A Typology of Corporate Actions for a Nature-Positive Future

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Abstract

Reaching the global goal of halting and reversing biodiversity loss will require a step-change in corporate action. Whilst clear guidance already exists for companies to take responsibility for and mitigate biodiversity loss caused by their own operations, delivering global nature-positive outcomes requires higher ambition and extended accountability for impacts beyond companies' direct control. This includes addressing indirect, diffuse or historical (or pre-baseline) impacts related to operations, as well as biodiversity loss caused by suppliers and consumers along upstream and downstream value chains.

As businesses look to contribute to the global nature-positive goal, they face a broad and dynamic landscape of guidance frameworks, standards and expectations, making it challenging to know which actions are proportionate and defensible, and how they best fit together as part of a comprehensive nature strategy. In this paper, we provide a typology of positive actions that businesses can take, which, when implemented together, can contribute to the global nature-positive goal. We outline key factors and considerations for selecting appropriate actions and provide a decision tree to help businesses navigate towards a coherent and defensible nature strategy.

Multiple factors can influence the decision-making process in a corporate nature strategy, including: i) whether actions are addressing specific negative impacts, ii) the types, timescale and locations associated with the negative impacts being addressed, iii) the equivalency of proposed biodiversity gains to losses, iv) the stage of the mitigation hierarchy, and v) the scales of action proposed. Underlying all these factors are questions around uncertainty in biodiversity losses and gains, the responsibility that a business should take for different types of impact, and the level of ambition required for meaningful nature-positive contributions. We provide examples for each action in the typology, outline key principles, and identify opportunities to overcome the challenges posed by high uncertainties and unclear responsibility.

1. Introduction

In line with global biodiversity goals and nature-related voluntary and regulatory frameworks, the business and financial services sectors are increasingly expected to play their part in halting and reversing biodiversity loss (McKenzie et al., 2025; Panwar, 2023). Targets 14 and 15 of the Kunming-Montreal Global Biodiversity Framework (GBF), for instance, are explicitly focused on the private sector, calling for incorporation of biodiversity into decision-making, and for businesses and financial services to reduce their negative impacts and biodiversity-related risks, increase positive impacts, and improve sustainable production (Convention on Biological Diversity (CBD), 2022). The 2030 mission of the GBF – to halt and reverse biodiversity loss by 2030 against a 2020 baseline – is effectively equivalent to the societal goal of 'nature positive' (Booth et al., 2024; Maron et al., 2024).

This global nature-positive goal challenges companies to take preventative and compensatory actions for a wide range of impacts both within and beyond their operations, as well as actions at broader scales to facilitate landscape, sectoral and transformative change (Booth et al., 2024; DeClerck et al., 2023; Panwar, 2023; Victurine et al., 2024; White et al., 2024). For example, businesses have been encouraged to take actions to address their substantial upstream and downstream value chain impacts (Peura et al., 2023; Victurine et al., 2024), address indirect impacts that may occur as a consequence of a business' direct activities (TBC, 2013), or to address historical impacts caused by the business' past operations (Roe et al., 2023). Businesses are also encouraged to go beyond traditional No Net Loss (NNL) goals and invest in additional conservation actions: positive actions at the landscape and sectoral scales to help promote wider shifts towards nature-positive outcomes (Booth et al., 2024; IMEC, 2023; Victurine et al., 2024).

A widely used framework underpinning corporate action for nature is the mitigation hierarchy (MH), an approach for addressing a business's negative impacts on biodiversity through a series of sequential actions (Arlidge et al., 2018; CSBI, 2015). The MH outlines that actions should first be taken to avoid and then minimise negative impacts on biodiversity as far as feasible. It acknowledges that the production of goods and services will inevitably lead to some unavoidable impacts on biodiversity even after the 'avoid' and 'minimise' stages have been completed. Companies are thus advised to restore impacted areas and finally to offset residual impacts to achieve No Net Loss or a Net Gain in biodiversity when all other stages have been exhausted (CSBI, 2015; Phalan et al., 2018). There are clearly defined guardrails to outline the implementation of these actions, particularly for offsetting (e.g. BBOP, 2012; CSBI, 2015; Maron et al., 2024).

Various extensions of the MH to corporate contexts have introduced guidance and terms to incorporate a push for extended accountability. For example, the Mitigation and Conservation Hierarchy emphasises the conceptual and practical synergies between traditional conservation and impact mitigation, within a single "four steps" framing (Milner-Gulland et al., 2021). Guidance from the Science Based Targets Network (SBTN) on setting science-based targets (SBTs) for nature (SBTN, 2024) provides a step-by-step process for businesses to avoid and reduce new and ongoing impacts within value chains. Such approaches help businesses to develop science-based targets to avoid and reduce impacts by a set 'cut-off date', in line with global targets or planetary boundaries.

However, the available documentation and guidance for businesses do not clearly disambiguate the full range of different underlying contexts and types of actions they could take to address their impacts on biodiversity. For example, realising a nature-positive future requires businesses to compensate for hard-to-abate impacts occurring in their value chains, not just those that are easily mitigated (Booth et al., 2024). This is acknowledged by SBTN, both through a new accelerated pathway for value chain assessment and a more comprehensive pathway which covers the organisation and its value chain impacts across land, freshwater and ocean realms (SBTN, 2025). Its guidance instructs companies to map the location of their key value chain activities, including operational sites, production inputs, raw materials, along with associated procurement volumes and supplier locations (SBTN, 2024).There is limited detail, however, on how to improve supply chain traceability, quantify biodiversity-related pressures, or assess upstream impacts beyond identifying inputs and locations. Furthermore, there is currently no accepted method for determining when, or to what extent, companies should act on their upstream and downstream supply chain impacts as part of a broader strategy to contribute to the global nature-positive goal. Uncertainties in estimates of loss for value chains rase concerns that promoting compensatory approaches could inadvertently allow businesses to bypass earlier steps in the mitigation hierarchy (Maron et al., 2024).

