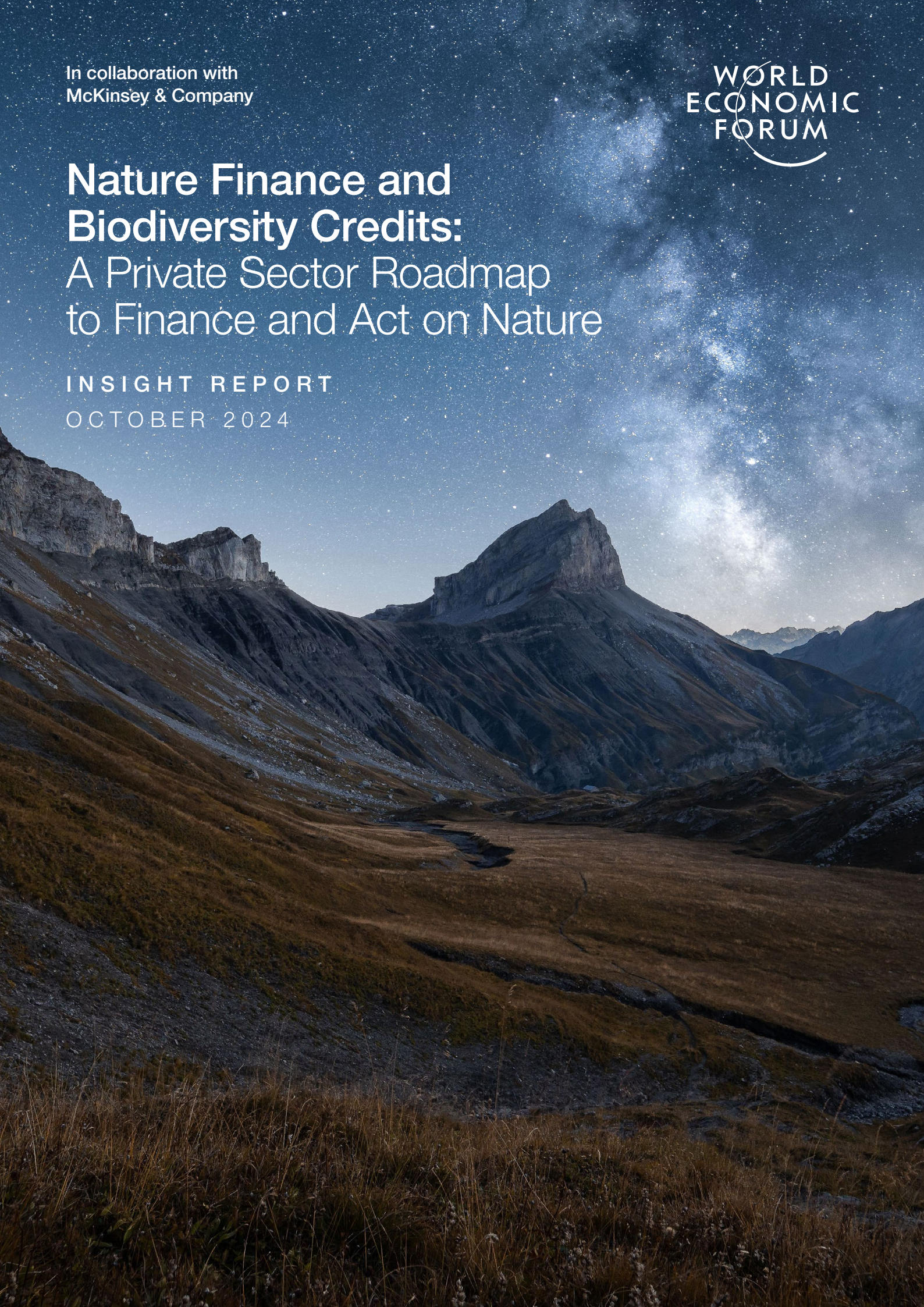
In collaboration with
McKinsey & Company

WORLD ECONOMIC FORUM

Nature Finance and Biodiversity Credits:
A Private Sector Roadmap to Finance and Act on Nature

INSIGHT REPORT

OCTOBER 2024



Images: Getty Images

Contents

Foreword

Jason Eis
Partner, McKinsey & Company

Akanksha Khatri
Head, Nature and Biodiversity,
World Economic Forum

When 196 parties signed the Kunming-Montreal Global Biodiversity Framework (GBF) in December 2022, they united behind the promise of halting and reversing biodiversity loss by 2030 and living in harmony with nature by 2050. Since a healthy environment is foundational to human well-being and economic prosperity, achieving these goals will be crucial. Taking action will require a paradigm shift across the entire economy and all of society.

Since the adoption of the GBF, opportunities for nature-positive interventions have multiplied. Biodiversity credit markets, wildlife bonds, corporate nature funds and other innovative instruments are increasingly attracting attention from senior executives and board members. On the regulatory side, governments are developing ambitious nature-related policies, such as the United Kingdom's Biodiversity Net Gain approach and the European Union's Nature Restoration Law. Corporate disclosure of nature-related impacts, risks and dependencies is increasingly becoming the norm.

Nonetheless, with only five years left to meet the 2030 GBF's targets, financing towards nature remains insufficient. Despite an increase in private financing to over $102 billion in 2023,[1] bridging the $700 billion annual shortfall required to adequately conserve and restore natural ecosystems remains a distant goal. This tenfold increase indicates that the private sector is beginning to recognize and embrace its opportunity to drive systemic change.

Moving from intention to action involves a multifaceted approach. First, it requires defining a nature-positive strategy that aligns the often mutually reinforcing dynamics of nature conservation and restoration with those of economic prosperity and financial performance. Today, only 5% of the biggest Fortune Global 500 businesses have a nature strategy, while more than 80% have one on climate.[2]

Second, translating commitments and targets into action involves applying nascent but promising solutions, such as biodiversity credits, that provide new avenues for funding conservation efforts and encouraging sustainable practices while mobilizing capital towards Indigenous Peoples and local communities (IPs and LCs). These solutions, though still emerging, hold immense potential to drive meaningful change, from the project level to the landscape level.

This report is designed to offer practical guidance on how to get started on nature finance. Summarizing almost two years of analysis and engagement with key market actors, this document provides a comprehensive roadmap for businesses, defining their vision and priorities and translating them into concrete action. By synthesizing existing resources and examining them when needed, this report also aims to empower businesses to take decisive actions towards a nature-positive future.

Executive summary

Businesses can start contributing to the nature-positive goal by defining a nature strategy and a corresponding nature finance action plan.

Closing the approximately $700 billion annual nature financing gap is essential to halting and reversing biodiversity loss by 2030.[3] Alongside the necessary governmental action, the private sector has a critical role to play in mobilizing the funding needed. To support businesses in these efforts, this roadmap outlines the steps to develop and implement a nature strategy and a nature finance action plan. While focusing on biodiversity credits, the considerations included in this roadmap are broadly applicable to other nature financing mechanisms, such as payments for ecosystem services (PES), green bonds or nature-linked loans.

The nature strategy and the nature finance action plan should ideally be developed jointly and iteratively. However, if a nature strategy already exists, businesses can refine it during the process of developing a nature finance action plan.

A **nature strategy** establishes a corporate ambition to contribute to halting and reversing nature loss, in line with the vision of the Kunming-Montreal Global Biodiversity Framework (GBF). There are multiple readily available frameworks for developing a nature strategy, such as the widely used ACT-D (assess, commit, transform and disclose) framework. An integral part of the nature strategy, the **nature finance action plan** operationalizes the strategy. The nature finance action plan, as outlined in this roadmap, aligns with the ACT-D framework and follows four steps:

Step 1: Define actions and value: In alignment with the mitigation hierarchy, identify and prioritize actions that offer both financial and nature benefits by prioritizing avoidance, reduction and restoration, before offsetting and contributing beyond own impact. Furthermore, specify an implementation plan and prepare to make relevant disclosures.

Step 2: Identify metrics: Select robust and fit-for-purpose metrics to measure the outcomes of the chosen actions. After defining actions, values and metrics, businesses can proceed with the next steps of the action plan. This report focuses on biodiversity credits as an example, but similar steps apply to other nature financing mechanisms.

Step 3: Procure credits (or other instruments) with integrity: Establish procurement guiding principles for biodiversity credits, considering risks, budget, timeline and other factors. Then, identify suitable credits.

Step 4: Manage communication and claims: Ensure transparent and appropriate communication, considering justified claims in relation to the purchased biodiversity credits and their use cases.

With these steps, businesses can make meaningful progress in advancing their nature-positive agendas and transitions, ensuring their economic prosperity while contributing to closing the nature financing gap.

Introduction

This roadmap outlines how businesses can finance nature-positive outcomes through high-integrity biodiversity credits and other nature financing mechanisms.

Despite increased attention and efforts to preserve and restore nature, the health of the natural world is declining. According to the Living Planet Index, wildlife populations have declined by 69% on average in the past 50 years,[4] while the stock of natural capital per person has declined by 40% from 1992-2014 and gross domestic product (GDP) per capita has more than doubled.[5] Halting this decline will require substantially increased financing for the conservation and restoration of nature, since the nature financing gap is estimated to be approximately $700 billion annually.[6] Biodiversity credits can be one way to direct capital towards nature restoration (Box 2).

Drawing on a broad set of existing guidance and tools, and considering them alongside new guidance where needed, this document presents a roadmap for businesses to finance nature-positive outcomes. While this roadmap focuses on biodiversity credits, its insights and considerations are broadly applicable across the spectrum of nature-financing mechanisms. This roadmap will be beneficial for any business looking to understand its nature-related impacts, risks and opportunities, regardless of regulatory contexts, which are not discussed here. At the same time, this roadmap should not be considered an exhaustive or prescriptive guide, and should be contextualized within the broader context of companies' transition towards nature-positive actions. This report is structured as follows:

Chapter 1 provides an overview of the key components for implementing and financing nature-positive actions, namely a nature strategy and a nature finance action plan. In practice, nature strategy development and implementation can be spread across different parts of a company.

Chapter 2 focuses on developing a nature strategy with sufficient depth to guide a nature finance action plan. This chapter also introduces *The Nature Strategy Handbook* and the ACT-D (access, commit, transform and disclose) framework.

Chapter 3 lays out the four steps of a nature finance action plan. The first two steps are agnostic of the specific nature financing mechanism. The last two steps use biodiversity credits as a practical example but can be applied in a similar fashion to other nature financing options.

Chapter 4 describes the interdependence of the nature finance action plan and the nature strategy.

This roadmap, while focused on businesses, is also useful for development banks, non-governmental organizations (NGOs), governments, market intermediaries, standard-setters and project developers. It provides clarity on the development and implementation of nature-positive action from the private sector (Box 1).

BOX 1 **The relevance of this roadmap to financial institutions**

Financial institutions have significant indirect influence through their financing of businesses that potentially affect nature. They should therefore develop their own nature strategies and ensure that their financed businesses do the same. To assist them, the World Economic Forum developed *Financing the Nature-Positive Transition: Understanding the Role of Banks, Investors and Insurers*, a briefing for chief executive officers that articulates key actions financial institutions can take on nature.

BOX 2 | **Definition of key terms**

Defining "nature finance"

Nature finance is a multifaceted concept that encompasses the mobilization of financing for biodiversity conservation and restoration, nature-based solutions (NbS) and the sustainable management of natural ecosystems. It involves various financial activities, investments and strategies aimed at halting and reversing nature and biodiversity loss.

Defining "biodiversity credits", including their relationship to carbon credits

Biodiversity credits are one of many nature finance mechanisms. Biodiversity credits are defined as a certificate that represents a measured and evidence-based unit of positive biodiversity outcome that is durable and additional to what would have otherwise occurred.[7] This definition and the exact terminology around "biodiversity", "nature", "credit" and "certificate" in the context of this market are still evolving, however. This roadmap uses the term "biodiversity credit" to refer to credits that cover actions that result in positive impacts on both nature and biodiversity. This term is used for consistency and because of its wide acceptance and specific use in Target 19 of the Kunming-Montreal Global Biodiversity Framework (GBF).[8]

Biodiversity credits are distinct from carbon credits in that they specifically focus on biodiversity conservation and restoration. Businesses purchasing carbon credits can expand their focus and exploit opportunities to incorporate nature co-benefits. When looking to engage with projects yielding both carbon and biodiversity benefits, businesses can consider specific carbon and biodiversity credit standards to better understand how to align the relevant metrics. While some climate finance initiatives do integrate nature and biodiversity, this is not consistent across the board. This inconsistency can present challenges for businesses seeking to align climate and nature goals.

Defining "nature positive"

As defined by the Nature Positive Initiative and Business for Nature "nature positive" is a global societal goal to halt and reverse nature loss by 2030 and achieve full recovery by 2050, and by extension refers to the actions, policies and strategies contributing to this goal. The concept emphasizes the importance of creating net-positive outcomes for nature (meaning that human activities should contribute to the overall health and resilience of natural systems).[9]

In practice, nature-positive action might involve the following:

- **Restoration**: Actively restoring degraded ecosystems through, for example, reforestation, post-mining restoration, wetland restoration and coral reef rehabilitation
- **Sustainable practices**: Implementing agricultural, forestry and fishing practices that support biodiversity and ecosystem health
- **Conservation**: Protecting critical habitats and endangered species through the establishment of protected areas and wildlife corridors
- **Green infrastructure**: Designing urban and rural development in ways that integrate natural elements and support biodiversity, for example, through NbS
- **Nature financing**: Making investments that benefit natural ecosystems
- **Community engagement**: Involving local communities in conservation and restoration projects, recognizing their role and knowledge in managing natural resources

Delivering the nature-positive goal requires measurable net-positive outcomes for biodiversity, which can be attained by increasing the abundance, diversity, integrity and resilience of species, ecosystems and natural processes.[10] All stakeholders, across economy, civil society and private and public sectors, should contribute to the global goal of being nature positive.

