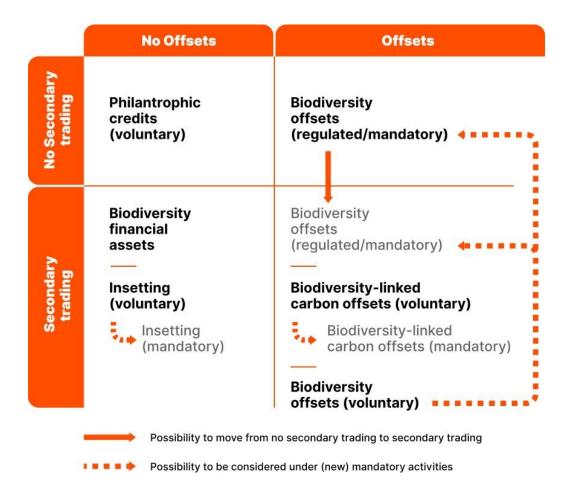




These categories are not exhaustive. They are likely to evolve over time, and to reflect what is already out there in nascent, or in some cases in quite mature, forms. Moreover, the categories are not exclusive, and may overlap. Philanthropic credits, for example, could in principle be tradeable offsets if a market could be found for them, just as regulatory offsets might evolve into being traded on secondary markets, potentially as third-party offsets.

It is important to keep a clear, conceptual distinction between the two main features of biodiversity credits, namely on one hand offsets and no offsets and on the other hand secondary trading versus no secondary trading. Exhibit 6 illustrates these traits and the respective credit types. It also indicates the potential pathways of market evolutions, e.g. from voluntary to mandatory.

#### **Exhibit 6. Key Biodiversity Credit Market Features**







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# **4** Governing Biodiversity Credit Markets

*Effective governance is a pre-condition for high-integrity, high-performing markets.* Markets are not born in their mature state. They develop over time, evolving like complex systems rather than iterations of a blueprint or standard. China's carbon markets, for example, were built on the learnings from earlier experiments, notably in Europe, and yet were initially established as a set of competing pilots across the country. Australia's early attempt to establish a regulatory framework for biodiversity credit markets build on their national experience in developing carbon markets.

**Defining credible credits is needed, but not nearly enough**. Not surprisingly, there is a considerable focus on defining what a biodiversity credit is. More than carbon credits, creating credible biodiversity credits poses major conceptual and measurement challenges, even accepting the need for a heterogeneous approach. This starts with the central problem of measuring the health of biodiversity, and becomes all the more tricky if associated credits are to be linked to carbon offsets or indeed traded as such in their own right.

Yet even highly contested markets do not rely for their governance on product specification. High integrity pharmaceutical markets, for example, largely dictate who can make the product, who can prescribe it to whom, and who can sell it to the prescribed person. In most financial markets, similarly, not anyone is able to buy and sell securities, raise money on public markets, or provide financial advice. Numerous equity considerations are often baked into markets, from statutory price-setting to cost-plus norms and consumer watchdogs, as well as governing fiscal regimes.

**Governance is a lot more than governments and regulation.** Governance is more than just the role of governments, regulators, and standard setters. It can usefully be thought of as an ecosystem of rules and norms that shape incentives, behaviour, and outcomes, including from public perception or license to (not) operate. Moreover, governance is not just about how markets work when they are up and running – it is also about who gets to decide on the shape of those markets in the first place. This is often the critical determinant of how markets turn out in practice.

#### **Governance Stack**

The ecosystem for shaping nature credit markets (including biodiversity credit markets) can be usefully thought of as a 'governance stack'. The stack is made up of a number of governance elements, which need to be designed to be fit for purpose both standalone and as part of a broader governance framework. These elements need to be understood and applied in the context of an equitable price, delivered at a timely scale for long-lasting impacts. Each of the governance building blocks is described in more detail in Exhibit 7, below. Practical applications and technical deep-dive considerations are also provided.

The exposition of the 'governance stack' is certainly not exhaustive but illustrates many of the key components needed for an effective governance architected and infrastructure. It also highlights that each and every building blocks includes tried and tested features, even though there is much to be done in advancing a coherent framework that works for the specifics of biodiversity credit markets.





