

OP2B's Framework for Restoration Actions

Technical document



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I. Introduction

This technical document provides detailed information on the One Planet Business for Biodiversity (OP2B) *Framework for Restoration Actions* and builds on the high-level leaflet published alongside this document.

In 2021, OP2B developed a framework for regenerative agriculture that serves as a tool for companies to support the transition of land, farms and farmers to a regenerative agriculture approach, report on progress and drive continuous improvements. Inspired by the success of this piece of work, in 2022, the coalition created a complementary *Framework for Restoration Actions* and thus completed the guidance for companies on restoration and regeneration.

The framework will help answer the need for harmonization in the ecosystem restoration field to align and amplify action for maximized impact at scale. The ambition of the framework is to enable companies to deploy large-scale and coherent high-value ecosystem restoration actions.

OP2B's *Framework for Restoration Actions* aims to guide on:

- **Where to act** – Based on a materiality assessment and prioritization and covering company spheres of influence as defined by the Science Based Targets Network (SBTN), a method for deciding where a company should act.¹
- **How to act** – In strong alignment with the widely used mitigation hierarchy and the SBTN's AR³T framework, which both prioritize actions to avoid and reduce impacts, restore or regenerate nature in a particular landscape, and finally transform business for the economic value that answers nature's needs.²
- **How to restore** – A set of science-based principles for implementing restoration actions. Note that this framework does not set targets at this stage, except those on non-conversion.
- **What to monitor** – A set of science-based impact indicators for measuring and achieving progress and impact.

This document is articulated in five sections: common definitions, the scope of intervention for companies, a description of the imperative and restoration principles that OP2B members have aligned on, examples of impact indicators and case studies from selected OP2B members.

We developed these elements using a collaborative, science-driven approach and in close partnership with business, scientists and civil society. This comprehensive process included more than 20 working sessions with OP2B members, consultations with 13 external partners and 19 member company practitioners and leveraging multiple existing restoration frameworks and potential indicators.

This work represents OP2B's ongoing contribution to supporting the halting and reversing of nature and biodiversity loss by 2030. The coalition will continuously collaborate with stakeholders to restore biodiversity and will support the evolution of the framework as guidance, regulations and common understanding evolve.

II. Common definitions

Business, civil society and governments use multiple definitions for conservation, regeneration and restoration. OP2B members have aligned on a common language and a shared understanding of each of these terms.

Conservation

According to the International Union for the Conservation of Nature (IUCN), conservation is the action of conserving the integrity and diversity of nature that contributes to development, as it is impossible to achieve sustainable development without conservation. It is a generic term that encompasses nature-related science, practices and policies.³ Strongly connected with conservation is the need to work with Indigenous Peoples and local communities (IPLCs) on all conservation actions, which we cover under Principle 3 below.

Restoration

In the literature, **restoration remediates and restores** forest, wetland, grassland and water ecosystems where those ecosystems historically existed;⁴ yet it can also describe a diverse suite of actions to recover degraded, damaged or destroyed ecosystems.⁵ Some organizations also refer to remediation as rehabilitation enhancing native habitats (but not restoring them).

OP2B has adopted the definition of the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC):

“Ecosystem restoration is the process of halting and reversing degradation, resulting in improved ecosystem services, and recovered biodiversity of degraded ecosystems, e.g., forest, wetland, grassland, water bodies, etc. Ecosystem restoration encompasses a wide continuum of practices, depending on local conditions and societal choice.”⁶

Ecosystem restoration includes political, economic, cultural and social dimensions.

In accordance with the International Finance Corporation (IFC) Performance Standard 6, degradation is (i) the diminution of the integrity of a habitat or ecosystem caused by a major and/or long-term change in land or water use; or (ii) a modification that minimizes the habitat’s ability to maintain viable populations of its native species.⁷

Regeneration

As per SBTN, regeneration is:

“Actions designed within existing land uses to increase the biophysical function and/or ecological productivity of an ecosystem or its components, often with a focus on a few specific nature’s contributions to people.”⁸

Regeneration applies to “working lands”, whereas restoration applies to lands where natural ecosystems or habitats such as forests, wetlands and grassland historically occurred. In accordance with IFC Performance Standard 6, natural habitats are areas composed of viable assemblages of plant

and animal species of predominantly native origin and where human activity has not essentially modified an area's primary ecological functions and species composition.⁹ In 2021, OP2B members agreed to align with the SBTN approach that, unlike that of the Society for Ecological Restoration (SER), distinguishes between restoration and regeneration.

OP2B's Framework for Restoration Actions complements the OP2B Framework for Regenerative Agriculture released in 2021.¹⁰ Although regeneration could also apply to "working water bodies" (such as when developing artificial wetlands on the shores of artificial reservoirs or designing semi-natural fishways along dams to maintain fish spawning), OP2B did not include this in its regenerative agriculture framework.