1 Overview of nature finance and biodiversity credit readiness

Businesses can achieve nature finance readiness with a nature strategy and a complementary nature finance action plan.

> To finance nature conservation and restoration meaningfully, businesses must understand their impacts and dependencies on nature and have a solid plan for cultivating and funding improvements.

While conserving and restoring nature is urgent, charging forward without sufficient preparation could undermine effectiveness. To finance nature conservation and restoration meaningfully, businesses must understand their impacts and dependencies on nature and have a solid plan for cultivating and funding improvements.

Three stages to financing corporate nature-positive action

Effectively financing nature-positive actions involves three key stages (Figure 1). The first stage (Chapter 2 of this roadmap) is about developing a nature strategy using frameworks such as ACT-D. The second stage (Chapter 3) is about defining a nature finance action plan that details the strategy's implementation, with particular emphasis on nature financing instruments (such as biodiversity credits). This includes four steps:

1. Define actions and value
2. Identify metrics
3. Procure credits (or other instruments) with integrity
4. Manage communication and claims

The third stage (Chapter 4) describes the alignment of the nature strategy with the nature finance action plan, which ideally occurs through an iterative process for consistency. Businesses with existing nature strategies can use them to create nature finance action plans and update the strategies as needed (Box 3).

The appendices outline additional relevant considerations, such as required capabilities and collaborations, advantages and disadvantages of various nature finance mechanisms, and an applied example of a nature strategy and finance action plan.

BOX 3

The potential of early pilots

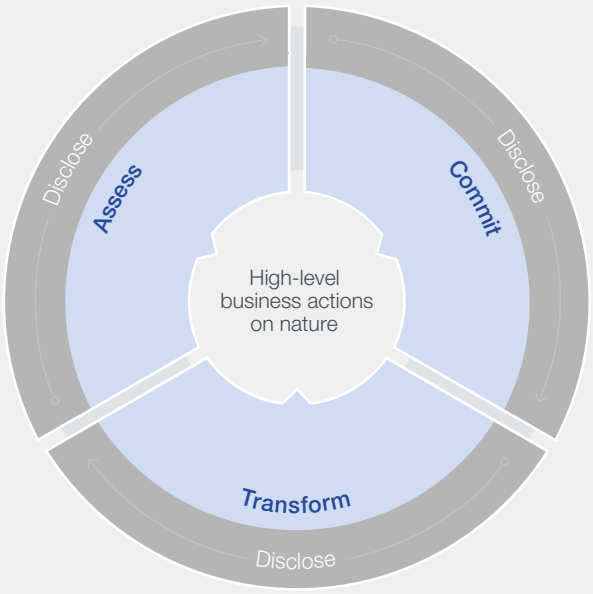
Some early movers have successfully implemented nature-positive actions, even without fully fledged nature strategies. Such early pilots can be beneficial in generating momentum and insights both inside and outside of a business. Furthermore, they can help to prepare for participation in potential voluntary and compliance markets.

The success of these early pilots, however, depends on certain prerequisites, such as the presence of robust methodologies, the upholding of integrity and transparency principles, collaboration with local stakeholders – including Indigenous Peoples and local communities (IPs and LCs) – and reliable and accurate tracking of impact.

FIGURE 1 | **Overview of the stages involved in nature finance and biodiversity credit readiness**

Developing an overarching nature strategy with high-level vision and ambition using the ACT-D framework (Chapter 2)

The strategy should ensure sufficient depth in understanding where to act and quantify business benefit.



Building a nature finance action plan detailing the approach to nature finance and possibly biodiversity credits in four key steps (Chapter 3)

Nature finance in general

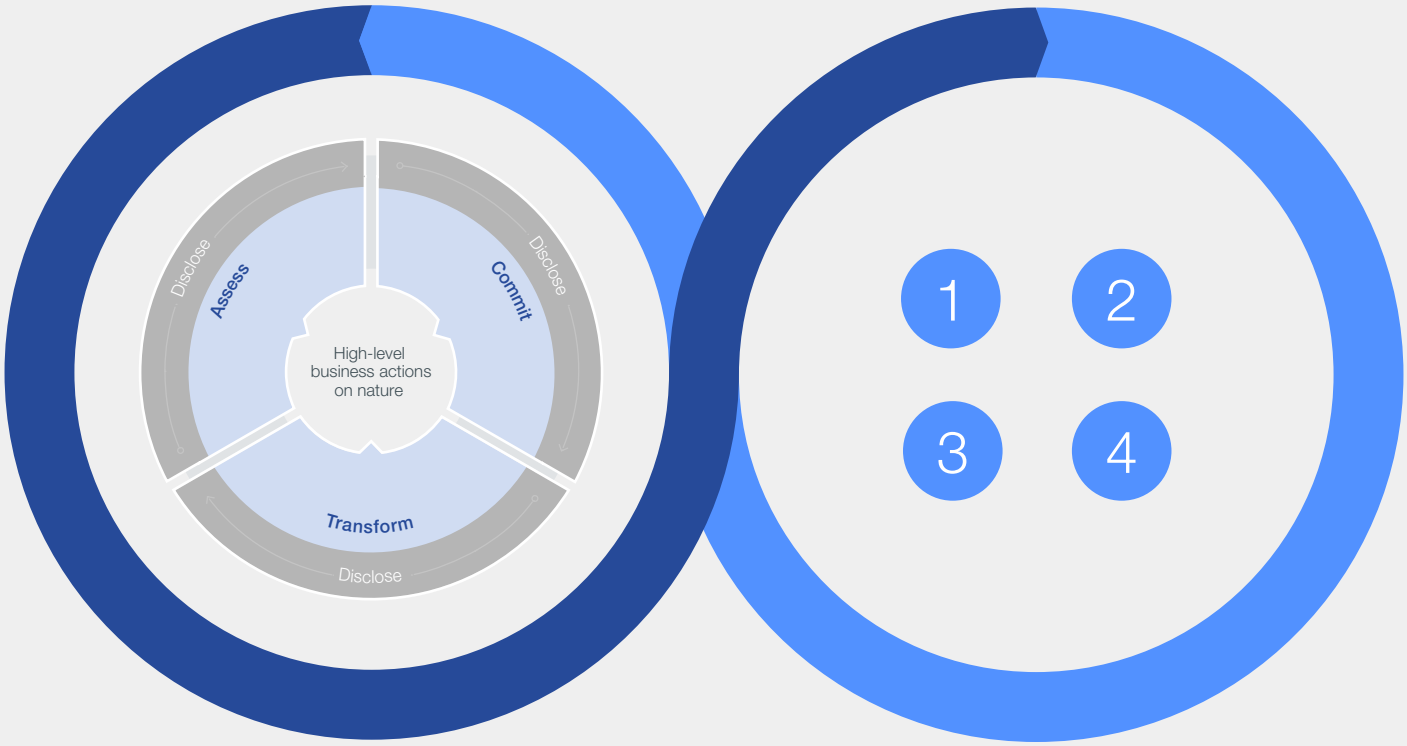
1. **Define actions and value**: Identify and prioritize actions following the mitigation hierarchy, based on impact on nature and business. Specify an implementation plan and prepare to make relevant disclosures.
2. **Identify metrics**: Select robust and fit-for-purpose metrics to measure the outcomes of the chosen actions.

If biodiversity credits are chosen as one course of action

Nature finance applied to biodiversity credits as example

3. **Procure credits (or other instruments) with integrity**: Set procurement principles and identify suitable credits.
4. **Manage communication and claims**: Ensure transparent and appropriate communication.

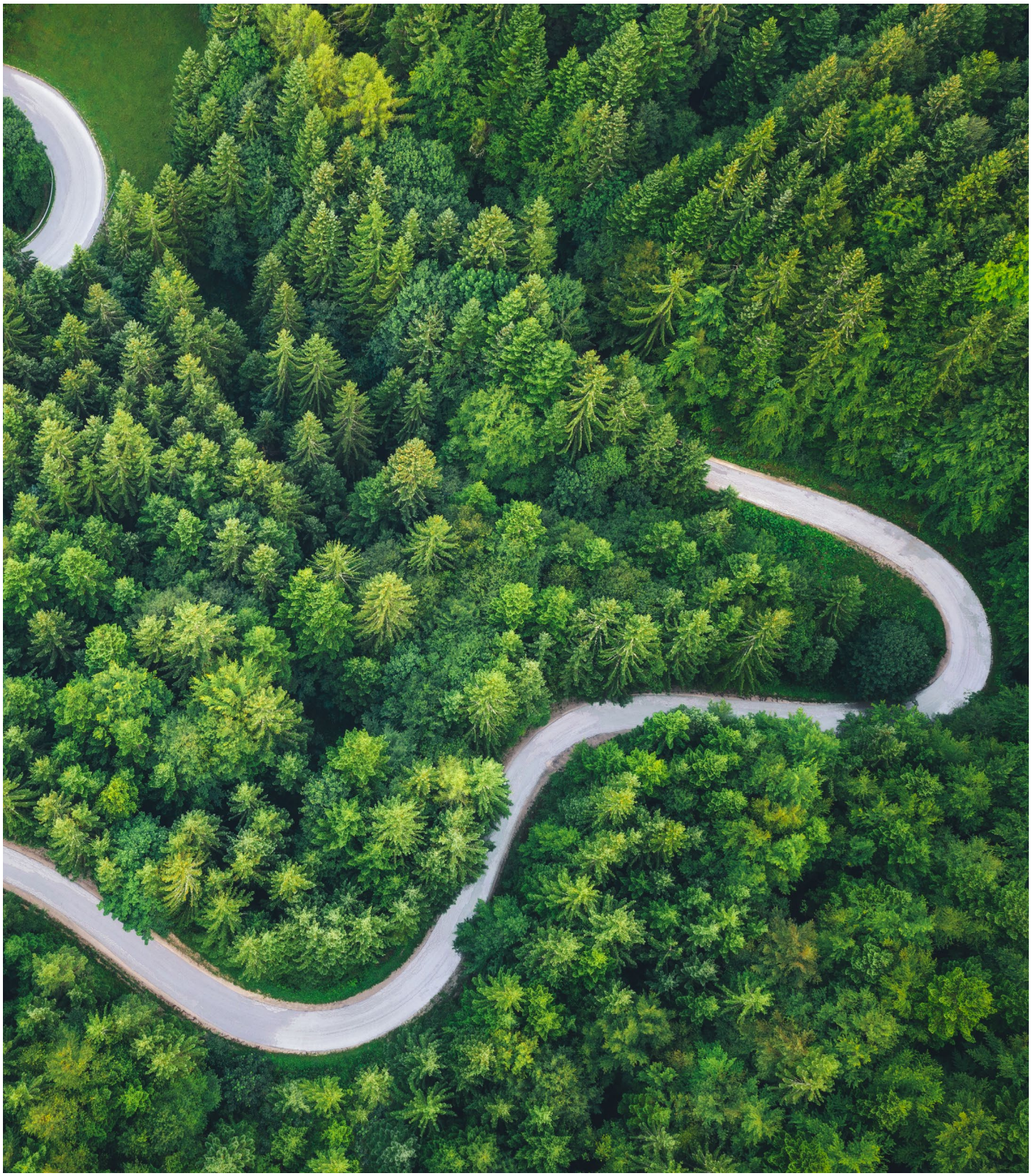
Aligning the nature strategy and nature finance action plan, ensuring coherence (Chapter 4)



Source: Adapted from Business for Nature. (n.d.). *High-level Business Actions on Nature*. https://www.businessfornature.org/high-level-business-actions-on-nature.

2 Develop a foundational nature strategy

A comprehensive nature strategy is the first step towards nature-positive action.



The nature strategy is an integral part of the sustainability strategy, which supports the broader corporate strategy and is crucial for businesses aiming to contribute to a nature-positive future.

Such a strategy helps mitigate or reverse environmental impact while ensuring sustainable resource use, and builds resilience against nature-related disruptions.

2.1 Nature strategy and ACT-D

A nature strategy should set targets aligned with halting and reverting nature loss, such as the GBF's 30 by 30 target (the protection and sustainable management of 30% of global lands and oceans by 2030),[11] and guide all nature-related actions, including financing. Funding third-party conservation projects, directly or through biodiversity credits, can help achieve these targets.

Key components of a nature strategy

While nature strategies can vary in both breadth and depth, three key components should be present – a baseline, targets and a nature finance action plan (Figure 2). Each element can be developed with varying degrees of detail, with the expectation that the strategy will become increasingly comprehensive over time.