Exhibit 7: Key Governance Building Blocks for Biodiversity Credit Markets					
Governance Building Block	Description	Selected Performance Enable			
1. Purpose	Biodiversity credit markets are public interest markets designed with an indivisible purpose to deliver equitable, nature positive outcomes aligned with climate goals.	• For raising ambition to achieve interconnected biodiversity and climate goal (scale, price, impact)			
2. Integrity Principles	Normative principles that create consistent and uncompromising adherence to strong ethical values in the design of (new) markets.	<ul> <li>For achieving high-integrity, high-quality ecological and social outcomes (<i>impacts</i>)</li> </ul>			
3. Product Specification	The credits, and their markets rules, should be designed with features that achieve both equitable, nature positive outcomes as well as provide for the market viability of the underlying assets.	<ul> <li>For selecting tradeable units that can achieve meaningful investments from relevant actors (<i>scale</i>)</li> <li>For creating transparent proponent-led processes (<i>impacts</i>)</li> <li>For enabling innovation and technology improvements (<i>scale, price, and impacts</i>)</li> <li>For developing IPLC-related certificate ratings (<i>price</i>)</li> </ul>			
4 .Transparency and Accountability	Markets need to visibly and clearly show all market players ´ performance along the relevant value chains and their adherence to relevant standards and rules.	<ul> <li>For maximising quality, data access and data sharing (<i>impacts</i>)</li> <li>For avoiding corporate greenwashing (<i>scale,</i> <i>impacts</i>)</li> </ul>			
5. Voices	Voices of all impacted stakeholders need to drive market design and be integral in decision- making processes.	<ul> <li>For breaking down embedded bias and siloed thinking on "consultations" (<i>impacts</i>)</li> </ul>			
6 .Price Setting & Distribution of Rewards	Consideration of market-wide price floors, cost plus development dividend pricing mechanisms and profit-sharing agreements	<ul> <li>For achieving equitable rewards to nature's steward while providing for the viabil of the underlying assets (scale)</li> </ul>			
7. Policy Incentives and Regulation	Whether local or global in nature - clear demand signals are needed for markets to reach scale.	• For incentivizing demand and/or setting mandatory requirements for corporates ( <i>price, scale</i> )			
8. Regulatory Oversight	National and international regulatory arrangements need to be bio-centric and reflect the interests of nature's stewards.	<ul> <li>For mandating performance standards for market service providers (<i>price</i>)</li> <li>For providing legal certainty to investors (<i>price, scale</i>)</li> </ul>			





#### A. Purpose

Any market design should start with a clear and strong purpose statement. For biodiversity credit markets, and arguably all nature credit markets, this should be about an indivisible goal of delivering on equitable, nature positive outcomes with associated gains in addressing climate goals. Although this should be self-evident, there are few signs of such a purpose driving, for example, the design of voluntary carbon markets. These markets at best reflect the aim of delivering credible 'additionality' in lower carbon emissions in the atmosphere. Social and economic equity should be integral to the design and working of any markets, rather than being one potential goal and outcome driven by open market dynamics or relying on purpose-led market actors.

#### **B. Integrity Principles**

The next level of the governance stack are normative principles that encapsulate the values for achieving equitable, nature positive outcomes. This includes principles that capture different social and economic equity issues, and that stipulate high-integrity, high-quality ecological outcomes.

The six-part principles, as part of the extended performance specification (see section 3, above), illustrate such principles. Beyond this, an example would be the integrity principles produced by the Integrity Council on Voluntary Carbon Markets<sup>22</sup> currently out for consultation, with another being the draft integrity principles prepared by the World Economic Forum's Working Group on Biodiversity Credit Markets<sup>23</sup>, also currently out for consultation, or the Design Principles proposed by the Biodiversity Consultancy<sup>24</sup>, the Plan Vivo Principles<sup>25</sup> and the Tropical Forest Credit Integrity Guide<sup>26</sup>. Ensuring integrity is also one of the key "ways forward" promoted by the Global Environment Facility Expert Group consultation paper.

Key of course is that principles can be, and are in practice, translated into both market design as well as being reflected in governing mandates and instruments.

#### **C. Product Specification**

*The greatest attention has to date been on defining what biodiversity credits are and how to measure biodiversity benefits through conservation and/or restoration efforts*<sup>27</sup>. Multiple definitions have been offered by varied organisations and processes, some more conceptual and generally normative (i.e., something that has biodiversity regenerative outcomes) and others quite specific, technical, and quantifiable. Unsurprisingly, definitions have varied between different types of credit markets (see Box on Suggested Taxonomy for Biodiversity Credits). The easiest relates to philanthropic credits and compliance offsets, and the greatest difficulty is encountered by those wishing to enable credits to be traded in secondary markets, especially when they serve as offsets.<sup>28</sup>

When talking about credit specification, many efforts are currently also focused on how to measure and quantify a unit of a credit.<sup>29</sup> While biodiversity can hardly be reduced to a single metric, such as carbon tonnes, there is currently a surge of different proposed methodologies, metrics and units.<sup>30</sup> One example is a new nature crediting framework developed by the standard-setting body Verra.<sup>31</sup> This dynamic, backed by specific interests and agendas, needs to be accounted for in the global discussion on the 'governance stack' – while allowing a bio-centric, jurisdictional approach to emerge.