Similarly, indirect and historical impacts (i.e., those that occur before the baseline year set in a nature strategy) can be important causes of biodiversity decline (Seki et al., 2022; UNEP-WCMC, 2022), but uncertainties over measurement and allocation of responsibility often hinder corporate action (Roe et al., 2023; TBC, 2013). Finally, some businesses may also see the rationale for investing in conservation initiatives at the landscape level in areas surrounding priority locations or commodities in their value chain (e.g., a watershed surrounding a cotton production area). Whilst there is guidance on when to make investments (e.g., SBTN's landscape engagement targets; SBTN, 2024), it can be challenging to know such actions fit alongside others, when they should be taken, or what contribution an individual business ought to make when there are multiple actors contributing to impacts in the landscape (e.g., multiple companies sourcing from the same cotton production area).

Adding to this complexity is the variety of terminology that is used, often inconsistently, in the context of climate and biodiversity impact mitigation (Durand et al., 2025). Terms such as offsets, compensation, counterbalancing, contributions, remediation, reclamation, and additional conservation actions are used in the biodiversity literature to describe positive actions taken by businesses for biodiversity (e.g., (Bull et al., 2013; CSBI, 2015; Maron et al., 2018; Poulton & Maron, 2025). In the climate change literature, similar terms are also often used, but often with different meanings, including offsets, counterbalancing and contributions (SBTi, 2024). However, while climate-related terms provide useful analogies, not all translate directly to biodiversity losses and gains for many reasons, including the assumption that both climate impacts and mitigation measures are fungible. The place-specific nature of biodiversity, by contrast, requires consideration of ecological equivalence (Quétier & Lavorel, 2011).

When actions are taken beyond the traditional MH to address biodiversity losses, but not specifically for the purposes of their own impact mitigation, businesses tend to reach for terms like 'enhancing biodiversity', 'nature positive contributions' or actions that 'align with nature positive outcomes' in the absence of clarity and guidance on appropriate terminology. These

terms are often used as a catch-all for a range of worthwhile and positive actions, masking the nuance of the underlying biodiversity contexts and impacts that are being addressed. Not only does this create ambiguity and confusion about the intentions and outcomes of the action, but it also opens businesses up to accusations of greenwashing (Milner-Gulland, 2022). Conversely, these challenges may also trigger a lack of action by businesses, or under-reporting of actions for fear of receiving public backlash despite ambitions to take positive action for nature recovery (i.e., greenhushing) (Falchi et al., 2022).

The proliferation of terms and the limited guidance on their appropriate use, combined with the systemic step-change in ambition levels required to realise a nature-positive future, creates a confusing landscape for businesses to navigate. There is currently a lack of clarity on where and how businesses can defensibly take action to contribute to the global nature-positive goal and meaningfully direct their efforts as a force for positive outcomes. Together, these challenges create a barrier to action: much of the substantial business-as-usual impacts on nature that lie beyond their direct operations continue to be largely unmitigated despite the growing awareness and willingness to act for nature among businesses.

2. Objectives

In this paper, we aim to clarify the types of positive actions that businesses can take to contribute to the global nature-positive goal and associated outcomes.

i) We first outline key factors influencing which terminology can be used to describe different positive actions that align with the global nature-positive goal. These factors include which impacts a business is responsible and accountable for and the level of certainty that exists in measuring the impacts.

ii) Based on these factors, we provide a typology to clarify the different scenarios in which a business may be taking positive action for nature. We provide a decision tree to guide businesses towards appropriate actions for each scenario, terminology to describe the actions, and illustrative real-world examples.

iii) We discuss key principles to facilitate integration of actions into a coherent and defensible nature strategy, and identify opportunities to overcome the challenges posed by large uncertainties or unclear responsibilities.

We anticipate that clarity on the typology of different nature-positive contributions, alongside identifying appropriate associated language and guidance to underpin these actions, will help corporate stakeholders be more confident, and therefore more likely, to play their part in halting and reversing nature loss.

3. Factors influencing terminology for positive actions for biodiversity

To help deliver nature-positive outcomes, businesses must act to address impacts that would be captured both within and beyond the traditional application of the mitigation hierarchy, but the suitability of different actions, and the associated terminology that is most appropriate in describing them, is influenced by multiple factors.

Firstly, actions may or may not be directly linked to negative impacts caused by a business. Some actions aim to explicitly or implicitly address such impacts, and create measurable positive outcomes of a similar type and magnitude. Other actions may be support uplift in the state of landscapes, ecosystems, or species in a way that is unlinked from such impacts. This includes actions taken under broader philanthropic investments aligned with the business' mission.

If an action is connected to specific negative impacts on biodiversity, the type of **negative impact** being addressed can vary on several axes, which can influence the suitability of different actions for delivering on stated commitments:

- **Causal links to business activity**: *direct, indirect or cumulative.*
  Direct impacts are those which can be directly attributed to business operations. For example, this may include land use change in a project's footprint, use of wild resources, or pollution caused by business operations. Impacts occurring through the indirect effects of business activities (e.g., habitat loss facilitated by road expansion) are harder to attribute but can be substantial (Sonter et al., 2017). The same can be true for cumulative impacts, which are the collective impacts of many actors at the land/seascape scale and amplify the significance of any one individual impact (Whitehead et al., 2017). In practice, indirect and cumulative impacts are often overlooked. Some businesses do take account of indirect impacts in their nature strategies (IFC, 2012; Victurine et al., 2024), but how effectively this is done is often contentious and with unclear boundaries of responsibility (TBC, 2013).

