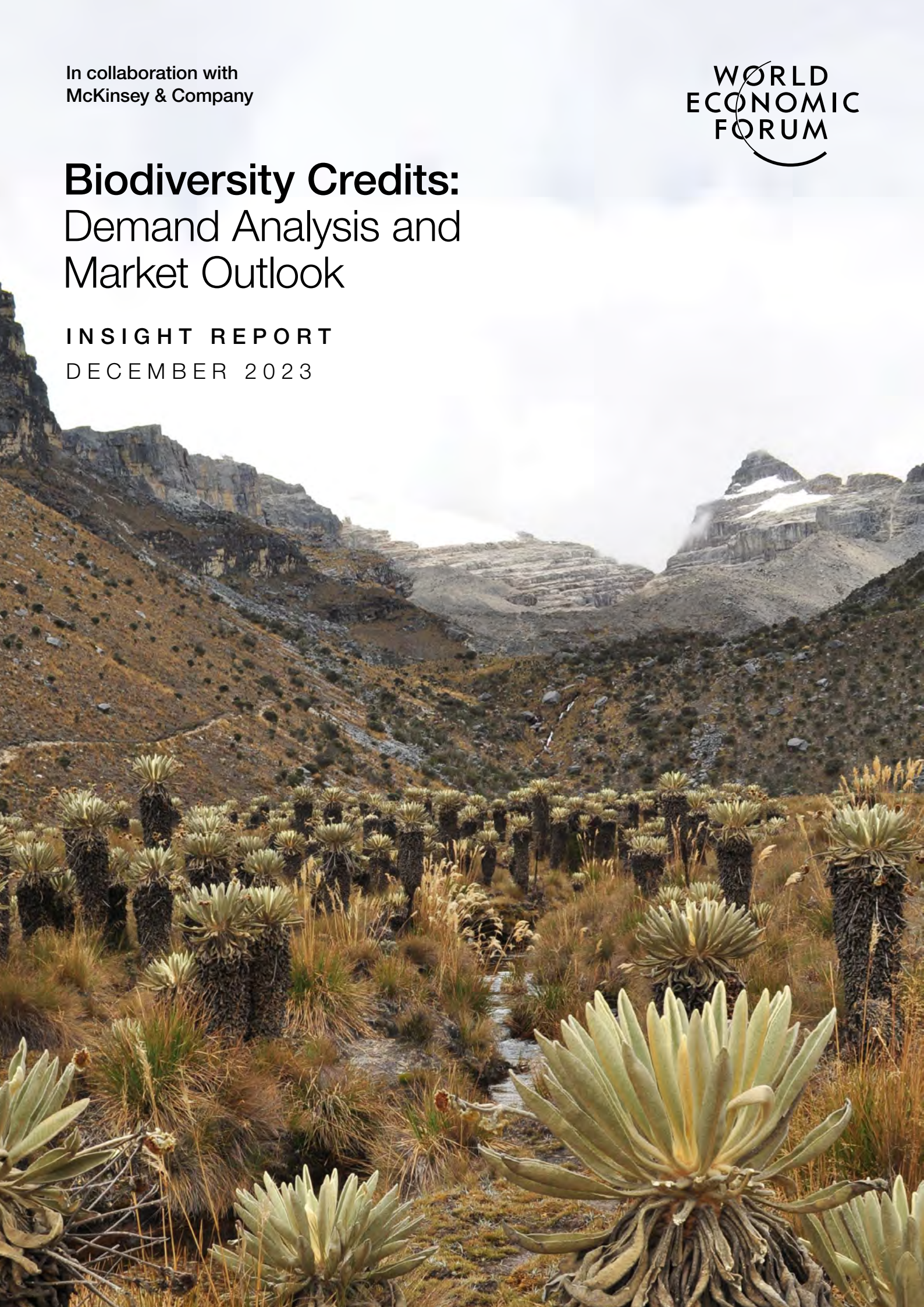
In collaboration with
McKinsey & Company

WORLD ECONOMIC FORUM

Biodiversity Credits: Demand Analysis and Market Outlook

INSIGHT REPORT

DECEMBER 2023



Images: Getty Images, Unsplash

Contents

The work presented here builds on the World Economic Forum's consultation paper *High-level Governance and Integrity Principles for Emerging Voluntary Biodiversity Credit Markets* and complements the Forum's white paper *Biodiversity Credits: A Guide to Support Early Use with High Integrity*, which sets out how businesses might start using biodiversity credits. In addition to desk-based research, quantitative analysis and broader consultations and workshops with experts, the report draws on in-depth corporate interviews which were carried out by the World Economic Forum in collaboration with McKinsey & Company Sustainability from April to June 2023. The interviewees and their respective institutions are kept anonymous, but the World Economic Forum and McKinsey & Company Sustainability would like to acknowledge their valuable contributions in the development of this document. The opinions expressed herein may not necessarily correspond with the views of everyone involved in the project. This work is independent, reflects the views of the authors and has not been influenced by any business, government or other institution.

Foreword

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In December 2022, 196 parties signed the historic Kunming-Montreal Global Biodiversity Framework, committing to halt and reverse biodiversity loss by 2030 and live in harmony with nature by 2050. This will require a "whole-of-society" approach and a paradigmatic shift in our economic and societal models. Bridging the current annual $700 billion financing gap for biodiversity will require policy reform, shifts to sustainable production and consumption, upholding equitable benefit sharing and the unlocking of new sources of finance. The private sector has an important opportunity to take the lead in developing holistic nature strategies, building on the growing awareness evident among corporates around their nature footprints.

To achieve systemic change of this magnitude in the coming decades, every tool is needed. Biodiversity credits – payments for measurable and scientifically verified biodiversity outcomes – are one of the instruments that hold promise. If designed and implemented with integrity[1] and transparency, biodiversity credits have the potential to deliver positive outcomes for nature and ecosystems, shift how economic activities account for externalities, mitigate disruption to businesses and their supply chains and benefit local communities and Indigenous peoples that may have safeguarded nature for generations.

While standards and methodologies are being developed, civil society, government and business must set a high bar for integrity. This stems from both a desire to learn from and improve on carbon markets and the need to build a solid foundation for this nascent market for biodiversity to support its long-term sustained growth.

This insight report presents the findings of an analysis conducted by the World Economic Forum and McKinsey & Company Sustainability. It addresses some of the questions around the drivers of demand, the potential use cases connected to the purchase of credits, the enabling conditions that will support the development of the market, and the potential scale of demand if supporting conditions come into place.

The report aims to capture the potential for developing the market for biodiversity credits, without being too prescriptive about how this potential might be realized. We do not aim to present a comprehensive approach, but to view the market through the lens of potential buyers by addressing what is needed to make the business case with companies and stakeholders. Integrity, good governance and transparency comprise the necessary pillars. Innovative thinking and learning will ultimately build the edifice that translates this opportunity into tangible outcomes for a net-zero, nature-positive and equitable future.

Executive summary

The biodiversity credits market is still at a very early stage, but it provides a compelling instrument to finance positive outcomes for nature.

Biodiversity credits – verifiable, quantifiable and tradeable units of restored or preserved biodiversity over a fixed period – offer a potentially robust and scalable mechanism for increasing nature-positive investment. The world will need hundreds of billions of dollars annually in funding for nature to meet the goals set by the Global Biodiversity Framework (GBF). Biodiversity credit markets, when implemented with high integrity standards, transparency, comparability, liquidity and price efficiency, could enable large-scale positive impacts and complement other instruments in meeting the goals of the GBF.

How credits can deliver value to business

Global demand for biodiversity credits could reach $2 billion in 2030 and $69 billion in 2050.

Biodiversity credits could deliver value to companies in four or five interrelated ways:

- Support quality assurance for companies buying nature-based carbon credits, by delivering biodiversity benefits (if robust additionality rules are met).
- Enable companies to assure sustainable access to ecosystem services such as pollination, flood protection and soil fertility.
- Demonstrate a corporate contribution to the global goals set out in the GBF, which will help businesses build a positive sustainability reputation among employees, investors and customers.
- Allow companies to create products bundled with nature improvements that help meet customer demand for nature outcomes, while securing product-based green price premiums.

A contested fifth use case for biodiversity credits would be to allow companies to take responsibility for residual biodiversity impacts that remain after taking measures in line with the mitigation hierarchy to "avoid, reduce, restore and regenerate". There is ongoing debate about whether credits could be used in this way. This use case could apply in a context where compliance offset schemes do not exist or only cover part of a company's impact on nature – but considering the state of the market, which would require additional market infrastructure and frameworks that are currently absent, this use case is not broadly recognized as a viable option.

Three scenarios of market demand

This report estimates possible demand for biodiversity credits and provides an indicative range based on different scenarios for market development. Given how nascent the market is, these estimates are meant to illustrate what it would take to achieve such market scale, rather than providing a projection or forecast. With effective progress across multiple fronts, global demand for biodiversity credits could reach $2 billion in 2030 and $69 billion in 2050. With less effective progress, global demand could reach $760 million in 2030 and up to $6 billion in 2050. An additional scenario – examining a highly ambitious trajectory with transformational changes in the regulatory environment and the value that society (voters, consumers, shareholders) places on nature – is also tested to show what might be possible.

The market for biodiversity credits is still in a very early stage of development. Many of the foundations of an effective market – able to support potential levels of demand indicated by the scenarios in this analysis – are still missing. These include confidence in the quality of credits, the robustness and comparability of claims, and the means of measurement and accounting. Experience in environmental markets and product markets more broadly suggests that biodiversity credit markets will need to demonstrate high-integrity supply, assure and secure demand, and establish transparent and standardized information and governance.

Actions needed to unlock impact

This report identifies the following actions or supporting conditions to unlock scale and impact in biodiversity credit markets:

- **Establish the business case for buyers:** Buyers can identify nature dependencies

and mitigation measures in the supply chain, motivate employees around nature performance, connect nature performance to sustainability criteria valued by investors, and develop and market products and brands that engender customer preferences for nature-positive outcomes.

- **Develop high-integrity supply at sufficient scale:** Suppliers can design projects that deliver robust outcomes for nature and local communities, improve the quality and efficiency of measurement, reporting and verification (MRV), and demonstrate cost reductions to enable developers to meet potential demand. This might also include policy action that facilitates high-integrity supply through environmental regulation and appropriate property law.

- **Consolidate common principles, standards and methods:** Standard-setters and independent governance bodies can establish rules to ensure information transparency, quality assurance and stakeholder protection. Common rules would enable comparability, trade and fair competition, while instilling trust and credibility. These could cover areas such as target-setting, claims and disclosure, MRV, equity and inclusion.

Policy also plays a role

Policy action can contribute to the development of these supporting conditions and help ensure biodiversity credits are high-quality and deliver benefits for nature, while minimizing the risk of greenwashing. The range of public policy levers includes:

- Establishing mandates to mitigate impacts.

- Supporting consumer demand for sustainable products.

- Facilitating high-integrity supply through environmental regulation to limit leakage risk.

- Instituting property law that clarifies the land rights of Indigenous people and local communities, and ownership of biodiversity credits generated on public, community and private land.

Progress implementing these supporting conditions could unlock biodiversity credit markets and, alongside other mechanisms, help close the nature funding gap. The biodiversity market could grow by 100-fold this decade (from a current $8 million annually)[2] and 10 times more the following decade, if there are immediate and sustained efforts to accelerate this market towards maturity, including opportunities for communities to learn by doing and iterate best practices.

Introduction

Biodiversity credits offer an innovative opportunity to increase investment in nature conservation and restoration, but the business case for buying credits remains to be made.

The Living Planet Index – a measure of relative species abundance – shows a 69% decline over the last 50 years.

Improving natural capital[3] and meeting global biodiversity goals will require growing levels of investment in conservation, restoration and sustainable management. Nature is declining globally at unprecedented rates with far-reaching consequences for wildlife and people.[4] WWF's *Living Planet Report 2022*[5] showed sustained declines in primary forests, coral reefs, wildlife populations, soil quality and wetlands over the last 50 years. The Living Planet Index – a measure of relative species abundance – showed a 69% decline over this period. There is clear urgency to invest in biodiversity conservation, restoration and sustainable management, with estimates of the financing gap to meet global goals ranging from $330 billion to $824 billion per year, far more than existing flows.[6]

Biodiversity credits have been proposed as an innovative and scalable mechanism for increasing nature-positive investment. The landmark Kunming-Montreal Global Biodiversity Framework (GBF), adopted by 196 governments in December 2022, encourages unlocking finance through "innovative schemes such as…biodiversity offsets and credits". Various pilot projects and multi-stakeholder initiatives are now pioneering the development of this market, with lessons from carbon and water credit markets, as well as broader markets for local ecosystem services.[7] With proper safeguards in place to ensure integrity and minimize risk, biodiversity credits could offer an appealing mechanism for buyers and suppliers.

For buyers, biodiversity credits could offer a reliable mechanism for mitigating nature-related risks, enhancing productivity and demonstrating a positive contribution to nature outcomes. For suppliers – including Indigenous peoples and local communities (IPs and LCs) – credits could provide a revenue source that enhances livelihoods and enables the financing of high-integrity projects at scale, especially for developers in ecosystems with insufficient carbon funding or limited ability to access it (e.g. offshore marine and desert systems).