It is important to note that in a given landscape, restoration and regeneration are not mutually exclusive practices and can take place in the same project, for example, restoring a forest while conserving vegetative edges in cropped fields. This means restoration can occur on a company's production site or landscape/waterscape. This vision of the diversity and multi-functionality of ecosystems implies that companies must choose the best strategy for each stratum of the land concerned.

III. Scope of intervention for companies

In this section, we highlight how companies can act and complement their strategy for restoration actions. We suggest following the SBTN scoping approach that is already guiding OP2B action under its Framework for Regenerative Agriculture.

Step 1: Assess – Materiality assessment (SBTN)

Companies should conduct a materiality assessment to identify and prioritize their impact and dependencies on nature using the SBTN Sectoral Materiality Assessment Tool.¹¹

Step 2: Prioritize – Determine the company’s different spheres of influence (SBTN)

As the sector-level materiality tool does not include company-specific or location data, the next step is a company-level hotspot assessment (SBTN Guidance step 2), which requires an understanding of the company’s value chain and location data for upstream and direct operations and, to some extent, the same downstream.

To achieve this, SBTN has defined four distinct spheres of influence, as shown in figure 1:

- Direct operations – a company’s own sites and activities;
- Value chain – activities, sites and entities that allow a company to carry out its activities, especially upstream suppliers;
- Value chain-adjacent areas – landscapes and seascapes located close to the value chain sites; they can directly impact the activities of the sites or vice versa;
- Systems – the economic and social systems in which these activities take place.

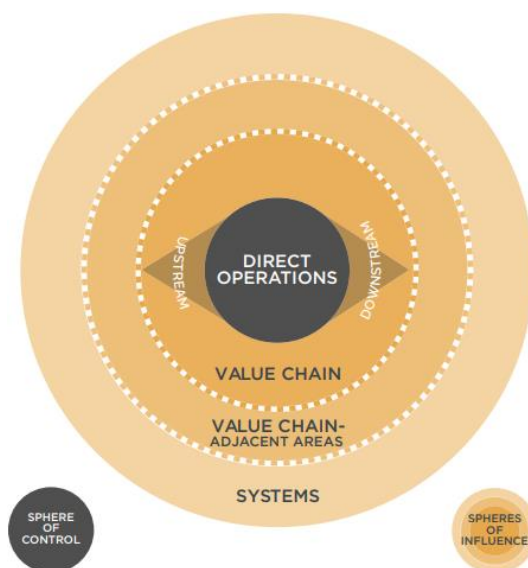


Figure 1: Sphere of control and spheres of influence relevant for businesses.

Note: Corporate sustainability has traditionally focused on direct operations (GHG Protocol scope 1 emissions; Natural Capital Protocol direct operations), followed by upstream and downstream value chains (GHG Protocol scope 3 emissions). These are key focuses for science-based targets for nature. But to achieve societal goals for nature in the next 10 years, action beyond the corporate value chain is necessary. Companies need to engage in collective action in the areas surrounding their operations, in upstream and downstream activities (i.e., in value chain adjacent landscapes) and in the systems in which they are embedded.¹²

A company may want to set a nature goal or undertake action based on many different things; this framework is agnostic on how companies arrive at engaging in restoration.

Yet, across those spheres of influence, it could be that:

- They look at the total footprint of their conversion risk commodities and commit to protect or restore that area, such as the Consumer Goods Forum (CGF) Forest Positive Coalition approach;¹³
- They look on an industry basis at the amount of conversion that has happened and attempt to conserve or restore that, such as the Rimba Collective approach;¹⁴
- They just set a target based on a needs assessment in a given geography where they operate, irrespective of their own footprint, such as a philanthropic approach;
- They want to develop a response to a specific conversion event that has happened, such as after a policy cut-off date, under the form of a compensation or remediation plan for that conversion event.

The following section details the principles that OP2B members have agreed to adopt to guide conservation and restoration action across these and other cases.