- **Stages of the value chain**: *direct operations, upstream, downstream.*
  Direct operations have historically been the focus of corporate nature strategies and impact mitigation, because they are attributable and easy to measure, but biodiversity impacts within value chains can be substantial, and are usually the largest share of negative impacts for multi-national corporations that sit outside primary sectors of agriculture, forestry and mining (Kering, 2018; Lammerant et al., 2021; Peura et al., 2023). New and emerging frameworks and regulations are increasingly focused on action to address value chain impacts throughout the entire life cycle of products and services (e.g., European Commission, 2023; SBTN, 2023; TNFD, 2023).

- **Time frames**: *new, ongoing, or historical*.
  Current corporate biodiversity action tends to focus on addressing new and ongoing impacts after a defined baseline (e.g., from 2020 onwards as per the Global Biodiversity Framework). However, addressing the substantial impacts of business activities from before these baselines will also be important for delivering a nature-positive future – fully realising the 2050 vision of nature recovery requires that historical negative impacts on nature be addressed and reversed.

The **positive impacts** (i.e., gains) for biodiversity resulting from different actions can vary along several axes in how they relate to negative biodiversity impacts. This has implications for the suitability of different types of action and the terminology used to describe them.

- **Equivalence**
  Equivalence refers to outcomes in which the positive gains in biodiversity are of the same type, locality and duration as the negative impacts they are addressing

(Quétier & Lavorel, 2011). Equivalence is an important consideration for biodiversity offsets to ensure that targets such as NNL are achieved. Where gains are not equivalent to the biodiversity lost, businesses must be clear on the purpose and outcomes of the activities they are undertaking to avoid misrepresenting their actions.

- **Stage of the mitigation hierarchy**
  The stage and prior implementation of the MH can influence the suitability of different types of positive corporate actions (CSBI, 2015). For example, an action to compensate for negative impacts taking place only after avoidance, minimization, and restoration measures have been robustly implemented, or inadvance of these priority steps of the hierarchy? Alternatively, has NNL or Net Gain already been achieved by the business, in which case they are seeking to go above and beyond these targets? Businesses will often also have set science-based targets to avoid and reduce impacts by set cut-off dates. Positive action to address impacts could be taken before or after these plans are developed, and before or after these cut-off dates for full implementation.

- **Scale of positive impact**
  The positive impacts from corporate actions (whether or not they are linked to negative impacts) also vary depending on the scale at which positive action is taken and its impact is felt: at a direct site, a landscape, a sector, or across wider society (Booth, Milner-Gulland, McCormick, et al., 2024).

These factors relating to the types of negative and positive impacts can potentially combine in numerous ways as part of a corporate nature strategy. For example, an action could be implemented to address value chain impacts upstream in the supply chain, with equivalent gains, after a science-based plan is in place to reduce impacts. Alternatively, an action could be implemented to address historical or indirect impacts with non-equivalent gains at a landscape scale. An action could also be implemented to invest in broader efforts to change society and reduce uncertainties in biodiversity impact estimates, after the MH has been applied, unlinked to the business' own negative impacts.

3.1. Uncertainty and responsibility for impacts

In an ideal world, businesses would take positive actions with a full understanding of the location and magnitude of their negative and positive impacts on biodiversity. In practice, however, businesses often face a high **uncertainty** on these points. Furthermore, questions arise around **responsibility** when addressing impacts that are caused by multiple actors across complex and often opaque value chains, where it is far from straightforward allocate a single actor's quantity of impact. These two issues add additional complexity efforts by individual corporates to contribute to the global nature-positive goal.

3.1.1. Uncertainty in quantifying impacts

Quantifying the total amount of biodiversity loss caused by a business's activities – across the many commodities, processes, and activities in their value chain – is hindered by large uncertainties (Bromwich et al., 2024; Damiani et al., 2023; Scrucca et al., 2020). In some cases, it is straightforward to quantify impacts (positive and negative) with a relatively high degree of certainty – such as in the direct operations of a mining site – and this facilitates the

implementation of evidence-based offsets and claims for NNL or net gain goals (Devenish et al., 2022). Higher levels of uncertainty often occur when measuring the magnitude or location of impacts that take place further away from a business' direct sphere of influence, within upstream and downstream value chains. These uncertainties are often driven by limitations in data availability and traceability, making it difficult for a business to set corporate biodiversity targets and monitor progress (White et al., 2023). Uncertainty levels are also often high in the estimation of indirect and cumulative impacts on nature. Measuring the quantity and extent of historical impacts may pose similar challenges because limited relevant data are available.

Businesses are increasingly expected to develop ambitious nature strategies in spite of these uncertainties, giving rise to several risks (Booth, Milner-Gulland, McCormick, et al., 2024). When uncertainty in negative impacts is large, businesses can face challenges in adhering to the strict equivalency-based guardrails required for biodiversity offsetting. This could risk accusations of greenwashing, even when a business has genuine intentions to take ambitious action for nature. On the other hand, a laissez-faire approach without clear guidance and principles could mean businesses have little incentive to prioritise avoidance of impacts and better quantification of those that remain.