Nevertheless, interviews with potential buyers conducted for this report underscore the early stage of market development, the risks and complexity associated with implementation, and differing views on relevant attributes of biodiversity credits and their legitimate use. While existing reports have articulated an attractive role for biodiversity credits as a revenue stream to suppliers of those credits, there is not yet a widely accepted or proven business case for the value that companies can derive from the purchase of credits.[8] In particular, there is no consensus around how companies should make claims based on their purchase of biodiversity credits or how to decide on the volume of credits to purchase.

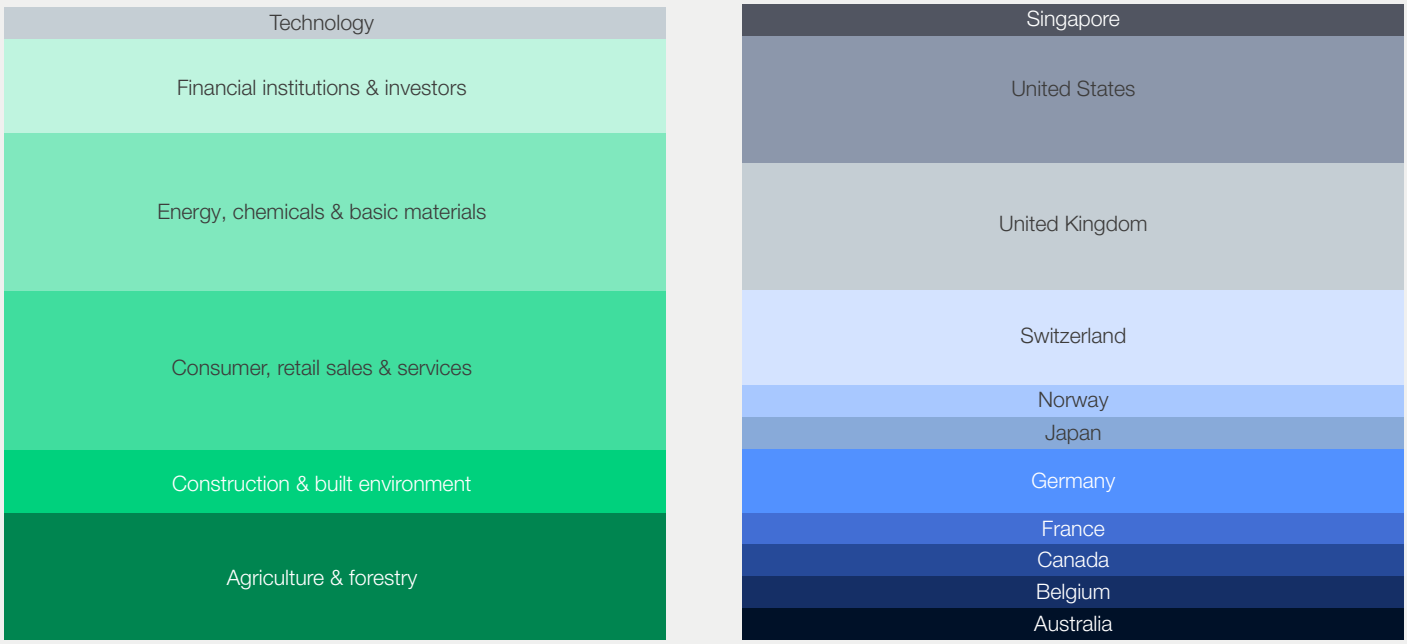
BOX 1: **Approach to interviews**

This report draws on in-depth corporate interviews carried out by the World Economic Forum in collaboration with McKinsey & Company Sustainability from April to June 2023. Given the focus on identifying the business case and the drivers of private sector demand, interviews were only carried out with large companies and financial institutions (although other potential buyers might include environmental charities, non-governmental organizations, donor-funded trusts, governments, multilateral development banks or similar public sector organizations).

Thirty semi-structured interviews of 30-60 minutes were conducted with company representatives who had visibility over nature strategy development (usually at the chief sustainability officer level). Interviewees represented six sectors and 11 countries (see Figure 1).

The full interview script is provided in the Appendix.

FIGURE 1: **Corporate interviews conducted for this report (April-June 2023)**



“There is no consensus around how companies should make claims based on their purchase of biodiversity credits or how to decide on the volume of credits to purchase.

Concurrently, the supply side is still in development, offering products with different features and only a limited sense of what would be most valued by buyers and why. Standard-setters are beginning to publish methodologies and standards, but market infrastructure and governance are still largely missing. Potential buyers interviewed for this report are therefore largely at the exploration stage, testing value-creation opportunities, assessing possible risks and understanding and engaging with emerging guidance.

This report examines the potential drivers of value for biodiversity credits and explores possible demand-side outlooks for the biodiversity credit market. This includes assessing the mechanisms through which biodiversity credits could create value for business, estimating the scale of demand under different scenarios and identifying the conditions that would best enable demand to materialize.

This report is structured as follows:

- Section 1 clarifies what is meant by “biodiversity credit” and summarizes the product’s distinguishing features.
- Section 2 identifies possible drivers of demand and use cases for biodiversity credits.
- Section 3 indicates some of the likely supporting conditions that could help drive demand.
- Section 4 quantifies the potential demand for credits under increasingly ambitious scenarios.
- Section 5 lays out possible next steps and a timeline for business readiness.

1 What are biodiversity credits?

Biodiversity credits could finance lasting improvements to the conservation and restoration of nature, in ways that are verifiable, quantifiable and tradeable.

1.1 Working definitions and similarities with carbon credits

Biodiversity credits are a novel financial instrument that could play a pivotal role in contributing to a nature-positive future. While there is no firmly agreed definition yet (see Box 2 for a working definition), biodiversity credits can be described as a verifiable and tradeable financing instrument that rewards positive outcomes for biodiversity over a fixed period. With sufficient safeguards and high-integrity standards, credits can be used to finance actions that result in measurable improved outcomes for biodiversity, encompassing species, ecosystems and ecosystem services.[9]

BOX 2: **Working definitions of biodiversity credits and notes on terminology**

Biodiversity credits have been described as "an economic instrument that can be used to finance actions that result in measurable positive outcomes for biodiversity (e.g., species, ecosystems, natural habitats) through the creation and sale of biodiversity units".[10] A biodiversity credit represents "a unit of biodiversity that is being restored or preserved."

Currently, the terms "biodiversity credit", "biocredit", "biodiversity certificate", "nature credit" and "nature token" are used to refer to the same concept. The terms "nature" and "biodiversity" are sometimes used interchangeably but can also be used to imply different concepts and have consequential implications for outcomes. Nature is a broad term covering both living and non-living elements of the natural world and does not necessarily imply ecological condition. The Convention on Biological Diversity defines biodiversity as a measure of the "variability among living organisms from all sources… and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems".[11]

While experts are still working on a definition for "biodiversity credits",[12] this report uses the term to refer to actions that result in positive impacts on both nature and biodiversity. The term is adopted for consistency and simplicity, being the one used in Target 19 of the GBF, and not intended as an endorsement.

Source: Porras and Steele.[13]

> With sufficient safeguards and high-integrity standards, credits can be used to finance actions that result in measurable improved outcomes for biodiversity.

Biodiversity credits are related to, but distinct from, voluntary carbon credits. Among other differences, while carbon credits represent units of a carbon equivalent avoided or removed from the atmosphere, biodiversity credits represent units of biodiversity restored or preserved, which may have a variety of distinctive characteristics. Importantly, while carbon credits seek to achieve a standardized unit as part of a commodity market, biodiversity credits may not lend themselves to full equivalence. The market could develop to include differentiated products such as credits for the type of nature restored and the metrics used to track improvements.

Some projects, particularly nature-based solutions (NbS), can generate units of both carbon and biodiversity benefits (or broader nature outcomes). Other projects may be more suited to one market or the other – for example, the restoration of biodiversity-rich desert ecosystems with limited carbon sequestration potential might be more suited to pure biodiversity markets. NbS projects that issue carbon credits (also known as natural climate solutions – NCS) may receive a premium for "beyond carbon" benefits to biodiversity and communities.

Such projects could issue both carbon and biodiversity credits if additionality conditions are met. The question of whether these credits should be "stacked" (i.e. sold separately) or "bundled" (i.e. sold together) is still being discussed.[14] Flexibility will be required as different types of projects may be better suited to deliver carbon or biodiversity outcomes as discussed above. Buyers may also have preferences for how they would like to purchase these types of credits.

Biodiversity credits are also distinct from biodiversity offsets.[15] This report reserves the term "offset" for regulated compliance schemes that require companies to invest in biodiversity improvements to compensate for their negative impacts on nature. This report focuses only on voluntary uses of biodiversity credits.

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1.2 Distinctive features of biodiversity credits

Biodiversity credits may offer key features, which when combined distinguish them from other financing mechanisms for biodiversity and nature. These distinctive features include:

1. **Benefits to biodiversity:** Credits represent real, lasting and additional improvements, avoided loss or management success related to biodiversity, as outlined by emerging standards. Measured relative to a pre-defined baseline and maintained or improved for a fixed period, usually 20-30 years.[16]

2. **Verifiable:** Benefits to biodiversity are measured openly and transparently, in a manner that can be checked and validated by a third party. This allows independent verification of biodiversity credits by a wide array of mechanisms for quality assurance, including formal accreditation, risk ratings and investigative research.

3. **Quantifiable:** Credits represent well-defined units of value that enable accounting, comparability and tradability. Well-defined units also enable cost-sharing for landscape-scale interventions, by allowing buyers to purchase a "share" of nature recovery. Due to highly local values associated with nature, there are likely to be several units in use, although consensus may evolve over time towards a single unit of measure or benchmark. Pilots and emerging standards are testing models for what these units could look like.[17]

4. **Tradeable:** Credits expand the opportunities for mediation between nature's stewards and those who seek to reward those stewards and potentially gain credit for positive outcomes. This does not mean credits would necessarily be traded in a secondary market – the greater breadth and depth of primary transactions itself should increase efficiency and scale.[18] As the market matures, secondary and derivative market developments could bring further benefits of greater liquidity, price efficiency and risk reduction.

Due to highly local values associated with nature, there are likely to be several units in use, although consensus may evolve over time towards a single unit of measure or benchmark.

1.3 How biodiversity credits could be used

These features describe what constitute the minimum requirements for a high-quality, legitimate biodiversity credit, but they do not describe how credits themselves can be used or what claims can be made about their use. In voluntary markets or contexts, different independent bodies with widespread credibility may emerge to set standards, adjudicate credit quality, and monitor the veracity and credibility of purchaser claims.[19] In the biodiversity credit market, several standards have recently been released or soon will be. These standards may feature further characteristics of high-integrity credits, such as the active inclusion and participation of IPs and LCs at every stage of the projects, as well as free, prior and informed consent (FPIC) and equal benefit-sharing. At the time of writing, initial claims guidance is still forthcoming. The Forum's recent white paper *Biodiversity Credits: A Guide to Support Early Use with High Integrity* provides a first step towards guidance on what kinds of claims companies can make.

As the voluntary carbon market (VCM) has shown, both standards and claims guidance (in addition to other supporting features discussed further in Section 3) are crucial to maintaining high integrity, ensuring markets deliver real and lasting benefits and minimizing the risk of greenwashing. In compliance settings, regulatory bodies carry out these functions, as is the case today with offset schemes that require companies to invest in biodiversity improvements to compensate for their negative impacts on nature.[20] Legitimate biodiversity credits could potentially be used in voluntary or compliance settings if they satisfy the relevant requirements laid down by standard-setters and regulatory bodies.

Growing interest in biodiversity credits led to their inclusion in the GBF, which in turn has stimulated wider interest. The GBF obliges its 196 state signatories to mobilize at least $200 billion in financing per year by 2030 and encourages countries to leverage "innovative schemes such as…biodiversity offsets and credits".[21]

Since 2020, 140 companies – as part of the Finance 4 Biodiversity pledge – have committed to "protecting and restoring biodiversity through their finance activities and investment", by sharing knowledge, assessing their own biodiversity impacts, setting targets and reporting publicly on progress before 2025.[22] In the run-up to the UN's Biodiversity Conference (COP 15) in 2022, more than 330 companies called on heads of state and governments to include mandatory disclosure for large and transnational businesses as part of the GBF's Target 15.[23]

To date, most of the world's top 500 companies have set climate-related targets, but although 51% of them acknowledge biodiversity loss, only 5% have set biodiversity targets.[24] Many

The Global Biodiversity Framework obliges its 196 state signatories to mobilize at least $200 billion in financing per year by 2030 and encourages countries to leverage innovative schemes such as biodiversity offsets and credits.

stakeholders hope biodiversity credits can strengthen mechanisms such as REDD+ (Reducing emissions from deforestation and forest degradation in developing countries), which have proven insufficient to reach global goals and have failed to deliver for pristine landscapes, such as "high forest low deforestation" (HFLD) settings.[25,26]

Biodiversity credits could be issued across both land-based and ocean-based ecosystems in ways flexible enough to appeal to a wide range of stakeholders. Although corporate demand is the focus of this report, potential demand for biodiversity credits is not limited to the private sector. Organizations that have mandates to deliver nature outcomes, or that have statutory obligations to fulfil, could also look to biodiversity credits to deliver against their targets. These organizations might include environmental charities, non-governmental organizations, donor-funded trusts, governments, multilateral development banks or public sector organizations. Depending on government schemes and regulation, biodiversity credits could help bridge the nature finance gap directly or through catalysing other funding vehicles that can build on the models of project development and verification established through biodiversity credit markets.