#### Market Implications of a Single Project vs Unitised Credits

A topic that has emerged during the open consultation by the Australian government on their proposed Nature Repair Bill is the issuance of a single certificate for each project. This is seen by many with huge, negative implications for a potential market to reach scale, price, and impacts.

In the present Australian scheme (February 2023), biodiversity credits are planned to be issued on a per-project basis, apparently irrespective of the actual biodiversity gains that have been made. Many believe however that projects should instead generate certificates as a result of measured and verified per-unit restoration and/or conservation benefits in biodiversity. It is of course an open question as to what should constitute a "unit" of biodiversity, but using a holistic, robust, standardised, and continuously updated metric such as the SEED Biocomplexity Index<sup>32</sup> could be a possible answer.

Using a single certificate would also mean that projects would need to be priced very differently because of their differing costs and conditions. Depending on the indicators of success (e.g. total number of hectares funded), this would quickly bias the market towards funding large scale projects over many thousands of hectares that might produce a relatively small biodiversity benefit compared to the same costs on a smaller scale project, but with potentially bigger biodiversity benefits.

There are also concerns that a single certificate, sold to a single purchaser, would favour larger corporates who are able to purchase the all-in-one biodiversity certificate, especially if the buyer retires their credit after initial purchase. Highly sophisticated brokers could also enter the market much easier than the general public, which may well have an interest to participate here.

#### Appropriate Time Horizon for Measuring Biodiversity Improvements

Setting meaningful time horizons for measuring ecological outcomes is also critical. Annual ecological outcomes, as in the case of carbon where credits represent annual emissions reductions, are largely unrealistic and costly. To measure improvements and enduring impacts efficiently and effectively, biodiversity certificates need to include permanence and durability features.

Changes and impacts also happen over time and where annual variations can frequently occur due to changing climatic conditions and changing baselines. Biodiversity credits will need dynamic multivariate approaches and metrics in their monitoring and reporting schemes – metrics that will be influenced by ecosystem and project size, as well as the societies in and around them.

#### Implications of a One-time Payment vs Results-based Approach

The Australian consultation also highlighted another market relevant topic regarding credit specification. Australia currently envisions a one-time upfront investment for a 25-year period. This is however unlikely to provide an investor with sufficient security. A more prudent, and innovative stepwise approach would be to initiate the project on an initial, up-front investment, coupled with results-based payments that reflect the needs and time horizons of the investor, project developer and biodiversity itself.



# Tiered Approach to Credit Rating – Based on Indigenous People's and Local Communities' Involvement

The role of Indigenous Peoples and Local Communities (IPLCs) in defining what is and what is not a credit is currently less extensive, less visible and less impactful. Notwithstanding how critical this is in aligning governance arrangements with the characterisation of high-performing, high integrity biodiversity credit markets outlined above (see Equity point above). Some piloting is on-going, such as work being advanced by the Regen Foundation.<sup>33</sup> Moreover, there are indications of growth in this field of engagement, albeit with insufficient impacts to date in bringing these experiences into the mainstream of market design.

A high level of integration of IPLCs is core to many stakeholder's expectations for emerging biodiversity credit markets. One way of incentivising this integration could be through price signals and could be achieved, for example, by introducing a tiered approach that couples IPLC engagement with the rating and pricing of a credit. Similar to the AAA rating applied in the bond markets, new market schemes could stipulate "premiums" to the credit, based on the initial, yet also continued engagement of IPLCs in the project. Such a system could then be coupled with ecological ratings. Overall, such an approach could well set the stage for the scalable quality of the credit in secondary markets, creating the backdrop for ensuring the integrity, and price of credit over time. Such an approach could, similarly, create the possibility to lower interest rates from bond issuance, assuming there is a potential for certificates to act as an underlying product for larger investments (see section further below).

#### Development and Review of Methodologies and Protocols

Methodological developments must continue to be supported by clear and compelling evidence that has been independently peer reviewed, preferably with scientific results that have been independently verified. This is key to getting markets on the route to impacts.

