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WORLD ECONOMIC FORUM

Biodiversity Credits: A Guide to Support Early Use with High Integrity

WHITE PAPER

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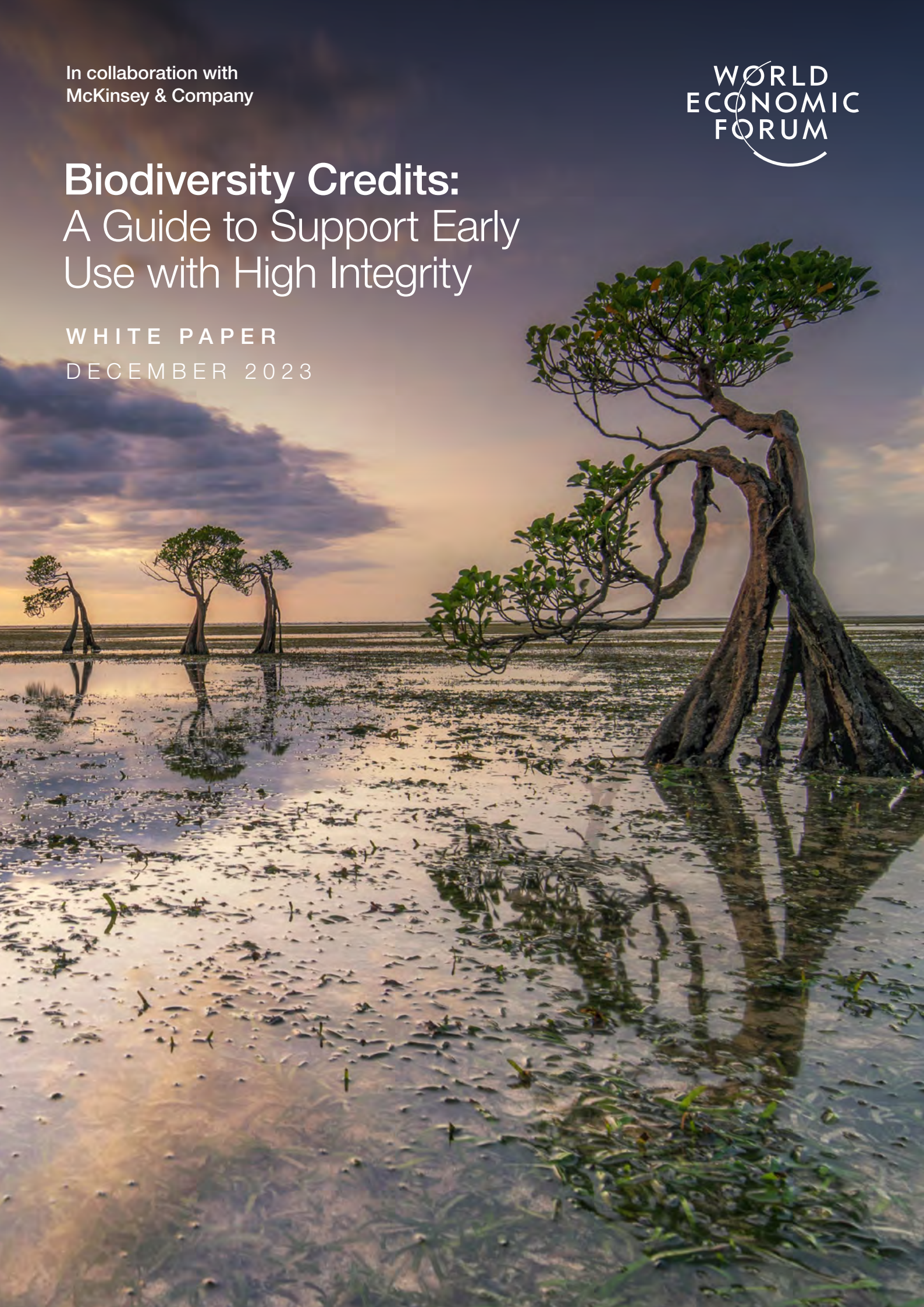

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Contents

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 insight report *Biodiversity Credits: Demand Analysis and Market Outlook*, which analyses the drivers of demand for biodiversity credits, use cases connected to the purchase of credits and the potential scale of the market.

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 guide covers some of the ways in which companies could support value-creation through the use of biodiversity credits. By taking early action on biodiversity credits, companies can help improve and accelerate the development of guardrails for integrity and credibility in the market, even while standards and guidance are evolving. The goal is to act now to raise the level of ambition, enable lessons learned from practical experience and reach a higher level of integrity that drives long-term benefits for nature, people and business.

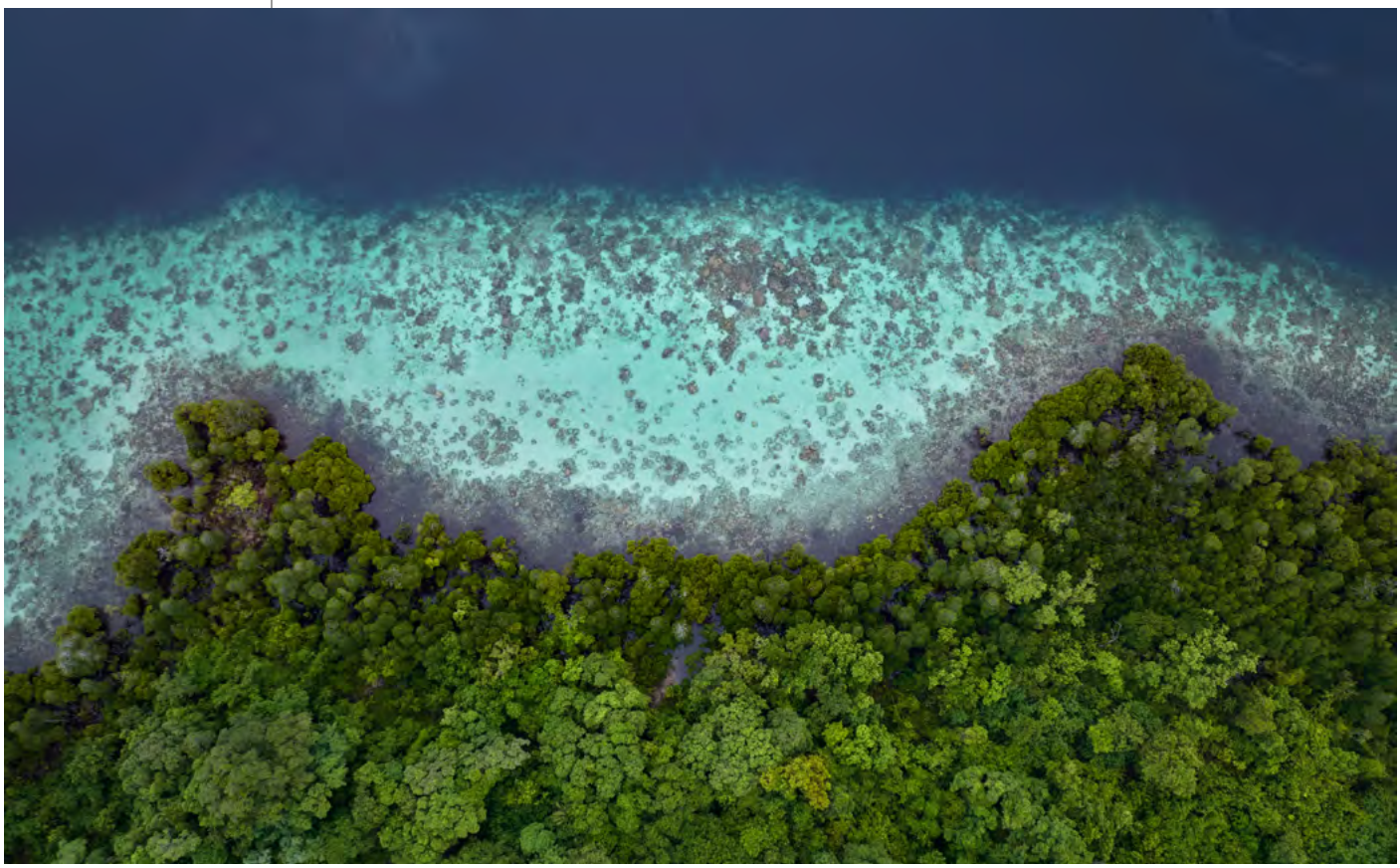
Executive summary

Biodiversity credits could benefit nature, people and business. When strongly assured for high environmental and social integrity, credits can generate benefits for nature and Indigenous peoples and local communities (IPs and LCs), while simultaneously enabling private sector value creation. High-integrity biodiversity credits could create value for businesses by reducing exposure to physical nature risks, supporting positive nature outcomes aligned with consumer preferences, keeping pace with regulatory changes, supporting a robust social licence to operate, reducing reputational risks, securing access to competitive finance, supporting talent acquisition, and increasing employee motivation and retention.

Specifically, this report identifies a set of interrelated use cases for biodiversity credits: to enhance carbon credits for better nature outcomes, to access ecosystem services as inputs, to contribute to nature recovery beyond own impact, and to offer projects bundled with nature recovery. These four use cases are emerging under existing frameworks. In addition, there is ongoing debate about whether biodiversity credits could be used to voluntarily take responsibility for a company's unmitigated and residual direct or indirect impacts on biodiversity (discussed further in Sections 1.5, 2.1 and 3.5). This could apply in a context where compliance offset schemes do not exist or only cover part of a company's impact on nature. Using biodiversity credits in this way would require additional market infrastructure and frameworks that are not in place, and for this reason it is currently not considered a viable use case.

Improper use of biodiversity credits may harm nature and local communities and expose buyers to strategic, operational and reputational risks. Inappropriate use could take the form of greenwashing, particularly where credits are perceived to replace meaningful efforts to avoid and reduce impact on nature. Low-integrity credits that do not achieve significant positive nature outcomes or support IPs and LCs may also fail to create long-term value for businesses. If companies make false and misleading claims to consumers, investors and other stakeholders about the uses and outcomes of credit purchases, this may expose them to substantial risks. The use of low-integrity credits can also risk further degradation of nature.

Businesses can take actions to maximize the value that biodiversity credits create, to ensure they use credits in credible and effective ways that support their objectives, and to avoid potential risks associated with their purchase. These actions include situating the purchase of biodiversity credits



within a nature strategy aligned with the mitigation hierarchy, and being specific and transparent in any claims made associated with the purchase of credits. Companies can also take practical steps during the procurement process to ensure any credits they buy are robust, credible and aligned to high-integrity principles.