BOX 3: Comparing the development of the biodiversity credit market with the trajectory of the voluntary carbon market (VCM)

Although the VCM has existed since the early 2000s, it was not until 2016, when the Paris Agreement offered a policy framework and consolidated global climate action, that it began to scale up. The market emerged as a way for non-state actors to certify voluntary carbon dioxide emissions reductions and removals.[27] The early market saw the launch of several standards and exchanges.

The Paris Agreement formalized the concept of net zero and through Article 6 signalled that voluntary carbon credits could achieve international standardization. In the five years that followed the agreement, the market grew from $200 million in annual value to nearly $2 billion.[28] Compliance markets have also played a critical role in driving demand in the voluntary market. Today, the market is expected to grow by a factor of 15 or more by 2030.[29]

Despite its recent growth, the VCM has struggled to demonstrate integrity.[30] Key challenges include the limited availability of financing and risk transfer products, difficulty validating projects, challenges with carbon accounting, the avoidance of double-counting, and safeguarding and clarifying the property rights of vulnerable communities including IPs and LCs. Despite early promise, Article 6 has hitherto failed to facilitate consensus, standardization and positive outcomes for nature and people. The result has been an oversupply of low-quality credits that have created negative publicity and lowered market confidence.

The emerging biodiversity credit market faces many of the same challenges as the VCM. First movers are keenly aware of the issues facing the VCM and early discussions have focused on the importance of defining and maintaining high integrity. For example, stakeholders hope the Forum's *High-level Governance and Integrity Principles for Emerging Voluntary Biodiversity Credit Markets*[31] published in December 2022 will remain at the heart of the market as it develops.

However, many of the challenges of maintaining high integrity in the VCM are likely to be more difficult to tackle in the biodiversity credit market, for a number of reasons:

- While the GBF calls for use of novel financing instruments including biodiversity credits, it does not establish a formal mechanism equivalent to Article 6.
- Highly localized values of nature and competing views over whether a single unit is appropriate may present additional challenges in establishing the market's liquidity, lowering its search costs and reaching scale.
- The compliance carbon market has helped drive demand for voluntary credits in a number of jurisdictions. Similarly, significant compliance markets exist for biodiversity in some jurisdictions and the aim of driving compensatory mitigation of residual impacts is similar to some of the proposed use cases for biodiversity credits. Nevertheless, the degree of local specificity and regulatory complexity could make linking the voluntary and compliance markets with high integrity even more difficult than for carbon markets.
- "Nature positive" has been considered a promising nature equivalent to net zero by some stakeholders. Net-zero pledges have been a critical driver of demand for voluntary carbon credits and a consolidated, understandable headline claim could be similarly important in driving demand for biodiversity credits (see Section 2). Yet ecological science has highlighted the great difficulty and potential unfeasibility of making such a claim in the same way as net zero, given the unique characteristics of local biodiversity.

2

What would drive demand for biodiversity credits?

Factors influencing the purchase of biodiversity credits include mission, reliance on nature, regulation, corporate reputation, market edge and attractiveness to investors.

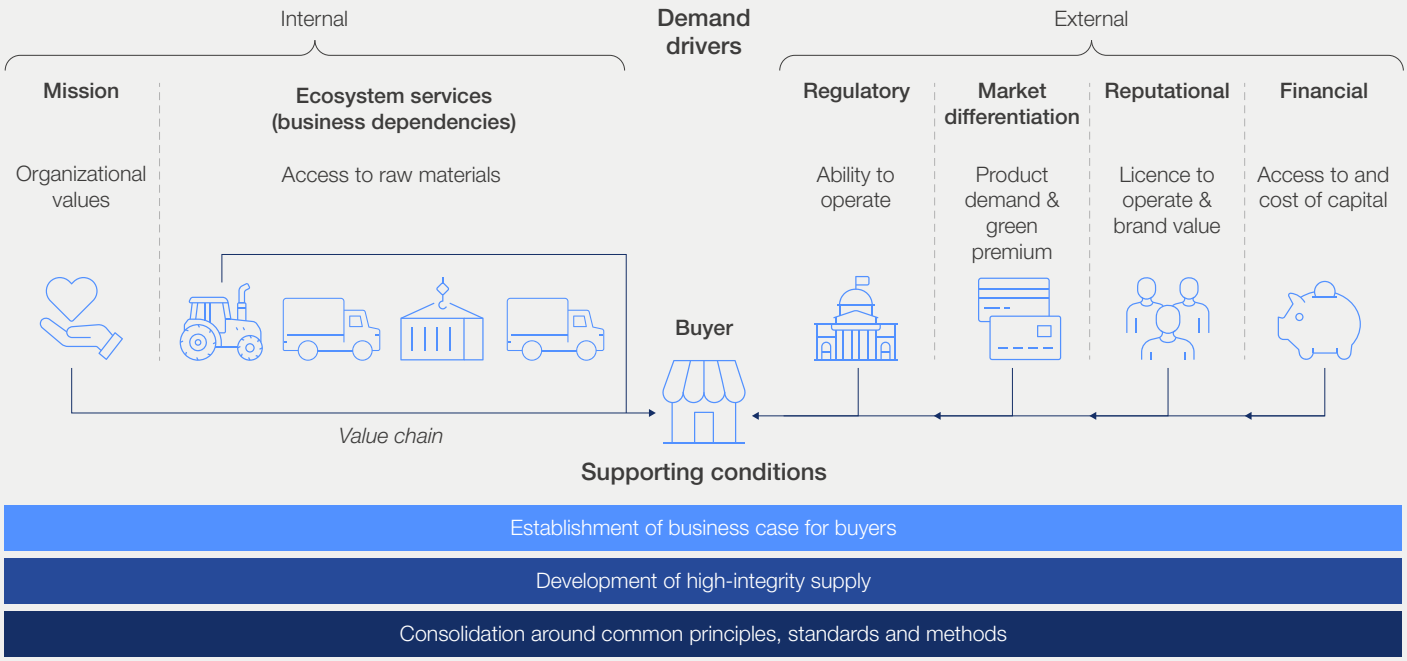
2.1 Demand drivers for biodiversity credits

The impetus for restoration, conservation and sustainable management relates both to our dependence on nature for economic and broader well-being and our responsibility for its stewardship.[32] Biodiversity is in rapid decline and approaching possible tipping points.[33] Over the last 50 years, the world has seen sustained decline in primary forests (20%), coral systems (50%), wildlife populations (69%), soil quality (33%) and wetlands (85%).[34] Over half the world's total GDP – $44 trillion of economic value generation in 2020 – is moderately or highly dependent on nature and its services, and all economic activity is ultimately dependent on nature.[35]

The World Economic Forum's *Global Risks Report 2023* ranked biodiversity loss and ecosystem collapse as one of the top five threats to humanity over the next ten years.[36] Human activity is the fundamental driver of nature loss[37] and a corresponding sense of responsibility has led to international government action – as reflected in the GBF – as well as action by citizens and consumers.[38]

The individual business case for investing in or purchasing credits from projects that generate biodiversity improvements varies across companies and sectors. Interviews suggest companies that consider or decide to invest in biodiversity improvements are driven by a variety of considerations. Figure 2 illustrates how both internal and external demand drivers influence a buyer's decision to purchase biodiversity credits, underpinned by the supporting conditions necessary for all drivers (discussed further in Section 3).

FIGURE 2: **Demand drivers for biodiversity credits**



Internal demand drivers

Internal factors might drive demand for biodiversity improvements when the business benefits directly from the improvement. These drivers include preserving access to critical raw materials, aligning with organizational values or delivering on a non-financial mission.

Mission

About one third of respondents indicated that their organizational mission, at least in part, drives their interest in biodiversity and nature. Publishing an explicit mission-based value on nature and biodiversity can help attract and retain employees. Candidates in the workforce today are increasingly factoring company ethics, sustainability and missions into their choices between employers.[39] Interviewees reported that carbon is overrepresented compared to biodiversity in sustainability agendas and some are looking for ways to elevate nature while maintaining focus on climate targets in their corporate strategies.

Ecosystem services (business dependencies)

Most companies surveyed acknowledged the importance of the unpriced ecosystem services that biodiversity provides their businesses, including pollination, climate regulation, water supply and soil fertility. A growing number of companies in downstream sectors (e.g. manufacturing and retail sectors that make or sell products to consumers, using raw materials or processed inputs from upstream sectors) are looking to invest in biodiversity improvements to preserve access to ecosystem services and raw materials to minimize the risk of business interruptions or raw commodity price shocks. For the most part, downstream buyers will look to their suppliers (upstream sectors like agriculture and mining) to issue these improvements and credits.

For example, a manufacturing company may use inputs from suppliers in both the agricultural and mining sectors. Producers in both of these sectors are heavily dependent on local water supply for their production. In order to improve the resilience of its supply chain, the manufacturing company could invest in projects that restore the local landscapes that these suppliers operate in and thereby improve the ability of the local ecosystem to retain and supply water.

External demand drivers

The expectations and opinions of external stakeholders can also drive demand for biodiversity improvements across the organization. Stakeholders could be regulators, local communities, investors, employees or consumers. For example, non-governmental organizations often tailor the conservation activities that they focus on to match the priorities of prospective donors (e.g. investments in specific species and/or habitats).[40]

Regulatory

Regulatory drivers vary across sectors and jurisdictions, but generally frame the legal context within which companies can operate. As lack of preparedness can result in costly responses to policy changes, companies often look to stay ahead of upcoming regulation. Due diligence rules, including the Regulation on deforestation-free products in the European Union (EU),[41] are leading some sectors (e.g. consumer goods, food and beverages, retail) to look seriously at the impacts of their supply chains. Likewise, voluntary disclosure standards, which are becoming mandatory in some jurisdictions like the EU[42] and France,[43] are leading to increased scrutiny on impacts within and beyond operations and supply chains.

Additionally, the GBF is intended to inform policy-making relevant to biodiversity across signatory countries over the next decade. Target 19 calls for significant increases in domestic resource mobilization through "national biodiversity finance plans or similar instruments." This suggests that countries could introduce a broader set of regulatory levers to mobilize finance towards activities that either reduce negative impacts or drive positive impacts on nature in the future.

Market differentiation

Demonstrating good stewardship of biodiversity and nature helps attract a growing subset of consumers who selectively buy green-certified or labelled products and are willing to pay a premium for positive nature outcomes.[44] While emerging research shows that consumers are increasingly aware of greenwashing,[45] and regulators such as the EU Directive on Green Claims are setting standards,[46] market governance can help ensure that claims are backed by meaningful action.

Reputational

Acting responsibly can be fundamental to a company's social licence to operate. This holds across a range of sectors and contexts and is not limited to consumer-facing businesses. Upstream sectors that have a clear and direct biodiversity or nature footprint (e.g. mining, extractive industries, forestry, agriculture) may have a particular reputational liability to address, but even downstream sectors are facing questions from consumers and civil society over responsible sourcing.[47,48]

Demonstrating good environmental performance may become a more urgent priority if civil society and financial institutions increasingly expect businesses to transparently disclose impacts, address nature loss and contribute to achieving global biodiversity targets.

Financial

Financial institutions are increasingly under pressure to offer nature-friendly portfolios. Therefore, improving overall biodiversity performance and securing an enhanced environmental, social and governance (ESG) rating can increase a company's attractiveness to investors and lenders by reducing reputational and regulatory risk (thereby lowering the cost of finance).

> Due diligence rules, including the EU's Regulation on deforestation-free products, are leading some sectors to look seriously at the impacts of their supply chains.