FIGURE 2 **Three key components of a nature strategy**

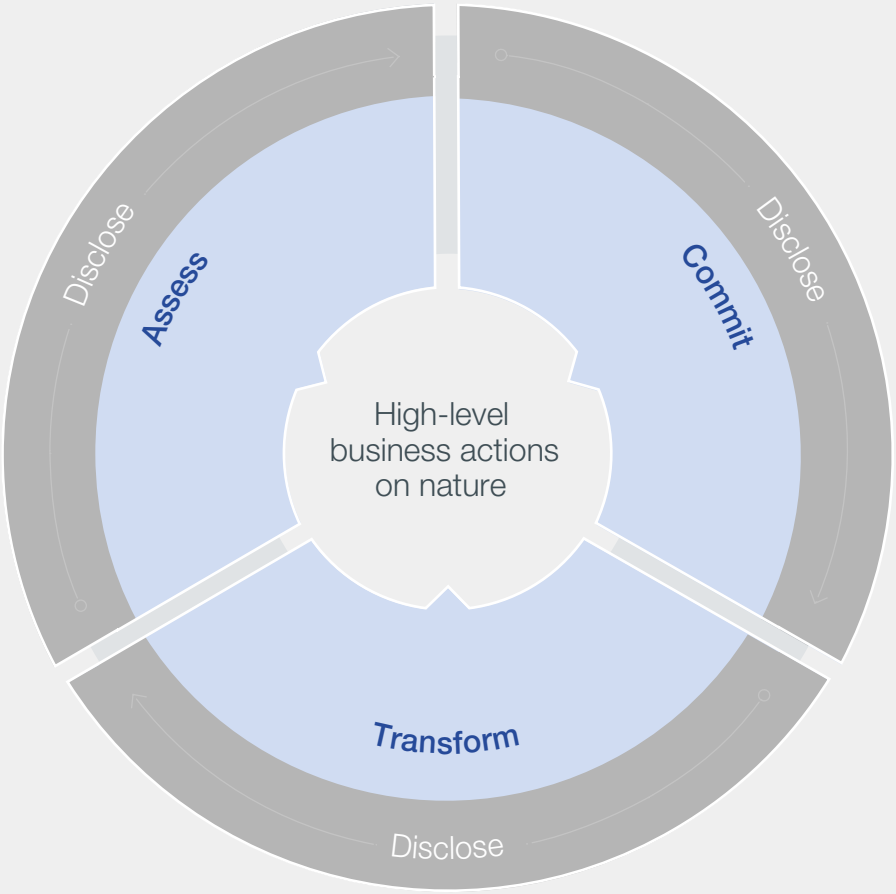
Key component	Example subcomponents
Baseline of nature impact, dependence, risks and opportunities	– Overview of locations with material impacts and dependencies – Map of how risks and opportunities may affect the business model – Stakeholder mapping
Targets, possibly based on external bodies and benchmarks	– Nature ambition statement, including business case and compounding effect on the sustainability and corporate strategy – Plan to monitor and evaluate progress against targets, e.g. key performance indicators (KPIs) – Rationale for action (e.g. regulation, voluntary), including respective frameworks, e.g. European Union (EU) Corporate Sustainability Directive (CSRD), EU Corporate Sustainability Due Diligence Directive (CSDDD), Taskforce on Nature-related Financial Disclosures (TNFD)
Nature finance action plan for nature-positive actions following the mitigation hierarchy	– Planned actions to restore, regenerate, and avoid and reduce harm to nature, including individual and joint business case – Planned actions to offset and contribute beyond own impact, including respective business case – Rationale for chosen nature financing mechanisms – Implementation plan for each action, detailing accountability, timeline, stakeholders, procurement principles, monitoring and verification processes, etc. – Internal and external disclosure frameworks aligned with the TNFD – External communication strategy in line with risk and claims guardrails (including but not limited to sustainability reports)

ACT-D as a framework for nature strategy

All three key components of nature strategies are covered in the ACT-D framework, described in Business for Nature's *Nature Strategy Handbook* and further discussed in the *Roadmaps to Nature Positive* from the World Business Council for Sustainable Development. ACT-D, presented in Figure 3, outlines high-level business actions on nature.

ACT-D is not the only option, and other frameworks can be used to complement it, or as alternatives (Box 3). This roadmap uses ACT-D because of its wide adoption. The reader is encouraged to consult the resources referenced across this roadmap for further details on how to implement it.

FIGURE 3 **Graphic representation of the ACT-D framework**



Assess

Measure, value and prioritize your impacts and dependencies on nature to ensure you are acting on the most material ones.

Commit

Set transparent, time-bound, specific, science-based targets to put your company on the right track towards operating within the Earth's limits.

Transform

Contribute to systems transformation by avoiding and reducing negative impacts, restoring and regenerating, collaborating across land, seascapes and river basins, shifting business strategy and models, advocating for policy ambition and embedding your strategy within your corporate governance.

Disclose

Publicly report material nature-related information throughout your journey.

Source: Adapted from Business for Nature. (n.d.). *High-level Business Actions on Nature*.

BOX 3 **Introductions to the Taskforce on Nature-related Financial Disclosures and the Science Based Targets Network**

The Taskforce on Nature-related Financial Disclosures (TNFD) and the Science Based Targets Network (SBTN) offer notable complementary guidance on specific elements of ACT-D.

The TNFD's *Recommendations of the Taskforce on Nature-related Financial Disclosures* offers risk management and disclosure recommendations for nature-related dependencies, impact, risks and opportunities, including implementation guidance and technical supplements. The TNFD focuses on the "assess" and "disclose" portions of ACT-D.

The SBTN provides science-based target-setting guidelines for companies and cities to reduce and improve their impact on nature, building on the Science Based Targets initiative (SBTi) and considering the TNFD by translating nature-related impacts into actionable, measurable, time- and place-bound targets. The SBTN primarily supplies guidance on the "assess" and "commit" parts of ACT-D. It uses the AR3T framework for nature strategies, emphasizing avoidance and minimization of negative impacts before restoration and regeneration.

2.2 Achieving sufficient depth of understanding in the nature strategy

Nature strategies are still relatively new and guidance on them is typically high-level. Therefore, strategies may have varying levels of depth, depending on factors such as the resources allocated to their development, available data and stakeholder expectations. For the nature strategy to effectively guide a nature finance action plan, two areas require sufficient depth of understanding and formulation:

- Understanding where to act
- Quantifying the benefits to business, nature and communities

Understanding where to act

Effective nature strategies assess a business's impacts and dependencies. Heatmaps are an effective method to represent complex datasets (Figure 4), using criteria such as soil nutrients (e.g. nitrogen, phosphorus and potassium), erosion rates and water quality – e.g. pH (potential of hydrogen), turbidity and use – to map impacts and dependencies across locations. Initially, businesses may lack data for in-depth analyses, but they can progressively enhance detail over time.

Heatmaps can set initial strategic direction on where to act by highlighting a business's nature dependencies, impacts and financial considerations. These factors can be tailored to relevant dimensions such as business activities, commodities or sourcing locations. For example, Figure 4 maps financial considerations and nature impacts at specific operational sites. This illustrative company might prioritize all impact dimensions at site 2 due to the significant respective revenue share while focusing on soil quality at site 1 and water-related actions at sites 3 and 4 based on the respective dependencies. Subsequently, as part of the nature finance action plan, businesses can apply high-level guidance and tools such as heatmaps to define concrete actions (section 3.1).

FIGURE 4 **Illustrative heatmap of a company's revenue, dependencies and impacts on nature per site**

“ There are many databases and tools to help businesses understand where their impact on nature is most material.

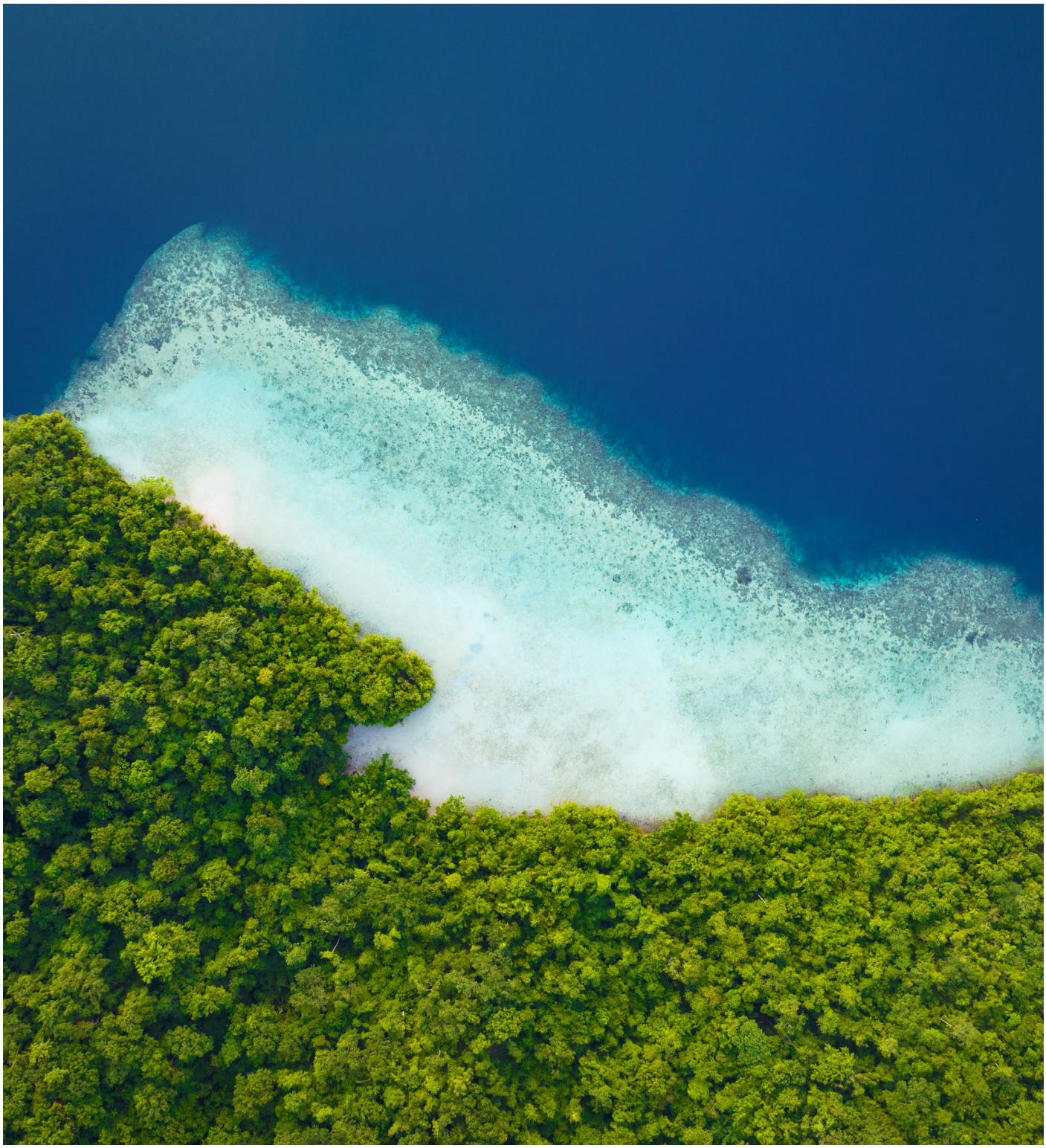
There are many databases and tools to help businesses understand where their impact on nature is most material. For example, the Taskforce on Nature-related Financial Disclosures (TNFD) Tools Catalogue is a repository of nature-related data tools available today, including the Biodiversity Intactness Index (BII), the Integrated Biodiversity Assessment Tool (IBAT) and more.

Quantifying the benefit to business, nature and community

A nature strategy should also quantify the value at stake, including assets exposed to nature-related risks and potential value generated from nature-positive actions. While detailed business case analyses are part of the nature finance action plan (section 3.1), businesses often perform rapid top-down calculations as part of the nature strategy. To do so, they can draw insights from industry-level analyses, such as *Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy*, which discusses value at risk by sector, *The Future of Nature and Business*, which identifies $10 trillion value opportunities, Sector Actions Towards a Nature-Positive Future, which outlines value creation through five nature-positive actions across different sectors and the TNFD’s *Guidance on scenario analysis*, which helps organizations examine potential impacts of nature loss and climate change.

3 Build a nature finance action plan

A nature finance action plan that is integrated with the nature strategy is key to operationalizing the strategy's goals.



In tandem with the nature strategy, businesses should define a nature finance action plan. This is a key step in translating the strategy into concrete action. A nature finance action plan is defined following four main steps, as described in Figure 5.

Identifying metrics for the nature finance action plan (step 2) follows the definition of actions and value (step 1), which may seem counterintuitive at first. This sequence, however, ensures that the chosen metrics are fit for purpose, meaning they are tailored to specific actions and can robustly measure the outcomes of the specific actions identified (section 3.2). In step 1, businesses will still require both qualitative and quantitative factors to evaluate and compare potential actions, but these factors will generally be at a higher level (section 3.1).

FIGURE 5 **Overview of four main steps to a nature finance action plan**

	Step	Components
Nature finance in general 	1 **Define actions and value**	– List possible actions. – Evaluate and choose actions based on qualitative and quantitative factors. – Decide scope of actions (within own operations, within the value chain or beyond the value chain) and whether to work in-house or use partners.
	2 **Identify metrics**	– Define how to measure positive and negative impact of actions on nature with robust, science-based metrics. – Given the nascency of currently available guidance and the rapid evolution of the market, be ready to adopt individual stances.
	If biodiversity credits are chosen as one course of action	
Nature finance applied to biodiversity credits as example 	3 **Procure credits (or other instruments) with integrity**	– Develop procurement principles based on key criteria (such as objectives, preferred credit types, integrity screening criteria, use case, budget, timeline). – Identify and procure suitable biodiversity credits.
	4 **Manage risks and claims**	– Monitor and manage risks to ensure biodiversity credits generate and maintain real, positive impact. – Guarantee truthful and fully transparent communication (e.g. by avoiding overstatement of impact).

3.1 Step 1: Define actions and value

To maximize the overall benefit to nature, the choice of actions should follow the principles of the mitigation hierarchy.