IV. Proposed principles

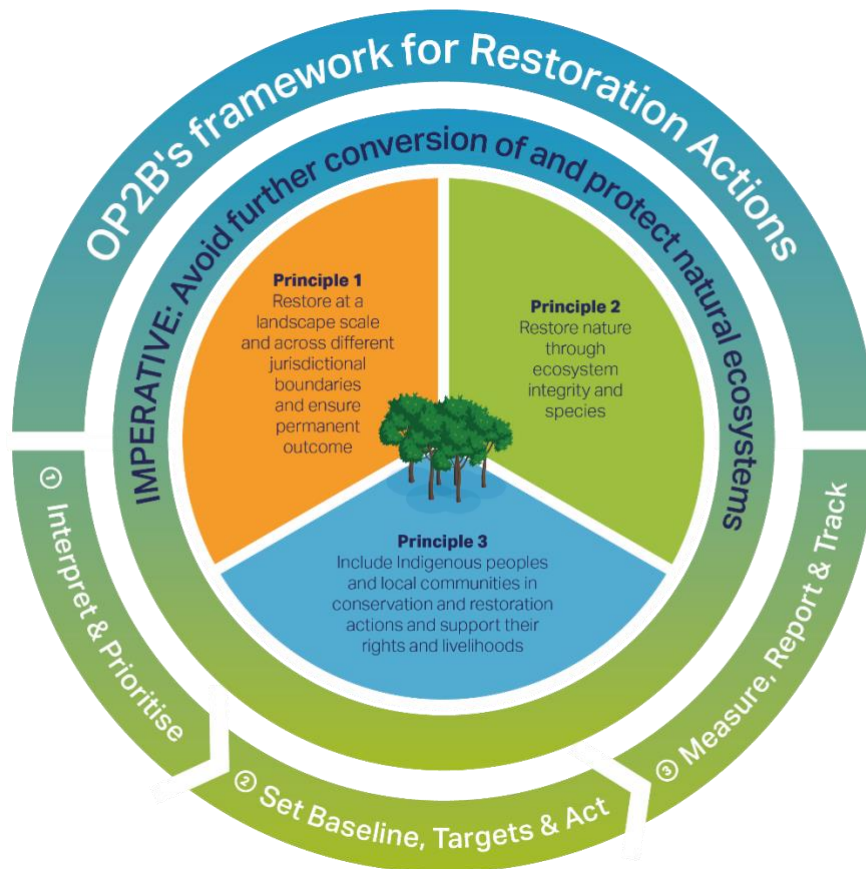


Figure 2: Proposed principles for OP2B's Framework for Restoration Actions

Overarching imperative: Avoid further conversion of natural ecosystems

The most common type of conversion is of course, deforestation. According to the latest World Resources Institute (WRI) *Global Forest Review*, seven commodities accounted for 57% of all agricultural deforestation between 2001 and 2015.¹⁵ In that timeframe, cattle pasture ranked first (45.1 million hectares), accounting for 36% of all tree cover loss associated with agriculture, followed by oil palm (10.5 million hectares), then soy (8.2 million hectares), cocoa, plantation rubber, coffee and plantation wood fiber. Yet, deforestation is on par with the conversion of non-forest natural ecosystems some biofuel development scenarios envisage up to several hundred million hectares over the coming 30 years, combining jatropha, maize, sugarcane, soy and oil palm.¹⁶

We follow the IFC Performance Standard 6 definition of natural ecosystems, where “natural habitats are areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area’s primary ecological functions and species composition”, which means conversion is not limited to deforestation.¹⁷

Note that even though highly degraded parts of the ecosystem are considered natural, they are only considered modified if fundamentally modified, according to IFC Performance Standard 6:

“Modified habitats are areas that may contain a large proportion of plant and/or animal species of non-native origin, and/or where human activity has substantially modified an area’s primary ecological functions and species composition. Modified habitats may include areas managed for agriculture, forest plantations, reclaimed coastal zones, and reclaimed wetlands.”¹⁸

This definition is consistent with the one in the Accountability Framework that several OP2B members use, which defines natural ecosystems as:

“An ecosystem that substantially resembles – in terms of species composition, structure, and ecological function – one that is or would be found in a given area in the absence of major human impacts. This includes human-managed ecosystems where much of the natural species’ composition, structure, and ecological function are present.”¹⁹

As per the widely accepted mitigation hierarchy (Figure 3), three elements compose this imperative:

- Avoid new impacts: starting now, where the company has a choice about whether to convert a natural ecosystem;
- Reduce on-going impacts;
- Conserve and manage existing ecosystems.

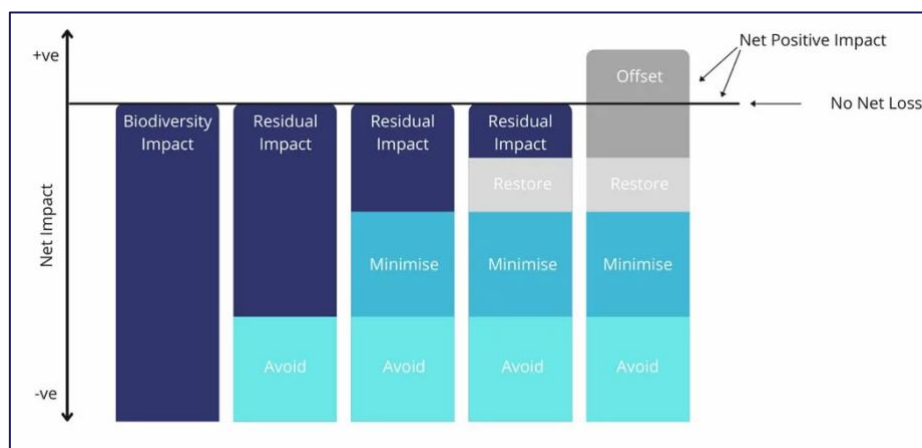


Figure 3: The IFC Mitigation Hierarchy

Note: This widely used tool that guides users to limit as far as possible the negative impacts on biodiversity from development projects. From left to right, it emphasizes the best practice of avoiding and minimizing any negative impacts and then restoring sites a project no longer uses, before finally considering offsetting residual impacts.²⁰