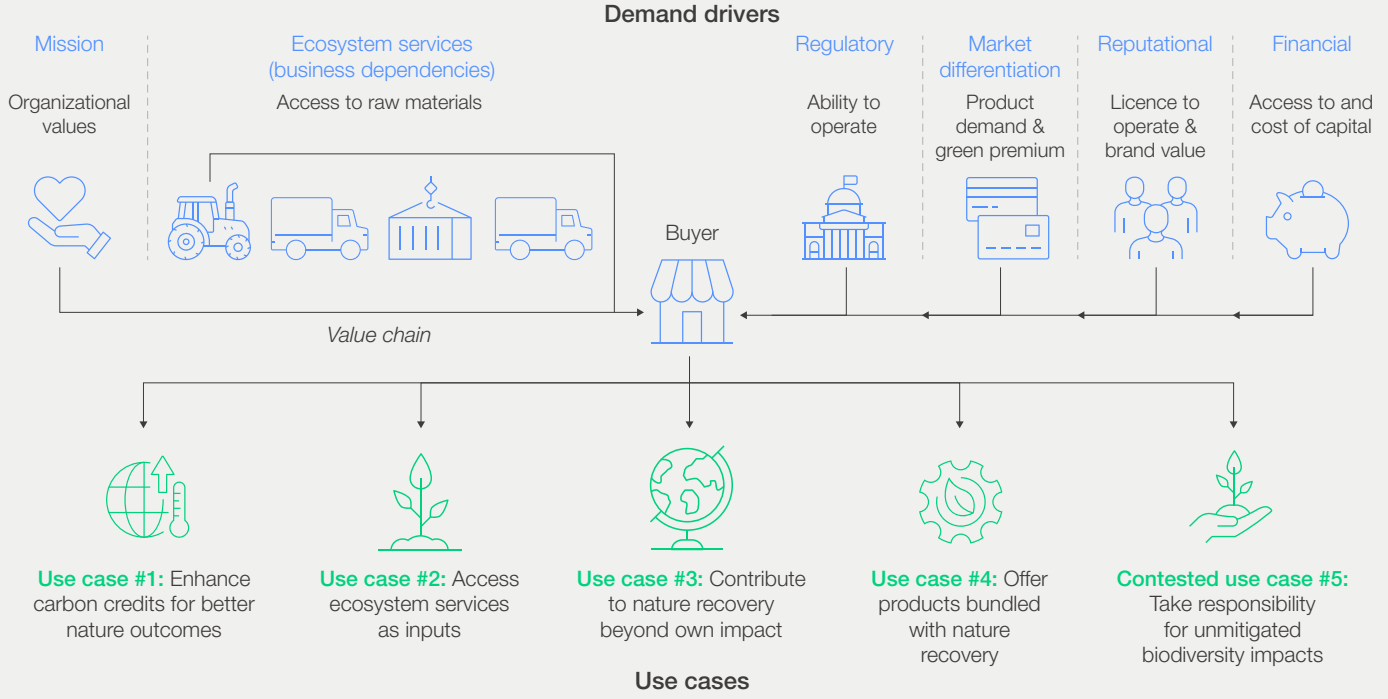
2.2 Use case examples

Corporate interviews with potential biodiversity credit buyers have helped distil the drivers into a set of use cases for biodiversity improvements. There are four use cases emerging under existing frameworks, and an additional fifth use case that could be available if the right supporting conditions and frameworks come into place. Where the demand drivers describe the reasons *why* companies should purchase biodiversity credits, the use cases outlined below describe *how* biodiversity improvements are used.

Each of the demand drivers above could contribute towards the adoption of the use cases below (see Figure 3). Additionally, each of the use cases carries the risk of potential greenwashing, so well-enforced safeguarding mechanisms, guardrails and market infrastructure are needed to ensure the use cases are applied with high integrity and to ensure buyers can be confident in the outcomes achieved.

Broadly speaking, the second use case and contested fifth use case are applications aiming to address and reduce negative impacts, while the third and fourth use cases are about making a positive contribution to nature improvements beyond addressing a company's negative impact. The contested fifth use case also requires both a clear definition of "nature positive" at the corporate level and a set of standards to establish how "acceptable equivalence" (of impacts generated by credits to the company's unmitigated impacts) can reasonably be achieved outside compliance offset schemes. Both these elements are currently missing in the system.

FIGURE 3: **Use cases for biodiversity credits**



Use case #1: Enhance carbon credits for better nature outcomes

In the first use case, companies may purchase biodiversity credits as part of the purchase of nature-based solutions (NbS) delivering carbon credits.[49] Purchasing carbon and nature outcomes through NbS can play a role in helping companies meet their climate targets in a way that has high integrity and demonstrable co-benefits for nature.

While both carbon and biodiversity credits come with inherent risks, this approach could help mitigate the risk that carbon credits might be delivered in a way that is neutral or even harmful to nature. The coordinated use of biodiversity credits can help ensure that activities financed through the purchase of carbon credits have a positive impact on nature as well. Projects may (and some currently do) issue carbon credits with a biodiversity "premium", but as more organizations adopt nature-related targets, projects could more explicitly price biodiversity improvements as an integral part of the carbon credit, or issue carbon and biodiversity credits separately from the same project if additionality rules are met.

> Climate, nature and social goals are mutually reinforcing and investments that holistically address all these elements will be more resilient.

For example, a carbon project without measurable biodiversity outcomes might be based in monoculture plantations, exposing the credit buyer to reputational risk associated with low-quality credits.[50] Verified biodiversity outcomes can ensure projects are based on ecologically healthy projects with appropriate species mix, and, if quantified, can contribute to emerging nature-related targets. Stacked carbon and biodiversity credits issued from, for example, a mangrove restoration project, could simultaneously improve climate and nature outcomes.

Nevertheless, biodiversity outcomes should remain an integral consideration for all nature-based solutions, regardless of whether biodiversity credits are being generated: climate, nature and social goals are mutually reinforcing and investments that holistically address all these elements will be more resilient.

Use case #2: Access ecosystem services as inputs

Companies rely on natural capital that they may not directly control to provide ecosystem services that are integral to their business operations, for example, local water supply. In this second use case, companies could use biodiversity credits to finance improvements to natural capital in their value chain, with the aim of securing or improving access to the ecosystem services upon which they rely. In the process, they could support positive outcomes for nature with potential benefits beyond the company.

For example, a confectionary company that purchases soft fruits directly from a farmer might purchase biodiversity credits from the local landscape in order to maintain the health of local pollinators essential for the growth of the fruits. This could constitute effective nature risk management. Ecosystem services that companies depend on can be disrupted by impacts from the company itself and from third parties; credits could reduce both of these sets of impacts.[51]

There may be cases where it could prove more efficient for a company to maintain access to ecosystem benefits through a direct bilateral agreement with a project developer, rather than going through a biodiversity credit market. However, the bio-credit adds a layer of verification and third-party assurance which may prove valuable to the company.

Use case #3: Contribute to nature recovery beyond own impacts

Companies may want to contribute to the protection and restoration of nature beyond their own direct and indirect impacts, in order to support global nature goals and the ecosystem services on which the global economy depends.

In this third use case, companies may make commitments to improve the state of nature, such as by contributing to global nature goals set out by the GBF or playing a role in a region's ecosystem restoration or species protection.[52] They can then purchase biodiversity credits as a means of fulfilling those commitments.

For example, a car manufacturer may purchase credits for the restoration of a globally threatened habitat type not closely linked to its operations, to contribute to global biodiversity goals. This can in turn drive business value by supporting global ecosystem services, attract and retain talent and help maintain social licence to operate.

However, this use case alone does not represent a holistic corporate nature-positive strategy, which would require companies to assess and disclose nature-related impacts and dependencies, set science-based targets and transform business operations to minimize negative impacts.

Use case #4: Offer products bundled with nature recovery

Companies may consider offering products and services that allow consumers to buy nature improvements – provided through a biodiversity credit – as an additional product attribute. A product bundled with a biodiversity credit provides consumers a convenient means through which to directly support positive nature outcomes through their consumption choices. Such outcomes could align with consumers' individual preferences and willingness-to-pay, while providing confidence (through rigorous verification) that the outcomes are delivered.

For example, a homeware producer might offer a vase at a premium if its purchase contributed to the restoration of a hectare of wildflower meadow. This use case need not be limited to customers. Companies could also purchase credits as part of an employee's benefits package or as a one-off gift.

Safeguards would be needed to ensure this was carried out with high integrity. This product offering would not be linked to a claim about the production process of that product or the net impact of the company on nature; rather, it would be linked to a specific positive outcome arising from the purchase of the credit.

Companies that engage in this use case may be at risk of misleading consumers if they fail to clearly communicate that bundled nature recovery does not mean that claims are being made about the production processes of the product or the net impact of the company. Credible claims guidance and effective verification of claims are critical to ensuring this use case does not support greenwashing.

Contested use case #5: Take responsibility for unmitigated biodiversity impacts

In addition to these use cases, another use case, currently not accepted, might be to take responsibility for a company's unmitigated and residual direct or indirect biodiversity impacts, in a context where compliance offset schemes do not exist or only cover certain sectors or part of a company's impact on nature.

There is live debate about whether and when voluntary biodiversity credits could be used in this way, although it is currently not broadly accepted as a viable use case considering the level of development of the market. Such use would require additional market infrastructure (currently absent) to be in place. This includes guidance on how to measure a company's impact across its value chain, as well as a clear definition of how "nature positive" could apply at the corporate or product level. Such infrastructure could provide a framework for how biodiversity credits apply across the full mitigation hierarchy - work that is currently being conducted by the Nature Positive Initiative."[53] It also includes a robust set of standards to establish how "acceptable equivalence" between the impacts generated by credits and the company's unmitigated impacts could reasonably be achieved outside compliance schemes.

There remains a lack of widely accepted rules and oversight of this application for biodiversity credits and uncertainty about whether voluntary or regulatory instruments would better achieve this goal. This report does not prescribe or set out to resolve the use of voluntary biodiversity credits to compensate for unmitigated impacts. It only outlines the concerns and guardrails to be put in place for corporates considering it. The potential applicability of this use case should not be considered as a substitute to transform and transition towards nature-positive business models. The World Economic Forum's white paper *Biodiversity Credits: A Guide to Support Early Use with High Integrity,* summarizes the current debate and outlines concerns that a company should consider if this use case were to be used in future.

2.3 Common principles and standardization

Both mandated and voluntary approaches are converging on a common set of principles around the mitigation hierarchy and the SBTN Action Framework AR3T (Figure 4), in which companies avoid, reduce, restore and regenerate their own nature impacts to the fullest extent possible,[54] and then invest in nature recovery to take responsibility for the remaining impacts which cannot be avoided, reduced or otherwise mitigated.[55]

The Forum's white paper *Biodiversity Credits: A Guide to Support Early Use with High Integrity* provides an in-depth discussion of the mitigation hierarchy and the potential role of biodiversity credits in a company's broader nature strategy.

FIGURE 4: **The SBTN AR³T Framework**

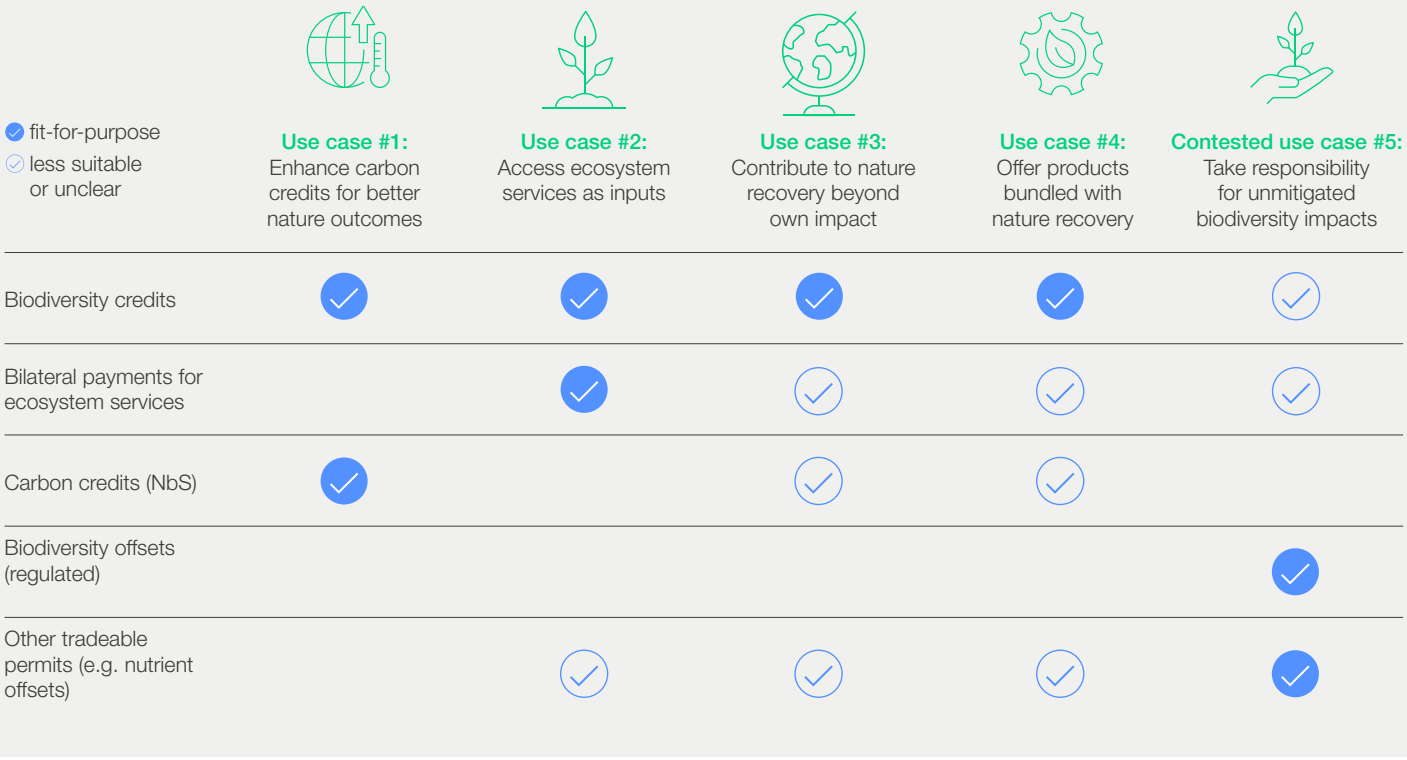
Biodiversity credits are most suitable where the benefits to standardization are high and there are a large number of potential credit issuers.