Uncertainty also pervades assessments of the positive impacts of business' actions for biodiversity. For example, in the biodiversity offsets literature, metrics used to measure outcomes of biodiversity offsets may have high uncertainty, and not be representative of the target component of biodiversity (Carreras Gamarra et al., 2018). Collaborative landscape initiatives (encouraged by e.g., SBTN Target 3 for land) may be key for effective action, but create further uncertainties regarding contribution and attribution. Some actions aiming to produce biodiversity benefits indirectly can also be challenging to quantify. Examples include programmes to address other drivers of loss in the landscape (e.g. alternative livelihoods programmes or protected area management), in research to reduce uncertainties, or in promoting changes in policy and practice within a sector or landscape.

3.1.2. Responsibility for addressing impacts

Whilst some negative impacts are clearly the responsibility of a given business to address, contributing sufficiently to the global nature positive goal and individual business positive outcomes requires taking additional actions to address a broader range of impacts less directly linked to current business activities (Panwar, 2023; White et al., 2024). Given the uncertainties surrounding positive and negative impact measurement and attribution, and different stakeholder views on who should take responsibility for different impacts, the challenges in allocating responsibility to an individual company are numerous. For instance:

- How far should a business take responsibility for indirect impacts that may be caused by their activities, and how far are they the responsibility of other actors, including government? (e.g., where the development of roads for a mining site opens the way to illegal hunting or land-clearance activities)
- Should a business extend the baseline year of their strategy to take historical impacts into account, and if so how far? (e.g., a company was established in 1926, and has a nature strategy with a baseline year for 2020 – are they responsible for the impacts incurred in the interim?)

- How far is a single company responsible for impacts along its entire value chain, where many different companies and actors may be involved at different stages? Should the responsibilities be shared and allocated, and if so, how?
- Should a business take responsibility for the ongoing negative impacts during the period while they implement mitigation measures in their strategy? (e.g., if a company plans in 2025 to phase out their sourcing of a high-impact commodity by 2030, are they responsible for the impacts created by that commodity sourcing in the interim?)

There are several ways of distributing responsibility for negative impacts between actors (Bai et al., 2024) and ensuring fair allocation of the associated costs (Booth et al., 2024). For example, responsibility can be divided between different upstream or downstream actors in various ways (at the two extremes, is it the ultimate consumer who should bear the responsibility because it is their demand driving the impactful production, or the producer because they are the ones causing the impact?) (Hickel et al., 2022; Piñero et al., 2019). Additionally, factors which could be used to reallocate the scale of responsibility for negative impacts between multiple actors may include economic capacity, (in)equality of opportunity, entitlement or perspective on a business' historical legacy (Bai et al., 2024; Booth et al., 2024; Gupta et al., 2024).

4. A typology of actions

A Nature Positive-aligned strategy requires extended accountability and scope of actions beyond mitigation of direct impacts from directly owned operational sites (Booth et al., 2024, IMEC 2023). To contribute to halting and reversing biodiversity loss at the societal scale, actions must be taken to address diffuse impacts across supply chains (where visibility and control may be limited) (Panwar, 2023), historical impacts (where data may be limited), and impacts that are currently hard-to-abate due to technological or feasibility constraints, as well as to drive systemic change (Booth et al., 2024). While this level of ambition is in line with societal goals for nature, meeting all these criteria in a comprehensive, practical, and defensible way is challenging.

In Figure 1, we provide a decision tree to help businesses determine the types of actions to take, with appropriate terminology. We then provide a typology that outlines some foundational principles for implementing these actions to ensure that they are robust and appropriately communicated in Table 1.

Figure 1. Decision tree to identify the aims, outcomes, and associated terminology associated with corporate actions for biodiversity.