Avoid new impacts

Companies should remember the SBTN interim targets published in November 2021 on **zero deforestation/zero land conversion by 2020** (with rare exceptions) as an overarching imperative to not jeopardize OP2B’s restoration efforts.²¹ Currently, OP2B members operate on different cut-off dates (ranging from 2014 to 2022). However, in alignment with SBTN interim targets and Sustainable Development Goal (SDG) target 15.2, we suggest keeping 2020 as the OP2B ambition, recognizing those who started early and those needing more time to change. In line with science, the Science Based Targets initiative (SBTi) *Forest, Land and Agriculture (FLAG) Guidance*²² and SBTN advances, the

scope of the OP2B framework should include all natural lands as per the IFC definition above. For water ecosystems, SBTN has not published an interim target. But SDG target 6.6 provides a consistent cut-off date: “By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes”.²³

Zero conversion also applies to high conservation value (HCV) areas, for which the HCN Network has developed guidance.^{24 25} Most of the irrecoverable carbon areas are neither protected nor classified as indigenous land, hence the critical role of economic actors and business to keep them intact.

OP2B acknowledges that zero conversion (including deforestation) raises many challenges for some members, especially those operating in complex value chains where suppliers change from year to year (palm oil is the most typical example): it will require working with suppliers to implement traceability all along the value chain and incentives to comply with company requirements. In some cases, it might also require exploring ways to replace the concerned commodities by other more traceable ones.

Reduce on-going impacts

Companies should reduce their on-going impacts without necessarily eliminating them, in line with science-based thresholds, using the SBTN Interim Targets.²⁶ This encompasses measures taken to reduce the duration, intensity and/or extent of impacts that companies cannot completely avoid.

SBTN’s guidance for business notes that “conceptually, strategies taken toward reduction can be very similar to those taken for certain types of avoidance, and the difference between Avoid and Reduce can be just a matter of baseline.”²⁷ It lists five key categories for an impact reduction strategy: production process changes, product design changes, product stewardship, business model changes, and sourcing/supplier engagement.

Conserve and manage

The conservation and management of ecosystems is as important as zero conversion yet is still aligned with OP2B’s ambition. OP2B recommends this, with a cut-off date in 2020, for SDG targets 15.2 for land ecosystems and 6.6 for water ecosystems (see above). This includes nature-positive landscape actions in landscapes at risk of future conversion (and where degradation already occurs). It is critical that companies take an active role in conserving and managing natural ecosystems, although it is not easy to attribute the impact of such conservation and management.

Also, companies should always undertake such actions with local stakeholders. This could include promoting sustainable natural resource value chains based on pristine ecosystems (such as forests) and securing/guaranteeing land and resource access rights, hence enabling the securing of an IPLC commitment to maintaining those ecosystems.

Restoration principles

Principle 1: Restore at a landscape scale and across different jurisdictional boundaries and ensure permanent outcomes

Aligned with common principles already discussed in 2020 by OP2B members, where, if a company contributes (or has contributed) to ecosystem conversion or loss in one location, it needs to compensate by:

- Restoring a **significantly larger area**^{28 29 30} *and*
- Restoring in the locality where the damage occurred or, where this is not possible, in areas with the same ecosystems or similar values for nature and people or at least in the same ecoregion³¹ *and*
- Ensuring restoration has reasonable chances of success, as outcomes need to be **permanent**. If there is sufficient risk that outcomes won't be permanent (such as forest fires occurring at too high a frequency in the area, known plans for reclaiming land or water systems, strong opposition from local populations, etc.), companies should not undertake the restoration and must consider the risks above when selecting the area to restore.

Note that restoration is the last resort and the existence of this mechanism is not a justification for further deforestation or conversion. It should apply only to historical conversion before a cut-off. While SBTN uses 2020 as the latest cut-off, companies should apply earlier cut-offs where they exist (for example, guidance from the Forest Stewardship Council (FSC), Roundtable on Sustainable Palm Oil (RSPO), Soy Amazon Protocol).