Biodiversity credits' distinctive features (as laid out in Section 1) could make them fit-for-purpose in use cases where the benefits of tradability and external validation justify the additional costs required for measurement, reporting and verification (MRV) and market infrastructure. Biodiversity credits are relatively less well-positioned to support applications that are tightly or exclusively tied to a company's own operations in a well-defined location (they still might have a role to play, but interviews suggest it would be limited relative to other instruments). For example, restoring vegetation on a hillside to regulate flood waters that risk damaging a company asset may be best addressed through direct interventions or bilateral agreements, rather than a biodiversity credit.

In general, biodiversity credits are most beneficial when there is demand for one or more standard and verified units from a large number of potential credit issuers. Other financing mechanisms such as direct investments will be more efficient in circumstances where standardization is not required and there are only two parties that can make a bilateral arrangement. In still other circumstances, different financing mechanisms (including sovereign instruments like new bond issuances or debt swaps) might be appropriate.[56]

Figure 5 illustrates where biodiversity credits are likely to serve emerging demand for nature improvements.

FIGURE 5: **Biodiversity credits are uniquely able to support emerging demand for nature improvements**



Compliance offset schemes exist in order to reduce the net impacts associated with unavoidable losses to nature. If the right supporting conditions come into place, the fifth contested case allows for biodiversity credits to support companies that would like to take responsibility for unmitigated impacts on nature (after following the mitigation hierarchy) but are not required to do so by compliance offset schemes.

3

What market infrastructure could support biodiversity credits?

For it to grow, the biodiversity credit market would need to make the business case to buyers, ensure a reliable supply of high-integrity credits and align on common standards and metrics.

3.1 Emerging frameworks and regulations focus corporate interest in biodiversity

While 86% of large companies have set climate strategies, just 5% have developed strategies that explicitly consider nature or biodiversity and few of those use biodiversity credits.

Biodiversity credit transactions are currently at pilot scale and demand is largely opportunistic. For large corporates, biodiversity is still being developed within the sustainability agenda – while 86% of large companies have set climate strategies, as noted in the previous section, just 5% have developed strategies that explicitly consider nature or biodiversity and few of those use biodiversity credits.[57]

To date, companies have invested in biodiversity improvements largely through bilateral agreements, such as partnerships with land and ocean managers including NGOs and farms in the supply chain. Some of these arrangements have many of the features of formal biodiversity credits. Several challenges can limit the ability of pilot deals to deliver the scale of funding required. These include difficulty in demonstrating value to customers, high transaction costs, fungibility issues and a lack of recognized and comparable quality standards.

As introduced in Section 2, demand is expected to grow as companies increasingly recognize the importance of investing in biodiversity and anticipate raised expectations for them to robustly demonstrate good stewardship. Reporting and disclosure frameworks have accelerated corporate thinking on nature. Emerging regulations in Europe, the UK and Australia are driving companies to assess their direct and indirect impacts and to develop strategies to ensure they are working in harmony with nature. Disclosure frameworks like the Taskforce on Nature-related Financial Disclosures (TNFD)[58] play an important role in driving and supporting this trend.

More broadly, regulatory and stakeholder pressures are raising concerns that poor nature stewardship might risk companies losing their licence to operate or their access to critical markets. Likewise, increased awareness, in part due to the GBF, has led proactive companies to think about how they align their business activities with this global framework.

These trends are increasing corporate interest in biodiversity credits, reflected by a growing number of pilot transactions now underway.[59] Recently, Swedbank and forest cooperative Orsa Besparingsskog carried out the first biodiversity credit transaction in Europe (91 credits at an undisclosed price), making explicit reference to the GBF and the desire to support market development as a way of achieving biodiversity investment at scale.[60]

However, this growing interest in biodiversity credits has not translated into large increases in demand yet. Businesses have not yet established the value proposition, nor have market governance and infrastructure been developed to address integrity concerns already seen in the voluntary carbon and regulated biodiversity offset markets. During the research phase for this report, many businesses reported taking a “wait and see” approach as the biodiversity credit market continues to mature.

3.2 Supporting conditions to unlock demand and boost market growth

Table 1 provides more detail on the three broad categories of supporting conditions that can be critical to unlocking demand and boosting market growth, along with relevant action by stakeholders.

TABLE 1: **Supporting conditions to unlock demand and boost market growth**

Supporting condition	Actions required by stakeholders
Establishment of the business case for buyers	**Buyers** – Identify and disclose nature dependencies and implement mitigation measures across supply chains – Motivate employees around nature performance – Connect nature performance to sustainability criteria valued by investors – Develop and market products and brands that engender customer preferences for positive biodiversity outcomes **Governments** – Frame policies that encourage the mitigation of negative corporate impacts on nature – Support consumer demand for sustainable products – Devise policies to price externalities and reward nature stewardship
Development of high-integrity supply at sufficient scale	**Suppliers** – Design projects that deliver robust outcomes for nature and local communities – Improve the quality and efficiency of MRV – Improve efficiency and reduce project development costs to realize demand potential **Governments** – Facilitate the supply of high-integrity credits through environmental regulation that limits leakage risk[61] – Pass property laws that clarify the land rights of Indigenous peoples and local communities
Consolidation around common principles, standards and methods	**Standard-setters and governance bodies** – Ensure information transparency, quality assurance and stakeholder protection – Enable comparability, trade and efficient competition – Instil broader trust and credibility **On the demand side**, this includes common principles, standards and methods for impact assessment, target-setting, claims and disclosure. **On the supply side**, this includes MRV, equity and inclusion, and broader governance themes.

3.3 Establishment of the business case for buyers

Corporate buyers are looking for biodiversity credits that deliver for nature and its stewards (including IPs and LCs). Making the business case includes scrutiny of both the business costs of nature degradation and sources of demand for more environmental sustainability to determine which use cases (introduced in Section 2) might be appropriate.

Buyers could engage in the following actions to build the corporate business case for biodiversity credits:

Identify and disclose nature dependencies and mitigation measures

> The widespread adoption of climate risk analysis by companies in recent years and the resulting actions to reduce that risk offer a template for what may be required with regards to nature.

First, companies could identify their nature dependencies and mitigation measures. The role of natural capital and ecosystem services as production inputs is well-established, as are the risks of increased costs or supply disruptions associated with nature degradation.[62] However, the creation of demand for biodiversity credits is likely to require targeted analysis of a company's footprint, the contribution of its various suppliers, their financial exposure to nature degradation and the actions that can be taken to reduce that exposure. The widespread adoption of climate risk analysis by companies in recent years and the resulting actions to reduce that risk offer a template for what may be required with regards to nature. The spread of voluntary disclosure rules can help accelerate these efforts.

Understand role of nature-positive impacts in motivating talent

Next, companies might act to understand the role of nature-positive impacts in retaining talent and increasing motivation. Research exists around the role of the company mission in increased employee engagement and commitment.[63] To harness this value-creating potential, companies could identify whether and how nature-positive outcomes resonate with their employees and could create the cultural and operational mechanisms that connect employee efforts to these outcomes on an ongoing basis.

Demonstrate effect of nature-positive actions on sustainability ratings

In relation to their investors, companies could demonstrate the role of nature-positive impacts in improving relevant sustainability scores and ratings. To take advantage of investors seeking strong sustainability performance, companies might demonstrate to those investors both their robust nature performance and the importance of that nature performance to their overall sustainability scores. In many instances, investors rely on proprietary or third-party sustainability scores or ratings and companies can seek to establish stronger links between nature performance and those metrics. By cultivating this connection, companies can establish the value of nature performance and biodiversity credits in improving access to and cost of finance.

Foster customer demand for strong nature performance

Finally and most critically, companies could understand and foster customer demand for strong nature performance. While research points to increasing consumer demand for sustainable products, companies will most likely need to find their own pathway to convert this into positive impact on the bottom line. This can include tailored customer research to identify the greatest source of value to customers, product design that delivers this to customers, product marketing that attracts a wider customer base and retains their loyalty, and brand building that maximizes value creation for the company. This process might look different when the customer is not the consumer (e.g. business-to-business segments). This customer-targeted approach could enable the business to reach a wider set of existing and prospective customers and secure the longer-term loyalty of their consumers as the business adapts. Regardless of how companies choose to foster customer demand, it is fundamental that genuine actions are behind these efforts.

Meanwhile, governments have a role to frame policies that encourage mitigation of negative nature impacts. Policy action could help establish or expand the business case across all its facets. Regulation can potentially encourage or mandate nature risk disclosure and impact mitigation, as already seen in biodiversity offset schemes. Performance requirements can support consumer demand for sustainable products. Fiscal instruments (e.g. charges, taxes, subsidies) can modify the return on investments. The role of regulations and frameworks is further explored below.

3.4 Development of high-integrity supply at sufficient scale

Demand at greater scale depends on developing a reliable supply of biodiversity credits of the right quality and price to achieve widespread uptake. Developing high-integrity supply at sufficient scale is critical for building market confidence and reducing both greenwashing and delivery risks. It also makes the process of assurance more cost-effective, enabling earlier adoption.[64] Meanwhile, measures to reduce the price of achieving biodiversity outcomes will most likely boost the business case and make the purchase of credits more attractive to companies.

Project design may help deliver robust outcomes for nature and local communities

> Biodiversity projects must meet increasingly high expectations around additionality, permanence and non-leakage.

The core challenge for suppliers is to design projects that deliver robust and valued outcomes for both nature and local communities. When it comes to nature outcomes, interviewees noted that biodiversity projects must meet increasingly high expectations around additionality, permanence and non-leakage. To ensure positive impacts on IPs and LCs, projects should be designed in partnership with them and ensure their inclusive participation.

Where biodiversity credits are used to generate additional revenue streams within value chains, there is a risk that investment could flow overwhelmingly towards large corporations, which are extending their titles over agricultural land, especially in the Global South. In South Asia and Latin America, for example, the top 10% of landowners own up to 75% of agricultural land[65] and local communities could risk being excluded if biodiversity credits are not designed to ensure benefit-sharing.

Emerging standards are likely to play a key role in setting a high bar for quality and inclusion, as well as ensuring validation is efficient and fairly administered. Eventually, consolidation in standards might be needed to reach sufficient scale. Interviewees for this report and stakeholders in the VCM alike have noted that fragmentation in emerging standards has potentially hampered market growth.

Improving quality and efficiency of MRV could reduce costs

Alongside these challenges, suppliers and supporting service companies can continue to improve the quality, cost and efficiency of MRV. Robust and regular verification of biodiversity outcomes is likely to prove critical to the assurance process that underpins the value of credits. A wide range of new techniques, including remote sensing, multispectral imaging, radar, lidar, biologging (geo-tagging species with sensors to collect data), eDNA, sonar and bioacoustics, Internet of Things (IoT) and data crowdsourcing, are improving MRV.

For example, emerging eDNA technology allows developers to monitor species presence using genetic material shed in the environment. It permits low-cost sample collection across ecosystems, a holistic measurement, minimal invasiveness and detection of difficult-to-detect species.[66] Further technological development, integration with IPs' and LCs' knowledge, and rapid learning curves could help efficiently meet the levels of quality (e.g. assessments of habitat quality and biodiversity levels) and timeliness (e.g. real-time monitoring) that the market needs to price and manage risks.

Improving efficiency and reducing costs could help realize demand potential

As suppliers continue to innovate and scale up, the project development costs per unit of impact generated are expected to fall. Although the market is still in the early stages of price discovery, business models will most likely need to deliver more biodiversity value (and more value to IPs and LCs) at a lower cost, if the full demand potential set out in this report is to be realized. Time will reveal the wide variety of possible conservation and restoration approaches, but they could include technological innovation for accelerated (high-quality) restoration, new partnership structures that incentivize economic activities for better livelihoods, and standardized contracts and offtake agreements that reduce the cost of capital.

Policy action could limit leakage risk, clarify land rights and offer incentives

Governments can play a role in underpinning high-integrity supply at scale. This includes environmental regulation that limits leakage risk (a form of market risk) and thereby reduces the risk associated with all suppliers in their jurisdiction. Legislators could strengthen laws around land tenure that clarify biodiversity credit ownership rights on property that is owned by the public, communities, IPs and LCs or private landowners, as well as on land in coastal areas and special economic zones. Such reforms might enable IPs and LCs to better participate in biodiversity credit development.

Depending on the market, policy action might also aim to eliminate harmful subsidies and negative incentives to conservation and restoration. Project developers could be granted public financing to accelerate early market development. Governments could also include a price floor to ensure fair prices are received and to help prevent low-quality credits from flooding the market and undercutting high-integrity developers.

3.5 Consolidation around common principles, standards and methods

Common standards can stimulate market growth

Interviews with potential corporate buyers suggest that consolidation around common principles, standards, frameworks and methods is likely to be critical in stimulating market growth. It could boost information transparency, quality assurance and stakeholder protection; enhance comparability, trade and fair competition; and help instil broader trust and credibility.

Alignment around common principles could reduce transaction costs and enable landscape-level approaches to take hold.