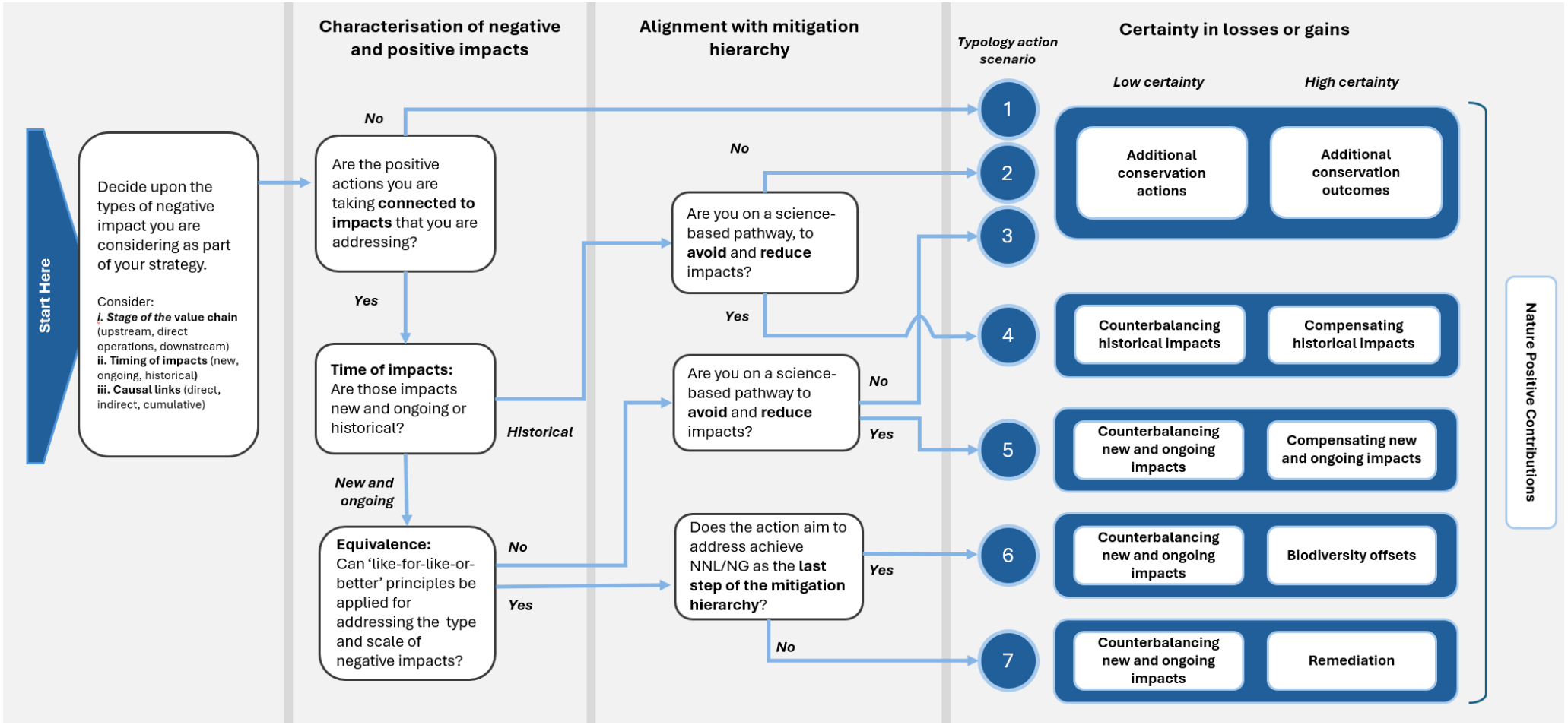

Table 1. Typology of scenarios and actions comprising a corporate nature-positive contribution, with examples for each action type.

#	Scenario: Taking actions...	Certainty in losses / gains	Action type	Example
1	...unconnected to impacts	Low	Additional conservation actions	A business provides financing for a national NGO that delivers education programmes, research or alternative livelihood programmes for biodiversity conservation – for which the direct positive outcomes for biodiversity are not easily quantifiable.
		High	Additional conservation outcomes	A business invests in habitat restoration in an area and of a type unrelated to their impacts. The conservation organisation implementing this project conducts detailed and robust monitoring of biodiversity outcomes.
2	... to address historical impacts, without science-based plans to reduce new and ongoing impacts.	Low	Additional conservation actions	A business is taking action to invest in broader species conservation efforts in similar areas to those impacted by the business. The gains resulting from these measures are not well-quantified nor easily relatable to potential impacts caused in the past. However, the business does not have a plan in parallel to reduce their new and ongoing impacts.
		High	Additional conservation outcomes	A business is taking action to invest in broader species conservation efforts in similar areas to those impacted by the business, and to address the types of impact they are likely to have caused in the past. They are able to quantitatively monitor the gains associated with these actions with a relatively high certainty of their outcomes, and relate them to past losses. However, the business does not have a plan in parallel to reduce their new and ongoing impacts.
3	... to address new and ongoing impacts, not following like-for-like principles, and without a plan to reduce impacts.	Low	Additional conservation actions	A business wishes to address their new and ongoing impacts, but they do not have the resources or existing knowledge to understand the extent or type of these impacts or form a cohesive nature strategy. However, they wish to make some positive impacts on biodiversity and invest in species conservation efforts in a variety of regions across the world. The outcomes of these investments are not well quantified and/or not related to the business's impacts.
		High	Additional conservation outcomes	A business wishes to address their new and ongoing impacts, but they do not have the resources or existing knowledge to understand the extent or type of these impacts or form a cohesive nature strategy. However, they wish to make some positive impacts on biodiversity and invest in species conservation efforts in a variety of regions across the world. The outcomes of these investments are well-quantified by the organisations carrying out the conservation programmes through extensive monitoring, but they are not related to the business' impacts.
4	... to address historical impacts, alongside science-based plans to reduce new and ongoing impacts.	Low	Counterbalancing historical impacts	A business assesses the impacts that occurred before the baseline date set in their strategy. Whilst known to be substantial, the magnitude and type of impacts in both the direct operations and upstream value chains are highly uncertain and difficult to measure. Alongside a plan to reduce new and ongoing impacts, the business invests in species conservation programmes in the areas known to have been impacted historically, but cannot quantify how these gains relate to the previous losses.
		High	Compensation for historical impacts	A business assesses the impacts the occurred before the baseline date set in their strategy, giving a good understanding of the magnitude and type of impacts caused by the business historically. Alongside a plan to reduce new and ongoing impacts, they invest in a habitat restoration program in similar areas, and affecting similar habitats and species that were impacted historically by the business. They quantify the gains and are able to relate them to the losses incurred in the past in terms of order of magnitude and biodiversity aspect (e.g., the amount of forest of a particular type lost and gained).
5	... to address new and ongoing impacts, not following like-for-like principles, with a science-based plan to reduce impacts.	Low	Counterbalancing new and ongoing impacts	A business has a plan to reduce the impacts from their upstream supply chain activities, but is highly uncertain in the locations and extent of their residual impacts on biodiversity due to limitations in supply chain traceability. They take action to protect biodiversity in the regions they are likely to be sourcing from, but are unable to quantitatively match the positive impacts on biodiversity to the negative impacts incurred.
		High	Compensation for new and ongoing impacts	A business has a plan to reduce the impacts from their upstream supply chain activities. For parts of their supply chains, they have a good oversight of the locations of their sourcing and the changes in land cover that drive biodiversity loss. To address this impact, they invest in habitat restoration in an area of their operations in a different geography, but of high biodiversity value. The gains are also well quantified, but are not aligned with the extent or type of the losses so cannot be matched to compare losses and gains.