Defining actions and understanding their value is the first step towards achieving nature-positive goals. To date, the value of nature-positive actions has often been uncertain, which poses challenges for decision-makers approving implementation and assessing potential trade-offs. This section aims to assist teams in building a compelling business case for nature-positive actions.

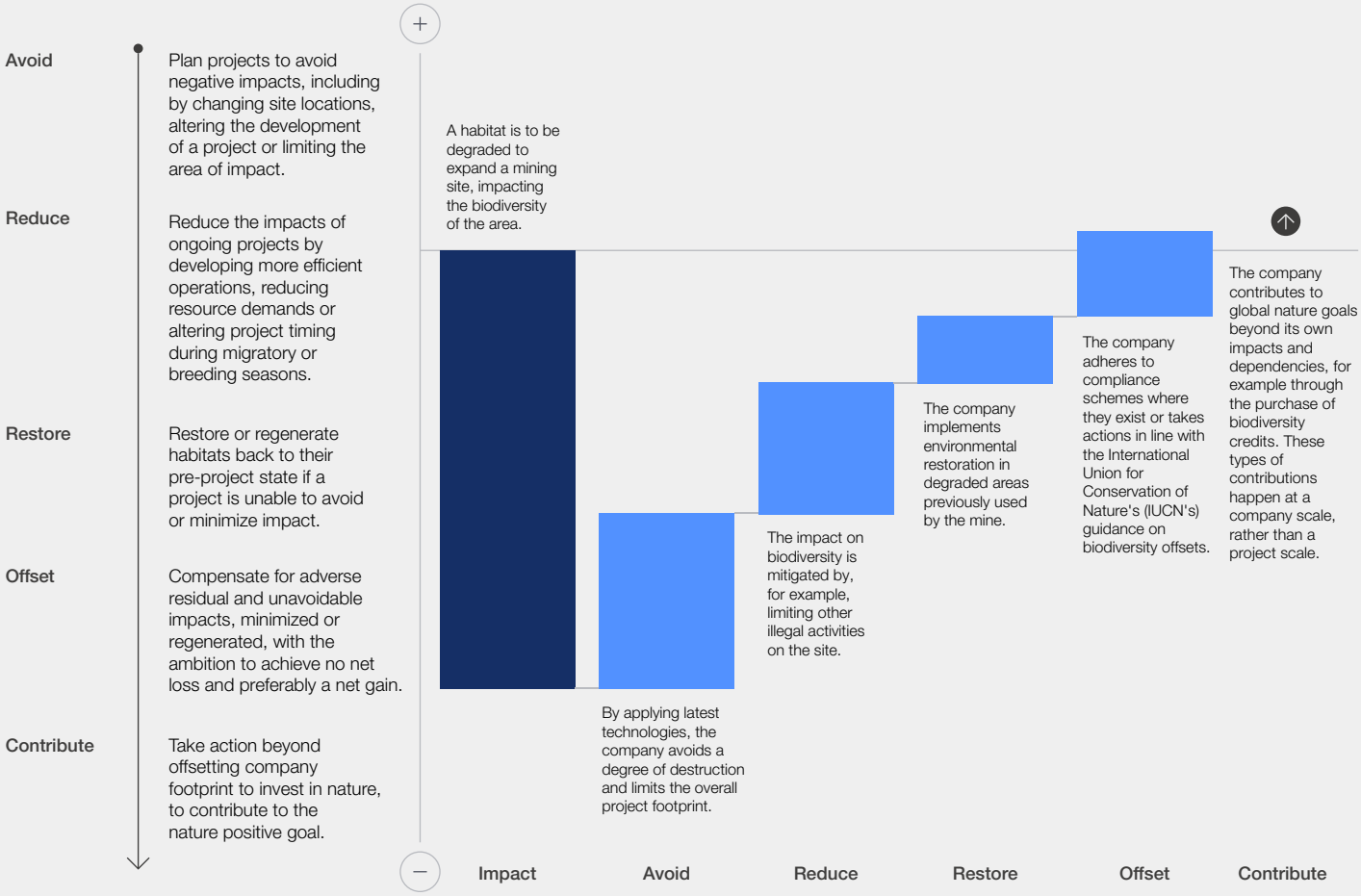
Mitigation hierarchy governing the choice of actions

To maximize the overall benefit to nature, the choice of actions should follow the principles of the mitigation hierarchy, which are relevant at a site and landscape level. In practice, this means that organizations should prioritize implementing actions to avoid and reduce their negative impacts, and restore and regenerate ecosystems. Organizations should ensure they are harnessing the maximum potential of these options before contributing to nature-positive goals beyond their own impact. Figure 6 shows the mitigation hierarchy applied to an illustrative example of a site-based project. An alternative example can be found in the interactive action framework of AR3T by the SBTN.

FIGURE 6 | A potential application of the mitigation hierarchy

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

For example, a mining company can apply different levers to mitigate its impact on nature.

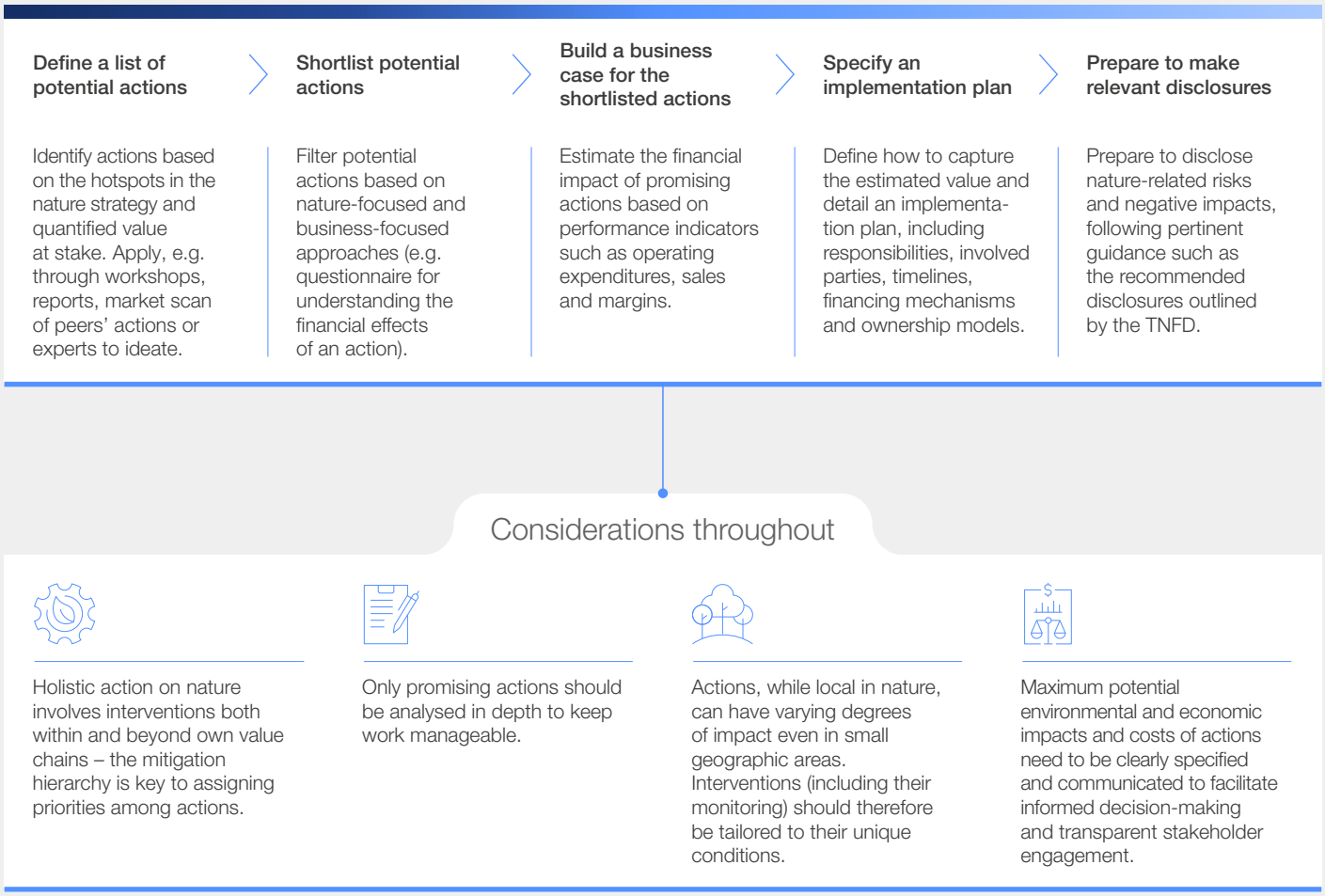


Sources: International Union for Conservation of Nature (IUCN). (2016). *Biodiversity Offsets*; The Biodiversity Consultancy. (n.d.). *Net Positive and the Mitigation Hierarchy*; Forest Trends. (n.d.) *The Mitigation Hierarchy*; The Nature Conservancy (TNC). (2015). *Achieving Conservation and Development: 10 Principles for Applying the Mitigation Hierarchy*. https://www.conservationgateway.org/Documents/TNCApplyingTheMitigationHierarchy.pdf; The Business and Biodiversity Offset Programme (BBOP). (2018). *The BBOP Principles on Biodiversity Offsets*. https://www.forest-trends.org/wp-content/uploads/2018/10/The-BBOP-Principles_20181023.pdf.

Identifying potential actions and streamlining the selection process

To help businesses define potential actions, narrow down options and build a comprehensive business case, Figure 7 highlights the key stages involved, which are subsequently discussed in greater detail.

FIGURE 7 **An exemplary prioritization funnel for actions, considering nature and business impact**



Defining a list of potential actions

Generating a list of potential actions, in line with the priorities identified in the nature strategies, can be challenging, given that it may be difficult to identify direct links between a specific business and ecosystem services. Businesses can identify possible actions by making use of experts, internal workshops and resources such as the Sector Transitions to Nature Positive reports, the TNFD's LEAP (locate, evaluate, assess, prepare) approach[12] and the SBTN's five-step approach (assess, interpret and prioritize, measure, set and disclose, act, and track).[13]

When following the first three phases of the TNFD LEAP approach (locate, evaluate and assess), businesses will arrive at a set of insights that help clarify the list of potential actions.

These insights are generated from activities such as:

1. Identifying nature-related dependencies and impacts of specific business activities or assets (like the heatmap analysis shown in section 2.1 but at a more detailed level)
2. Identifying location-specific issues that require management attention
3. Conducting materiality and risk assessments for specific business areas (e.g. commodities)

Similar activities can be performed by following the first two steps of the SBTN's five-step approach (assess, and interpret and prioritize). Note that holistic intervention includes nature-positive actions within own operations, value chains and beyond.

Shortlisting potential actions

Filtering and prioritizing – part of the first TNFD phase (locate) and of the SBTN second step (interpret and prioritize) – are strictly interlinked with definitions of potential actions, and can be approached from various angles. From an ecological point of view, prioritization approaches in existing literature are based on factors such as:

1. Intervention efficiency (considering locally relevant current and future habitat status, anthropogenic pressures and the protection and status of specific species)[14]
2. Adaptive capacity (namely the ability to adapt to unavoidable environmental changes, such as climate change)[15]
3. Biodiversity hotspots[16] (areas with exceptionally high levels of species richness, e.g. at least 1,500 endemic vascular plant species under significant threat, or at least 70% of original habitat lost)[17]
4. Global extinction risk of species[18]

To complement this nature-focused perspective with a more business-driven approach to prioritization, Figure 8 illustrates how businesses can also filter possible actions based on their potential to yield financial value. These actions can be broadly categorized into safeguarding existing value at risk and generating new value. This qualitative approach can be complemented by quantitative substantiation in the subsequent stage (building a business case for shortlisted actions).

The TNFD has outlined alternative representations of the financial effects of nature-positive actions.

Building a business case for shortlisted actions

Actions that indicate a promising effect on nature and business can then be analysed further. This can include a more detailed bottom-up quantitative analysis of their individual and joint benefits (both financial and for nature).

FIGURE 8 **Key drivers of financial value for nature-positive actions and prioritization criteria**

	Value driver	Description	Prioritized actions should score be…
Value at risk	**Transition nature risk**	Risks from transitional nature policy and regulation, e.g. deforestation penalties, stranded assets	– Mitigating expected penalties, e.g. deforestation – Avoiding lost sales, e.g. import/export regulation prohibiting companies/products with large nature footprints
	Physical nature risk	Lost output from disruption of ecosystem services, e.g. lower crop yields due to decline in bee populations	– Helping ensure access to critical ecosystem services in value chain, e.g. pollination – Avoiding risk of stranded assets, e.g. by acquiring efficient machinery that may become required later
	Reputational risk	Loss in image and brand value and consequent loss in market share	– Addressing key concerns of stakeholders, e.g. customers, value chain collaborators – Yielding improvement in key reputational issues, e.g. water consumption
	Financing risk	Limited access to certain sources of financing, potentially at raised interest rates	– Helping meet investor requirements, e.g. by adhering to sustainability requirements – Possibly providing access to new financing sources, e.g. green bonds
Value creation	**Net cost savings from risk mitigation**	Investments in nature-positive action, rewarded by avoided nature-related costs, e.g. taxes and compliance fees	– Indicating a solid case for cost savings, e.g. reduced risk of supply chain disruption in the context of El Niño
	Value unlock from risk mitigation	Value unlocks, e.g. enhanced reputation, increased staff retention and new investors	– Generating clear gains for external and internal communication – Meeting sustainability-related criteria from customers and suppliers
	Operational efficiencies	Increased output at reduced nature impact due to enhanced operational efficiency and resilient value chains, e.g. savings from reduced water use and waste reduction	– Representing no-regret moves, e.g. efficiency gains from operational excellence – Potentially inducing a value chain partner to adopt nature-positive actions
	Nature as a growth theme	Growth unlocks, e.g. increased market share, green premiums and new business opportunities with greener products	– Cultivating sale of products with a green premium – Serving an attractive market and target customer base

These more thorough business cases should substantiate the top-down estimate done in the nature strategy (section 2.2) and complement the qualitative analysis from the previous stage (shortlisting potential actions). Ultimately, they can provide the business rationale for nature finance.