Biodiversity credits are not the only mechanisms available and should complement, not replace, ambitious corporate action to create positive nature outcomes in other ways. Businesses may have existing investments in biodiversity, such as projects to conserve or restore nature in-house, with partners or through grants to conservation NGOs. In some cases, biodiversity credits could offer benefits relative to these approaches, such as rigorous third-party measurement, auditing and accountability of outcomes, reporting and verification standards, a low-cost and scalable framework, and the ability for multiple buyers to pool funding to support larger landscape-scale projects.

Companies should consider which instruments are most appropriate to invest in to generate positive outcomes for nature. The choice of mechanism should be based on its ability to achieve verified positive outcomes for nature and people and its alignment with the company's objectives. This guide does not recommend that businesses discard other approaches (e.g. in-house, with partners), but it does encourage a uniform, high-integrity standard with thorough and rigorous third-party verification across all approaches, including biodiversity credits and its alternatives.

Companies that act now can help develop and improve guardrails for integrity and credibility in the market. This guide aims to provide interested buyers with early direction on the different ways in which companies could support value-creation through the use of biodiversity credits, while ensuring high-integrity outcomes for nature and people. Important lessons are being drawn from the voluntary carbon market (VCM). The World Economic Forum's report, *Biodiversity Credits: Demand Analysis and Market Outlook*, gives a thorough overview of these lessons and how they can be applied to the emerging biodiversity credit market. Corporate nature strategies and the use of biodiversity credits are still at an early stage. Organizations such as the Science-Based Targets Network (SBTN),[2] the Taskforce for Nature-related Financial Disclosures (TNFD),[3] the Nature Positive Initiative[4] and a range of standards agencies continue to develop and release guidance on how companies can approach nature risk assessment, target-setting and the disclosure of both positive outcomes and negative impacts on nature.

Companies can take early action to improve their practical understanding of how biodiversity credits could operate even while standards and guidance are evolving. Early-movers are encouraged to ensure radical transparency with any claims made. Such action can raise the level of ambition over time, enable lessons learned from practical experience, and help the market reach a higher level of integrity that drives real benefits for nature and businesses faster.

Introduction

The voluntary market for biodiversity credits could be worth $69 billion by 2050, bringing large-scale positive impacts to nature, communities and companies.

Biodiversity credits are emerging as a possible instrument to drive investment towards positive nature outcomes with the potential to scale up rapidly. Biodiversity credits are verifiable, quantifiable and tradable units of biodiversity restored or preserved over a specified period of time.[5] While the current voluntary market is nascent, it could expand rapidly with the potential to reach $2 billion by 2030 and $69 billion by 2050,[6] bringing large-scale positive impacts if high integrity is maintained. Together with other instruments, biodiversity credits could contribute towards the goals of the Global Biodiversity Framework (GBF),[7] which acknowledges their potential to harness investment for nature. Credits could also play an important role in returning earth systems to within their planetary boundaries.[8]

This report uses the term "biodiversity credit" to refer to actions that result in positive impacts on both nature and biodiversity. In the current market, 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 imply different concepts. "Nature" is a broad term covering both living and non-living elements of the natural world, while "biodiversity" refers specifically to the diversity of life "within species, between species and of ecosystems".[9] The term "biodiversity credit" is used throughout this white paper for consistency and simplicity, being the term used in Target 19 of the GBF.

This guide envisages potential buyers as companies; however other types of organizations, including development banks, NGOs and local, state and national governments, may also buy biodiversity credits.

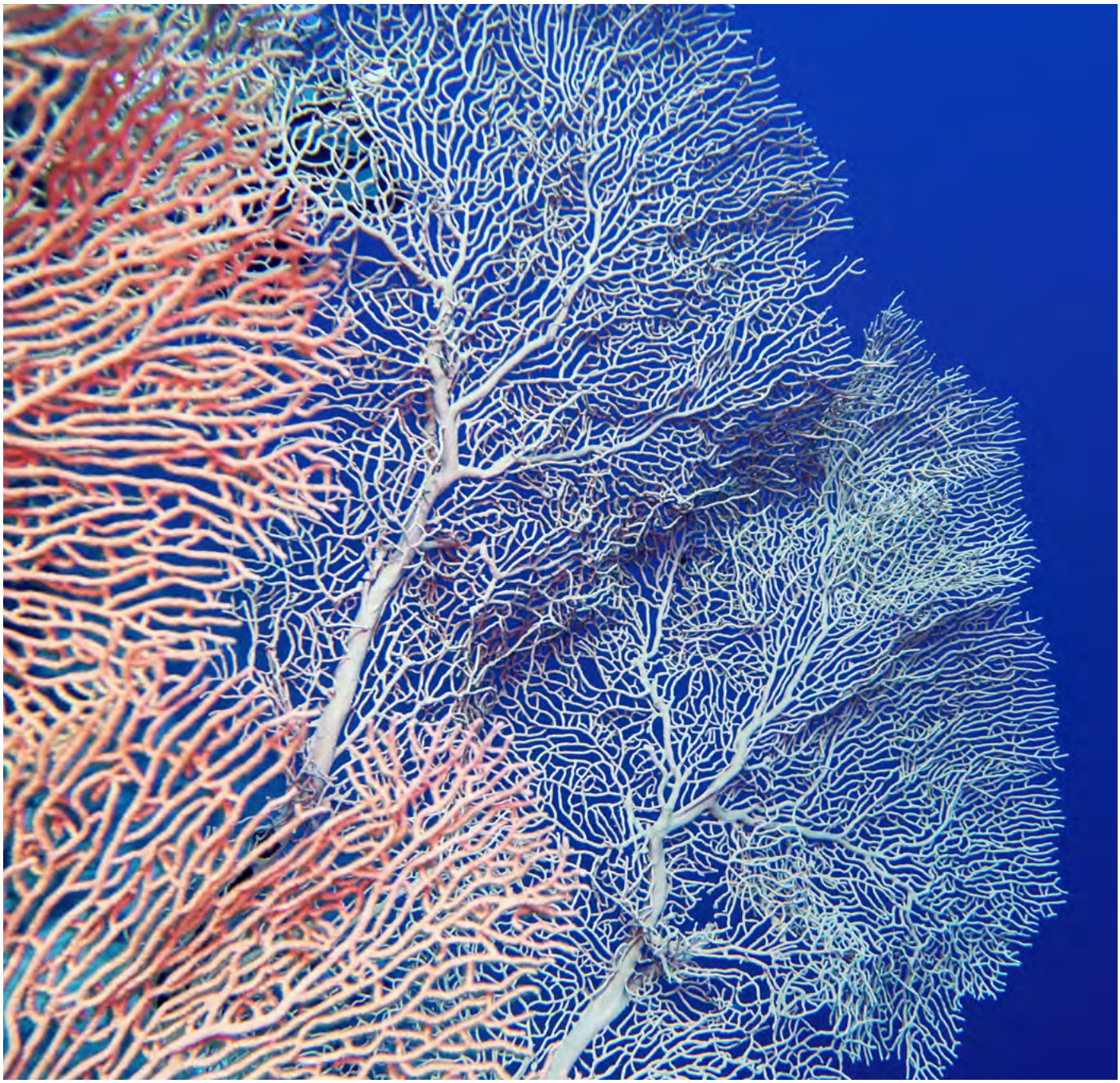
Active partnership with Indigenous peoples and local communities (IPs and LCs) at every stage of such projects is vital for the creation of a just and sustainable biodiversity credit market. They have unique rights linked to biodiversity and play a vital role in safeguarding biodiversity on the ground. IPs and LCs have the right to decide if and how they are involved in biodiversity credit projects and should benefit from financial flows into nature.[10]

This guide is organized as follows:

- **Section 1** summarizes ways in which a company can use biodiversity credits with integrity, based on interviews with existing and potential buyers.
- **Section 2** discusses actions to mitigate potential risks associated with the use of biodiversity credits.
- **Section 3** demonstrates what those actions could look like in practice in the context of each use case and associated claim.

1 How could companies use biodiversity credits with integrity?

This section presents use cases for biodiversity credits that deliver positive nature outcomes both within and outside company value chains.



Corporate buyers might use biodiversity credits in different ways, reflecting the different motivations they may have for improving the state of nature. The World Economic Forum's report *Biodiversity Credits: Demand Analysis and Market Outlook* outlines four possible use cases emerging under existing frameworks for why companies may purchase biodiversity credits and an additional potential future use case under debate that requires advances in new frameworks and additional governance structures.[11] These use cases were identified and tested in interviews with prospective buyers and are aligned between these reports.[12]

All potential use cases require both high-integrity commitments and actions from buyers, and a robust, scientifically rigorous measurement and verification standard. This standard is necessary to ensure that all credits generate real benefits for nature and local communities. It will also enable buyers to purchase credits with confidence that real, positive outcomes for nature are achieved.

This report does not aim to provide a comprehensive framework of use cases. Market development, ongoing conversations and emerging scholarship may uncover more use cases than are presented here. While conceptually distinct, multiple uses cases, both existing and future ones, might reinforce one another as motivation for purchasing biodiversity credits.

All potential use cases require both high-integrity commitments and actions from buyers, and a robust, scientifically rigorous measurement and verification standard to ensure that all credits generate real benefits for nature and local communities.

1.1 **Use case #1** – Enhance carbon credits for better nature outcomes

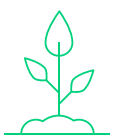
In the first use case, companies may purchase biodiversity credits as part of the purchase of nature-based solutions (NbS) delivering carbon credits.[13] Purchasing carbon and nature outcomes through NbS can play a role in helping companies meet their climate targets in a way that has high integrity and demonstrable co-benefits for nature.

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

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.

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.[14] 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.



1.2 **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.[15]

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 credits market. However, the biodiversity credit adds a layer of verification and third-party assurance which may prove valuable to the company.

1.3 **Use case #3** – Contribute to nature recovery beyond own impact

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.[16] 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.

1.4 **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.

1.5 **Contested use case #5** – Take responsibility for unmitigated biodiversity impacts

> This guide 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.

In addition to these use cases, another potential use case is 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.