6	… to address new and ongoing impacts, following like-for-like principles, and aiming to achieve NNL or NG goals.	Low	Counterbalancing new and ongoing impacts	A business designs and implements an ambitious habitat restoration programme to adjacent to one of their mining sites to offset the site's residual impacts. The programme aims to cover direct and indirect impacts of the mine, but there are large uncertainties associated in quantifying the indirect impacts. Whilst they have detailed assessments of losses and predicted gains, and have considered ecological equivalency, there is a large margin of uncertainty around whether NNL can be reached as a result.
		High	Biodiversity offsets	A business designs and implements an ambitious habitat restoration programme to adjacent to one of their mining sites to offset the site's residual impacts. This involves a detailed assessments of losses and predicted gains, with consideration of ecological equivalency to achieve a target of Net Gain for the impacted features. Importantly, there is a relatively low uncertainty associated with the measurement of these losses and gains due to the rigor of assessment undertaken and understanding of the impacts. The business can therefore be relatively confident that the gains from their programme will more than outweigh the losses from their operations.
7	… to address new and ongoing impacts, following like-for-like principles, but where NNL is not possible.	Low	Counterbalancing new and ongoing impacts	A business aims to address some of the known impacts from their direct operations and invests in a habitat restoration programme that produces gains in biodiversity that are similar in type and location to the losses incurred. However, the uncertainty around the predicted gains and losses is high, and thus the programme does not aim to reach a NNL target due to the lack of robust, quantitative evidence.
		High	Remediation	A business aims to address some of the known impacts from their direct operations and invests in a habitat restoration programme that produces gains in biodiversity that are similar in type and location to the losses incurred. However, they do not match gains and losses explicitly, because they do not have NNL as a goal in their nature strategy.

The typology we present highlights the importance of context, aims, and outcomes when it comes to designing and communicating actions within the nature positive journey. When taking positive actions for biodiversity, the type of positive action that is most appropriate to take, and associated terminology, is dependent on: how closely the action is connected to negative impacts, the types of negative impact being addressed, the characterisation of the positive impacts, the stage of the MH, and how certain a company can be that their actions are indeed addressing their impacts (Figure 1).

When addressing new and ongoing impacts, if businesses are aiming to achieve NNL or NG (following like-for-like or better principles) and following the mitigation hierarchy, these actions could be described as **biodiversity offsets** (BBOP, 2012; Bull et al., 2013; Scenario 6), if there is high certainty in both the losses being addressed and the gains in biodiversity from the positive action. If NNL or NG are not the goal of these equivalent actions, and the actions are being used to address short-term impacts on site, then these actions seek to **remediate** impact (Poulton & Maron, 2025; Scenario 7). Offsets are generally most feasible when addressing direct operational impacts on the ground – because they are measurable and attributable, such that there is higher certainty in losses than at other stages of the value chain. This makes it easier to prove equivalence. However, if there is very high traceability for impacts that occur in other parts of the value chain, such that they can be measured, attributed and mitigated through equivalent gains, then offsets could, in principle, be designed to address these impacts too. For both offsets and remediation actions, uncertainty in losses and gains can circumvent equivalence, meaning that such actions can be better classified as counterbalancing.

If actions to address new and ongoing impacts are not delivering equivalent gains, but are being implemented alongside plans to reduce impact, these actions are **compensating** for impact if there is low uncertainty in losses and gains (Scenario 4). In reality, certainty in measuring losses and gains is typically low for many value chain impacts. In these circumstances, positive actions can be described as **counterbalancing** impacts (rather than compensating or offsetting impacts, because a business cannot be sure of how far their actions may fall short of addressing the negative impacts (Durand et al., 2025; SBTi, 2024) (Scenario 4). This scenario may often be the case when a company seeks to take positive actions to address impacts in value chains, and encounters limitations in both estimating the negative impacts incurred on biodiversity and the positive impacts gained through positive actions. Despite having a broader strategy in place to reduce these impacts, the company would not therefore be able to design equivalent and ecologically robust compensation or offset measures. It may also be possible to compensate for historical impacts where there is certainty in losses and gains, but in practice there may often be high uncertainty, leading a company towards a ‘counterbalancing’ use case (Scenario 5).

The term **additional conservation actions** (ACAs) is used when actions are intended to be positive for biodiversity but are not connected to a business’ negative impacts (Scenario 1). ACAs are often characterised by a high level of uncertainty in the gains that may result, such as the gains that may result from investment in conservation education programs, research initiatives, or resourcing for non-profit organisations working in an area of interest (CSBI, 2015; TNFD, 2023b). In the case where the outcomes of these actions for biodiversity can be well-quantified, these would deliver **additional conservation outcomes**. The term ACA has often been applied to actions unconnected to impacts (e.g., traditional philanthropic donations) taken after full application of the MH for direct operations to create additional benefits for

nature. We propose that ACA is also appropriate terminology where positive action is being taken to address impact, but where there is not yet a clear plan to avoid and reduce either historical or new and ongoing impacts (Scenario 2 and 3).

Collectively, actions taken across all these scenarios may help a company **contribute** to the global nature-positive goal. Uncertainty in losses and gains can vary continuously, but for simplicity the typology considers only the extremes of highly certain and highly uncertain. In reality, increasing uncertainty rapidly increases the risk of claims relating to compensatory outcomes (considered in this typology as compensation, offsets, or remediation), so business are advised to apply these terms with circumspection and clear communication of the context that underlies each action (Durand et al., 2025).