The science and our understanding on the socio-ecological context around biodiversity, and the constant improvements on technology, for measurement, reporting and verification (MRV), and financing means, are rapidly improving. Methodologies and assessment protocols may need to show a degree of flexibility. Methodologies can't be locked-in in such a way that they hamper technical improvements. Continued innovation needs to be encouraged rather than suppressed. Any new scheme may wish to explicitly refer to the regular review of such improvements and how these inform methodology developments.

#### Several Metrics, Several Credits, Several Markets

The end game for biodiversity credits will not be one metric, one credit or one market, not least because of the different types of markets highlighted in the taxonomy. There is heterogeneity around voices and interests as well as the diversity of land and seascapes. Unless the community embraces the diversity of schemes and approaches that have and will continue to emergen and supports this heterogeneity of the markets, meaningful guidance around good governance will be hampered.

A broad application of natural capital accounting can lead to robust measurement frameworks and results, which can in return, inform market pricing.





#### **D. Transparency and Accountability**

There is a need to be able to continually associate the credit and so inform its valuation with the state of biodiversity to which it refers. Certification is generally assumed to be the visible governing architecture to secure this validation. Yet some of the more interesting developments in this field concern the use of digital platforms. The platforms can automate, and so increase accuracy and reduce costs of traceability, notably the use of blockchain which then also allows for the use of smart contracts.

Transparency and accountability is broader than traceability and should include a more fundamental approach to openness as to the terms and conditions of deals that are being made, and by whom. Furthermore, the focus to date has been on the credits, rather than market actors with the main objective being to enhance price discovery and increase liquidity. Yet the anonymity in today's voluntary carbon markets are at least one possible cause of troubling information and power asymmetries, as well as providing an open door for anyone to trade, an approach that would be forbidden in many regulated markets.

#### Data Access and Sharing

*Provisions in new, emerging governing legislation should clearly maximise transparency, data access and data sharing, while enabling protection of privacy and commercial-in-confidence information.* These features would earn greater public trust and confidence in scheme arrangements – suggestions made already as part of the Independent Review of Australian Carbon Credit Units.<sup>34</sup>

One possibility would be for the rules to require the project locations, certificate values, etc. to be hosted on an associated platform such as Restor.<sup>35</sup> Alternatively, if the regulator establishes its own platform for sharing environmental information held by different organisations and governments, it should also develop an Application Programming Interface (API) so that researchers and other third parties can review and analyse the data. This would make the scheme more transparent, and potentially more trustworthy, while informing how the scheme could continuously be refined.

The Taskforce on Nature related Disclosure (TNFD), while focused on nature related risks, has made advancements on Key Performance Indicators (KPIs), metrics and data that will prove invaluable for the biodiversity credits related work. Similarly, the efforts being undertaken by the Banque de France, leading the biodiversity scenarios work of the Network of Central Banks on Greening the Financial System, would ideally be woven into the discussion on the quality and integrity of assessing and verifying biodiversity credits.

#### Accreditation of Other Agents

**Biodiversity service providers and market advisors, including agents, should be accredited and regulated**. As outlined by the Chubb report<sup>36</sup>, mandating performance standards for carbon service providers, including agents, would enhance market confidence and consumer protection. The same will hold true for the biodiversity certificates.





#### **E. Voices**

Markets are all about the provision of information relevant to a potential transaction. In that context, there is great relevance in the voices of effected stakeholders as they highlight technical features of the credit itself. Even some of the most sophisticated grievance mechanisms have often proven to be of limited value<sup>37</sup>, including those associated for example with publicly supported infrastructure investments and mining operations, as well as classic whistle-blower and staff grievance systems. Likewise, these mechanisms are typically very slow and often only generate important insights after harm has already occurred. There is ample opportunity and means within nature markets, to have credit characteristics include the views of interested parties up front, especially indigenous peoples and local communities. Such an approach would impact the value of the credit directly, made all the more easy when embedded through and on blockchains.

Having a voice first and foremost means nature's stewards are able to define what is and what is not an acceptable biodiversity credit, and moreover what biodiversity can and cannot be included in such trades. They need to be able to design credit features that allow for cultural and other factors to be taken into account up front, including possibly to whom they can be sold, and on-sold as the opportunities arise. Or in other cases actually veto contracts and/or market transactions.

#### Further Strengthening of Indigenous Peoples' and Local Communities' Inclusion

The direct and early inclusion of indigenous knowledge, methodologies and practices in market design and technical consideration is key. Improving existing and setting up market mechanisms offers the opportunity to diversify the parameters of methodology and practices, breaking down embedded bias and siloed thinking on "consultations".