Figure 9 shows how nature-related risks and opportunities can influence financial value, including examples for quantifying the impact and the role of biodiversity credits.

The cost efficiency of actions and measures is critical. Valuable guidance on the cost-effectiveness of conservation can be found in the Database of Conservation Evidence and additional ongoing research.[19]

FIGURE 9 **Illustrative value protection and creation supported by financing nature-positive outcomes**

Value indications are indicative

Sources: Simon, F. (2023). *Indonesia, Malaysia seek more time to implement EU anti-deforestation law*. Euractiv; Staal, A. et al. (2018). Forest-rainfall cascades buffer against drought across the Amazon. *Nature Climate Change*, vol. 8, pp. 539-543; Mighty Earth. (2023). *Sauver le Cerrado: Les Supermarchés, Bunge et les Gouvernements Doivent Agir sans Tarder*; Mongabay. (2009). *World Bank's IFC suspends lending to palm oil companies*; Neste. (2018). *Neste-lead project verified 50% methane emission reduction at palm oil mills*; Proforest. (2020). *Sustainable Palm Oil: Trade and key players between Indonesia and China*; McKinsey & Company analysis.

Specifying an implementation plan

After identifying actions and their value, businesses can decide how to capture that value and over which timelines. For example, to protect land near cotton farms and ensure pollinators thrive, a business could either pay a third party or manage the land itself.

Implementation plans should define clear responsibilities relating to internal and external stakeholders involved, ownership rights, timelines, milestones linked to value drivers and tracked by robust metrics, and reliable allocation of capital and resources. Such plans should also include decisions on the financing mechanisms used to implement the actions (such as biodiversity credits). Note that credits are only one of many nature financing mechanisms. A non-exhaustive overview of nature financing options, including their advantages, disadvantages and suitability, can be found in the appendices. Furthermore, the Biodiversity Finance Initiative (BIOFIN) maintains a Catalogue of Finance Solutions.

Preparing to make relevant disclosures

In line with GBF target 15 and other frameworks like the TNFD and SBTN, businesses should assess, reduce and disclose their nature-related dependencies, impacts, risks and opportunities. Preparing to make disclosures can make identifying and taking concrete action easier. TNFD's *Recommendations of the Taskforce on Nature-related Financial Disclosures* (Figure 10) is an overview of recommended disclosures. Guidance on disclosing is not only relevant for the priority actions identified, but is also relevant during step 4 of the nature finance action plan (manage communication and claims) and should be closely aligned with the final element of the nature strategy's ACT-D framework: disclose.

FIGURE 10 **Recommended disclosures as outlined by TNFD**

Governance	Strategy	Risk and impact management	Metrics and targets
Disclose the organization's governance of nature-related dependancies, impacts, risks and opportunities.	Disclose the effects of nature-based dependencies, impacts, risks and opportunities on the organization's business model, strategy and financial planning where such information is material.	Describe the process used by the organization to identify, assess, prioritize and monitor nature-related dependencies, impacts, risks and opportunities.	Disclose the metrics and targets used to assess and manage material nature-related dependencies, impacts, risks and opportunities.
Recommended disclosures			
1 Describe the board's oversight of nature-based dependencies, impacts, risks and opportunities. 2 Describe management's role in assessing and managing nature-related dependencies, impacts, risks and opportunities. 3 Describe the organization's human rights policies and engagement activities, and oversight by the board and management. Ensure respect to IPs, LCs and affected and other stakeholders in the organization's assessment of, and response to, nature-related dependencies, impacts, risks and opportunities.	1 Describe the nature-related dependencies, impacts, risks and opportunities the organization has identified over the short, medium and long term. 2 Describe the effect nature-related dependencies, impacts, risks and opportunities have had on the organization's business model, value chain, strategy and financial planning, as well as any transition plans or analysis in place. 3 Describe the resilience of the organization's strategy to nature-related risks and opportunities, taking into consideration different scenarios. 4 Disclose the locations of assets and/or activities in the organization's direct operations and, where possible, upstream and downstream value chain(s) that meet the criteria for priority locations.	1A Describe the organization's processes for identifying, assessing and prioritizing nature-related dependencies, impacts, risks and opportunities in its direct operations. 1B Describe the organization's processes for identifying, assessing and prioritizing nature-related dependencies, impacts, risks and opportunities in its upstream and downstream value chain(s). 2 Describe the organization's processes for managing nature-related dependencies, impacts, risks and opportunities. 3 Describe how processes for identifying, assessing, prioritizing and monitoring nature-related risks are integrated into and inform the organization's overall risk management processes.	1 Disclose the metrics used by the organization to assess and manage material nature-related risks and opportunities in line with its strategy and risk management process. 2 Disclose the metrics used by the organization to assess and manage dependencies and impacts on nature. 3 Describe the targets and goals used by the organization to manage nature-related dependencies, impacts, risks and opportunities and its performance against these.

Source: TNFD. (2023). *Recommendations of the Taskforce on Nature-related Financial Disclosures*.

3.2 Step 2: Identify metrics

All metrics should be robust, science-based, feasible, cost-effective, applicable over long periods of time and indicative of durable, system-scale outcomes.

In recent years, guidance on metrics that businesses can use to track nature-positive actions has undergone continuous progress and evolution. However, challenges remain in some areas, such as accurately attributing benefits of a specific action to a specific party, given that biodiversity outcomes are typically measured across large areas, over long periods of time and are influenced by many stakeholders and projects.

To measure the impact and outcomes of the specific actions identified and selected in the nature finance action plan, companies need to adopt specific metrics that are suitable and tailored to those actions. Nature strategies and nature finance action plans should be designed through an iterative process, so the specific metrics of the nature finance action plan need to align with the indicators and metrics used while defining the nature strategy (e.g. through ACT-D). All metrics should be robust, science-based, feasible, cost-effective, applicable over long periods of time and indicative of durable, system-scale outcomes (as outlined in step 1).

Existing metrics in disclosure and target-setting frameworks

Although metrics related to biodiversity are used frequently, no universally accepted biodiversity-specific disclosure standard exists. The TNFD provides some guidance on measuring nature in general.[20] Examples of its core global disclosure metrics for nature-related dependencies and impacts include total spatial footprint, encompassing surface area controlled, disturbed and rehabilitated/restored (km^2, TNFD indicator reference C1.0). They also include extent of land-/freshwater-/ocean-use change (km^2, C1.1), amount of wastewater discharge (m^3, C2.1) and quantity of high-risk natural commodities sourced from land/ocean/freshwater (t, C3.1), all within an organization's operations and value chains and directly mapping to GBF targets. Furthermore, the TNFD also provides core global disclosure metrics for nature-related risks and opportunities (C7.0-C7.4), core sector metrics and an array of additional global disclosure metrics, such as for responses to nature-related issues. Examples of these metrics include an organization's investment in projects that mitigate and reduce negative nature impacts or conserve ecosystems where impacts cannot be avoided (A21.0), restoration of negatively affected species and ecosystems (A23.2), and value of operational/capital expenditure. These examples are paired with mitigation hierarchy actions based on value and/or proportions (A23.5).

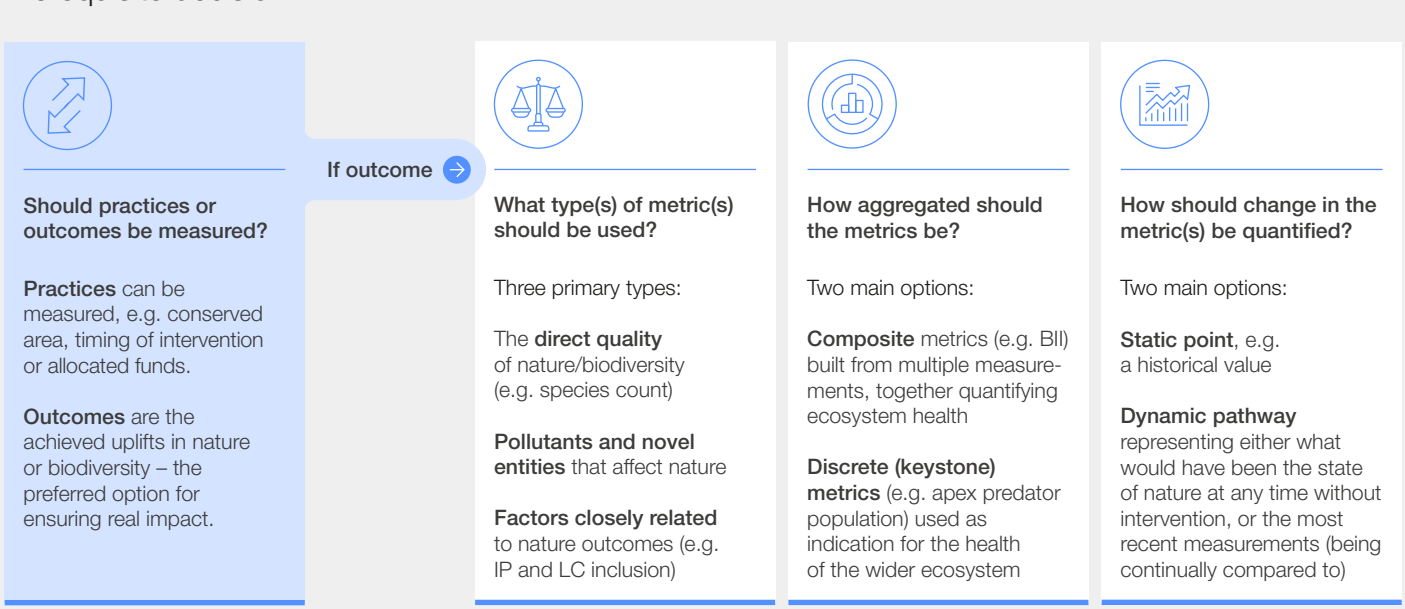
The suite of metrics outlined by TNFD help gauge an organization's impact on nature as well as responses to nature-related issues overall. However, there is still a lack of guidance on how these metrics apply and pertain to different nature financing mechanisms such as biodiversity credits, where metrics tend to be more detailed and tailored to specific circumstances. This is also the case for other guidance, such as the SBTN and the CSRD. Guidance is, however, consistently enhanced, for instance through regular publications by the TNFD, the SBTN and the Nature Positive Initiative.

Navigating the dynamic field of nature and biodiversity metrics

As overall metrics guidance evolves, businesses should strive to align with the TNFD and SBTN, staying informed on emerging guidelines and engaging with these institutions to ensure feasible standards are set in line with technological and cost considerations. Today, no existing framework may have sufficient specificity for a given business or action, so frontrunners may have to choose what they believe to be most suitable and select metrics accordingly (possibly inspired by existing methodologies for biodiversity or other nature-related credits).

To help navigate this fast-moving space, the Forum's 2024 paper, *Biodiversity Credits: Demystifying Metrics for Nature Markets*, supports businesses in adopting a fit-for-purpose measurement approach by guiding on four key decisions, outlined in Figure 11. While the report has been developed specifically for biodiversity credit markets, the insights are also relevant for other financing instruments. The International Finance Corporation also provide guidance on indicative metrics for different biodiversity finance activity.

FIGURE 11 | **Four key decisions to help identify nature and biodiversity metrics**



Source: Adapted from World Economic Forum. (2024). *Biodiversity Credits: Demystifying Metrics for Nature Markets*.

3.3 Step 3: Procure credits (or other instruments) with integrity

While the first two steps of the finance action plan are broadly applicable to other nature financing instruments, the two following steps apply to a situation in which the purchase of biodiversity credits is identified as a concrete action in the nature finance action plan. Nontheless, the insights and considerations in these steps can be applied to other nature financing instruments.

Active risk management across three key risk categories

If businesses select biodiversity credits as one of their preferred nature financing options, they need to understand and mitigate key risks associated with them to avoid cascading negative effects. As outlined in *Biodiversity Credits: A Guide to Support Early Use with High Integrity*, there are three main categories of risks associated with buying biodiversity credits: strategic, operational and reputational risks (Figure 12). These risks can occur independently but are often related.[21]

Strategic risk is the first and most prominent category to consider, as it has the highest potential to create negative effects down the line. For example, strategic risks from an unclear strategy can create operational risks that cause the purchase of low-integrity credits, in turn leading to inaccurate claims that cause reputational risks.

Developing a holistic nature strategy and following key principles outlined in the previous steps of the nature finance action plan (e.g. mitigation hierarchy) can help businesses mitigate strategic risks.

Operational risks are best mitigated through strong due diligence and procurement principles, which enable the identification of high-integrity credits and their credible procurement. These lower the risk of being associated with low-integrity credits.

Finally, **reputational risks** are particularly relevant after businesses have purchased credits. These are discussed in step 4 (manage reputational risks and claims).