Also note that a "significantly larger area" is not a sufficient guarantee that restoration will deliver a "fair" compensation for conversion that has already occurred. In particular, from either an integrity or an intactness perspective, it is not necessarily appropriate to trade area for condition: for example, compensating for the loss of 1 hectare of high integrity and intactness with 10 hectares of restoration with low integrity and intactness.³² OP2B defines integrity as an ecosystem's functional capacity to contribute to biosphere processes and to produce ecosystem services and intactness depending on the state of an ecosystem's impairment from post-industrial human alteration.

There is no "one size fits all" solution; in all cases, a company cannot act alone on such landscape approaches. It should therefore co-design restoration with local stakeholders, including governments, Indigenous peoples and communities, in a multistakeholder partnership and include due diligence and safeguards for all stakeholders (such as Nestlé's Carbon Best Practice Principles).³³ The latter should specify how the principles of additionality, eligibility, legality, permanence, real and measurable impacts, and stakeholder consultation apply in the process. Finally, as OP2B ranks business societal materiality high, its members could be leading partners on science-based "strong sustainability" in certain regions where the institutional setup is weak.

Each ecoregion has a unique "biodiversity balance sheet", be it one of the 825 terrestrial ecoregions that include both land and continental water ecosystems or one of the 232 marine ecoregions.^{34 35 36} The *locality/same ecosystem or ecoregion* rule should always come ahead of jurisdictional boundaries. This means it should prevail over the option of restoring in, for example, a different area in the same country or province that is not in the same locality or, where not possible, the same ecosystem or ecoregion. Furthermore, companies should follow that rule in particular when it comes to restoration

actions from the three first pathways listed above (compensate for the total footprint of the conversion risk for their commodities or for their industry’s past amount of conversion, or restore irrespective of their own footprint). Indeed, unlike climate where compensation can happen anywhere, companies need to avoid, reduce and restore ecosystem impacts locally.

The “permanent outcome” rule may sound challenging for companies as they could argue that what happens if and when they leave the area where they undertake restoration falls beyond their accountability. Therefore, it is key to assess the chances of permanency and financial viability before deciding on a restoration action and developing a mitigation plan. And even if they leave the region of concern, companies should keep monitoring those outcomes and demonstrate achievements regularly thereafter (such as every 5 years and for at least 25 years, a timeframe of action planning often used by industry groups such as RSPO and Rimba).

Tracking progress (described as step 5 of the SBTN methodology) is therefore crucial to accompanying action on the ground.³⁷ Also known as MRV (monitoring, reporting and verification), it consists of:

- Monitoring – tracking (i) progress on and (ii) maintaining the permanence of the defined restoration target;
- Reporting – preparing formal documentation typically connected to desired objectives, outcomes or outputs, such as those connected to targets and goals;
- Verification – an independent third-party confirmation of either a) baseline values of a target indicator (such as a company’s impact inventory) or b) progress made on achieving the target, or both.

SBTN expects to provide further guidance on MRV specifications, in terms of who, how and for how long, in 2023.

Principle 2: Restore nature by considering ecosystem integrity or species

Ecosystem integrity

As introduced in the definitions above, integrity is an ecosystem’s functional capacity to contribute (and continue contributing in the long term) to biosphere processes and produce ecosystem services. In a 2019 *Environmental Management* article, Carter et al. define ecosystem integrity as “the extent to which the composition, structure, and function of an ecosystem fall within their natural range of variation.”³⁸

OP2B privileges integrity because:

- It is a powerful integrator of the various attributes of an ecosystem since composition refers to species (see below), structure refers to intactness (defined above) and function refers to the various ecosystem benefits (including ecosystem services or national contact points (NCPs)).
- It is easy to estimate through a proxy expressed as the proportion of natural or semi-natural habitat within a landscape as a measure of its functional capacity to contribute to biosphere processes and to produce ecosystem services. SBTN has indicated it will use integrity as the main biodiversity indicator in land and water targets.
- It strongly contributes to economic, social and ecological resilience.

The integrative aspect of ecosystem integrity calls for preferring it to species, which are, as explained above, embedded in integrity. However, some companies may already have historical monitoring in place that may justify keeping them alongside integrity measurement.

Species

Species are often a primary entry point to biodiversity restoration. Companies increasingly use several tools and related indicators (see examples in the following section) that have emerged in recent years. These tools and indicators are useful **when and where species abundance can measure nature loss and restoration, meaning when biodiversity is the most material issue** among other nature issues (land, freshwater, ocean) and when it is possible to measure proxy indicators and changes in the field.

Principle 3: Include Indigenous peoples and local communities in conservation and restoration actions and support their rights and livelihoods

There is ample evidence that **Indigenous peoples and local communities** (IPLC) – including farmers, pastoralists, gatherers, hunters, fishers, etc. – contribute significantly to global biodiversity conservation and ecosystem services.³⁹ IPLC rights are also a cross-cutting principle in conservation and restoration that downstream companies should also adopt.