Alignment around common principles could also reduce transaction costs and enable landscape-level approaches to take hold. Demand is responsive to such standards and frameworks. For example, interviewees indicated that voluntary and mandatory reporting requirements had been highly influential in stimulating the development of corporate nature strategies, because they made nature impacts a public liability. The concern is that reporting against various nature-related frameworks is very time-consuming.

As shown in Box 4, there is some alignment emerging across reporting frameworks developed over the last few years, though not yet consolidation. For example, the *Recommendations of the Taskforce on Nature-related Financial Disclosures,* published in September 2023,[67] is aligned across several dimensions with the Global Biodiversity Framework (GBF), International Sustainability Standards Board (ISSB), Global Reporting Initiative (GRI), European Sustainability Reporting Standards (ESRS) and Science Based Targets Network (SBTN). Further consolidation and alignment could be achieved with actions on both the demand side and supply side of the biodiversity credit market.

Alignment on a definition of "nature positive" may accelerate target-setting and credibility

Many interviewees reported that alignment on the concept of "nature positive" could encourage companies to set actionable nature-related targets. They also report that such alignment might help make it more straightforward to communicate credit purchases credibly (to make claims). The term nature positive has emerged as a potential net-zero equivalent for nature, but it has not yet been universally defined.

New initiatives, such as the Nature Positive Coalition,[68] aim to define the term in a way that delivers positive benefits for nature in line with scientific evidence, while addressing concerns around the risk of greenwashing given that nature loss is often irreversible and highly location-specific. Researchers, for example, have expressed growing doubts around the validity of making a nature-positive or no net loss claim, given that nature loss is irreversible, irreplaceable and highly location-specific.[69,70] As such, some companies may not set targets or make claims relating to nature positive until broadly accepted disclosure and target-setting frameworks have been agreed and published.

In relation to aligning on nature-positive or GBF targets, there might be a role for an independent certification for companies' claims (see the Forum's white paper *Biodiversity Credits: A Guide to Support Early Use with High Integrity*).

In addition, policy-makers could set up mechanisms that enable companies to contribute directly towards national nature goals. By standardizing the units aligned with official targets and registries, governments could enable companies to claim they had contributed a certain share towards a GBF target. Policies that disincentivize nature-degrading activities (e.g. reforms to harmful subsidies and land tenure) or that incentivize nature-restoring activities (e.g. public subsidies, tax benefits) could also help build the project development volumes required under high-demand scenarios.

Demand-side frameworks could standardize measurement of impacts

Tools and methodologies for measuring and disclosing biodiversity impacts are fundamental to all demand drivers. This includes clear guidance on impact assessments (especially around baseline conditions and continuous monitoring), cost-effective and high-integrity MRV and, importantly, consensus on biodiversity metrics, units and benchmarks. Such tools should also include

verifiable technologies to conduct assessments, ground-truthing and supply-chain transparency. TNFD's September 2023 guidance (v1.0) includes more direction on disclosure metrics, especially core sector metrics, but companies still report confusion and a desire for consolidation. Innovations, especially novel technologies like eDNA and bioacoustics, are improving the cost and accuracy of assessments, but companies with complex supply chains still require greater traceability.[71,72]

Supply-side alignment might help assure high-integrity credits

On the supply side, alignment could be improved through consolidation around MRV, equity and inclusion, and broader governance themes.[73] Standard-setters are issuing guidance on metrics, methodologies, MRV requirements, verification, validation and grievance mechanisms. The emergence of transparent and trusted market infrastructure is critical to assure high-integrity supply and to de-risk purchasing decisions from a buyer's perspective. Without market infrastructure in place on the supply side to verify the integrity of credits, the due diligence burden falls entirely on companies, heightening their risk and restricting demand. Broad consultative processes – like that carried out by the World Economic Forum to produce an agreed set of integrity and governance principles[74] – could be iterated to facilitate further consolidation.

BOX 4: **Frameworks to measure impacts and set targets on nature and biodiversity**

- **Taskforce on Nature-related Financial Disclosures (TNFD)**[75] – has developed a risk management and disclosure framework for organizations to incorporate nature-related risks and opportunities into decision-making processes. The complete framework was launched in September 2023.
- **European Union's Corporate Sustainability Reporting Directive (CSRD)**[76] – entered into force in January 2023, replacing the EU's Non-Financial Reporting Directive. Large companies and listed SMEs will need to report according to European Sustainability Reporting Standards (ESRS), which include a reporting standard on "Biodiversity and Ecosystems".
- **Global Reporting Initiative (GRI)**[77] – has published a biodiversity standard which has undergone public consultation. The final standard will be published in late 2023.
- **Carbon Disclosure Project (CDP)**[78] – provides companies with questionnaires on forests and water security as well as on climate change.
- **Natural Capital Protocol**[79] – is a framework to enable businesses to measure and value their impacts and dependencies on natural capital.
- **Science Based Targets Network (SBTN)**[80] – is developing guidance for setting targets on freshwater, land, biodiversity and oceans. Initial guidance for businesses and draft guidance for land and freshwater have already been published.

4 Three demand scenarios

If the market shows “effective development”, demand for biodiversity credits could reach $2 billion per year in 2030 and $69 billion by 2050.

This section presents three indicative demand scenarios for the biodiversity credit market. These scenarios could either reinforce or challenge expectations. They illustrate how supporting actions could drive future demand. This in turn can inform prospective market participants' priorities and support the planning of market infrastructure.

The scenarios presented below are designed to illustrate the potential scale of demand according to different critical market developments and do not represent projections or forecasts. This demand-side perspective complements existing supply-side scenarios, such as the January 2023 report *Preparing financial markets for climate- & nature-related policy & regulatory risks* from the Inevitable Policy Response (IPR) initiative.[81]

4.1 Limited, effective and transformational scenarios

Three demand scenarios of increasing ambition have been developed for this report, based on the use cases introduced earlier. Two scenarios, "limited development" and "effective development", occupy the central range, where market growth rates are grounded in observations from related markets. The third scenario imagines a transformation in how society values biodiversity. This "transformational development" scenario tells a story in which biodiversity credit use becomes mainstream across the private sector. It shows what could potentially happen with strong consumer preferences, mission-driven corporate leadership and bold public policies.

The scenarios are summarized below, with detailed story lines described in Table 2.

Scenario 1: Limited development

This is the story of a central lower estimate, with unambitious assumptions for market development and growth beyond today's state of play, grounded in historical precedent in slow-growing and niche sustainability-related markets. In this story line, for example, only companies that already had nature targets in 2023 participate in biodiversity credit markets by 2030. The scenario embodies low adoption of nature targets; biodiversity credits see limited use in green products and by sustainability-orientated brands but are seldom used for impact reduction.

Scenario 2: Effective development

This is the story of a central upper estimate, with more ambitious market development and growth, grounded in historical parallels in the voluntary carbon market. This scenario is characterized by the steady adoption of nature targets, supported by clear and credible guidance on how biodiversity credits can be used and how companies can make claims based on such credits. The scenario envisages the widespread use of biodiversity credits in green product sales across consumer product categories and their increasing use in satisfying national or global goals.

Scenario 3: Transformational development

This story imagines a radical transformation in how businesses and consumers value nature, alongside a significant acceleration in the adoption and development of more scalable models. It is included to show what could be possible. The scenario assumes the rapid and widespread adoption of nature targets, clear claims guidance and the frequent use of biodiversity credits in green product claims. It also assumes that companies will implement their commitments to global goals, such as those set out in the GBF. This scenario is modelled on experience from broader new product and technology adoption, although compliance carbon markets offer a similar growth trajectory over the last 15 years.

Each scenario tells a story across each of the four main use cases and the contested fifth use case. The market potential associated with the three demand scenarios was calculated by first estimating the overall addressable opportunity for each use case, given the scale, impacts and revenue of participating sectors and companies. Then different assumptions were applied across each scenario for the pace at which companies would choose to adopt the use cases and the extent to which biodiversity credits serve as the primary mechanism for delivering each use case.

For each scenario, the technical modelling aggregates five use cases into three. The second use case (access ecosystem services) is combined with the contested fifth use case (take responsibility for unmitigated biodiversity impacts), while the first use case (enhance carbon credits for better nature outcomes) is not expected to drive demand independently. Instead, this use case might support the development of the other use cases by providing an auxiliary benefit (for those companies also procuring NbS carbon credits) and by facilitating an increase in the supply of biodiversity credits more broadly.

Results of the three scenarios are aligned against NbS development pathways to estimate the proportion of carbon credit projects that might also deliver biodiversity credits and to gauge the

possible market scale this unlocks. As these cases are highly interrelated, double counting is avoided by assigning only one use case per sector.

The scenarios focus on demand driven by large companies, which are most likely to have the capacity to engage in biodiversity credit markets.[82] Such enterprises might face the most scrutiny from the public and from regulators. They also often enjoy product and brand differentiation and scale, which they could deploy to create and capture value through biodiversity credits.

TABLE 2: **Three demand scenarios: how biodiversity credit use cases could develop**

Central range

Use cases	Limited development scenario	Effective development scenario	Transformational development scenario
	A small proportion of Fortune 500 companies adopt nature-related targets and biodiversity credits play a limited role in reaching targets.	**A large share of Fortune 500 companies adopt nature-related targets and biodiversity credits play a significant part in nature strategies.**	**Almost all Fortune 500 companies adopt nature-related targets and biodiversity credits play a significant part in nature strategies.**
Use case #1: Enhance carbon credits for better nature outcomes	Nature-based carbon credits do not offer measured outcomes. Idea of benefit stacking is regarded as illegitimate.	Buyers of nature-based carbon credits seek joint biodiversity outcomes to strengthen integrity. Stacking of benefits supports market scale; NbS carbon credit market grows steadily.	Buyers of nature-based carbon credits seek joint biodiversity outcomes to strengthen integrity. Stacking of benefits supports market scale; NbS carbon credit market grows rapidly.
Use case #2: Access ecosystem services as inputs	Limited due to lack of scrutiny and inadequate standards for supply chain measures, and sustained high MRV costs.	Leaders in sectors with indirect impacts and/or dependencies adopt biodiversity credits to preserve access and/or reduce impacts.	Most companies with indirect impacts and/or dependencies use biodiversity credits to preserve access and/or reduce impacts.
Use case #3: Contribute to nature recovery beyond own impact	Sporadic company efforts, predominantly marketing-orientated for reputation building. No market concept of contribution to GBF.	Widespread company efforts in leading jurisdictions (Europe, North America, Australia) with established frameworks and widely accepted best practice for demonstrably contributing to national and global nature-related goals.	Widespread company efforts in most jurisdictions globally with established frameworks for demonstrably contributing to national and global nature-related goals and heightened expectations around best practice.
Use case #4: Offer products bundled with nature recovery	Niche opportunities for product and brand differentiation in select markets. Fragmented efforts and general distrust of product claims.	Bundling across diverse consumer product categories. Coordinated, widely accepted claims labelling.	Bundling mainstreamed across consumer product categories and considered core brand hygiene. Coordinated, widely accepted and comparable claims labelling.
Contested use case #5: Take responsibility for unmitigated biodiversity impacts	Limited due to inadequate standards and assurance mechanisms for equivalence claims, or adoption of principles that make it illegitimate to voluntarily take responsibility for unmitigated impacts.	Taking responsibility for impact accepted as legitimate use and supporting standards and mechanisms in place to assure integrity. Spreads widely from 2030, following trends in climate.	Taking responsibility for impact accepted as legitimate use and supporting standards and mechanisms in place to assure integrity. Becomes mainstream by 2030, expanding rapidly thereafter, accelerating trends in climate.

Each scenario would require a market infrastructure of supporting conditions (see Section 3, Table 1). A biodiversity credit market that reaches a particular size implies commensurate developments in companies' efforts to establish the business case for buyers, in enhancing the success of suppliers in achieving high-integrity supply at scale, and in the adoption of common frameworks and standards, as well as other market infrastructure. Table 3 illustrates how this infrastructure could be scaled up under each of the three scenarios.