We therefore commend new efforts, such as we see emerging in Australia, to establish a transparent proponent-led process for developing and modifying, as soon as practicable, methodologies and assessment protocols, with potential independent Committees assuring the integrity of methods. The role of IPLCs as custodians of nature, and the stewardship for healthy species, ecosystem services, and biodiversity at large, including carbon, has been well documented<sup>38</sup> <sup>39</sup>. Practices and knowledge, for example, on forest fire management techniques, has proven invaluable in the past.

Government entity(ies) could additionally provide support for participants who otherwise may not be able to participate, including Indigenous Peoples.

#### **Comprehensive Policy Innovation for IPLCs**

There is likely to be a temporal lag on the intended financial flows via the issuance of credits to any Indigenous-protected area through current, government funding for protected areas. There is however the opportunity to develop 5 to 10 year plans for returns, from market mechanisms to directly augment any government funding of Indigenous protected area programs. It is important that a new mechanism (ie. voluntary biodiversity credit market) is included in countries overall policy innovation and timeline.





#### Broadening the Expertise

Examples from the U.S. mandatory biodiversity credit mitigation market show the added value of regional, interagency review teams to partake in the decision-making process to government operated mechanisms. This would allow for a broader set of stakeholders – both from indigenous groups as well as technical ecologists – to participate. Such an approach could bring a deeper understanding of the local circumstances of the projects in question to the table.

We further see an opportunity to ensure there is wide, and active reach of public consultation efforts, to include technical, ecology focused expertise. These experts will be integral to the development of adequate methodologies and metrics, and to the overall success in terms of assessing biodiversity outcomes that look at the big trees and small critters alike.

The full and early incorporation and engagement of numerous stakeholders and indigenous groups - from development of a new legislation as well as in setting the parameters, impacts, standards, benefit sharing mechanism, amongst others - will also inform and enable greater data coherence (structure, harmonization and translation from MRV and biodiversity impact into assets) (see more on data in section on transparency).

#### E. Price Setting and Distribution of Rewards

As with other markets, there should be consideration of market-wide price floors, cost plus development dividend pricing mechanisms and profit-sharing agreements with the majority of sales revenues going to IPLCs in partnership with related sovereigns. Although many project developers will offer high quality nature-based credits to the market, scaled quality of supply will need collective action, essentially a Seller's Club (see more on this further below), primarily between governments of nature abundant countries. Such a club can grow over time and will need to work with others in setting price floors in return for quality guarantees.

Furthermore, re-stating the need for the inseparability of equitable and nature positive outcomes of nature credit markets. It's thus critical that prices are set in a way that achieve both equitable outcomes as well as provide for the viability of the underlying assets.

**Considering the distribution of rewards, the argument that a deal is fair, as long as there is a willing buyer and seller, is simply misguided**. Equity encompasses far more and covers the suite of issues including 'sovereign' equity - the right of the host country to benefit; IPLC equity; project developer equity; equitable distribution of benefits across recipients but weighted against compliance requirements. Equity might more specifically feature in high-level integrity principles (see governance element (2)) and may be part of what some traders choose to act on voluntarily in the manner in which they strike deals and write and agree on contracts. Both of these approaches can be of value, but alone or even together are inadequate.

As we keep witnessing in the carbon markets, equitable distribution is seldomly achieved through open negotiations, given information asymmetries and different negotiations skills. Notwithstanding that there are well designed profit-sharing agreements at play in the carbon market, evidence suggests that contract-based benefit-sharing mechanisms remain marginal if on a voluntary basis only. We therefore consider price-floors - whether fixed or formulated - as indispensable means to achieve equitable, nature positive outcomes. We recognize that this is likely to have some implications on volume and liquidity of the markets in question. Yet, aiming for an equitable, nature positive outcomes, the importance of equity outweighs.





While equity is conceived as a positive attribute, its application through the proper price setting and distribution of rewards can be challenging. Issue of existing tensions / inequities within recipients might even get exacerbated by the arrival of previously non-existent market incentives and structures. Common and complex tenure agreements could suddenly receive influx of cash that will need careful consideration of how to apply/pay out. The notion of having more voices heard (see above) can itself create tension from the early days on: IPLCs themselves might have different internal views, possibly dividing these groups themselves. More voices can also mean a crowed, and potentially, confused market space with many different credit types.

#### F. Policy Incentives and Regulations

Nature credit markets may well grow to be large-scale, heterogenous, and financially and economically significant markets. Moreover, given some of the proposed characterisations and elements of the 'governance stack', there are likely to be significant, distinct, regulatory capabilities that enable the regulator to be both practically effective and credible. Indeed, some of these capabilities will be technical but others may be of a more representative nature, formally or otherwise. In this light, it seems unlikely that existing regulators, such as financial and traditional environmental regulators, could do the job effectively.