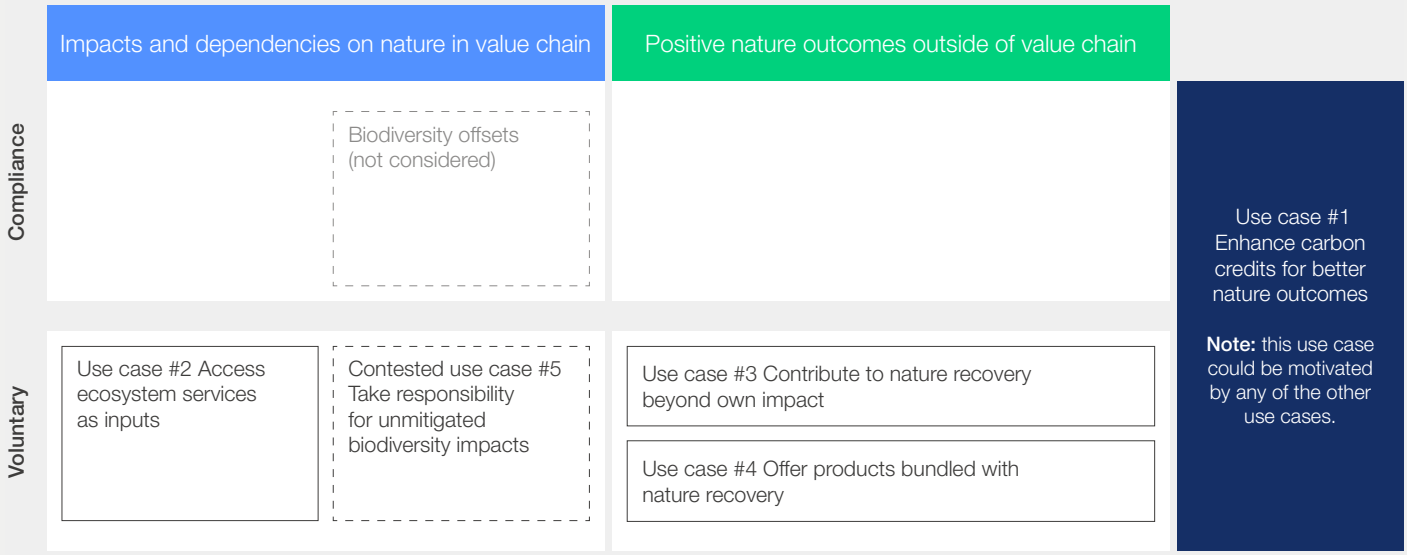
There is live debate about whether and when voluntary biodiversity credits could be used in this way, although it is currently not broadly accepted as a viable use case considering the level of development of the market. Such use would require additional market infrastructure (currently absent) to be 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.[17] 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 guide 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.

Each of these use cases could be supported by biodiversity credits as well as by a range of other instruments, including direct investment in restoration projects, contributions to conservation charities, or positive advocacy. Companies should assess the appropriate instrument on a case-by-case basis and look for complementarities between instruments. Biodiversity credits can offer advantages over other instruments by offering robust measurement, reporting and verification (MRV) procedures, a low-cost and scalable framework and the ability for multiple buyers to pool funding to support landscape-scale projects.

Figure 1 shows how these use cases can be considered. Of particular importance here is the clear distinction drawn between compliance biodiversity offsets (not considered in this guide) and voluntary efforts to take responsibility for unmitigated biodiversity impacts (the contested fifth use case).

FIGURE 1: **Overview of biodiversity credit use cases, by characteristics**



While each of the different use cases corresponds to differences in how biodiversity credits could be applied, there are some fundamental risks, approaches and frameworks that could be adopted by buyers of biodiversity credits across all use cases – outlined in Section 2. Section 3 then examines what these approaches could look like in practice in the context of each use case.

2

How to maximize impact and mitigate risks when buying biodiversity credits?

This section offers guidance on how to review, purchase, retire and make claims about biodiversity credits in ways that minimize risks and maximize benefits to nature.

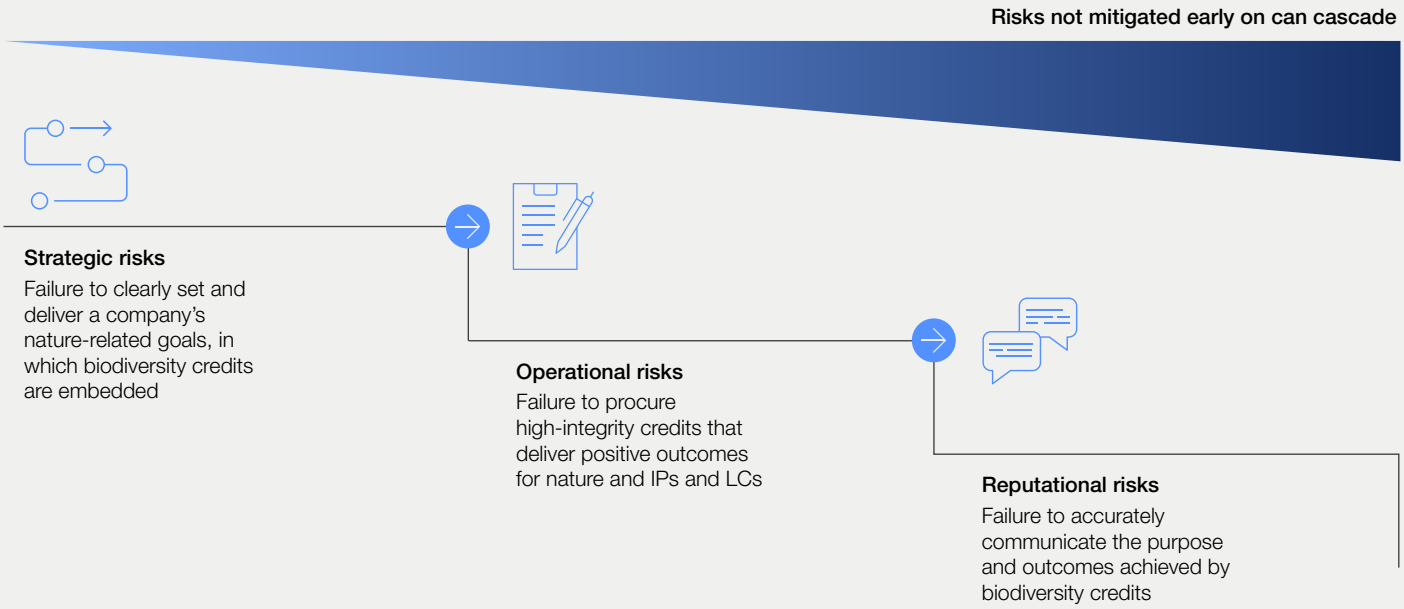
If not used carefully, biodiversity credits could generate risks to a company's strategy, operations and reputation. This section outlines three key risks to buyers of biodiversity credits and offers guidance to companies looking to maximize impact for nature and value for the company as well as minimize risks. Buyers' primary concern should be that positive outcomes for nature and people are achieved.

The following risks could undermine the desired benefits of biodiversity credits:

- **Strategic risks** refer to the failure to clearly set and deliver a company's nature-related goals, in which the use of biodiversity credits is embedded.
- **Operational risks** refer to the failure to procure high-integrity credits that deliver desired outcomes for nature and real benefits for IPs and LCs.
- **Reputational risks** involve the failure to accurately communicate and demonstrate the purpose of biodiversity credits and their outcomes to stakeholders and the wider market.

These risks can occur independently, but are also interrelated. Unclear strategy can create operational risks, which in turn may lead to inaccurate or misleading claims (see Figure 2). Understanding each of these risks and managing them effectively creates the basic framework for the credible use of biodiversity credits.

FIGURE 2: **Biodiversity credit risk management framework**



2.1 Strategic risk management: developing a holistic nature strategy

Strategic risks arise when a company purchases biodiversity credits without knowing how they contribute to its nature-related goals or how they fit into its wider nature strategy. This presents risks to the company, as characteristics of the credits (e.g. habitats restored, impacts and dependencies addressed, budget for purchases) may not be aligned to the company's longer-term objectives.

For example, a company may wish to secure water filtration ecosystem services in a catchment because it relies on good water quality. If it has not clearly defined how much it depends on water quality, the company's likely impacts and dependencies on clean water, or the scale and cost of the intervention required, it could allocate insufficient budget for the purchase of credits. As a result, the company might not meet its goal of securing access to water filtration services.

A robust nature strategy, situated in the mitigation hierarchy (avoid, reduce, restore & regenerate – see Figures 3 & 4), is the foundation for effectively deploying biodiversity credits and helping manage strategic risks. A nature strategy comprises the company's full approach to managing its impacts

and dependencies on nature. It will typically include:

- An overview of the impacts and dependencies the company faces
- The risks and opportunities these create
- The strategic goals of the company in relation to managing these risks and opportunities
- Specific, science-based, quantifiable and time-bound nature targets
- The actions it plans to take to achieve those, following the mitigation hierarchy
- A financing and implementation plan to deliver these actions

A company's nature strategy should ensure that credits deliver real biodiversity impact and are deployed as a complement to in-value-chain mitigation efforts, not as a substitute.

A company's nature strategy should clearly specify how biodiversity credits contribute to meeting corporate goals within a broader set of actions in line with the mitigation hierarchy. The strategy should ensure that purchased credits deliver real biodiversity impact and are deployed as a complement to the company's in-value-chain mitigation efforts, not as a substitute. It can also provide assurance that adequate resources are available to successfully deliver those actions and that the type of biodiversity credits are suitable vis-à-vis other actions. Nature strategies can also be used to align with other related goals, such as climate and social issues, to help identify synergies in the application of biodiversity credits to meet multiple goals. In November 2023, Business for Nature launched a "Now For Nature" campaign that provides preliminary guidance through its Nature Strategy Handbook.