FIGURE 12 | **Description and examples of three key risk categories**

Strategic risks

Failure to clearly set and deliver nature-related goals, in which biodiversity credits are embedded

Example: Vague strategic goals are translated into conflicting implementation plans across the organization, leading to significantly reduced progress on nature

Operational risks

Failure to identify trustworthy suppliers and partners and to procure high-integrity credits that deliver positive outcomes for nature and IPs and LCs

Example: Credits of questionable integrity are procured, with subsequently emerging signs of severe leakage issues

Reputational risks

Failure to accurately communicate the purpose and outcomes achieved with biodiversity credits

Example: Misleading communication, purporting credits offset all impact on nature

Source: Adapted from World Economic Forum. (2023). *Biodiversity Credits: A Guide to Support Early Use with High Integrity*.

Credit procurement principles

Before procuring services or instruments supporting nature conservation, such as biodiversity credits, businesses should develop procurement principles that are aligned with the nature strategy.

Figure 13 outlines some important aspects of these principles specifically related to biodiversity credits, adapted from *Biodiversity Credits: A Guide to Support Early Use with High Integrity*.[22] Note that this is not an exhaustive list and the principles will need to be tailored to individual circumstances.

FIGURE 13 | **Main aspects to be covered by procurement principles**

	Covered by procurement principles	Considerations
Credit 	Objectives of credit procurement (e.g. target biodiversity uplift, inclusion of IPs and LCs)	 Alignment with existing procurement and sustainability policies
	Desired volumes to be procured and timing thereof (e.g. on annual basis)	 Available budget
	Intended use case of credits	
	Preferred credit types (e.g. prioritized habitats and metrics)	 Acceptable level of third-party risk
	Credit screening criteria	 Timeline for procurement of credits and demonstrable impact of said credits
Funding and KPI 	Source of funding	
	Science-based KPIs to track procurement and impact	 Tolerable flexibility in case credits fail to meet all preferences

Source: Adapted from World Economic Forum. (2023). *Biodiversity Credits: A Guide to Support Early Use with High Integrity*.

Identifying high-integrity credits

The nature strategy should inform the business's objectives and, therefore, the procurement principles and the preferred credit types. Beside identifying the right type of credits, it is imperative for businesses to ensure the environmental and social integrity of the projects and credit suppliers. The Forum's report *Biodiversity Credits: A Guide to Identify High-Integrity Projects*[23] outlines how businesses can review projects against 10 integrity guardrails, outlined in Figure 14, that will be readily recognizable to carbon credit stakeholders. For each guardrail, the paper provides suggested documentary evidence to be requested from suppliers, including respective review criteria. Further resources include *High-level Governance and Integrity Principles for Emerging Voluntary Biodiversity Credit Markets* and *Biodiversity Credits: A Guide to Support Early Use with High Integrity*. Finally, other screening guidelines also exist, such as the Pollination Group's *Review Frameworks for Biodiversity Credit Schemes*.

FIGURE 14 **10 guardrails for screening the integrity of biodiversity credits**

Rights	**Rights of IPs and LCs**	Project developers should respect and protect the rights of IPs and LCs and ensure their meaningful inclusion in all project stages.
Rights	**Benefit-sharing arrangements with IPs and LCs**	Project developers should ensure transparent, equitable benefit-sharing with IPs and LCs, document biodiversity credit ownership, respect traditional knowledge and compensate for impacts while preserving local livelihoods.
Rights	**Legal rights**	Project developers should have the legal right to carry out a biodiversity credit project.
Credibility	**Transparency requirements**	Governance arrangements should provide publicly available, comprehensive and transparent information on project design and credit issuance.
Credibility	**Independent validation and verification**	Governance arrangements should include regular, independent verification and validation at both the project developer and project levels, involve affected stakeholders, use transparent data collection, publicly disclose review outcomes and recommendations, and implement such recommendations in a timely way.
Credibility	**Monitoring, reporting and verification**	Projects should undergo robust monitoring, reporting and verification (MRV) of biodiversity and community outcomes using sound scientific methods, transparent metrics and traditional knowledge, developed with inclusive participation from IPs and LCs.
Credibility	**Third-party issuance**	Independent third parties should administer projects and issue credits. To avoid double counting, registries that uniquely identify, record, track and securely retire credits should be used.
Quality	**Additionality**	While additionality is an established integrity principle in carbon markets, the value-add of strict additionality clauses for biodiversity credits requires further rethinking, given biodiversity credits are not offsets.
Quality	**Durability (permanence)**	Projects should achieve long-term positive biodiversity outcomes and developers should transparently communicate durability periods and measures to manage or compensate for reversals.
Quality	**Leakage**	Project developers should address leakage risks to prevent the unintended displacement of activities that negatively impact biodiversity outside the project area, undermining intended positive outcomes.

Source: Adapted from World Economic Forum. (2024). *Biodiversity Credits: A Guide to Identify High-Integrity Projects.*

Options for procuring credits

To determine **where** to procure biodiversity credits, prospective buyers can consult recent market landscape mappings, such as the Pollination Group's *State of Voluntary Biodiversity Credit Schemes and Initiatives*, the International Institute for Environment and Development's (IIED's) *Biocredit Catalogue* and the Nature Finance and IIED's *Mapping of Indigenous Peoples and Local Community Involvement in Emerging Biocredits*. Alternatively, the weekly *OPIS Biodiversity Market Report* provides an overview of current nature and biodiversity markets, including credit projects and pricing.

> Reputational risks can be caused by failing to accurately communicate the purpose and outcomes achieved through the purchase of biodiversity credits.

Finally, buyers need to consider their options for **how** to procure credits. Deals are often bilateral since there is currently no centralized marketplace, and they can happen at various stages of the project life cycle. While the most intuitive approach may be to purchase credits post-issuance, entering into offtake agreements at earlier stages, in particular with IPs and LCs, can help project developers and buyers reduce risk by guaranteeing demand at given volumes and prices. In some instances, buyers might benefit from a discounted price for credits pre-issuance, as they would be providing funds early in the project's lifetime and share part of the project risk (such as of failure to generate sufficient credits). Businesses should, however, avoid negotiating prices below project operating costs. Extended offtake agreements should also facilitate flexible pricing and term reviews to manage supply variability and risk sharing. Furthermore, to reach sufficient project scale for meaningful impact on nature, buyers and project developers can collaborate on expanding the number of credit buyers, thereby making use of economies of scale – for instance through reduced monitoring, reporting and verification (MRV) costs – and, at the same time, increase the impact of the money deployed.

Nonetheless, in the case of forward-sold credits, businesses should verify the existence of guardrails that prevent project developers from pre-selling credits to multiple buyers and corporate claims should be made on those credits only after the official credit registration and issuance.

3.4 Step 4: Manage communication and claims

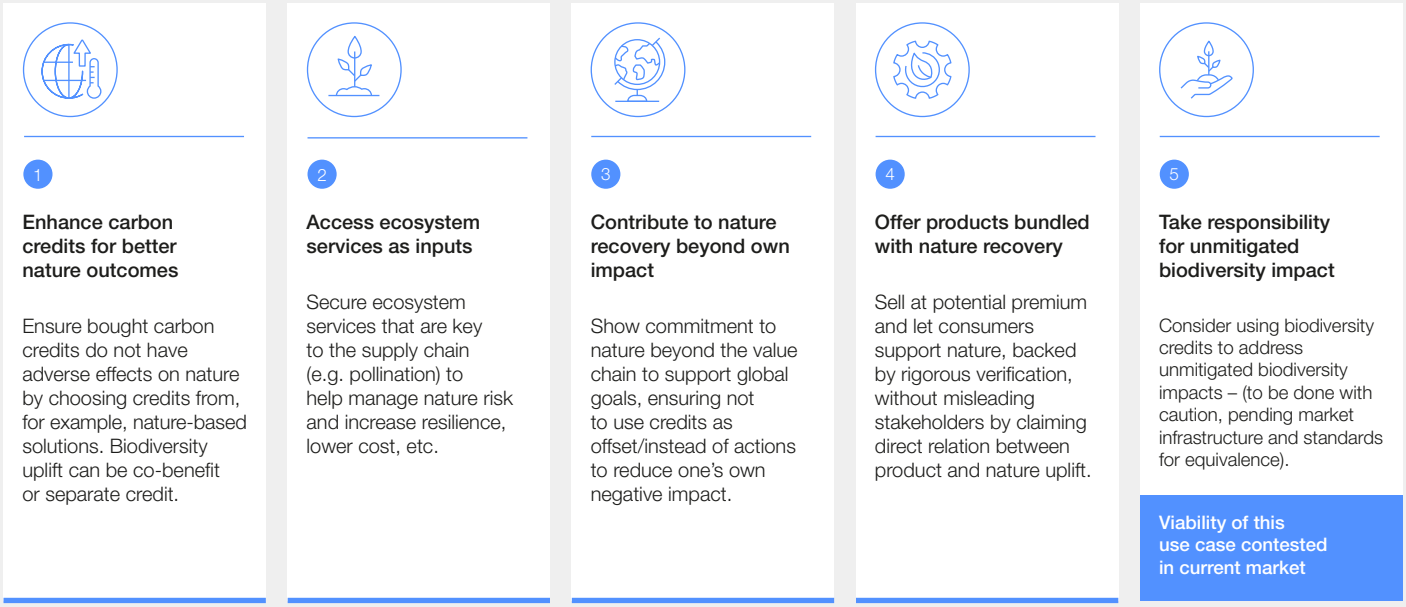
As indicated in section 3.3, reputational risks can be caused by failing to accurately communicate the purpose and outcomes achieved through the purchase of biodiversity credits (Figure 12). Beyond having a solid strategy and an established process to address operational risks, reputational risks are best mitigated by ensuring effective communication of credit-related claims.

The type of claim, made with regards to a biodiversity credit, is closely linked to its use case. Therefore, considerations on which claims to make could be an additional factor in the approach to shortlisting actions in step 1 (define actions and value).

Biodiversity credit claims and use cases

The Forum's 2023 report, *Biodiversity Credits: Demand Analysis and Market Outlook*, delineates five main ways in which biodiversity credits can be used and claimed (Figure 15). One or multiple use cases may be relevant for any biodiversity credit buyer. However, the fifth use case – taking responsibility for unmitigated biodiversity impacts – is currently contested and not seen as a viable option, considering the level of development of the market infrastructure and governance.[24]

FIGURE 15 **Five ways biodiversity credits can be used and claimed**



Source: Adapted from World Economic Forum. (2023). *Biodiversity Credits: A Guide to Support Early Use with High Integrity*.

> There is a need for multistakeholder alignment, specifically around the overall use cases and acceptable claims related to biodiversity credits, some of which are still debated.

Overall, to ensure integrity in the claim, businesses should be clear that they are not using biodiversity credits as a standalone instrument for corporate action, but as one aspect of the broader corporate transition. Before they purchase credits, businesses should ensure that they have goals and targets to halt and reverse nature loss by 2030, that they are maximizing the potential of direct interventions throughout the mitigation hierarchy and are applying the most efficient nature financing mechanism to achieve their objectives. In other words, they should be committed to following guidelines such as those outlined and referenced in this roadmap. Communicating this progression will be crucial to mitigating any reputational risk.

Clear and transparent communication

Communication on the purchase of credits and their intended use should provide clarity on 1) scope, 2) boundary, 3) accuracy and 4) transparency.

1. **Scope** means ensuring clarity on where and how a credit is being used and what the circumstances of the credit are (such as current and future status of the ecosystem, anthropogenic pressures and protection status). Businesses should be clear about whether a credit use applies within or beyond the value chain, as well as whether the credit has been purchased as a voluntary contribution to nature or, for example, to comply with externally imposed requirements.

2. **Boundary** means detailing the elements of a business that the credit claims apply to, ranging from the entire company to certain products. For example, a business could use credits to finance conservation of biodiverse and pollinator-rich areas near upstream farms that are dependent on the ecosystem services of those pollinators to produce ingredients that the company uses in its bakeries. More specific claims tend to be clearer, as aggregated, company-wide claims can be complex to communicate.

3. **Accuracy** means not overstating the impact of activities that generate the credits, nor omitting potential trade-offs and failing to understand the risks. As with the boundary dimension, achieving accuracy tends to be more difficult with broader claims.

4. **Transparency** means providing clear, accessible and supporting information on claims and relevant trade-offs in terms of habitats and species composition. Transparency should reinforce credibility, enable traceability and verifiability of outcomes, and consider the need for further development of standards. An example of complete transparency would be providing open online access to all information on the underlying credit purchase.

In addition to the above guidance, businesses should be careful to avoid oversimplified, incorrect and misleading communication on biodiversity credits and markets. This includes claims such as biodiversity projects having an impact before verification, direct comparisons between biodiversity and carbon credits, or portrayals of biodiversity credits as a fully established and risk-free financing mechanism for nature.

A call to action for elaborated guidance on biodiversity credits

Today, guidance on communication about biodiversity credits is relatively rare. While this roadmap provides some high-level guidance and references, there is a need for multistakeholder alignment, specifically around the overall use cases and acceptable claims related to biodiversity credits, some of which are still debated.