While there is clearly a surge in international interest in biodiversity credits/certificates, efforts risk being limited if there is no strong signal provided to corporations. Without other measures - such as mandatory disclosure of biodiversity-related risk applied to companies, taxes, levies, or other financial instruments- a significant demand may not materialise. Other measures would help to set clear signals towards the desired paradigm shift to create added value in the natural systems, instead of offsetting intended future destruction of nature in the future. This is clearly called for by financial institutions, for example by those united under the Finance for Biodiversity Pledge.<sup>40</sup>

*The challenge is further enlarged when it comes to regulating cross-border and multicountry nature, and specifically biodiversity credit markets*. The prospect of establishing a global bio-credit regulator is attractive to some, for example it is advocated by the Biodiversity Credit Alliance.<sup>41</sup> Should this option prove impossible or impractical, an alternative is to follow the approach adopted for carbon markets in seeking agreement on over-arching rules as part of the inter-governmental climate negotiation process. In tandem, a club-like approach or network governance approach has been adopted, exemplified by the Integrity Council on Voluntary Carbon Markets.<sup>42</sup>





#### **G. Regulatory Oversight**

The regulatory context of biodiversity credit markets is likely to happen at a national, or at least jurisdictional level. Today, the only example of a proposed national regulatory framework for voluntary biodiversity offsets is in Australia, where proposals are currently out for consultation.<sup>43</sup> The Australian proposals draw extensively from the experience of carbon compliance markets, where the country has a well-developed and widely appreciated approach. How such approaches would work in voluntary biodiversity credit markets, if at all, is an open question.

**Despite such mature options being available, biodiversity credit markets might benefit from a fresh look at possible regulatory regimes.** For example, a bio-centric approach to governing such markets might benefit from the broader use of more radical regulatory options such as the 'legal rights of nature'.<sup>44</sup> This would add an all-important legal layer to the normative framing of what constitutes a nature positive credit. It would strengthen local representation and voice in such markets by opening the way for a broader range of citizen led moves to seek legal redress where the interests of nature were seen not be being served.

#### Litigation Mechanisms

Leaning on the Australian example, while it will be very helpful for have clear administrative procedures from the market regulator- for example how credits can be cancelled - clarity must also be provided on possible disputes between proponents and holders of a certificate. Any investor holding a certificate requires legal certainty about litigation mechanisms.

#### From Principle to Practice

**Establishing the right governance should be a pre-condition to the formation of biodiversity credit markets**. Markets take time to develop. There are many existing lessons that can be taken into account as new experiences will inform rules and norms as they emerge and evolve. One cannot get markets right from the beginning. That said, there are significant risks in encouraging or even allowing trading in markets that are not sufficiently mature to secure agreed minimum performance standards - in this case equitable, nature positive outcomes.

**Reversing out of trouble is difficult if we move too quickly and advance poor market design**. The rush to trade – and the hope of having found a credible means to access private finance for conservation - led to a green light for diverse efforts that were not effectively joined up on a voluntary, let alone robust, rules-based basis. Efforts are being made to catch up on governance by the Integrity Council on Voluntary Carbon Markets<sup>45</sup> and the Voluntary Carbon Markets Integrity Initiative<sup>46</sup>. Yet with voluntary carbon trading now taking place fairly chaotically across the world, it is proving hard to get back to some aspects of the fundamental performance specification, including equity and voice considerations, and even the basics of effective credit certification. Poor governance arrangements have not served the broader public interest of carbon markets, nor achieved the easy, and large-scale wins expected for nature conservation.





Governing arrangements need to be advanced to support purpose-aligned, highintegrity, high-performing biodiversity credit markets. Biodiversity credit markets are emerging in all shapes and sizes, without the necessary governing arrangements in mind, let alone in place. The development of these globally dispersed, heterogeneous markets are already happening. It is important to advance, with urgency, the development of the appropriate governance architecture and infrastructure. Indeed, even signalling a concerted push in this direction would cause many market makers to pause, reflect, and either contribute to a collective effort or to wait for the relevant frameworks to be agreed.



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# 5 Building High-Performance Biodiversity Credit Markets

#### An Integrated Approach

*Pieces of the puzzle do not make a complete picture*. The prior sections have pointed positively to a performance framework, a set of principles reflecting an over-arching public purpose, and a governance stack summarising key elements of governance that need to be in place to support high-performance biodiversity credit markets. Markets need to evolve, as do associated governance arrangements. That said, the pieces of the puzzle cannot effectively be implemented in an ad hoc, piece meal way. A broader vision and architecture is needed to develop how the pieces might fit together over time.