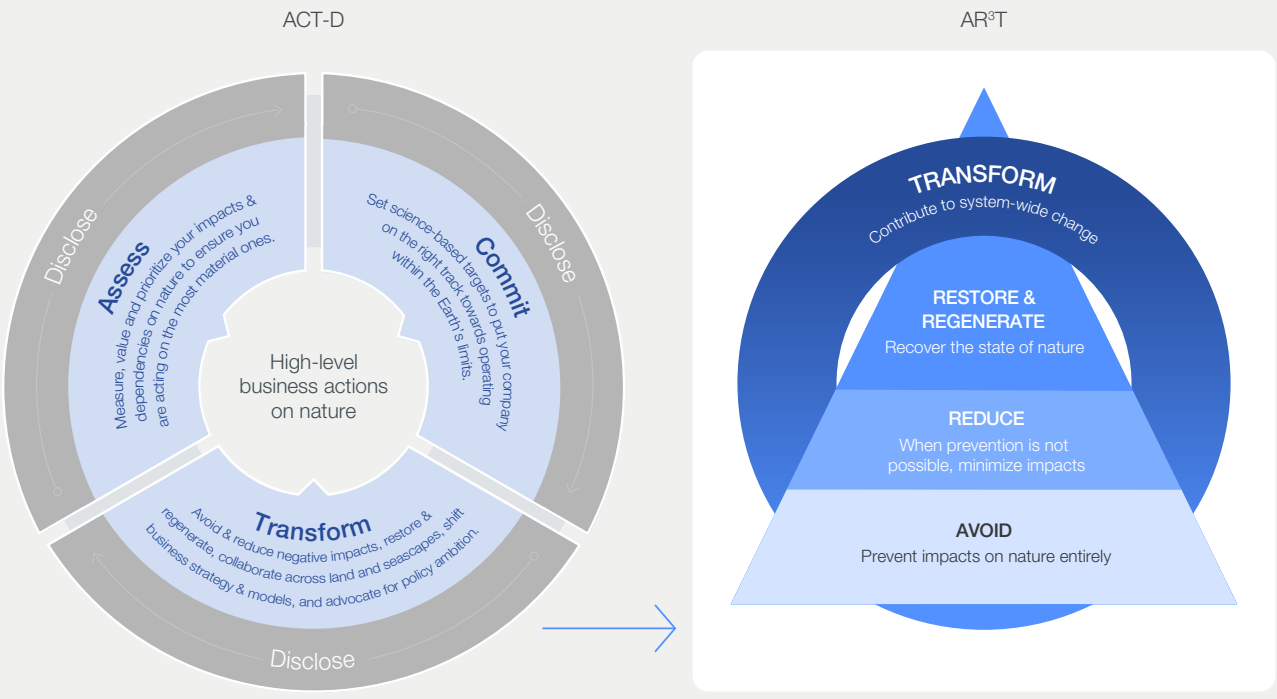
Existing nature-focused frameworks and guidance

Companies can look to existing frameworks to guide them on developing nature strategies. Governmental and non-governmental organizations are developing initial nature-related guidance and frameworks to define these roadmaps. For example, Figure 3 illustrates the ACT-D framework,[18] which provides a synthesis of four key components for developing nature strategies:

- Assess impacts and dependencies
- Commit to targets
- Transform business models
- Disclose these actions through frameworks such as the TNFD.[19]

The AR^{3}T framework,[20] also displayed in Figure 3, outlines how the mitigation hierarchy is core to nature strategies. The hierarchy requires companies to avoid and reduce or minimize negative impacts, before moving onto actions such as restoring and regenerating nature. The AR^{3}T framework extends beyond the standard hierarchies to cover transformative action, which considers the ways organizations can contribute to systemic change inside and outside their value chains. Nature strategies should be transparent about how impacts are measured and the data, assumptions and other decision metrics used to determine which impacts cannot be avoided or reduced. Figure 4 expands on this to consider a potential mitigation hierarchy in a nature strategy which makes use of biodiversity credits.

FIGURE 3: **ACT-D high-level business actions on nature and AR^{3}T framework**



Sources: Business for Nature, Science Based Targets Network.

FIGURE 4: | **A potential mitigation hierarchy which considers biodiversity credits**

The mitigation hierarchy should be followed in order when reducing impacts on nature

Avoid — Plan projects to avoid negative impacts, including by changing site locations, altering the development of a project, or limiting the area of impact

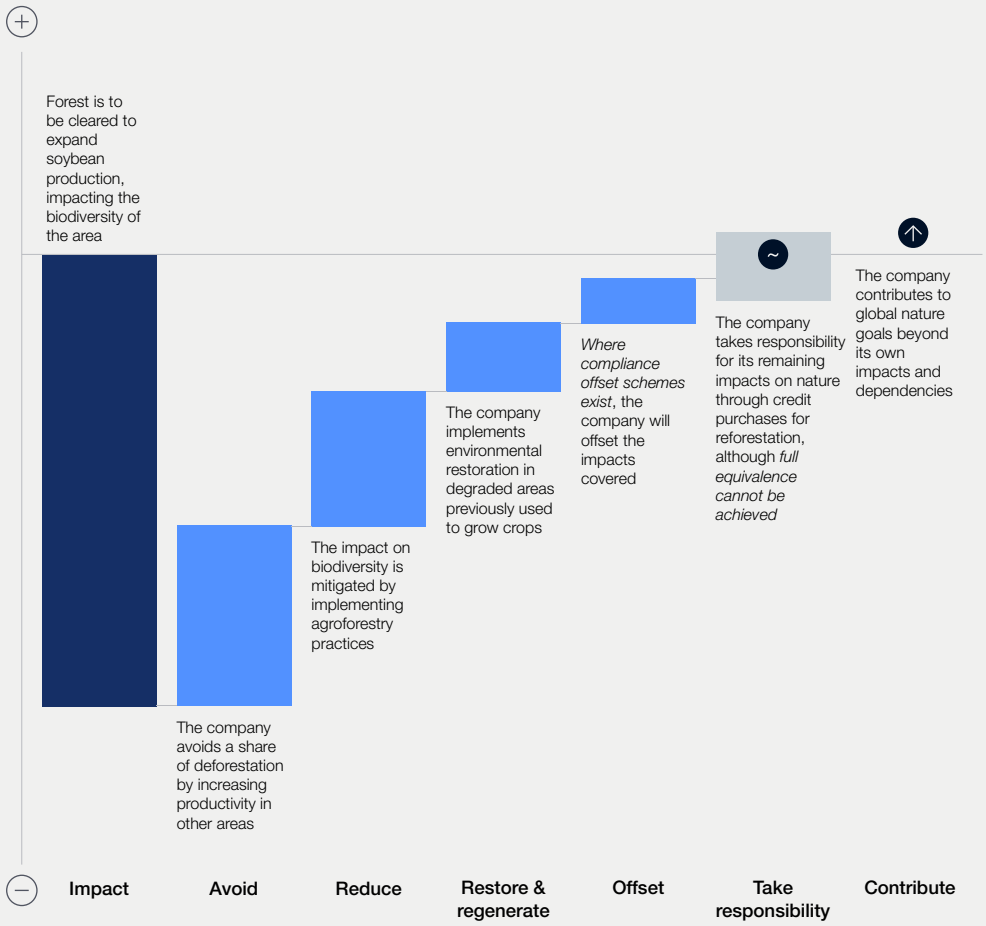
Reduce — Reduce the impacts of ongoing projects by developing more efficient operations, reducing resource demands, or altering project timing during migratory or breeding seasons

Restore & regenerate — Restore or regenerate habitats back to pre-project state if a project is unable to avoid or minimize impact

Take responsibility — Where compliance offset schemes are not available, take responsibility for remaining impacts by voluntarily remediating those impacts (although full equivalence to impacts cannot be achieved)

Contribute — Take action beyond offsetting company footprint to invest in nature, to become nature positive

For example, a soybean producer can apply different levers to mitigate its impact on nature



Source: Adapted from Forest Trends.[21]

2.2 Operational risk management: building procurement and due diligence capabilities

Carbon markets have highlighted the importance of effective procurement. Operational risks in buying biodiversity credits can arise from failure to adequately involve IPs and LCs, procure high-quality credits, or identify delivery risks in underlying projects, where the project does not deliver the desired uplift in biodiversity. These risks are interrelated, as the involvement of IPs and LCs can improve the underlying resilience of the project and permanence of project outcomes.[22] Operational risks for companies could mean that biodiversity outcomes are not achieved or that real harm is inflicted on IPs and LCs. This in turn could damage the reputations of both the buyer and the wider biodiversity credit market.

Characteristics of high-quality biodiversity credits

Companies should purchase high-quality biodiversity credits that achieve significant, sustained protection or uplift in the state of nature. However, verifying this uplift is made difficult by the complexity of measuring nature and the variability in measurement approaches. Nature outcomes can be difficult to measure definitively, as biodiversity can be considered at the ecosystem, species, or genetic level. Ecosystems can be dynamic, with species populations fluctuating from year to year, based on external factors or cycles of disturbance, such as natural fire regimes.

Similarly, the baseline change in biodiversity may not be static; for example a biodiversity credit may achieve uplift for a coral reef that nonetheless continues to decline because of external factors such as sea surface temperature. In such cases, the credit can still achieve uplift, but it can be difficult to isolate how much the intervention has achieved. Verra's new proposed framework considers a crediting baseline, which reflects the likelihood of baseline losses in habitat condition. By contrast, Plan Vivo does not use a baseline loss, instead measuring gains or losses against a site's state in "Year 0".[23,24]

Scientific measurement of habitats is becoming more accurate, scalable and affordable due to technologies such as satellite, remote sensing and environmental-DNA, which should complement traditional and local knowledge. Habitat banks (parcels of land where quantifiable gains in biodiversity are generated) are one example where technology could benefit restoration and conservation at the ecosystem level. Buyers should encourage transparency around how uplift is measured, including details on data used, assumptions and limitations. Third-party providers can bring their own measurement frameworks – for example CreditNature's NARIA framework quantifies changes in ecosystem integrity into units.[25]

As with any procurement or purchasing decision, companies should make their own investigations to evaluate the social and environmental integrity of potential credit purchases. Failure to purchase high-quality credits that deliver real benefits for nature and people in the long-term represents a wasted investment. It is critical for companies to have a clear set of procurement criteria that they can use to assess projects and project developers.[26] Table 1 offers an overview of 12 key criteria buyers could consider. High-quality credits generally need to meet the full set of criteria, which means that good performance in one area cannot compensate for bad performance in another. The list in Table 1 is not exhaustive and biodiversity credit buyers should consult additional guidance as it is made available.[27]

TABLE 1: **Twelve criteria for procuring high-integrity credits[28]**

Group	Criteria	Description
Rights, equity and inclusion	1	Projects recognize and respect the **rights of Indigenous peoples and local communities (IPs and LCs)** and demonstrate their participation: – Where possible, project proponents should offer to partner with IPs and LCs (including having them as project co-owners not only beneficiaries); and where IPs and LCs have governance rights over biodiversity, they should be the project proponents and developers themselves. – Projects should maintain or strengthen the role of IPs and LCs as stewards, stakeholders and knowledge-holders. – Projects should receive free, prior and informed consent (FPIC) of IPs and LCs to start project development and have processes to maintain this consent during the project lifecycle. – Projects should provide IPs and LCs with fair and equitable social and economic benefits, either through equity arrangements or benefit-sharing agreements. These should be fairly negotiated and have the flexibility to accommodate project changes (such as revenue increases) over time. – There should be an agreed, documented, accessible and confidential system for handling grievances during the project's lifecycle, open to relevant affected parties, which resolves grievances in an effective, timely, appropriate and transparent manner.
	2	Projects should ensure there is **no net harm** – no unintended negative impacts on the environment, local communities, or sustainable development more generally.
	3	Projects should **align with national and local frameworks** for biodiversity conservation and contribute to regional and national conservation goals, where these exist.
	4	Project proponents should have **legal rights** or access to the legal rights for the project and associated revenues.
Transparency and governance	5	Credits should be issued in accordance with a standard from an independent standard-setter (independent from the purchasing organization) with a **rigorous verification and validation process** and consistent re-verification in place, including through innovative MRV technologies where appropriate.
	6	**Avoid double-counting** by ensuring credit issuances and transactions are consistently tracked across and within corresponding registries or distributed ledgers, including in blockchains, if applicable.
	7	Projects and crediting mechanisms should **uphold transparency** by providing comprehensive and transparent information on project design, implementation, contracting, pricing, and credit ownership and issuance.