5. Principles for applying the typology

When it comes to the implementation of these actions, there remains risks and challenges that businesses may encounter, necessitating principles to guide decision-making. For example, a business' positive actions for biodiversity should not detract from adherence to the MH (Maron et al., 2024) and adoption of Science-Based Targets to avoid and reduce impacts. Failure to align with these principles can lead to both risks for business and conservation outcomes (Clare et al., 2011; CSBI, 2015). For example, if businesses apply offsets or counterbalancing actions to address indirect impacts prior to taking steps to first avoid or reduce them, this can legitimise impacts which could otherwise have been avoided, leading to suboptimal or even detrimental outcomes for biodiversity (Ives & Bekessy, 2015). Unsubstantiated claims of having reached NNL can then expose businesses to reputational risks from perceived greenwashing, financial or litigation risks from non-compliance with standards or regulation (e.g., as set forth by standards such as the IFC PS6).

Table 2 provides a list of recommended principles for good practice, aiming to help corporate actors navigate some key challenges when taking action across the proposed typology. Companies seeking to ensure nature-positive alignment would also be advised to reference additional principles, guidance, and requirements (e.g., IMEC 2023, zu Ermgassen et al. 2022) – with the underlying pre-requisite being the robust implementation of the MH in all cases.

Table 2. List of key challenges with associated principles and guidance for delivering positive corporate actions for biodiversity

Challenge	*Principles and Guidance*
Lack of clarity about responsibility	**Responsibility is meaningful when it is clear, transparent, and appropriately shared.** • When taking additional responsibility for impacts influenced by a business, clearly disclosed the types of impact and timeframes. • Clearly justify any case being made that the business is not responsible for particular impacts. *Note: many leading sectoral frameworks require businesses to take responsibility for indirect impacts caused by operations (IFC, ICMM), and/or to take a full value chain approach to assessing impacts and designing appropriate mitigation (e.g., TNFD).* • When assessing whether or not a business is responsible for different types of impacts, considerations may be taken to share and allocate the responsibility of addressing impacts amongst actors involved in a value chain or a landscape. The methods used for sharing responsibility should be clearly disclosed (e.g., Bai et al., 2024, ISEAL, 2024). • Ensure action is as proportionate and as equivalent as possible where responsibility is taken for impacts a business may find it difficult to address directly (*e.g., it has high traceability of its supply chain, but does not directly own or manage the sites where impact occurs*).
Determining baselines and cut-off dates	**Credible action depends on clear, consistent, and justified baselines and timeframes.** • Ensure that a baseline no later than 2020 is used to align with global goals of nature recovery in the global biodiversity framework. • Provide a clear justification for the choice of baseline year. • Apply the same baseline across different types of impacts being addressed (e.g., direct operations and value chain impacts). • Consider over time setting additional baselines to account for historical impacts, and taking some responsibility for impacts to this baseline, as part of the business' contribution to a nature-positive future. • Clearly state and justify the baseline year and the grace period used to quantify any additional impacts caused by time lags. There may be time lags between the design of strategies to reduce impacts and achievement of those objectives. In the interim, actions should be taken to address new and ongoing impacts, but with the aim of reducing the necessity for those actions over time.
Taking positive action alongside adherence to the mitigation hierarchy	**Positive actions are most robust when grounded in the mitigation hierarchy.** • Ensure adherence to the MH, to avoid and reduce negative impacts as far as possible, before taking compensatory actions, alongside any additional positive actions. When uncertainty is high, positive action can still be taken, but this should ideally be done alongside a clear plan to reduce uncertainties in impact assessments and to increase transparency. • If positive action is being taken where there is not a plan to avoid and reduce negative impacts, a prioritise a plan for impact quantification and mitigation. • Even when certainty is high, and action is taken to reduce impacts, it may sometimes be impractical or impossible to achieve NNL or Net Gain. Care should be taken to avoid claims such as that actions are offsetting impacts, when in reality this is not possible. • Take care when claiming that impacts represent offsets. *Even when certainty is high, and action is taken to reduce impacts, it may sometimes be impractical or impossible to achieve and to demonstrate NNL or Net Gain.* • Prioritise actions to address impacts within a business' direct control (e.g., direct operations impacts) and influence (e.g., value chains, indirect impacts), before taking other positive actions. *A business need not wait until attributable impacts are fully addressed before investing in additional conservation actions/outcomes, but should aim to be addressing attributable impacts in parallel and as the main priority.* • When investing in additional conservation actions/outcomes, ensure there is a clear case for delivery of cost-effective results (Squires & Garcia 2018).

Challenge	*Principles and Guidance*
High uncertainty in impacts	**Uncertainty should be met with precaution, transparency, and continuous efforts to improve knowledge.** • Where negative impacts are uncertain, place priority on increasing the certainty of these impacts. This includes gaining greater clarity on the extent and scope of their negative impacts, as well as their location within their value chain. • Take a precautionary approach that incentivises data collection when uncertainty is high, by assuming that the negative biodiversity impacts that need addressing are greater unless proven otherwise, and/or the positive impacts are at the lower end of uncertainty bounds. Actions that seek to reduce uncertainty in biodiversity losses that require mitigation should be publicly disclosed and, where feasible, coupled with an ambition to increase responsibility to address any newly revealed impacts
Other socio-economic and environmental outcomes	**Biodiversity action should avoid unintended harm to people or other environmental values.** In addition to uncertainty in positive biodiversity outcomes from business action, there can also be uncertainty in the other environmental and social outcomes. Care should be taken to assess these to avoid damaging social and environmental impacts and trade-offs from positive biodiversity action (e.g. Bidaud et al., 2017; Griffiths et al., 2018).
Ensuring equivalence	**Actions are most credible when they deliver outcomes equivalent to, or better than, the impacts they address.** • Like-for-like (or better) mitigation should always be prioritised when the type and amount of biodiversity impacts are known, and any efforts to reduce uncertainty should attempt to enable actions to become more aligned with impacts. Transparent communication is needed where actions are provisional responses due to high uncertainty, alongside a commitment to reduce uncertainty and adapt action in future.