Securing the needed scale, price and impact of biodiversity credit markets requires an ambitious, integrated approach. Creating the conditions for securing the requisite, scaled demand and quality of supply at a fair price is central to this approach. There may be many ways of building such an integrated approach and underpinning them by deploying some or all of the governance instruments proposed above. That said, there seem to be no alternatives to securing timely, scaled demand without policy and ultimately regulatory interventions. Moreover, such demand will have to be channelled into credits purchased in nature rich countries, requiring credible cross-border transactions.

On the supply side, similarly, meeting the challenges and opportunity of offering scaled, quality credits at a fair price will almost certainly require collective action through some sort of 'Sellers Club', maybe at a sovereign level or directly involving nature's stewards. The bridge between the two is likely to involve voluntary markets subject to a form of collaborative governance arrangements that seek to implement broadly accepted inter-governmental agreements.





#### Exhibit 8: One Possible Integrated Approach

- Scaled Demand: although likely to grow voluntarily through the development, for example of voluntary purchases and profit-seeking insetting, a rapid build-up of scaled, stable demand for biodiversity credits will require policy intervention. Most obviously, this can and must come from those countries whose citizens and businesses are responsible for, and economically able to enter into, long-term purchase agreements. Policy intervention would set the terms of such compliance markets.
- **Credible Supply:** although there is likely to be continued growth in project developers offering biodiversity credits, collective action is likely to be needed to secure the enabling conditions to deliver credibly at scale over extended time periods. Such a Seller's Club might well be a group of governments which come together to guarantee quality in return for an agreed price floor. This approach, over time, might attract other countries to develop the governing conditions that enable them to join given the price premium on offer.
- Voluntary Bridge: there is the potential of developing international credit markets governed by a single integrated, inter-governmental regulator. Notwithstanding this, it is more likely that an ecosystem of voluntary or partially regulated markets will emerge, connecting scaled demand with credible supply. This would nevertheless need to be effectively overseen through a collaborative governance platform, most effectively involving state and non-state actors, including indigenous peoples and local communities.



# Collaborative Design







# **6** Collaborative Design

There is growing community of thought leaders and practitioners championing different individual contributions to the discussion around biodiversity credit markets. As we have outlined throughout the discussion paper, some focus on the questions around standards and methodologies, while others are more focus on piloting projects on the ground. Allowing any and all flowers to bloom will open the door to low quality, inequitable, low impact outcomes. At the same time, attempts to drive a single design will not work either and will generate their own negative unintended consequences.

**Proposal to launch a platform initiative to advance the effective governance of biodiversity credit markets**. What is now needed is a coherent, multi stakeholder and multi layered approach to designing and overseeing the development of biodiversity credit markets. This approach would address the multifaceted nature of heterogenous biodiversity credit markets, while incorporating market performance specifications, including governance. Such an initiative would build on the existing work referenced above, and beyond. It would include sovereign developments such as in Australia, indigenous and community led initiatives from the Amazon to Canada, existing coalitions of experts and practitioners, and those working to evolve high-integrity carbon offset markets. One option is for this initiative to emerge from the One Planet Summit in Gabon, building on the work of the related work of the Global Environment Facility's Working Group on Innovative Mechanisms to Address Biodiversity Financing Needs.





*The Terms of References of such a platform or partnership could read as follows.* "Develop and advance designs for biodiversity credit markets that meet the objectives of timely scale, fair price and credible nature, climate and equity outcomes:

- Consider the relative merits of different forms of markets and credits, allowing for heterogeneity in forms of both reflecting cultural expressions and scientific realities.
- Assess options for bounding the scope of biodiversity credit markets, including by biomes, geographies, and market actors.
- Amplify and draw on the perspectives and experience of indigenous peoples and local communities, in defining market boundaries, credits and governance arrangements.
- Advance the design, prototyping and deployment of key governance instruments and processes, including boundaries, transparency and accountability, voice and regulatory arrangements.
- Consider options for scaling demand, covering the market taxonomy and options for voluntary, regulatory and combined approaches.
- Design options for scaling quality supply of credits, including configurations of seller's clubs at the sovereign, sub-sovereign or combined.
- Assess technical options for collective price setting, drawing on experience elsewhere of absolute price floors and cost-plus formulas.
- Consider technical options for a common approach to the collection, analysis and use of biodiversity data.
- Determine technological options for improving transparency and accountability, including contract disclosure and traceability, and covering both credits and markets actors.
- Consider institutional options for the governance of both national and cross-border transactions and markets, including how best to involve indigenous peoples and local communities."