Group	Criteria	Description
Measurement	8	Standards should ensure that the **baseline is appropriately accurate and conservative** to ensure that the biodiversity outcomes claimed are not being overestimated.
	9	Credits should deliver **real and measurable biodiversity outcomes**, based on sound scientific methods, best available technologies and techniques, transparent metrics and integration of traditional and local knowledge.
Reporting and verification	10	Credits should **uphold additionality** as defined by the standard under which the credits are issued, with radical transparency on how this is defined and measured. For example, projects lead to biodiversity outcomes that would not have otherwise occurred under business as usual, considering parameters such as regulatory requirements and pre-existing financing. The definitions and interpretations of additionality are still evolving and minimum standards might arise as a pre-requisite. Transparency in how additionality is considered and measured is vital.
	11	Credits should be designed, implemented and managed to create durability and **mitigate risks of impermanence** of outcomes – positive biodiversity outcomes can be reversed by human factors (e.g. politics, land-use change) or natural events. Projects should therefore demonstrate they have safeguards to ensure the pre-requisites for long-term success by ensuring a non-permanence risk assessment is conducted in line with appropriate methodologies and that risk mitigation measures are in place.
	12	Projects should take measures to **prevent leakage** – biodiversity degradation should not be displaced to areas outside the project boundary and this should be mitigated through appropriate measures to mitigate risk, such as leakage insurance.

The process of purchasing high-integrity biodiversity credits

Buying biodiversity credits from a reputable biodiversity crediting programme with robust third-party verification can provide greater assurance that the underlying project is well-designed and delivers positive outcomes for nature and people. Reputable biodiversity crediting and verification is still nascent but should be based on robust and scientifically accepted standards and should clearly address the set of criteria in Table 1. As the market develops, further initiatives to promote the supply of high-quality credits and robust verification standards are likely to launch, as observed in the carbon markets with, for example, the Integrity Council for Voluntary Carbon Markets (ICVCM).

For now, however, buyers may need a more bespoke and hands-on procurement process for biodiversity credits, given the market is still at an early stage of development. Table 2 illustrates an approach to reviewing, purchasing, retiring and reporting high-quality biodiversity credits across eight steps. Companies may wish to engage directly with project developers, including through long-term partnerships to gain assurance of their reputability and ensure alignment with corporate objectives. Especially in the early stages, companies may wish to review project documents and undertake site investigations themselves to identify whether credits are of high quality before purchasing. As the market matures, credible, independent external parties could increasingly support the procurement process and companies may also want to build longer-term relationships with such partners.

> Buyers may need a more bespoke and hands-on procurement process for biodiversity credits, given the market is still at an early stage of development.

TABLE 2: **How to review, purchase, retire and report high-integrity biodiversity credits**

Step	Detail
1. Determine objectives to be achieved through purchase and use of biodiversity credits	Identify the relevant use case for biodiversity credits, based on company context and nature strategy. Section 1 outlines different use cases, while Section 3 describes further considerations for each use case.
2. Set budget and define suitable geography and type of intervention	Based on the use case, set a budget and define the location and type of intervention the credits should support.

Step	Detail
3. Review available credits in the market or identify developer to design bespoke plan	Identify high-quality credits in line with guidance in Section 2. Consider how the following characteristics of available credits support the use case(s) most relevant to the business: – Measurement unit underpinning the credit – Project location – Ecosystem – Extent of social benefits – Transaction size – Diversity of portfolio, in terms of geography and ecosystem – Other elements of strategic fit, e.g. presenting a narrative to stakeholders related to corporate action to protect a particular species
4. Align purchasing approach with existing procurement and sustainability policies	To support alignment with wider sustainability goals, buyers could: – Form partnerships with project developers in accordance with an independent standard and validated by third party validation and verification bodies (VVBs). – Support project developers who are already in the process of development, particularly at critical project stages (e.g. by providing early financing support). – De-risk project activity for the developer via offtake agreements: prior to credit issuance the buyer agrees a purchase volume linked to a price, price range or index. – Cooperate with other buyers to maximize positive outcomes, e.g. via a co-investing model where buyer's funds are aggregated into larger investments in biodiversity projects. – Preferentially purchase standardized credits (e.g. from brokers, marketplaces or exchanges) to help the market scale up and increase transparency. Models with greater collaboration require more time and resources upfront but may provide the opportunity for market learning through closer involvement, as well as the potential to stipulate additional requirements.
5. Perform due diligence on partners and suppliers, including audit of impact measurement	Due diligence should cover potential partners and selected projects, by reviewing publicly available information from registries and project developers, including project design documents and validation and verification reports. In the process, red flags should be raised in case of: – Legal action taken against the potential partner – Experience and expertise – Financial stability – Lack of policies on safeguarding (e.g. human rights, anti-discrimination, diversity and inclusion, community engagement, health and safety etc.) – Negative press
6. Hedge for risks of under-delivery of biodiversity outcomes	Purchases of biodiversity credits based on forecasts should include due consideration of how to approach the risk of under-delivery of biodiversity outcomes as well as understanding how the supplier insures or protects against this risk. Buyers may want to take action by setting up mechanisms or instruments to hedge this risk.
7. Retire credits in appropriate registry and document their use internally[29]	Credit retirement is a precondition to any environmental claim and essential to avoid double-counting. Buyers should develop accurate internal documentation on the use and retirement of credits to allow for audits.
8. Report and communicate transparently the use and benefits of the purchase, ensuring appropriate monitoring and verification of nature outcomes	Communicate the purpose the credit has been employed for within the buyer's broader nature strategy. Credit reporting should include: – Number of credits purchased and retired – Certification standards and issuing registry – Project name and ID – Project host country – Credit vintages, purchasing date and retirement date – Methodologies used in crediting – Information on how IPs and LCs have been involved in the decision-making process – Rigorous third-party certification of projects' social co-benefits, if available Ensure transparent communication that limits any claim around environmental performance of the organization/ product to the overall milestones achieved through the broader nature strategy; and accurately report the positive nature outcomes achieved through the purchase and use of the biodiversity credits.

2.3 Reputation risk management: effective claims communication

The scope and accuracy of any claim made by a company, related directly or indirectly to a biodiversity credit purchase, has an impact on its credibility. Accurate and transparent claims can help a company establish itself as a leader in biodiversity credits and nature more widely. Conversely, inaccurate or misleading communication can undermine the company's nature strategy, its reputation and the reputation of biodiversity credits more widely.

The scope and accuracy of any claim made by a company, related directly or indirectly to a biodiversity credit purchase, has an impact on its credibility.

This is broadly similar to other company and product claims (e.g. related to the health benefits of a product). Experience in carbon markets suggests that claims will be examined thoroughly and, where in doubt, could incur reputational damage. Existing guidelines and regulations from carbon markets can provide some preliminary direction on making claims.[30]

At least four principles should be kept in mind to help ensure accuracy and transparency while minimizing risks when making claims associated with the use of biodiversity credits: scope, boundary, accuracy and transparency.

Scope

The scope of a claim relates to clarity on what it is trying to achieve. In particular, there are distinct communication requirements related to claims that involve taking responsibility for unmitigated nature impacts (contested use case #5) and outside the value chain (use cases #3 and #4). Clarity of scope may also involve communicating whether use of credits applies inside and/or outside direct operations and the value chain. Section 3 examines possible requirements by use case in more detail.

Boundary

The boundary of a claim defines whether it applies to a whole company, a subset of its operations (such as by geography) or a brand, product, or service level. Claims related to all use cases – from taking responsibility for unmitigated impactsto positive nature outcomes – can be made at different boundary levels. Operations-level or product-level claims may lend themselves to greater specificity (i.e. related narrowly to the credit outcomes), where communication can be more precise and demonstrable.

However, claims made at a company level can be more complex to communicate, as they often relate to wider environmental performance metrics, which may then be aggregated into overarching claims that require detailed and standardized guidance such as "no net loss", "biodiversity net gain", or "nature positive".

Accuracy

Accuracy in the communication of benefits is critical to credibility for any given scope and boundary of a claim. Communication challenges include overstating the additional impact of an activity, insufficiently highlighting trade-offs and understating risks and possible reversal of benefits over time.

For example, companies need to appropriately retire their purchased credits before making claims, to reduce potential misstatement of benefits and to avoid possible double counting. Ensuring accuracy can be particularly difficult when making broad claims on company-wide impacts, such as when taking responsibility for unmitigated impacts.

Transparency

Transparency deepens levels of trust in communicated claims, especially given the multiple ways of measuring nature uplift. Companies need to consider the full set of supporting information released alongside the communication of any claims.

Sharing as much information as possible in relation to the specific characteristics of the biodiversity credit itself and its role within the company's nature strategy reinforces credibility. Furthermore, providing sufficient information to enable traceability and verifiability of credit-related outcomes can facilitate positive engagement with independent entities that can help corroborate claims.