The challenges of uncertainty can hinder business sector approaches to defensibly contributing towards a nature-positive future. Reducing this uncertainty is therefore a key priority for businesses. In particular, it is important to reduce uncertainties associated with quantifying value chain impacts, as these often account for substantial proportions of a businesses impact on nature. Greater accuracy in quantifying impacts then enables them to be robustly addressed according to the MH. This could include actions to increase the transparency of value chains or to obtain new data on historical or indirect impacts, which reveals the type and amount of loss that occurred due to business activities.

Traditional equivalency-based approaches through locally matched action will be unfeasible where uncertainty is high until data is improved, but this should not preclude action altogether. The recognised role of supply chains as major drivers of biodiversity loss justifies pressure to act. A middle ground is needed: one that takes an ‘as equivalent as possible based on the information at hand’ approach, enabling meaningful progress towards more positive biodiversity outcomes in the meantime. This requires transparent communication that such actions are provisional responses under uncertainty, and a commitment to update and adapt, paired with parallel efforts to reduce uncertainty through supplier engagement, increasing traceability, and disengaging from sources unwilling to provide better data.

Useful precedents from other environmental contexts facing similar uncertainty constraints could provide a way to progress in this grey area. For example, “conservatory” actions are often taken in the context of fisheries by-catch mitigation (Squires et al., 2018) by supporting restoration or mitigation efforts indirectly but within the same system. For example, the sea turtle conservation programme led by the International Seafood Sustainability Foundation protects turtle nesting sites in remote habitats away from fishing grounds to mitigate untraceable turtle by-catch across a diffuse marine area. In a supply chain context, the same logic could apply: a business unable to pinpoint its exact biodiversity footprint in a commodity-

producing region might fund habitat restoration or other actions that benefit the threatened species or ecosystems likely to be affected by its sourcing activities. These actions are not fully equivalent, but they are ecologically relevant and can be scaled or redirected as information on biodiversity footprints of commodities is improved.

Additionally, clarity needs to be provided on the level of responsibility a business holds for negative impacts, and the ambition needed for all types of positive corporate action to effectively contribute towards the global nature-positive outcomes (e.g., how much is enough?). This involves considerations of how breaches of planetary boundaries translate to the actions and inactions of different sectors and actors (Gupta et al., 2024). Businesses should look to extend their responsibility where appropriate – accounting for impacts beyond their direct sphere of influence, including value chain impacts, indirect impacts, and historical impacts. This could involve actions such as shifting the baseline year for a strategy to include a greater scope of historical impacts against which biodiversity targets are measured, and taking actions to measure their impact upstream. Whilst there are many approaches emerging across environmental disciplines to define targets at a corporate scale and allocate responsibilities (Bai et al., 2024; Gupta et al., 2024), alignment on methods and clear guidance on how businesses can take proportionate responsibility for biodiversity losses under uncertainty is needed.

6. Conclusion

The guidance provided here aims to clarify the types of positive actions required when extending corporate accountability and ambition in nature strategies. Such actions are necessary to ensure businesses contribute effectively to a nature positive future, but there is often confusion as to when and where different types of actions are appropriate or needed as part of a nature strategy. The typology provided can be used to help businesses clearly communicate the different types of positive actions they are taking to address biodiversity loss, extending beyond the mitigation of impacts immediately within their sphere of influence and ongoing impacts. It also aims to provide confidence to businesses making claims associated with their nature strategy, helping avoid misinterpretation of intentions and the potential for greenwashing accusations. This confidence and clarity may also alleviate risks of greenhushing, thus driving cascading network effects that drive increasing momentum on positive biodiversity actions.

The typology and decision tree showcase the numerous factors that can influence the types of action taken, and the appropriateness of each, such as ‘characterisation of negative or positive impacts’, ‘alignment with the mitigation hierarchy’, and ‘certainty in losses or gains’. In tandem, the principles for applying the typology in practice establish key guardrails to ensure that actions are contextually suitable, reduce risks to the business, and can achieve the most effective benefits for nature. These principles are especially useful to guide businesses as they extend their ambition level for nature and find themselves in several of the potentially challenging situations outlined.

Going forward, further clarity is still needed to help businesses understand ‘how much is enough?’ in each of these scenarios, as well as determine a fair and equitable way to distribute the required effort between different sectors and actors. This gap is exacerbated by

uncertainties in measuring progress towards the global nature-positive goal as a whole – either by an individual business, or in aggregate at the sectoral or geographic level.

Whilst there are many challenges to taking robust positive action when extending the scope of business action for nature, the severity of the biodiversity crisis demands that urgent action is taken. We hope the typology and recommended principles can be applied to support businesses in defining and implementing the spectrum of action required to contribute towards the global nature-positive goal. This can allow action to be taken in the immediate term by businesses alongside broader efforts to reduce uncertainty and increase ambition.

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AHYB, TBW, MS, HB, JWB, LB and LJS receive income from commercial consultancy services related to biodiversity impact mitigation and nature strategy development in the private sector. RNM is employed part-time at the Nature Positive Initiative Secretariat.