TABLE 3: **Three demand scenarios: how enabling conditions and market infrastructure could scale up**

Central range

Enabling conditions	Limited development scenario	Effective development scenario	Transformational development scenario
Establishment of the business case			
Identifying external nature value	Lack of employee, investor and customer pressure prevents clear articulation of external value Limited brand differentiation and/or willingness-to-pay.	Leading companies adopt nature-related missions and sustainability ratings to attract talent, investment and customers. Moderate brand preference and willingness-to-pay.	Most companies adopt nature-related missions to attract talent, investment and customers. Strong brand preference and willingness-to-pay.
Policy support and risk reduction	Lack of supportive policy and market frameworks – first movers accept risk and rely on existing risk-sharing where available.	Most governments establish core policy and accept some risk such as guarantees, offtake agreements and insurance.	Governments establish strongly pro-credit policy and market frameworks. Risk mitigation is widely available through demonstration projects, offtake agreements, standardized contracts, guarantees and insurance.
Development of high-integrity supply			
Supply of well-designed projects	Poor integrity and cost-quality of supply limits choice and value.	High-integrity demand avoids race to the bottom.	In addition, landscape-level projects drive multi-stakeholder collaboration and dissemination of best practices.
Measurement, reporting and verification (MRV)	Moderate cost reductions in line with existing trends with low (perceived) robustness.	Public support for emerging technologies (e.g. bioacoustics, eDNA) reduces costs rapidly.	Policy support and emergence of standards enable measurement methods to become cost-effective, scalable and comparable across geographies.
Policy support	Lack of policy support means supply-side risk remains high.	Moderate government action to limit leakage, reform land tenure protections and eliminate harmful subsidies.	Strong government action to limit leakage, reform land tenure protections and eliminate harmful subsidies.
Consolidation around common principles and frameworks			
Reporting and disclosure	Proliferation in voluntary disclosure frameworks and high monitoring costs discourage companies from making initial assessment.	Consolidation around a handful of credible voluntary standards and reduced monitoring costs lead companies to assess opportunities and risk.	Consolidation and strengthening around mandatory frameworks and falling monitoring costs enable rapid assessment.
Claims and target-setting	Missing, disjointed, or lacking credibility.	Credible, consolidated and well-communicated guidance based on "contributing to nature positive". Body emerges to set standard for certifiers (cf. VCMI).	Credible, consolidated and well-communicated guidance based on "contributing to nature positive" and "contributing to GBF". Body emerges to set standard for certifiers (cf. VCMI).

4.2 Scenario results

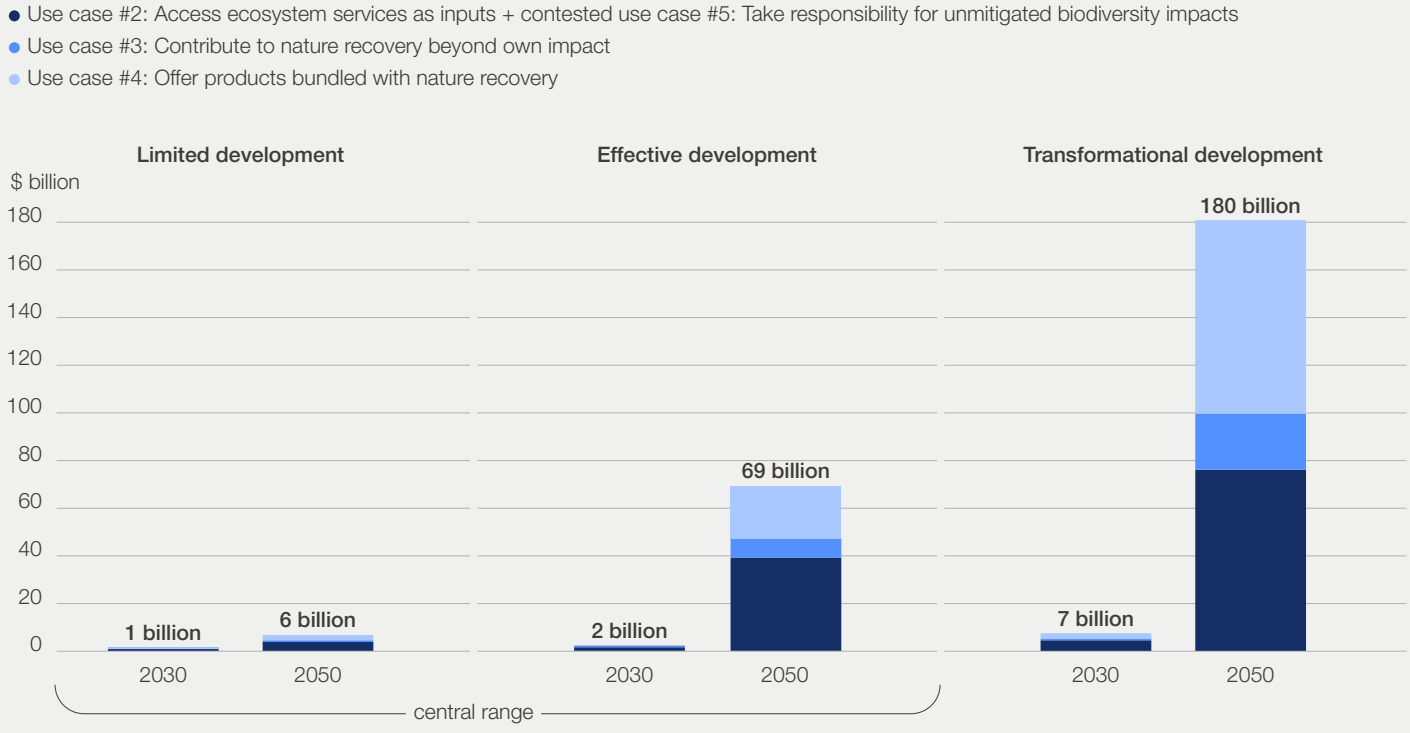
Under the "effective development" scenario, market demand for biodiversity credits might reach as much as $2 billion per year in 2030. By 2050, effective development and policy support could unlock $69 billion annually in global demand. Under the less ambitious "limited development" scenario, this assessment finds that market demand could reach $760 million per year in 2030 and up to $6 billion annually by 2050. The large difference between limited and effective development arises from the early stage of market development today and its substantially uncertain future. Much depends on critical formative steps over the next few years.

Under the illustrative "transformational scenario", demand could reach $7 billion per year in 2030 and $180 billion annually by 2050. This scenario tells the story of the full potential of biodiversity credits and features strong policy support, a revolution in consumer preferences and pressure from society, leading to near-universal adoption of nature targets among large companies, whether voluntarily or by compulsion.

Figure 6 illustrates the contributions in US dollars to demand by use case. In each scenario, most of the value is attributed to demand from a combination of the second and contested fifth use cases (access ecosystem services as inputs and take responsibility for unmitigated biodiversity impacts) or from the fourth use case (offer products bundled with nature recovery). According to these results, the third use case (contribute to nature recovery beyond own impact) plays a relatively small role.

However, this analysis makes conservative assumptions regarding the adoption of use cases by sector. In particular, it assumes that only large companies will buy credits, that most sectors will focus on a dominant use case (e.g. product bundling or company-wide contribution) and that sectors will not participate if they lack significant nature dependencies, impacts on nature or a strong direct connection to consumers. Hence, more sectors and companies could adopt biodiversity credits in relation to the third use case than are modelled here.

FIGURE 6: **Three demand scenarios: contributions by use case ($ billion by 2030 and 2050)**



Carbon credit projects can offer material biodiversity co-benefits, helping meet demand for biodiversity outcomes especially for buyers already engaging in carbon markets. Analyses indicate the voluntary carbon market could reach between $5 billion and $50 billion annually by 2030.[83] Some biodiversity credit buyers might be attracted to purchase carbon credits associated with biodiversity co-benefits (and vice versa).

If all carbon projects stacked biodiversity and carbon credits, UN PRI analysis indicates that those carbon projects might support $43 billion of biodiversity credit revenues per year by 2050.

The ability for projects to generate both carbon and biodiversity credit revenues can open the door to greater scale in biodiversity credit markets. While this analysis does not estimate the potential associated with the first use case (enhance carbon credits for better nature outcomes), results of the three scenarios are aligned against NbS development pathways to estimate the proportion of carbon credit projects that might also deliver biodiversity credits, to gauge the possible market scale this unlocks.

Analysis released last year[84] by the UN-supported network Principles for Responsible Investment (PRI) calculated that if 30% of carbon projects[85] stacked biodiversity and carbon revenues, carbon projects could support a biodiversity credit market of $11 billion per year by 2050. Under that assumption, carbon projects might deliver 16% of market demand under the effective development scenario. If 100% of carbon projects issued stacked biodiversity and carbon credits, the UNPRI's analysis indicates that those carbon projects might support $43 billion of biodiversity credit revenues per year by 2050 (which could account for 62% of demand in the effective development scenario).

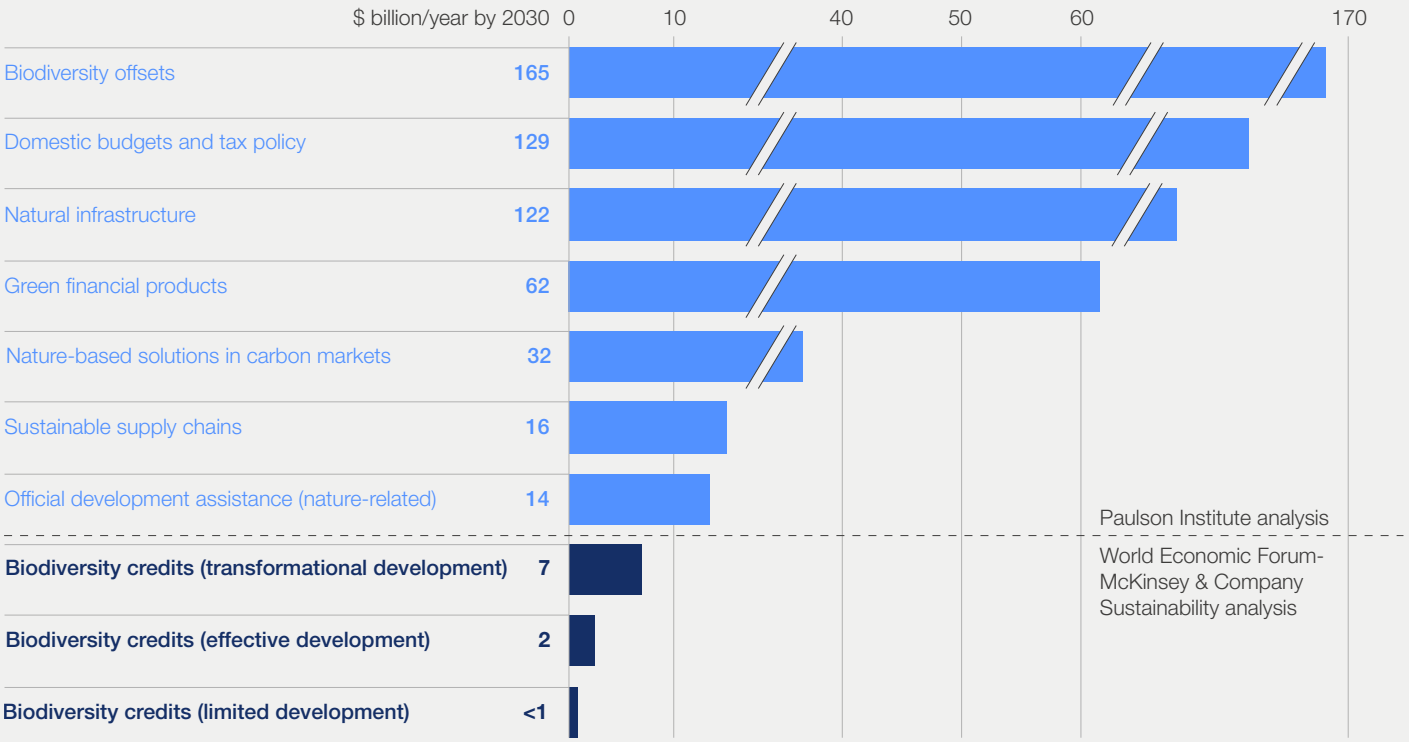
In addition to the VCM, the biodiversity offset market also serves as a reference point for these estimates. In 2022, the regulated biodiversity offset market was estimated at around $6 billion in annual global value,[86] mostly governing the mining and infrastructure sectors.[87] The analysis in this report assesses only voluntary markets, which are currently unregulated sectors, primarily agriculture and forestry. However, over time, offsetting schemes could cover additional sectors, such as agriculture, and biodiversity credits could be used to satisfy regulatory offsetting requirements, provided credits comply with regulatory standards. These trends would make it more difficult to disentangle these results (which cover currently voluntary markets) from regulated offset markets.

The results indicate that finance is likely to flow towards Sub-Saharan Africa and Latin America. Companies using biodiversity credits in support of the second use case (access ecosystem services as inputs) and contested fifth use case (take responsibility for unmitigated biodiversity impacts) might prefer credits issued from the geography or even the ecosystem where their dependencies and unmitigated impacts are concentrated. Model results indicate global deforestation might be concentrated in Sub-Saharan Africa (e.g. the Congo Basin), Latin America and to a lesser extent Asia, the Middle East, North Africa, Russia and Central Asia.

However, while global land use modelling shows deforestation over the coming decades concentrated in the Congo Basin, the demand modelling is not detailed enough to confirm whether the companies that would adopt biodiversity credits would have unmitigated impacts in the region. Furthermore, deforestation was only one driver of biodiversity loss assessed and companies might also look to take responsibility for impacts on biodiversity tied to land degradation, pollution, invasive species and direct harvesting.

Figure 7 shows that the biodiversity credit market has the potential to be significant but modest compared to the funding necessary to reach global targets for nature by 2030, as estimated by the Paulson Institute.[88] The biodiversity credit market alone would deliver up to 4% of the financing needed to reach global targets in 2030 (in the transformational scenario). Biodiversity credits will therefore sit alongside other financing mechanisms to deliver the finance needed to reach global targets.

FIGURE 7: **Potential biodiversity credit demand compared to funding needed to reach global nature targets ($ billion/year by 2030)**



Sources: World Economic Forum, McKinsey & Co., Paulson Institute

5 What are the next steps to unlock demand?

A few key actions – if completed in the next 12 months – could unlock robust demand for biodiversity credits within two or three years.