Companies can effectively communicate their claims even while standards and enabling conditions are under development. Being clear about boundary and scope, as well as paying attention to accuracy and transparency, can help companies cope with early-market challenges such as emerging guidance, benchmarks and low-cost MRV. Companies' claims can openly recognize these challenges, while demonstrating robust efforts to align and improve over time as the market matures. Section 3 provides some examples of pragmatic approaches by use case.

Effective communication of claims is also possible at different stages in the journey. Companies at various levels of preparedness in terms of their nature strategies and capabilities can make claims

> A company that is not yet able to make a claim related to its biodiversity impact, due to incomplete measurement, may still make a claim limited to the specific actions taken in support of biodiversity.

appropriate to their level of progress. For example, companies without a holistic nature strategy may make individual purchases of biodiversity credits with claims focused on the specific impact delivered by those credits rather than broader statements related to company-wide performance. Similarly, a company that is not yet able to make a claim related to its biodiversity impact, due to incomplete measurement, may still make a claim limited to the specific actions taken in support of biodiversity.

Companies can increase their level of ambition and the range of claims in tandem over time. The minimum requirements for the making of claims varies by use case and is discussed in full in Section 3.

For further guidance on how to make accurate and transparent claims, companies can refer to the European Commission's proposed Green Claims Directive.[31] This will require companies that make environmental claims in their marketing and labelling to have those claims verified and certified by third parties. The directive will also place additional requirements on how environmental claims are substantiated, to ensure that claims:

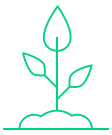
- Rely on recognized scientific evidence
- Demonstrate the significance of impacts from a life-cycle perspective
- Demonstrate whether they are accurate for the whole product or only parts of it
- Demonstrate that the requirement is not equivalent to requirements imposed by law
- Provide information on environmental performance relative to common practice
- Identify potential leakages

3 How could biodiversity credits be deployed effectively for each use case?

Each use case carries its own set of unique risks. This section explains how best to mitigate those risks.

Businesses may want to consider additional actions they could take to ensure they use biodiversity credits most effectively for their chosen use case(s). This section discusses potential actions to maximize value and mitigate the most material risks of each use case. Figure 5 outlines some of the unique risks for the different use cases.

FIGURE 5: **Most material strategic, operational and reputational risks for each use case**

Biodiversity credit use cases	Strategic risks	Operational risks	Reputational risks
 **#1 Enhance carbon credits for better nature outcomes**	–	–	Failure to prevent double-counting of benefits e.g. biodiversity credit + biodiversity co-benefits of carbon credit
 **#2 Access ecosystem services as inputs**	Failure to identify the type of credits to support the most important and material ecosystem services to the company	–	–
 **#3 Contribute to nature recovery beyond own impact**	Failure to identify the type of credits that support global goals and reflect stakeholders' preferences	–	–
 **#4 Offer products bundled with nature recovery**	Failure to identify the type of credits that support global goals and reflect consumers' preferences	–	Failure to be clear that it makes no claims about the production process of that product or the net impact of the company
 Contested use case #5 Take responsibility for unmitigated biodiversity impacts	Failure to accurately measure impacts and to outline a nature strategy that can address risks in line with mitigation hierarchy	Failure to procure sufficient quality or quantity of credits for projects similar to the company's unmitigated impacts	Failure to be clear and transparent about data and assumptions behind seeking like-for-like habitats

Companies interested in exploring how they could use high-integrity biodiversity credits can get started today. Sensible starting points include: evaluating how biodiversity credits could fit into the company's broader nature strategy, pilot-testing emerging measurement approaches and supporting the development of robust market infrastructure.

All companies should follow the mitigation hierarchy. Yet companies can explore the use of biodiversity credits for any of the first four use cases described in this report before the mitigation hierarchy is fully implemented. Basic requirements for each of these four use cases include:

- Identifying credits that are appropriate for the company's strategic nature goals and the use case in question
- Procuring high-integrity credits
- Clearly acknowledging where the company's impacts have not been measured and where impact on nature is unknown or unclear

3.1 **Use case #1** – Enhance carbon credits for better nature outcomes

A company may purchase biodiversity credits to meet dual climate and biodiversity targets, given the complementarities of actions required to regulate the climate and restore biodiversity. For example, natural forest restoration can sequester carbon and boost biodiversity simultaneously. Biodiversity credits that co-deliver other benefits can offer cost-efficiencies for companies with climate and nature targets, lowering the company's overall costs and ensuring scarce land is used efficiently.

It is possible the same project could issue both biodiversity and carbon credits. Known as "stacking", this is where one project that provides both additional climate and biodiversity benefits can be packaged and priced as two separate products. However, current guidance and standards relating to the stacking of credits and the associated claims that buyers can make are still under development.

Stacking would maximize synergies between climate and biodiversity interventions and make joint carbon and nature interventions more competitive against alternative, damaging land uses. It would also incentivize carbon markets to move towards conserving and restoring natural habitats. The rationale is that it is more efficient if one management action creates two distinct benefits (biodiversity and climate), from one area of land and from the same investment.

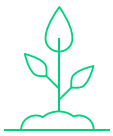
> "Stacking is where one project that provides both additional climate and biodiversity benefits can be packaged and priced as two separate products."

However, using biodiversity credits to help meet climate and other targets presents some unique risks:

- **Reputational risks:** if companies invest in a project with positive benefits for both carbon and nature through the purchase of stacked credits, the company cannot simultaneously claim that it has generated nature benefits through the nature credit, as well as nature co-benefits through the carbon credit. This would be considered "double-counting" and exposes the company to reputational risk.

Companies could mitigate these risks by following some simple principles:

- First, no claim of biodiversity co-benefits should be made on the carbon credits that are stacked and no claim of carbon reduction co-benefits should be made on the biodiversity credits that are stacked, as these credit products have been packaged and sold separately.
- Second, companies need to be confident that biodiversity outcomes are delivered beyond what would be expected by other actions, such as a standalone carbon credit project.
- Additionality rules could be stricter for compliance schemes and will have specific guidelines based on the regulations in each jurisdiction.



3.2 **Use case #2** – Access ecosystem services as inputs

Biodiversity credits can be purchased that may help to secure or enhance the provision of ecosystem services within a company's supply chain. For example, a major retailer of fruit and vegetables may have an interest in ensuring that pollination services in its supply chain are maintained. Biodiversity credits could finance measures that increase wild pollinator numbers in the surrounding landscape. This may create tangible business value for the company, through increased resilience, lower costs, higher revenues and the avoidance of operational disruptions.

Companies could purchase credits for this use case where they want to ensure access to ecosystem services in a measured and verified manner.

However, this comes with some unique risks:

- **Strategic risks:** the use of credits may be ineffective if companies fail to identify which ecosystem services are critical to its business, or which types of credits would best support the provision of those ecosystem services.

Companies could work to mitigate these risks by:

- Conducting an assessment of their dependencies and associated financial risks to identify those of greatest importance to the company.
- Identifying credits that support local ecosystems in a way that improves or maintains the provision of ecosystem services on which the company depends.

3.3 **Use case #3** – Contribute to nature recovery beyond own impact

A company could purchase biodiversity credits to demonstrate its commitment to improving outcomes for nature, as long as it makes no claim against that purchase in relation to its own impacts and dependencies, and as long as the purchase does not substitute actions to avoid and reduce those impacts. In the context of the Global Biodiversity Framework, companies increasingly recognize their role in contributing to nature's wider recovery and appreciate that they depend on global nature beyond their own direct value chains.

For example, a Scottish whisky distillery may wish to purchase credits for temperate rainforest restoration in Scotland, reflecting its global importance as well as customers' and employees' commitment to its Scottish brand. However, contributions to nature recovery beyond a company's own impact present some unique risks:

- **Strategic risks:** global goals cover a plethora of different aspects of biodiversity and different habitats. A company could feasibly purchase a credit that supports a global sustainability goal but that is not well aligned to their strategic priorities or does not reflect the preferences of their customers, employees and other stakeholders.

Companies could mitigate these risks by taking the following actions:

- Adopt a nature strategy which could provide a foundation from which the company can identify credit purchases that best reflect customer and other stakeholder preferences.
- To identify global conservation priorities, refer to scientific literature on key biodiversity areas or intact ecological areas.
- Use surveys or other instruments to gather customer and employee preferences.[32]
- Commit to make regular contributions based on company performance, to help ensure that contributions are meaningful, while also providing consistent scaling of funding for nature.

One approach to mitigate both strategic and reputational risks arising from this use case would be for companies to commit 1% of corporate profits to meeting nature targets. If this were carried out by the top 500 global businesses, it could amount to $43 billion per year in finance for nature,[33] equivalent to almost one fifth of the 2025 nature-based solutions gap identified by the UN Environment Programme.[34]

> **If the top 500 global businesses committed 1% of corporate profits to meeting nature targets, it could amount to $43 billion per year, equivalent to almost one fifth of the 2025 nature-based solutions gap identified by the UN.**

3.4 **Use case #4** – Offer products bundled with nature recovery

Companies may offer biodiversity credits bundled with the sale of a product or service they offer. For example, a company may offer a biodiversity credit for the restoration of one square metre of wetland with every purchase of a festival ticket. Biodiversity credits may be an attractive instrument to use in this context, if coupled with credible standards and governance mechanisms to assure high-quality outcomes.

However, companies could be faced with some unique risks associated with this use case:

- **Strategic risks:** companies are at risk if the types of credits identified do not reflect their consumers' preferences.
- **Reputational risks:** companies are at risk of misleading customers and other stakeholders if, due to lack of clarity or accuracy, they misinterpret the objective and outcomes of the credit purchases, such as believing they make the product or company nature positive.

Companies could consider the following to mitigate these risks:

- Strategic risks related to the selection of appropriate credits could be overcome by careful consultation with customers, or alternatively by allowing customers to select or vote for their preferred project type. This could also be seen as an opportunity to maximize the value created.
- Reputational risks could be mitigated by ensuring that the company clearly explains the boundaries of the bundled credit and acknowledges where it has not measured impacts, making clear that impacts are therefore uncertain across the company's operations and value chain. While not considered a minimum requirement, producing a nature strategy including implementing the mitigation hierarchy would generate greater clarity on the product's and the company's overall impact on nature as well as its approach to reducing that impact.