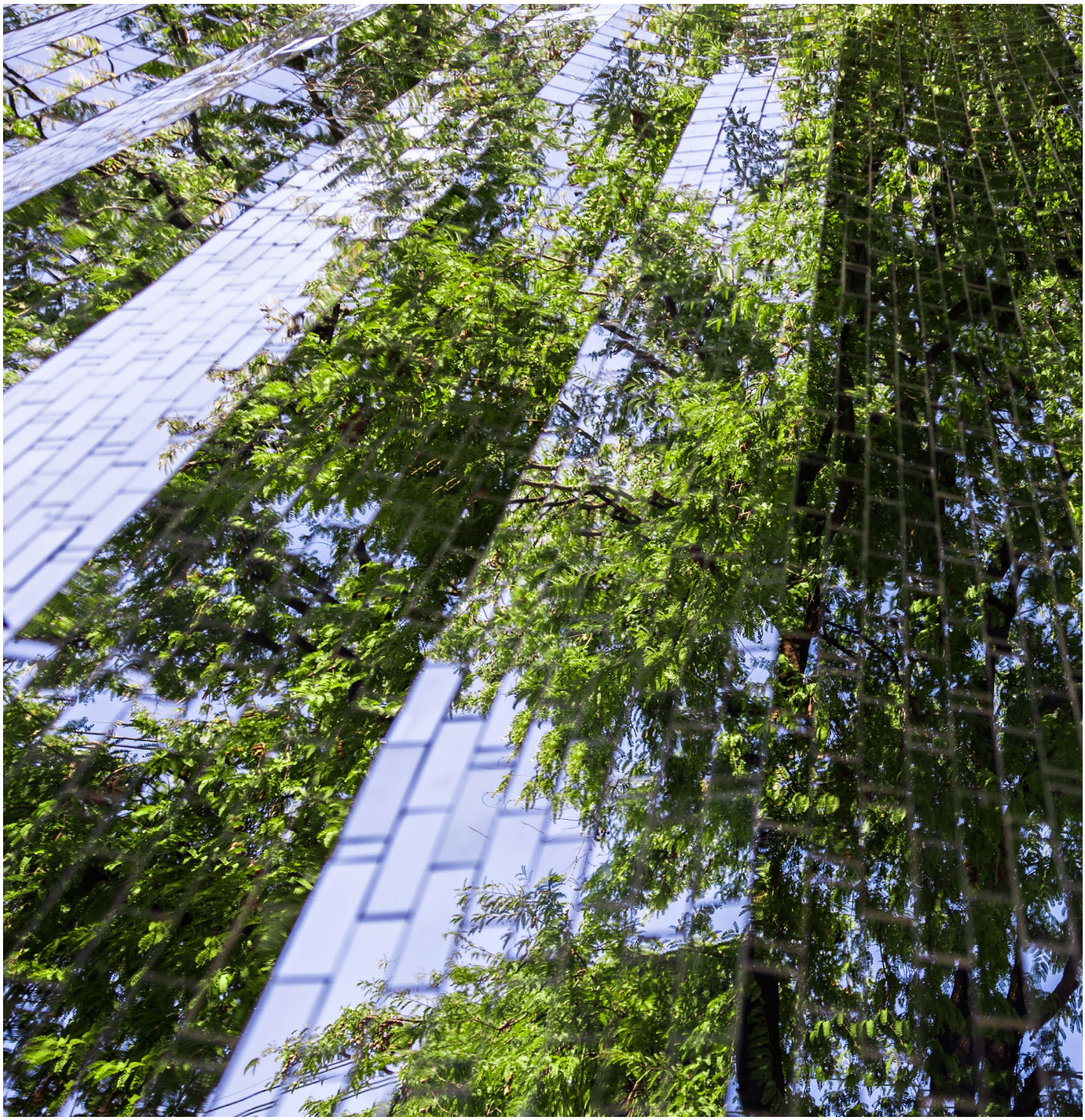
However, some lessons on communication may be drawn from project developers who provide guidance for their specific products. Examples include NaturePlus' *NaturePlus Claims Guidance* (also referencing Accounting for Nature's *Claims Rules*) and South Pole's EcoAustralia Credits Frequently Asked Questions.[25] While these sources are likely not applicable across all credits, they have commonalities and key points that can guide communication for businesses.

Additionally, independent standard-setters will likely continue to play a fundamental role in providing guidance to the biodiversity credit network. Considering the overall lack of a globally recognized standard, one source of inspiration could be the widely agreed-upon guidance for the voluntary carbon market, as laid out in the VCMI Claims Code of Practice or ISEAL's *Effective Company Claims About Contributions to Landscape Performance Outcomes*. However, since that guidance may not directly transfer to biodiversity credits, it may be valuable to develop a tailored code of practice.

Finally, regulation related to greenwashing is continuously developing, such as the recently released green transition directive from the European Union,[26] outlining rules for sustainability-related claims, the Green Guides from the Federal Trade Commission in the US,[27] which are currently being reviewed, and the UK's green claims code for businesses.[28] Similar to other discussed guidelines, national regulations may not specifically address biodiversity credits but can offer a framework for ethical conduct.

4 Integrate the nature finance action plan into the nature strategy

The nature strategy and the nature finance action plan should ideally be developed jointly and iteratively.



Since nature strategies are still evolving, they may differ in detail and may not always specify how businesses can implement them. This is why the nature finance action plan complements these overall directives. Action plans should revisit and further substantiate the direction set in the nature strategy and be integrated into the strategy to ensure coherence, whether the strategy is developed first or both are developed together. Figure 16 visualizes how the steps of the action plan map to each component of the nature strategy, which is based on the ACT-D framework. During the development of each step in the action plan, the corresponding parts of the strategy should be consulted and updated where relevant, depending on the needs of the specific business.

FIGURE 16 **Relationships between the steps of a nature finance action plan and those of ACT-D**

Nature strategy components		Finance action plan steps: Step 1: Define actions and value	Step 2: Choose metrics	Step 3: Procure credits (or deploy other nature financing)	Step 4: Manage risks and claims
Assess	Conduct an initial materiality assessment to prioritize efforts	✓			
	Measure and evaluate impacts and dependencies on nature	✓	✓		✓
	Assess risks and opportunities	✓	✓		✓
	Consider climate and people within the nature assessment				
Commit	Define ambition and goals	✓		✓	
	Set targets	✓	✓	✓	
Transform	Avoid and reduce	✓	✓	✓	
	Restore and regenerate	✓	✓	✓	
	Shift business strategy and models	✓			
	Collaborate along value chain at landscape, seascape and river basin level	✓		✓	
	Advocate for ambitious policies and initiatives				✓
	Embed nature within the corporate governance			✓	✓
Disclose	Monitor progress regularly		✓		✓
	Report progress made towards nature-positive goals and communicate findings with key stakeholders throughout the process		✓		✓
	Seek independent validation and verification to enhance credibility				✓
	Align reporting with major reporting standards		✓		✓

✓ Strong relation ✓ Some relation

Conclusion

Nature and biodiversity markets, as well as regulations, are rapidly evolving. The time to prepare for the future is now. Engaging in nature finance through actions such as purchasing biodiversity credits can be a source of competitive differentiation and provide a host of benefits, including safeguarding at-risk financial value and generating new value.

The key actions outlined in this roadmap can help businesses navigate nature finance, enhance their readiness and take action. Figure 17 presents five key takeaways from this document.

While this roadmap primarily targets corporate buyers of biodiversity credits, all stakeholders in nature finance are encouraged to use and test the sections they find relevant. They are also encouraged to apply and tailor the roadmap to their sectors or chosen nature financing mechanisms. Moreover, standard-setters, NGOs, market consortia and governments are invited to fill the gap in generally applicable guidance on biodiversity credit use. Clarifications and further guidance on all aspects of nature finance can help boost buyer confidence and drive demand, which is critically needed to close the nature funding gap and meet the GBF's goals of halting and reversing biodiversity loss by 2030 and living in equilibrium with nature by 2050.

FIGURE 17 **Five key takeaways from this roadmap**

The time is now for the private sector to engage and help bridge the nature finance gap.

A nature strategy and a finance action plan that are inherently integrated with each other are needed to purposefully act on and finance nature.

While there is a fair body of guidance available for nature strategies, there is a lack of resources on how to operationalize them (e.g. with a nature finance action plan). This roadmap provides a foundation for corporates to meaningfully engage in nature finance (e.g. biodiversity credits).

A nature strategy can be developed by using a framework like **ACT-D**. The nature finance action plan should be developed through four **key steps**:

1. Define actions and value
2. Identify metrics
3. Procure credits (or other instruments) with integrity
4. Manage communication and claims

Biodiversity credits are one of many options for nature finance. While focusing mainly on biodiversity credits, this roadmap may still guide on other options.

Appendices

A1 Capabilities and collaboration

The development and implementation of a nature strategy and a nature finance action plan involve key capabilities and collaboration, as outlined in Figure 18.

Developing or sourcing capabilities

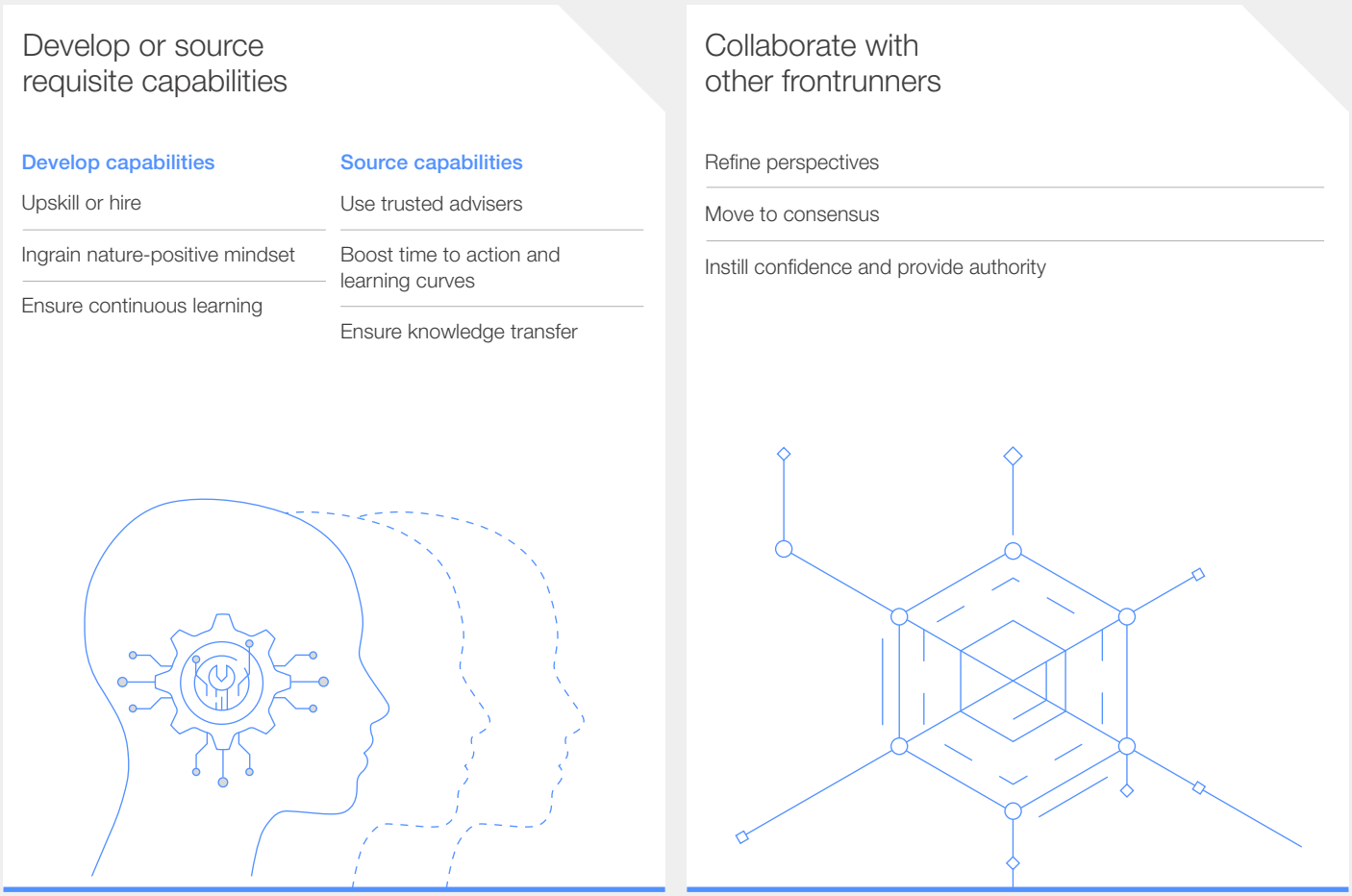
New capabilities may be needed to develop a nature strategy and nature finance action plan. Some capabilities are transferable from similar functions, such as general strategy or procurement functions, but nature-related actions require specific capabilities. These might include in-depth knowledge of nature dependencies and opportunities or aligning with the Taskforce for Nature-related Financial Disclosures (TNFD). These capabilities can be developed in-house or sourced externally.

Developing capabilities in-house through upskilling or targeted hiring helps ensure continuous, long-term organizational learning enabled by consistent codification of lessons learned. This is particularly important in the relatively new field of nature strategy, in which both individual businesses and the economy as a whole need to advance and mature. Sourcing capabilities externally can help accelerate delivery time to action and support in-house capability building.

Collaborating with other frontrunners

Beyond developing or sourcing capabilities, collaborating with peers can help drive success. Consortia and other partnerships can help move individual businesses and the entire field of nature finance forward by creating and spreading consensus. This can be achieved by pooling perspectives, identifying new ideas, instilling confidence to act when needed and providing organizations with the authority to take market-forming stances.

FIGURE 18 **Capabilities and collaboration as two key enablers for nature-positive action**



A2 Advantages, disadvantages and suitability of various nature financing mechanisms

Table 1 provides a non-exhaustive overview of nature financing options, including their advantages, disadvantages and suitability to specific contexts.