## **Endnotes**

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<sup>4</sup> UNEP (2021). State of Finance for Nature 2021. Nairobi. <u>https://www.unep.org/resources/state-finance-nature</u>

<sup>5</sup> The estimated biodiversity financing gap (2019) sits between US\$ 598 billion and US\$ 824 billion per year.

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<sup>8</sup> UNEP (2022). State of Finance for Nature in the G20. Nairobi. <u>https://www.unep.org/resources/report/state-finance-nature-2022</u>

<sup>9</sup> <u>https://www.theguardian.com/environment/2022/aug/30/utterly-damning-review-finds-offsets-scheme-fails-to-protect-nsw-environment; https://www.abc.net.au/news/rural/2022-09-01/nsw-biodiversity-offset-schemes-criticised-by-auditor-general/101391042</u>

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<sup>11</sup> <u>COMMENT</u>: Six questions to resolve in order for carbon markets to deliver more for nature « Carbon Pulse (carbon-pulse.com)

<sup>12</sup> <u>https://www.bain.com/insights/voluntary-carbon-markets-in-2023-a-bumpy-road-behind-crossroads-ahead/</u>

<sup>13</sup> See <u>Science Based Targets</u> (SBTi), <u>Race to Zero</u>; <u>Nature Climate Solutions Alliance</u> (NSA).

<sup>14</sup> Vivid Economics (2022) Global Nature Markets Landscaping Study,

https://www.naturemarkets.net/publications/global-nature-markets-landscaping-study

<sup>15</sup> Ibid.

<sup>16</sup> <u>https://news.mongabay.com/2023/02/biodiversity-credits-an-opportunity-to-create-a-new-crediting-framework-commentary/</u>

<sup>17</sup> <u>https://www.weforum.org/agenda/2022/12/biodiversity-credits-nature-cop15/</u>

<sup>18</sup> "U.N. says new biodiversity credits can succeed where carbon offsets failed": Japan Times, 6<sup>th</sup> December 2022: <u>https://www.japantimes.co.jp/news/2022/12/06/business/biodiversity-credits/</u>

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- <sup>27</sup> GEF. (2023.) Report Outline: Innovative Mechanisms to Address the Biodiversity Finance Gap. To be discussed at the Expert Panel Meeting on January 25 and 27, 2023; (version as of January 23, 2023).
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- <sup>29</sup> Ducros, A and Steele, P. (2022). Biocredits to finance nature and people: emerging lessons. IIED, London. ISBN 978-1-78431-996-0ClimateTrade. <u>https://iied.org/21216iied</u>
- <sup>30</sup> Biodiversity certificates and related initiatives, as outlined by the GEF WG paper
  - <u>Niue Ocean Conservation Credit (OCC)</u>
    - "Sustainable development units", New Zealand
  - Terrasos: Partnership for Forest Protocol for Voluntary Biodiversity Credits (VBC), Colombia
  - EcoAustralia™ credit
  - Wallacea Trust biodiversity credits
  - <u>ValueNature, Africa</u> (Start-up in development stage , plans to stack biodiversity and carbon credits)
  - Malua Biobank in Sabah, Malaysia
  - IDB Lab's digital tokens for biodiversity challenge, notably supporting Terrasos (Colombia) to combine biodiversity credits with digital tokens; the Fundación Futuro (Ecuador) to expand the scope of the zero carbon system to offer monetary incentives to landowners for conservation and restoration); and Nature Services (Peru) to structure socioeconomic incentives to recognize behaviors and actions in favor of biodiversity and avoid unwanted behaviors by integrating blockchain functionalities (including fungible and non-fungible tokens).
  - Recelio`s Dynamic Biodiversity Tokens

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<sup>45</sup> <u>https://icvcm.org/</u>

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## About (I) Taskforce on Nature Markets

The Taskforce on Nature Markets' core objective is to shape a new generation of purposeful nature markets that deliver nature positive and equitable outcomes. It seeks to achieve this by:



The Taskforce is an initiative of, and hosted by, NatureFinance (previously the Finance for Biodiversity Initiative - F4B). It benefits from the broader portfolio of NatureFinance's work and the extensive knowledge of its partners and networks. The Taskforce is supported by the MAVA Foundation.

Find out more about the Taskforce on Nature Markets, its members, partners, work programme and how to get involved at www.naturemarkets.net

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Consultation Paper March 2023