3.5 **Contested use case #5** – Take responsibility for unmitigated biodiversity impacts

Companies' nature strategies should set a high bar to transform their business models and ensure the minimum possible impact on nature. Nonetheless, transforming business models to avoid and reduce those impacts could take time and society as a whole will have to assess both the impacts and trade-offs. For instance, rare earth materials are critical for renewable energy transition and circular business models are not ready for scale today. Both biodiversity credits and biodiversity offsets encourage a nature-positive approach in these circumstances. Wherever compliance offset schemes exist, they should take priority and voluntary action should not be a substitute for it. However, where compliance offset schemes do not exist or only cover certain sectors or part of a company's impact on nature, companies may seek to take responsibility for their residual direct and indirect impacts through voluntary, positive investments. There is no consensus around using biodiversity credits in this way, and the high-integrity applicability of this use case requires additional market infrastructure and governance which are currently absent.

Debate continues about whether companies could ever legitimately address their residual impacts on nature outside of compliance-based offsetting schemes.[35] Some of the design questions that would need to be answered to provide guidance on how biodiversity credits could apply in this context include:

- How should impact across a company's value chain be measured
- What constitutes a "nature-positive" outcome (e.g. considering guidance under development by the Nature Positive Initiative)[36]
- What would an acceptable response to impact be through the application of credits, including how to determine the appropriate quantum of credits, the type of credits, the notion of equivalence and the geography from which credits originate

This report does not set out to resolve whether this use case could be appropriate or not. Instead, the section below summarizes the current debate and outlines considerations that might be helpful in advancing this discussion.

Multiple risks associated with this use case

Using biodiversity credits to take responsibility for unmitigated impacts and making associated claims could come with a number of risks:

- **Strategic risks:** the failure of a company to know what its impacts are or to have a strategy to mitigate all addressable impacts in line with the mitigation hierarchy would make it impossible to know how many and what types of unmitigated impacts to address. This could actively harm nature and undermine the desired outcomes.
- **Operational risks:** companies that are unable to procure a sufficient quantity or quality of biodiversity credits may undermine any claims made regarding the company-wide impacts on nature. Companies are also at risk of procuring the wrong type of biodiversity credit as the intended credits should fund positive impacts for nature that seek to replicate the distinctiveness and quality of the habitats lost (discussed in more detail below).
- **Claims risks:** failure to make accurate claims about the extent of unmitigated impacts, the extent to which biodiversity credit purchases address these and the data, assumptions and limitations underlying the measurement of impact generate a high risk of misleading stakeholders.

Possible approaches to mitigate these risks

Establish a nature strategy

First, cascading risks related to the measurement and communication of biodiversity impact could be mitigated by ensuring that the company has a comprehensive nature strategy in place. A nature strategy with assessment and disclosure of nature-related impacts and dependencies and clear science-based targets should be considered the minimum requirement for making claims about the use of credits for addressing unmitigated impacts.

Further guidance on the construction of nature strategies is included in Section 2.1. Due to the difficulties and variability of approaches for measuring impacts on biodiversity, any claim should be supported by full transparency on measurement methodologies, assumptions, limitations and uncertainties involved. This transparency can make valuable contributions to market development and establish the buyer as a responsible stakeholder.

> Companies should strive to get close to achieving equivalence and further guidance on this from standard-setters is required.

Follow IUCN recommendations for compliance markets

Second, there is a higher bar for integrity in this use case because there is a greater risk of net negative impacts on nature if poorly implemented.

While there are no global standards for this in voluntary markets, the recommendations of the International Union for Conservation of Nature (IUCN) for appropriate offsetting in compliance markets should be considered as minimum requirements.[37] As additional guidance and standards emerge for the use of credits to voluntarily take responsibility for unmitigated impacts, buyers interested in this use case should align with their requirements.

IUCN emphasizes that the mitigation hierarchy must be rigorously applied before offsets are considered. In addition, it outlines clear contexts, detailed below, in which compliance offsets must not be used, which could also apply to any voluntary measures to take responsibility for residual impacts.

Where any of the following conditions apply, biodiversity credits will most likely not be the appropriate means of taking responsibility for unmitigated impacts:

- **Threatened species and habitats:** where there is a high risk of driving one or more species and/or ecosystems into or further along IUCN's Red List categories (Vulnerable, Endangered, Critically Endangered, Extinct in the Wild, or Extinct).
- **Uncertainty:** where there is high uncertainty about the outcomes of the compensating project.
- **Cost-shifting:** where investment in credits is at risk of substituting for, rather than adding to, total investment in conservation, such as by contributing to existing protection schemes with no additional measures. Here, credits cannot be considered to have generated additionality.
- **Inequity:** where the gains and losses are accrued in ways that are considered culturally or socially unacceptable, for example local people lose out on access to resources.
- **Time lags:** where time lags mean that impacts on biodiversity cannot be remediated for, or time lags significantly impact the likelihood of population recovery in at-risk species.
- **International standards:** where impacts will occur in World Heritage Sites or protected areas recognized by IUCNs category I-IV designation, or when action is considered incompatible with IUCN policy and resolutions.

Strive to get close to achieving equivalence

Third, credible compensation for unmitigated impacts should ensure that the habitats being restored replicate the distinctiveness and quality of those being lost. Full equivalence cannot be achieved due to the distinctiveness of all aspects of biodiversity; however, companies should strive to get close to achieving equivalence and further guidance on this from standard-setters is required. As such standards emerge, companies should follow the processes and requirements they lay out. Given the multiplicity of nature, a wide range of different measurement methodologies exist and could be considered, but should incorporate metrics related to:

- Habitat size and connectivity
- Habitat condition and quality
- Habitat rarity and distinctiveness

Factoring in habitat condition when aiming for equivalence could mean that the created habitat may need to be significantly larger than the impacted area; in one compliance offset scheme, the offset area was required to be 19-times larger than the impacted area.[38]

Compliance offset schemes can offer insights into how companies may look to voluntarily take responsibility for their unmitigated impacts, though they should themselves evaluate the appropriateness and robustness of such schemes for their context and follow standards for voluntary use as they emerge. Examples of compliance offset schemes include:

- England's incoming Biodiversity Net Gain (BNG) legislation will require developers to deliver local offsetting plus 10% BNG by using a biodiversity unit influenced by proximity to the site being impacted.[39]
- The New South Wales (Australia) Biodiversity Offset Scheme encourages equivalence by requiring impacts to be compensated for with like-for-like biodiversity credits where these are available.[40]
- The Conservation Banking scheme in the US allows credits to be pooled into single projects, facilitating the establishment of larger areas of habitat, which can be of greater ecological value than a series of fragmented projects.[41]

Companies should seek to replicate this emphasis on local remediation, equivalence and supporting larger, connected habitats rather than a series of small, fragmented habitats.[42] Actions taken voluntarily in this direction could eventually encourage further regulation or interventions from the public sector.

Conclusion

The rates of biodiversity loss over 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.[43] 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.[44] More than half the world's gross domestic product (GDP) is moderately or highly dependent on nature and its services.[45]

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 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.

There are clear current use cases for how companies can use biodiversity credits to generate value for nature, local communities and their business. For each of these, companies should ensure the minimum requirements outlined in this report are met:

– Identify credits that are appropriate for companies' strategic nature goals

– Procure high-integrity credits

– Acknowledge where companies' impacts on nature have not been measured or disclosed

These actions will help to maximize the value that credits generate for nature, people and the business, while minimizing strategic, operational and reputational risks.

Companies interested in exploring how they could use high-integrity biodiversity credits can get started today. Sensible starting points include evaluating how biodiversity credits could fit into their broader nature strategies, pilot-testing emerging measurement approaches, and supporting the development of robust market infrastructure. Each of these can accelerate the development of guardrails for integrity and credibility in the market, even while standards and guidance are evolving.

Appendix

Illustrative examples of use cases, claims and risk mitigation

This section outlines some illustrative examples of risk mitigation actions and the making of appropriate claims related to each of the different use cases. It is purely illustrative, to help companies understand the practical applications of risk mitigation and language that could be used in potential claims about the use of biodiversity credits. If claims are to be made, they should follow clear standards laid out in the market, both specifically for the use of biodiversity credits, as well as more broadly in sustainability (e.g. the EU Green Claims Directive).

Illustrative use case example #1 – Enhance carbon credits for better nature outcomes

Context: A clothing company wants to offset its carbon footprint from the hard-to-abate parts of its supply chain while also generating positive outcomes for biodiversity. As naturalistic forest ecosystems can achieve both outcomes simultaneously, it wishes to purchase stacked biodiversity and carbon credits from a set of projects that restore mixed-age, native forest. In line with its commitment to Indigenous rights, it also wants these to be purchased from Indigenous-led projects. Maximizing synergies in its climate, nature and social goals will create cost efficiencies for the company and help ensure resilient project delivery.

Mitigating actions: The company undertakes robust due diligence and is confident that the project will achieve biodiversity benefits additional to those that a narrow carbon-only project would, and that the project will provide tangible benefits to the Indigenous communities from which they are purchased. The company is clear to claim social co-benefits on the carbon credits only, with the biodiversity component clearly packaged separately as a biodiversity credit.

Purchase and use of credits: The company purchases stacked voluntary biodiversity and carbon credits from the same projects, that restore native forest in a range of different geographies from different Indigenous communities.

Illustrative claim: "We have purchased stacked carbon and biodiversity credits that sequester carbon and generate positive impacts for nature respectively. This is a cost-effective approach to support both climate change mitigation and nature restoration. The biodiversity benefits are not designed to compensate for our unmitigated nature impacts (beyond climate change), which we have not yet measured or disclosed."

Illustrative use case example #2 – Access ecosystem services as inputs

Context: A major fruit retailer depends on wild pollinator services for its supply of fruits. Populations of wild pollinators have been falling in its value chain, caused by land-use changes and intensification of agriculture in the surrounding landscape. The retailer is also itself contributing to pollinator population decline through land-use change and use of pesticides.

Mitigating actions: The company has conducted an initial assessment of the ecosystem services it depends on, which identified pollination services as a strategic priority. As part of its wider strategy, the company is also expanding its range of organic produce, which could better protect pollinators and has proven popular with consumers. In the procurement process, it chose to purchase biodiversity credits for projects located in and around its value chain that are using tried-and-tested means of boosting pollinator numbers, in order to best capture the ecosystem service benefits. The claim includes wording that acknowledges not all of the company's impacts and dependencies have been measured and disclosed.