Further guidance can be found in the BIOFIN Catalogue of Finance Solutions.[29]

TABLE 1 **Advantages, disadvantages and suitability of various nature financing mechanisms**

Nature financing mechanism	Advantages	Disadvantages	Suitable for businesses that are…
Improve own operations	– Full mandate and ability to influence – Easily demonstrable results – May have co-benefits (e.g. efficiency gains)	– Doesn't remediate nature impact in wider value chain – May not be most effective way to benefit nature if value chain footprint is larger	Situated in hard-to-abate nature impact sectors
Use partners to improve operations	– Potential to quickly unlock both impact and capabilities – May create win-win if collaborating with competitors or stakeholders from other markets – May create connections for future partnerships	– May be relatively costly (e.g. due to pure cost of hiring advisers or upfront investment for a collaboration effort) – Risks losing some control of own operations	In a position with access to helpful partners and already doing or have completed "no-regret" in-house improvements
Improve others in value chain	– Large sphere of influence with intact ability to claim impact – May strengthen relationships – Co-benefits (e.g. efficiency gains) may be shared	– Requires deep understanding of value chain and where nature is affected – Dependent on value chain stakeholders who also have other interests	Part of value chain with significant nature impact, but not the main contributor therein
Conduct own projects outside own operations	– Can be tailored to one's circumstances for maximum effect – Potential for new organizational learning – Communication can be fully owned	– Risks going far beyond core operations and capabilities – Requires much active involvement for being (mainly) outside own value chain	Able and willing to conduct projects outside core operations and be hands-on
Build new, green business	– Maximum potential for innovation – Can be tailored to fit any need – Market-based option with potential for strong business case	– May require substantial upfront investment and preparation – Potentially risky and uncertain impact on business and nature	In a position with access to strong innovative capabilities and capital
Directly finance third-party nature projects or stakeholders	– Relatively easily attained, far-reaching impact – Tangible philanthropic impression – Relatable to end consumers who donate themselves	– May have limited options in terms of both projects/stakeholders and timing – Limited control of how money is used	In relatively nature-friendly value chain but still want to contribute, or have indirect/ uncertain impact (e.g. financial institution)
Use biodiversity credits to finance third party nature projects or stakeholders	– Requires minimal active involvement (granted a functioning market exists) – Standardized and verified impact (though still in development) – Scalable way to pool funding for large projects and benefit from economies of scale	– Nascent field requiring up-to-date knowledge on developments (for now) – Reputational third-party risk from credit supplier introduced	Frontrunners aiming to generate momentum for nature markets/ready to communicate transparently

A3 Applied example: A nature strategy and a nature finance action plan for EcoMines, an illustrative company

EcoMines is an illustrative mining company, dedicated to halting and reversing biodiversity loss. Its ambition is to become the world's most nature-friendly mining company by 2050.

EcoMines' nature strategy consists of the following:

Baseline: in 2020, EcoMines...

- Reduced biodiversity ecosystems by 10% on average, across its 2,000 hectares (ha) of land used for mining activities (including operational sites and areas affected by infrastructure development), measured by the Biodiversity Intactness Index (BII)
- Induced the loss or degradation of 500 ha of critical habitats, including wetlands and forests, due to mining activities
- Generated 3 million tonnes of mining waste, including tailings and overburden, with limited recycling
- Used 5 million cubic metres of water, primarily for ore processing and dust suppression
- Emitted 1.2 million tonnes carbon dioxide equivalent (CO_2e), contributing to air pollution and climate change
- Consumed 1.5 million megawatt-hours, 80% of which were derived from non-renewable sources
- Induced the displacement of IPs and LCs, affecting 1,000 households
- Conducted a comprehensive environmental impact assessment using the ACT-D framework to identify key areas for improvement

Set of targets: EcoMines' key nature objectives are to...

- Reduce biodiversity impact in active mining areas by 25% by 2030, and by 80% by 2050
- Reduce water use by 70% by 2030
- Switch to 100% sustainable energy by 2030
- Reduce waste by 50% and reach a recycling rate of 80% by 2050
- Restore 100% of closed mining areas by 2030
- Support all suppliers and interested peers in adopting nature-positive strategies and actions
- Engage affected IPs and LCs in project planning processes

Nature finance action plan: In line with its environmental impact assessment, EcoMines has identified key nature-positive actions and pledged $70 million in nature investment over five years to...

- Create wildlife corridors and plant native vegetation on 900 ha on and around mining sites
- Partner with environmental organizations to restore 1,000 ha of degraded lands meeting and exceeding local regulation
- Purchase biodiversity credits that conserve 1,000 ha and restore an additional 1,000 ha over a 25-year period to go beyond own impact and generate nature-positive outcomes (to do this, they have developed a set of procurement guidelines in line with the highest integrity standards)
- Issue green bonds to finance water efficiency, renewable energy, waste reduction and restoration measures on mining sites

The outcomes of EcoMines' actions will be tracked primarily through BII and the Integrated Biodiversity Assessment Tool (IBAT), although specific methodologies vary according to local context. To identify the most suitable communication strategy, considering risk and claims guidelines, EcoMines has set up an internal taskforce.

An extract from the company's business case evaluation of the actions outlined reveals that EcoMines will:

- Save $5 million annually by 2030 from reduced water and energy costs and carbon tax liabilities
- Avoid $2.5 million in potential fines and opposition costs through community engagement
- Access $50 million in new capital over five years by issuing green bonds to finance return-on-investment positive efforts on mining sites
- Deploy $20 million in on-balance-sheet finance for additional restoration efforts, including efforts related to regulatory requirements
- Generate $10 million annually from sustainably sourced minerals and $4 million from new market entry into generative artificial intelligence (AI)-enabled MRV systems for mining, developed with existing MRV partners

Contributors

World Economic Forum

Alessandro Valentini
Lead, Innovative Finance for Nature

McKinsey & Company

Mariella Goebl
Associate

Tony Hansen
Director, Natural Capital and Nature

Duko Hopman
Partner

Joshua Katz
Partner

Daniel Laving
Specialist

Acknowledgements

Giulia Carbone
Director, Nature for Climate, World Business Council for Sustainable Development

Alejandra Castro
Global Head, Partnerships, International Organizations, Bayer

Adele Cheli
Director, Sustainability Partnerships & Strategy, GSK

Letícia Guimarães
Biodiversity Lead, Vale

Erika Korosi
Fellow and Senior Director, Nature Markets, Conservation International

Natalia Paes
Analyst, Biodiversity, Vale

Olga Panchenko
Carbon Markets and Policy Expert, Rabobank

Edmund Pragnell
Lead, Nature Finance, CreditNature

R. Raghunathan
Director, The Silent Foundation

Toral Shah
Biodiversity Coordinator, Plan Vivo Foundation

Elisa Vacherand
Deputy Practice Leader, Finance, WWF

Belle Tan
Nature Finance, Standard Chartered Bank

Adrian Ward
Chief Executive Officer, Accounting for Nature

Production

Louis Chaplin
Editor, Studio Miko

Laurence Denmark
Creative Director, Studio Miko

Jay Kelly
Designer, Studio Miko

Endnotes

1. United Nations Environment Programme (UNEP). (2024). *Private finance for nature surges to over $102 billion, paving the way to close global biodiversity financing gap by 2030.* https://www.unepfi.org/wordpress/wp-content/uploads/2024/06/Press-release-New-Green-Shoots-research-Clean-10062024-updated-2.pdf.
2. McKinsey & Company. (2022). *Where the world's largest companies stand on nature.* https://www.mckinsey.com/capabilities/sustainability/our-insights/where-the-worlds-largest-companies-stand-on-nature#/.
3. Deutz, A. et al. (2020). *Financing Nature: Closing the Global Biodiversity Financing Gap*. The Paulson Institute, The Nature Conservancy and the Cornell Atkinson Center for Sustainability. https://www.paulsoninstitute.org/conservation/financing-nature-report/.
4. World Wide Fund for Nature (WWF). (2022). *Living Planet Report 2022: Building a Nature-Positive Society.* https://wwflpr.awsassets.panda.org/downloads/lpr_2022_full_report_1.pdf.
5. Dasgupta, P. (2021). *The Economics of Biodiversity: The Dasgupta Review*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf.
6. Deutz, A. et al. (2020). *Financing Nature: Closing the Global Biodiversity Financing Gap*. The Paulson Institute, The Nature Conservancy and the Cornell Atkinson Center for Sustainability. https://www.paulsoninstitute.org/conservation/financing-nature-report/.
7. Biodiversity Credit Alliance. (2024). *Definition of a Biodiversity Credit.* https://www.biodiversitycreditalliance.org/wp-content/uploads/2024/05/Definition-of-a-Biodiversity-Credit-Rev-220524.pdf.
8. Convention on Biological Diversity. (2022). *Kunming-Montreal Global Biodiversity Framework.* https://www.cbd.int/gbf/targets/19.
9. Nature Positive Initiative. (2023). *The Definition of Nature Positive.* https://4783129.fs1.hubspotusercontent-na1.net/hubfs/4783129/The%20Definition%20of%20Nature%20Positive.pdf.
10. Ibid.
11. The "30x30" target refers to targets two and three of the Global Biodiversity Framework (GBF) adopted at COP15. Convention on Biological Diversity. (2022). *2030 Targets (with Guidance Notes).* https://www.cbd.int/gbf/targets.
12. Taskforce on Nature-related Financial Disclosures (TNFD). (2023). *Guidance on the identification and assessment of nature-related issues: The LEAP approach.* https://tnfd.global/wp-content/uploads/2023/08/Guidance_on_the_identification_and_assessment_of_nature-related_Issues_The_TNFD_LEAP_approach_V1.1_October2023.pdf?v=1698403116.
13. Science Based Targets for Nature (SBTN). (2020). *Initial guidance for business.* https://sciencebasedtargetsnetwork.org/wp-content/uploads/2020/09/SBTN-initial-guidance-for-business.pdf.
14. Shi, H. et al. (2005). Integrating Habitat Status, Human Population Pressure, and Protection Status into Biodiversity Conservation Priority Setting. *Conservation Biology*, vol. 19, issue. 4, pp. 1273–1285. https://www.jstor.org/stable/3591312.
15. Freudenberger, L. et al. (2013). Nature conservation: priority-setting needs a global change. *Biodiversity and Conservation*, vol. 22, pp. 1255–1281. https://doi.org/10.1007/s10531-012-0428-6.
16. Bacchetta, G., Farris, E., & Pontecorvo, C. (2012). A new method to set conservation priorities in biodiversity hotspots. *Plant Biosystems - An International Journal Dealing with All Aspects of Plant Biology*, vol. 146, issue. 3, pp. 638–648. https://doi.org/10.1080/11263504.2011.642417.
17. Y. Kobayashi, K. Okada, A.S. Mori. (2019). Reconsidering biodiversity hotspots based on the rate of historical land-use change. *Biological Conservation*, vol. 233, pp. 268–275. https://doi.org/10.1016/j.biocon.2019.02.032.
18. International Union for Conservation of Nature. (n.d.). *Red List of Threatened Species.* https://www.iucnredlist.org/.
19. T. Pienkowski, C. Cook, M. Verma, L.R. Carrasco. (2021). Conservation cost-effectiveness: a review of the evidence base. *Conservation Science and Practice*, vol. 3, issue. 5. https://doi.org/10.1111/csp2.357.
20. Taskforce on Nature-related Financial Disclosures (TNFD). (2023). *The TNFD Nature-related Risk and Opportunity Management and Disclosure Framework. Beta v0.4 Annex 4.3 Disclosure Metrics Annexes*. https://tnfd.global/wp-content/uploads/2023/07/23-23882-TNFD_v0.4_Annex_4.3_v3-1-1.pdf?v=1690527800.
21. World Economic Forum. (2023). Biodiversity Credits: A Guide to Support Early Use with High Integrity. https://www3.weforum.org/docs/WEF_Biodiversity_Credits_A_Guide_to_Support_Early_Use_with_High_Integrity_2023.pdf.
22. Ibid.
23. World Economic Forum. (2024). *Biodiversity Credits: A Guide to Identify High-Integrity Projects*. https://www3.weforum.org/docs/WEF_Biodiversity_Credits_A_Guide_to_Support_Early_Use_with_High_Integrity_2023.pdf.
24. World Economic Forum. (2023). *Biodiversity Credits: Demand Analysis and Market Outlook*. https://www3.weforum.org/docs/WEF_2023_Biodiversity_Credits_Demand_Analysis_and_Market_Outlook.pdf.

25. South Pole. (n.d.). *EcoAustralia Credits Frequently Asked Questions*. https://www.southpole.com/sustainability-solutions/ecoaustralia-frequently-asked-questions.

26. Council of the European Union. (2024). *Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directives 2005/29/EC and 2011/83/EU as regards empowering consumers for the green transition through better protection against unfair practices and better information*. https://data.consilium.europa.eu/doc/document/ST-5417-2024-INIT/en/pdf.

27. Federal Trade Commission. (n.d.). *Green Guides*. https://www.ftc.gov/news-events/topics/truth-advertising/green-guides.

28. GOV.UK. (2021). *Green claims code: making environmental claims*. https://www.gov.uk/government/publications/green-claims-code-making-environmental-claims.

29. The Biodiversity Finance Initiative (BIOFIN). (n.d.). *BIOFIN Catalogue of Finance Solutions*. https://www.biofin.org/finance-solutions.

WORLD ECONOMIC FORUM

COMMITTED TO IMPROVING THE STATE OF THE WORLD

The World Economic Forum, committed to improving the state of the world, is the International Organization for Public-Private Cooperation.

The Forum engages the foremost political, business and other leaders of society to shape global, regional and industry agendas.

World Economic Forum
91–93 route de la Capite
CH-1223 Cologny/Geneva
Switzerland

Tel.: +41 (0) 22 869 1212
Fax: +41 (0) 22 786 2744
contact@weforum.org
www.weforum.org