The Accountability Framework’s principles and guidelines, as well as the IUCN Global Standard for Nature-based Solutions (Criterion 6) provide guidance on IPLC rights, including.^{40 41}

- Securing the free, prior and informed consent (FPIC) of Indigenous peoples and local communities;⁴²
- Respecting human rights;⁴³
- Ensuring that companies explicitly acknowledge the potential costs and benefits of associated trade-offs of the intervention and do not negatively impact the most disadvantaged elements of society or, equally, that they give them access to the intervention’s benefits.

As part of OP2B’s ambition, restoration actions should ensure local people’s livelihoods, income, land and nutritional security in the areas of intervention (nature degradation and restoration). In other words, companies should share the value and the benefits derived from restoration (for example, through carbon credits or any sort of payment for ecosystem services) with local communities. Restoration itself also brings added value to the ecosystem, which can in turn enhance livelihoods, income, land and nutritional security.

Furthermore, this principle **aligns with SBTN’s “Transform”**, the ultimate part of its AR³T framework:

*“Take actions contributing to system-wide change, notably to **alter the drivers of nature loss**, e.g., through technological, economic, institutional, and social factors and changes in underlying values and behaviors.”⁴⁴*

It refers to what SBTN calls a company’s societal materiality:

“By taking a societal perspective, companies open the door to internal transformation (e.g., of their business model and decision-making processes) and to external transformation (e.g., of the systems in which they are embedded).”

V. Indicator examples

This section proposes some examples of indicators, in alignment with those of the Consumer Goods Forum (CGF) Forest Positive Coalition. It privileges outcome indicators that are open source and companies can use directly (except Species Threat Abatement and Restoration (STAR), which requires a license for the time being). Note that companies can use process indicators until it is possible to compare outcome indicators with baselines (similar to OP2B’s recommendation in its *Framework for Regenerative Agriculture* to measure land under regenerative agriculture until companies can assess soil organic carbon (SOC) every five years). However, companies often use consulting services to start the process. At this stage, OP2B does not pretend to be more comprehensive but rather to show what the coalition considers as the best options for conservation and restoration indicators.

Imperative/ objective	Indicators	Guidance	Sectors	Verification means	Spatial scale	Time scale	Comment
Imperative: Avoid further conversion	Converted and conserved/managed areas in each ecoregion since 2020 (ha)	SBTN Interim Targets, 2021	All	All relevant mapping using high resolution satellite data (e.g., Global Forest Watch for forest ecosystems) For complex supply chains (e.g., palm oil), supplier-declared deforestation	30-m	Yearly since 2001	In certain complex supply chains (such as palm oil, etc.), a first step would be to measure the percentage of deforestation the supplier declares. In such cases, companies should individually monitor and evaluate trader progress on deforestation. Some companies may have a baseline before 2020; 2020 is SBTN’s “worst case” baseline.
Imperative: Reduce on-going impacts	Water withdrawals (m ³ /month)	SBTN Initial Freshwater SBTs, 2022	All	Water meters and water diversions	River basin	Monthly	For those ecosystems and value chains where water quantity and quality are material.
	Water pollutant loading rate (kg pollutant/month)	SBTN Initial Freshwater SBTs, 2022	All	Discharge flow and nutrient concentration (point source), locally developed model results (non-point source)	River basin	Monthly	
	Species Threat Abatement and Restoration (STAR)	IUCN (Mair et al., 2021)	Value chain with endangered species	IUCN data	50-km grid	Yearly	STAR is based on IUCN Red List of Endangered Species; it requires a USD \$15,000 license. Covers species extinction risk and measures opportunity to reduce extinction threat.

Principle 1: Restore at a landscape scale and across different jurisdictional boundaries and ensure permanent outcomes	Ratio between the surface under restoration and the previously degraded surface in each ecoregion (%)	SBTN Interim Targets, 2021 ⁴⁵	All	Company mapping	% per ecoregion	Yearly as from baseline	A response indicator, not an outcome one, hence the yearly measurement until it is possible to compare the outcome indicators below to the baseline. Although some actions will take place at more local scale than an ecoregion, having this for each member in the ecoregion would allow intercomparison and aggregation of member progress.
Principle 2: Restore biodiversity through ecosystem integrity	Simplified Ecosystem Integrity Index	DeClerck et al. 2022 (in review) ⁴⁶	All	ESA land cover map , used to derive integrity index based on DeClerck et al. 2022 (Methods) ^{47 48}	km ²	Yearly since 1992	Defined as the proportion of natural or semi-natural habitat within a landscape The methods by DeClerck et al. 2022 are not yet self-usable but the team stands ready to work with us at a fee to produce maps.
	Mean Species Abundance (MSA)	Schipper et al. (2016) ⁴⁹	All	GLOBIO database ⁵⁰	km ²	Yearly	MSA is the basis for estimating the CDC Biodiversité’s Global Biodiversity Score. A mere average and static measure of a company or commodity materiality but limited in measuring changes in the field. Also, possible to assess “ecosystem quality” using, e.g., HCV assessments at site or landscape level, or government REDD+ baselines/CBD inventories (e.g., SourceUp) ⁵¹
Principle 2: Restore biodiversity through species	Biodiversity Intactness Index (BII)	Newbold et al. (2016) ⁵² ; Hill et al. (2018) ⁵³	All	NHM Database ⁵⁴	km ²	Yearly since 1970	BII is a measure of the intactness of the biodiversity in a location. Same limitation as MSA.
	Local species population indexes	E.g., Farmland bird index ⁵⁵	Sectors where biodiversity is the most material issue	Local observation (often citizen-based)	Local	Yearly	Can be an interesting complement to measure how local species population are restored.