Purchase and use of credits: The company decides to purchase biodiversity credits from a project developer to establish wildflower margins on farms and restore forest adjacent to farms, to boost pollinator populations in order to increase revenues. It chooses to purchase biodiversity credits because it has many suppliers, so it wants the biodiversity benefits to be verified across a range of suppliers and a large area. The MRV process of biodiversity credits also helps to build trust with other retailers, who are then more likely to pursue similar, mutually beneficial investments that boost pollinator populations. This is a substantial benefit over an equivalent series of bilateral agreements or direct investments.

Illustrative claim: "We have purchased biodiversity credits to support populations of wild pollinators within our value chain. This is designed to ensure that our crops continue to be pollinated and begins to address some of our impacts on nature through farming. This applies to a subset of our value chain and dependencies; we aim to work towards

securing a greater range of ecosystem services in future. We acknowledge that we have not measured or disclosed our full impacts on nature."

Illustrative use case example #3 – Contribute to nature recovery beyond own impact

Context: A major coffee brand commits to making a regular contribution to nature recovery and thereby supporting the Global Biodiversity Framework. The company does not have a nature strategy in place, but it is aware that it could be contributing indirectly to deforestation in tropical regions.

Mitigating actions: The company is undertaking an initial assessment to understand the extent of its possible contribution to deforestation. It has consulted with its customers and employees and identified support for the company to deepen its commitment to social causes, with protection of tropical rainforests a high priority. The company is clear internally that this purchase of credits is not a substitute for action to reduce its own impacts on biodiversity. In its claims, the company is clear and transparent that the purchase of biodiversity credits does not mean that they have eliminated all of their impacts on nature and that it is a contribution designed to help meet global nature goals beyond their own operations.

Purchase and use of credits: Given some historic links to tropical deforestation, the company feels a sense of responsibility to contribute towards global nature recovery. It also hopes that by demonstrating its commitment to global goals it will help boost its brand, build customer loyalty and improve its ability to attract and retain talented employees. The company purchases biodiversity credits worth 3% of its profits every year. The credits pay for projects across a range of geographies and habitat types, reflecting their employee and customer preferences, with an emphasis on tropical forests.

Claim made: "We have purchased biodiversity credits for a range of tropical forest projects in support of global biodiversity goals and will continue to invest 3% of our profits every year in this way. While we are in the early stages of understanding and addressing our own impacts on nature, which have not yet been quantified, we nonetheless feel it is important to support global goals beyond our own supply chain."

Illustrative use case example #4 – Offer products bundled with nature recovery

Context: A festival organizer wants to include a biodiversity credit with every ticket it sells for a major festival. It hopes this will enhance its eco-friendly festival brand, which could encourage greater sales. The organizer hopes that using biodiversity credits could help assure festival-goers that their ticket also supports real-world benefits for biodiversity. The festival operator does not have a nature strategy in place.

Mitigating actions: The company is able to reflect the preferences of its customers by allowing them to select from a range of different projects to support when purchasing their festival ticket. Information on the different credit schemes is displayed transparently for customers, including those that are verified by standards that ensure IPs and LCs are involved in project design from the start. The company is clear in communicating that the purchase of credits says nothing about the wider impact that the festival or operator may have on nature.

Purchase and use of credits: The company purchases biodiversity credits for each ticket sold for the festival, supporting a range of different conservation initiatives that all involve the full and effective participation of IPs and LCs.

Illustrative claim: "Receive a complementary biodiversity credit with each festival ticket purchased. Credits support different global conservation efforts, which you can choose from when purchasing your festival ticket. This does not offset our impacts on nature, which we have not yet measured or disclosed. As an operator committed to eco-friendly festivals, we are working towards a better understanding of our nature impacts to seek to avoid and minimize these where possible."

Illustrative contested use case example #5 – Take responsibility for unmitigated impacts

Context: A mining company impacts biodiversity principally through land-use change and pollution from its mining operations. It expects to have residual impacts on biodiversity even after mitigation over the next decade and would like to take responsibility for these impacts voluntarily in the jurisdictions in which it operates that do not have compliance schemes. It wants to purchase biodiversity credits today to take responsibility for its current unmitigated biodiversity impacts and to develop expertise in biodiversity credit markets.

As discussed in Section 3.5, this use case requires at least two critical pieces of market infrastructure to be established which are absent today: a definition of "nature positive" at the company or product level and a robust set of standards to establish how equivalence (of impacts generated by credits to the company's unmitigated impacts) could reasonably be achieved outside of compliance offset schemes.

Mitigating actions: The company develops a holistic nature strategy that measures and discloses its impacts on nature and that outlines a plan for avoiding and minimizing these impacts on nature consistent with the mitigation hierarchy. Mitigation actions include investment in wastewater treatment and reducing the extent of land-use change through avoidance measures and restoration to minimize footprint. It follows a rigorous procurement procedure to ensure there is a high chance of project success and restored habitats replicate the quality and distinctiveness of the habitat lost. The claims on biodiversity credits are carefully put together to ensure impact is not overstated and biodiversity measurement methodologies and sources are transparent.

Purchase and use of credits: The company purchases biodiversity credits to take responsibility for its unmitigated impacts on nature through residual land-use change. It makes a commitment to purchase biodiversity credits over and above the amount of land it converts. For example, if the company has unavoidable impacts or land conversions after robustly following the mitigation hierarchy, it purchases restoration credits, following the latest guidance and standards on establishing reasonable equivalence of impacts outside of compliance offset schemes. It is transparent about its impacts and the standard it has adhered to. In the process, it develops expertise in biodiversity credit markets and has also contributed to the development of the market.

Illustrative claim: "As per our Global Biodiversity Framework-aligned nature strategy, we are purchasing and retiring biodiversity credits to take responsibility for unmitigated impacts associated with a recent project, following the approach laid out in [relevant standard]. This is after thorough application of the mitigation hierarchy, to avoid, minimize, and restore to the full extent possible the impacts associated with the project. Further information on our impacts and dependencies and how we calculated our mitigation and unmitigated requirements, including the review conducted by third parties, is provided on our website."

Contributors

This work builds on the World Economic Forum's December 2022 consultation paper, *High-level Governance and Integrity Principles for Emerging Voluntary Biodiversity Credit Markets* and the insight report that accompanies this guide, *Biodiversity Credits: Demand Analysis and Market Outlook*.

This guide is a combined effort of all the participants involved in our numerous discussions, workshops and research. However, the opinions expressed herein may not necessarily correspond with the views of everyone involved in the project.

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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 peoples 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.

2 Science Based Targets Network (SBTN), 2023, https://sciencebasedtargetsnetwork.org/.

3 Taskforce on Nature-related Financial Disclosures (TNFD), 2023, https://tnfd.global/.

4 Nature Positive Initiative, 2023, https://www.naturepositive.org/.

5 This is a working definition. The Biodiversity Credit Alliance (BCA) is drafting a proposal towards a common definition. See: Biodiversity Credit Alliance, https://www.biodiversitycreditalliance.org/.

6 Market sizing figures include the potential fifth use case (taking responsibility for unmitigated biodiversity impacts). If the infrastructure to support this use case does not materialize, the demand for biodiversity credits might be much lower than the figures presented here. See: World Economic Forum, Biodiversity Credits: Demand Analysis and Market Outlook, December 2023.

7 The Kunming-Montreal Global Biodiversity Framework was adopted during COP 15 in December 2022 and sets out an ambitious pathway to reach a world living in harmony with nature by 2050. See: Convention on Biological Diversity, Kunming-Montreal Global Biodiversity Framework, 18 December 2022, https://www.cbd.int/doc/c/e6d3/cd1d/daf663719a03902a9b116c34/cop-15-l-25-en.pdf.

8 Stockholm Resilience Centre, All planetary boundaries mapped out for the first time, six of nine crossed, 2023, https://www.stockholmresilience.org/research/research-news/2023-09-13-all-planetary-boundaries-mapped-out-for-the-first-time-six-of-nine-crossed.html.

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11 World Economic Forum, Biodiversity Credits: Demand Analysis and Market Outlook, December 2023.

12 Aligning the use cases means that there is some duplication – in descriptions and use of examples – between this report and the World Economic Forum's report Biodiversity Credits: Demand Analysis and Market Outlook.

13 Carbon credit standards already offer approaches to certify and monetize co-benefits for nature, but the co-benefits are not quantified. Under this use case, biodiversity benefits would be quantified and so could be used against company's nature-related targets.

14 Bukoski, J.J. et al., Rates and drivers of aboveground carbon accumulation in global monoculture plantation forests, Nature Communications, vol. 13, no. 4206, 28 July 2022, https://doi.org/10.1038/s41467-022-31380-7.

15 The first and second use cases could include actions to reduce own impacts, however the motivations for doing so are subtly different. In the first, buyers are concerned with securing ecosystem services they depend on, some of which can be done through reducing own impacts. In the second buyers are concerned with reducing their own impacts for the purposes of reporting, which comes with additional strategic, procurement and claims requirements.

16 Family-owned enterprises and "Certified B Corp" organizations (e.g. clothing company Patagonia) already report against social purpose as well as profit.

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27 Currently, this may include the Governance and Integrity Principles published by the World Economic Forum, as well as standards being developed by project registries and verifiers. To gain maximum assurance, companies may also use a combination of third-party standards with incremental criteria based on their values, risk appetite and nature strategy. 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.

28 Drawn from lessons learned in voluntary carbon markets. Useful resources include, among others:

- 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.
- Business and Biodiversity Offsets Programme (BBOP), The BBOP Principles on Biodiversity Offsets, https://www.forest-trends.org/wp-content/uploads/2018/10/The-BBOP-Principles_20181023.pdf.
- Integrity Council for Voluntary Carbon Markets (ICVCM), The Core Carbon Principles, https://icvcm.org/the-core-carbon-principles/.
- The Natural Climate Solutions Alliance and Boston Consulting Group, A Buyer's Guide to Natural Climate Solutions Carbon Credits, Draft for Comment, November 2022, https://www.wbcsd.org/contentwbc/download/15185/214678/1.
- Tropical Forest Credit Integrity Guide, 2023, https://tfciguide.org/.
- WWF, What makes a high-quality carbon credit, 4 June 2020, https://www.worldwildlife.org/publications/what-makes-a-high-quality-carbon-credit.

29 In carbon markets, the Voluntary Carbon Markets Integrity Initiative (VCMI) Claims Code of Practice recommends that voluntary carbon credits are always retired, which could be a default starting point for the biodiversity credits market. See: VCMI, VCMI Claims Code of Practice: Building integrity in voluntary carbon markets, 2023, https://vcmintegrity.org/vcmi-claims-code-of-practice/.

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