While the analysis presented in Section 4 reveals considerable potential for demand, there are critical elements likely to be needed to unlock market growth. This section draws on insights from interviews to set out the actions required to unlock demand at scale, as well as the timeline for business readiness. These actions have been categorized around four groups of key stakeholders:

- Potential buyers (companies and financial institutions)
- Potential sellers (suppliers or supporting service companies)
- Public regulators and independent governing bodies
- Policy-makers

5.1 Actions by potential buyers

Consultations with stakeholders indicate that uncertainty over demand and the lack of a credible business case are the most significant barriers to market development. Companies and financial institutions can help unlock demand in three ways:

- Commit to deliver carbon and nature outcomes as part of a more holistic sustainable business strategy (for those already engaged in carbon markets)
- Satisfy customer demand for strong biodiversity performance through new product offerings
- Support some early supply-side initiatives to build capacity and reduce investment risk

A relatively low-cost demand-side action would be for companies and financial institutions that are already engaged as buyers in carbon markets to commit to purchase credits linked to biodiversity outcomes. Carbon credit buyers may wish to purchase biodiversity co-benefits attached to carbon to boost green product credentials or reputational value, or simply to assure carbon project integrity and reduce risk. For carbon credit buyers interested in improving reputation, this represents a low-regret option to begin purchasing nature outcomes and embark on a wider nature strategy. As the demand signal strengthens, developers may offer more advanced products with greater transparency and flexibility, which might stimulate further demand from a broader range of prospective buyers.

> Carbon credit buyers may wish to purchase biodiversity co-benefits attached to carbon to boost green product credentials or reputational value, or simply to assure carbon project integrity and reduce risk.

Companies and financial institutions not already engaged as buyers in carbon markets can consider launching new offerings to satisfy growing consumer demand for products linked to positive biodiversity and nature outcomes. However, companies should respond to such demand as part of wider nature strategy development by following credible frameworks like TNFD and SBTN. The Forum's white paper *Biodiversity Credits: A Guide to Support Early Use with High Integrity* shows how biodiversity credits can fit into such a strategy. Section 3 lays out the actions such businesses can take to establish the business case.

5.2 Actions by potential sellers

The supply of biodiversity credits will need to be high-integrity and de-risked to make purchases both cost-effective and process-effective. Suppliers or supporting service companies of biodiversity credits can help unlock demand in two ways:

- Strengthen MRV and transparency, and implement safeguards for high-integrity credits
- Establish strong partnerships with IPs and LCs

Suppliers can ensure they match emerging demand by continuing to innovate to enable quicker scale-up and optimized costs per unit. Improving the quality and efficiency of MRV will be critical as an assurance of integrity and to reduce unit costs.

Engaging IPs and LCs is critical to ensure the market delivers for nature in a way that is equitable. Indigenous peoples' territories contain 80% of the world's remaining biodiversity.[89] The credibility of biodiversity credits rests on delivering high-integrity outcomes and – given the history of IPs and LCs as effective landscape stewards – they must be engaged as partners, project proponents and beneficiaries as markets continue to deepen. Developers who fail to establish strong partnerships with these communities will not be able to reach scale and risk failing to deliver for nature. Despite this risk, safeguards are needed to address concerns over remote investors financializing land ownership and potentially limiting access to biodiversity credits. Land tenure reform and the FPIC of IPs and LCs is a necessary, though not sufficient, condition to ensure that investment flows are equitable.[90]

> Engaging Indigenous peoples and local communities is critical to ensure the market delivers for nature in a way that is equitable.

5.3 Action by public regulators and independent governing bodies

Public regulators can help spur demand primarily and unlock market growth through regulatory requirements and reducing market complexity. For example, regulators can:

- Set mandatory disclosure rules to stimulate transparency and target-setting
- Establish common definitions and frameworks to bring clarity and transparency

Regulation can encourage or mandate nature risk disclosures and impact mitigation, as already seen in biodiversity offset schemes. Interviews indicated that demand is responsive to such standards and frameworks, which support transparency and public visibility of companies' nature performance.

Independent and widely accepted governing bodies can bring clarity around the definition of biodiversity credits and how this can be used to eliminate ambiguity in measurement and value. This could include specifics in terms of pricing, payment schedules, risk profiles, claims guidance and so on. This role could be played by public sector agencies or by independent third parties, and it could also include an element of consolidation around existing efforts, such as TNFD and SBTN.

On the demand side, such bodies could align relevant standards and methods such as foot-printing, target-setting, equivalence assurance, claims, disclosure and reporting requirements. There might be a role for an independent certification for companies' claims in relation to mitigation or direct and supply chain impacts, contributions towards nature-positive or GBF targets, and taking responsibility for residual impacts. On the supply side, alignment could be improved through consolidation around MRV, equity and inclusion, and broader governance themes.

> Governing bodies can bring clarity around the definition of biodiversity credits and how this can be used to eliminate ambiguity in measurement and value.

5.4 Action by policy-makers

Policy-makers can play important roles across the emerging market, from strengthening the demand signal to reducing market complexity. This analysis has identified two critical "unlocks" for policy-makers:

- Adopt regulation to underpin high-integrity supply
- Strengthen the demand signal through offtake agreements and similar mechanisms

Policy-makers can pass environmental regulations to underpin high-integrity supply at scale. This might include redirecting harmful subsidies, enacting supporting regulation, and reforming and clarifying land rights (see Section 3 for a full discussion).

Policy-makers could also consider wider de-risking mechanisms to provide additional support, instil trust and build investor confidence, such as establishing offtake agreements, providing guarantees and insurance or offering subsidies to show support and help demonstrate credible demand.

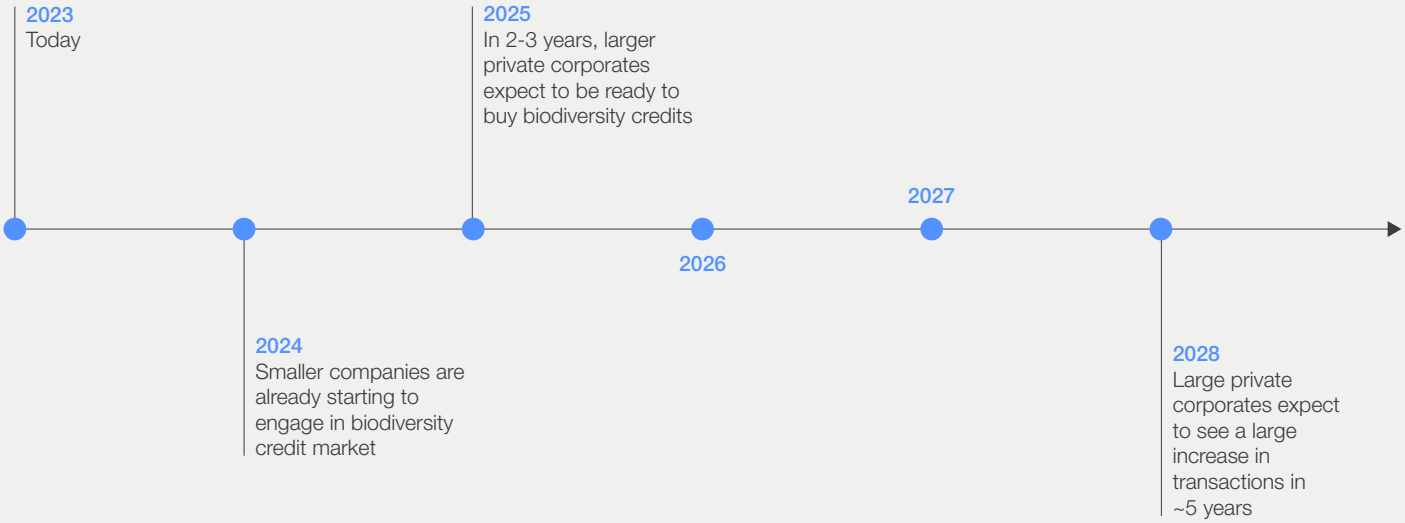
5.5 Five-year timeline

Nearly all the corporate representatives surveyed expect the biodiversity credit market to see growth in transactions and market development within the next five years. Around three-quarters of interviewees reported still developing (or revising) their biodiversity strategies. Of the 25% that had completed their biodiversity strategies, none confidently identified a role for biodiversity credits in their current form.

However, despite corporate thinking on biodiversity credits being in its early stages, those companies that expect to participate as buyers in the biodiversity credit market said they may be ready to engage in two or three years. Stakeholder interviews suggest that smaller companies, under less regulatory and reputational pressure to reach existing climate-related targets, may have more flexibility to engage in biodiversity credit markets and may participate even earlier.

> Those companies that expect to participate as buyers in the biodiversity credit market said they may be ready to engage in two or three years.

FIGURE 8: **Stakeholder expectations over the next five years**



The actions to de-risk biodiversity credits and stimulate demand outlined in this section provide a real opportunity to significantly accelerate this timeline, as evidenced by the excitement generated for biodiversity credits among stakeholders in the lead up to and following the adoption of the GBF. These actions are critical to unlocking robust demand and reaching the potential presented in this report. They could be implemented and completed within 12 months, potentially reducing the timeline for large-scale uptake from five years to two or three years.

This timeline, particularly the rapid pace at which smaller companies are moving, suggests there is an opportunity to raise confidence among buyers, strengthen demand drivers and accelerate the demand for biodiversity credits at scale.

Conclusion

The rates of biodiversity loss of the past 50 years have put society on a dangerous path towards ecological collapse, with the safe planetary boundary for the biosphere being dangerously exceeded.[91] The World Economic Forum's *Global Risks Report 2023* identifies natural disaster, biodiversity loss and ecosystem collapse, and natural resource crises as the third, fourth and sixth most pressing global risks over the next decade.[92] More than half the world's gross domestic product (GDP) is moderately or highly dependent on nature and its services.[93]

The world urgently needs to act to halt and reverse nature loss. Governments and civil society increasingly recognize the risks this poses to their economic and social growth aspirations, as well as the opportunities inherent in a more sustainable pathway. Businesses increasingly understand the risks to their current business models and the opportunities for value creation aligned with their customers' desire for more sustainable products. Market dynamics need to be shifted and harnessed if this massive transformation is to be achieved.

Since the adoption of the Global Biodiversity Framework in Montreal, biodiversity credits have gained unprecedented momentum as one of the instruments that can mobilize additional capital towards biodiversity conservation, restoration and sustainable management. The ability of biodiversity credit markets to drive scale and improve the effectiveness of these efforts means they can make a substantial contribution to bridging the existing nature finance gap and unlocking the growth opportunities associated with better nature outcomes.

If designed and implemented with high-integrity standards, good market governance and full transparency, biodiversity credit markets promise to deliver benefits for ecosystems, Indigenous peoples and local communities – the stewards of nature – while supporting companies in mitigating their nature-related risks, investing in nature-positive outcomes and providing customers with more attractive products and services.

Despite the early stage of development, the opportunities behind biodiversity credits are clear. The market could grow exponentially with immediate and sustained efforts to accelerate its elements towards maturity. A whole-of-society approach will be needed for this to happen – involving proactive leadership from government, civil society and business. Each set of actors will need to drive this change both in their respective spheres and through collaboration, paving the way for a better growth trajectory for all.

Appendix

Interview script

What nature commitments and targets have you made?

Does your strategy include investments? E.g. supply chain transparency or green certification, offsets, green bonds etc.

Does your climate strategy include nature-based solutions? Are you looking for dual value or willing to pay a nature premium?

Are you considering biodiversity credits as part of your environmental strategy?

What timescale might you expect to be investing in biodiversity credits?

What drives your interest in biodiversity credits?

What claims are you looking to make if/when you purchase biodiversity credits? Is claims guidance important to you?

What would need to change for you to accelerate and/or scale your investment commitment to biodiversity credits?

What is holding you back from investing in biodiversity credits now?

What would need to change for you to start investing in your next strategy period?

What characteristics of a biodiversity credit are likely to be important to you? E.g. location, habitat, species, other co-benefits

Why? E.g. link to impact, connection with consumers, licence to operate

What types of conservation activity would be important to you?

Would investment in protecting intact (low threat) nature be important to your strategy?

Do you have any views on the term “biodiversity credit”? For example, do you prefer the term biodiversity or nature? Credit, token, or certificate?

Do you have a view on the need for a secondary market?

What do you think are important characteristics of an impact metric?

How do you see voluntary credits relating to a business’s impact?

What do you think an appropriate baseline would be and how would this affect the types of credits that could be developed? For example, do you think avoidance credits should be legitimate?

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Endnotes

1 High integrity in this context refers to biodiversity credits that adhere to high standards in ensuring they deliver real benefit for nature and people. This includes following the latest guidance on aspects such as additionality, leakage, permanence and inclusion of Indigenous people and local communities (IPs and LCs). For more detail, see: World Economic Forum, High-Level Governance and Integrity Principles for Emerging Voluntary Biodiversity Credit Markets, 2022, https://www3.weforum.org/docs/WEF_Biodiversity_Credits_Markets_Integrity_and_Governance_Principles_Consultation.pdf.

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