Table 1: Proposed indicators for the principles of the OP2B restoration actions framework

VI. Case studies

This section presents several case studies from OP2B members as of today. Most of those are still work-in-progress, therefore, they do not necessarily match in detail all the principles and indicators proposed in the framework. They rather stand here as examples of business restoration and conservation practices. As such, these examples transparently demonstrate the margins of progress that exist in many cases to achieve ambitious restoration actions through this framework.

Kering & Solicaz - The first full-site reforestation program for mining sites in the Amazon rainforest

The project enables the restoration of 100% of the surface of former alluvial gold mines in French Guiana – far beyond the legal requirement of 30%.

Project characteristics

Location	French Guiana, Guianan lowland moist forests ecoregion	Project phase	Expansion after first pilots implemented since 2018
Commodities	Gold (responsible, artisanal small-scale mines)	Ecosystem type	Former alluvial gold mines
Scale	Replanting activities have taken place in a total of 141 hectares since 2018 (100% of former mining surfaces)	Partners	Solicaz (reforestation & soil microbiology/soil restoration experts) and Forest Finance France (experts in the development & management of reforestation initiatives)
Start & end date	Started in 2018, expansion still ongoing		

Project details

Landscape approach (mosaic of ecosystems & land uses)	
✓ Mitigate climate change	
✓ Restore biodiversity through habitat restoration & increased connectivity	
✓ Support livelihood of local communities	
✓ Avoid further ecosystem conversion	
Restoration actions	Leveling and reinstating watercourses, growing and planting tree seedlings
Input KPIs	Number of trees planted (density of 1,680 seedlings/ha, with 75% nitrogen-fixing trees and 25% other native species)
Output KPIs	Number of hectares revegetated and restored
Measured impact	Big mammals returning as evidenced by camera traps
Tools/metrics to measure baseline & impact	Camera traps; ant species assessments; soil respiration assessments to estimate ecosystem service delivery in the restored areas, before and after project activities, compared to nearby highly intact forest parcels
Measures to ensure no additional conversion	The project takes place on public lands that are allocated according to the regional territorial planning scheme

Project financials

Funding	The funding provided by Kering enables the restoration of 70% of the formerly mined surface, which do not require reforestation by law.
Additional revenues	The mining company provides funding for the 30% of the surface that it is legally compulsory to reforest after exploitation
Intangible benefits for company	Increase of ecosystem services (including carbon sequestration); proof of concept of full site restoration after alluvial gold extraction, support to responsible artisanal small-scale mines

Project lessons learned

Main barriers to scaling up	Labor costs for implementation are higher than in other tropical areas (French Guiana)
Main enablers for scaling up	Support from other private and public stakeholders

Livelihoods Venture – India Sundarbans Mangrove Restoration (Livelihoods Carbon Fund/2011 – 2015)

Community-based mangrove restoration and management to improve livelihoods and increase biodiversity in the Sundarban delta

Project characteristics

Location	Sundarban delta, West Bengal, India (RESOLVE Eco ID: 323 and level of protection: “Nature could Recover”)	Project phase	Implemented
Commodities	No commodity specified. Restoration needed to protect communities from flooding	Ecosystem type	Mangrove mudflats forming on the edges of embankment dykes
Scale	4,400 ha, restored over 5 years	Partners	Nature, Environment and Wildlife Society (NEWS) and local network rural/fishers’ communities
Start & end date	2011-2015		

Project details

Landscape approach (mosaic of ecosystems & land uses)	
✓ Mitigate climate change	
✓ Restore biodiversity through habitat restoration & increased connectivity	
✓ Support livelihood of local communities	
✓ Avoid further ecosystem conversion	
Restoration actions	Zoning, nursery raising, planting, monitoring & long-term management
Input KPIs	Number of trees planted; Number of ha restored; survival rate after 1 year
Output KPIs	Tons CO2 sequestered annually, increased bird and marine biota biodiversity, reduced saltwater intrusion & damage from cyclones
Measured impact	40,000 tons of CO2 on average annually, which translates in the field to the planting of nearly 16 million propagules in the space of 5 years
Tools/metrics to measure baseline & impact	Remote sensing analysis of baseline vegetation; on-site measurement of surface and tree growth to assess biomass carbon sequestration; default values for soil organic carbon (SOC) (CDM AR-AM0014 Methodology). Baseline & impact surveys for socioeconomic & biodiversity KPIs.
Measures to ensure no additional conversion	Community-based management of restored areas; training to improve agricultural practices and market linkage (Badabon Harvest Farmer Cie).

Project financials

Funding	EUR €2,386,000
Additional revenues	Increased crab, shrimp and fish catch, creating new jobs in communities
Intangible benefits for company	Contributing to improve the livelihoods of communities as well as supporting greater biodiversity in the Sundarban

Project lessons learned

Main barriers to scaling up	Availability of land suitable for restoration
Main enablers for scaling up	Building the local partner capacity in scaling up

LVMH – Co-designing solutions to the loss of forest cover and peatland (with local communities & companies)

The project aims to co-designing solutions to the loss of forest cover and peatland with local communities and companies, avoiding further conversion and restoring those ecosystems. The goal is to create a resilient landscape and a compelling case for the feasibility of balancing commodity production with forest conservation, sustainable livelihoods and the welfare of people at scale. We are only covering the restoration part of the project in this case study. However, the project includes a part on the transition of agricultural models towards regenerative agriculture that we won't be addressing here.

Project characteristics

Location	Riau, Indonesia	Project phase	Engagement with target groups, implementation, monitoring, Scale up
Commodities	Palm oil, pulp & paper industry (acacia, eucalyptus)	Ecosystem type	Sumatran peat swamp forest Eco ID: 280 Sumatran freshwater swamp forest Eco ID: 277
Scale	8,297,525 ha (landscape size)	Partners	Earthworm Foundation (based in Switzerland), with dedicated teams based in Indonesia, Riau landscape, in close contact with local communities, governments and farmers
Start & end date	2020 - 2025		

Project details

	✓ Landscape approach (mosaic of ecosystems & land uses)
	Mitigate climate change
	✓ Restore biodiversity through habitat restoration & increased connectivity
	✓ Support livelihood of local communities
	✓ Avoid further ecosystem conversion
Restoration actions	Train people to reforest degraded areas, technical assistance for forest stewards groups in 17 villages in the implementation of Forest protection & Restoration plans 20 villages (restoration only)
Input KPIs	Number of ha forest protected (in/out concessions); Number of trees planted; Number of ha reforested; Number of illegal loggers that were trained to change activity (to farming); Number of household members supported; Number of local companies trained/onboarded to forest protection/conflict resolution/labor issues; Number of communities/villages onboarded in project
Output KPIs	Number ha of degraded areas restored; Number ha of forests non converted/protected
Measured impact	362,030 ha of forest under protection and with formal management plans (inside and outside concession)
Tools/metrics to measure baseline & impact	Assessment of deforestation via Starling drone monitoring methodology, participatory mapping/land tenure study
Measures to ensure no additional conversion	Regular monitoring of area to spot conversion / change of land use in the Riau landscape (goal to avoid further conversion of forest to farming), strong field presence by dedicated teams, Global Impact Framework Tool (for measurement)

Project financials

Funding	Co-funded by a range of companies, LVMH supports 12.5 %
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LVMH – Co-designing solutions to the loss of forest cover and peatland (with local communities & companies) (continued)	
Additional revenues	Benefit for local communities: sensitized to benefits of protecting forest, right of workers, conflict resolution, onboarding of all stakeholders, etc.
Intangible benefits for company	Restoration project on an area where company is sourcing, contribution to fighting against deforestation and for forest and peatland conservation. Landscape approach allows acting on both conservation/restoration areas and agricultural models

Project lessons learned	
Main barriers to scaling up	Lack of trust from communities; communities are hesitant to do restoration when the same area can be used for farming
Main enablers for scaling up	Building trust and stronger relationships with the village governments; landscape supporters to engage their suppliers in the landscape to participate in planned activities; incentives for restoration can encourage communities, for instance agroforestry model as part of restoration strategy for degraded land.

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Disclaimer

This publication has been developed in the name of WBCSD. Like other WBCSD publications, it is the result of a collaborative effort by members of the secretariat and senior executives from member companies. A wide range of member companies reviewed drafts, thereby ensuring that the document broadly represents the perspective of WBCSD membership. Input and feedback from stakeholders listed above was incorporated in a balanced way. This does not mean, however, that every member company or stakeholder agrees with every word.

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We recognize that business cannot achieve systemic transformation alone. Supported by a rigorous and science-driven approach, OP2B engages constructively with policy-makers, institutions and supply chain actors to initiate action at scale.

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