

Gartner Research

3 Sustainable Business Responses to Biodiversity Loss

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Biodiversity underpins life, but the overabstraction of resources harms ecosystems, which risks undermining the economy in the long term. Executive leaders in leading enterprises are taking a stewardship role by establishing local biodiversity measures and action plans.

Overview

Key Findings

- Typically, executive leaders don't act on biodiversity issues, as they are often not seen as a direct operations problem. Those who do act, don't know what action to take, as they are unsure how to measure impact.
- Biodiversity projects are sometimes directed to showing action is being taken, as opposed to maximizing action impact. The driver is stakeholder engagement, rather than effective change.
- Halting biodiversity loss requires engagement with multiple stakeholders, from communities to nongovernmental organizations (NGOs). Often, organizations don't know where to start to form these partnerships or how to measure their impact.

Recommendations

To drive sustainable business and act on biodiversity issues, executive leaders should:

- Identify what to measure by selecting a range of measurement approaches, including inputs to create biodiversity (e.g., water, air quality, land use) and outputs (e.g., species diversity). Don't rely on just one measure; use multiple approaches to obtain a clear and complete assessment.

- Conduct a biodiversity hot-spot analysis by assessing the organization's positive and negative impacts throughout the value chain. Prioritize high-risk areas for immediate action.
- Determine who to work with locally by developing impacts-based partnerships. Because biodiversity loss is a local issue, work with NGOs and communities to improve ecosystem management and skills as well as to identify mutually beneficial outcomes.

Introduction

The economy relies on converting environmental resources into financial returns for stakeholders. But is this consumption sustainable? The United Nations states that 75% of the land-based environment and 66% of the marine-based environment have been altered by human action. ¹ These actions include activities ranging from increased deforestation to the rising amounts of ocean plastics.

It is a bleak, but not irreversible picture. Continued overconsumption of natural resources is a risk to executive leaders and their enterprises. In the short term, constrained resource availability will lead to price spikes. In the long term, the degradation and destruction of ecosystems will lead to impacts felt within all societies. For example, the loss of pollinating insects compromises the food system.

Biodiversity loss is a business challenge. Research from the World Economic Forum indicates approximately \$44 trillion in economic value generation is moderately or highly dependent on nature. ² The agriculture, construction, and food and beverage industries exhibit the highest dependence.

Business reliance on biodiversity is starting to be seen as a risk. In our 11 interviews with executive leaders, including with Unilever's Laurent-David Charbit, we found that biodiversity loss and ecosystem health was increasingly viewed as a threat to business prosperity and security. This research also includes information acquired from secondary sources and industry commentary.

“If you don’t protect biodiversity, you undermine the resilience of supply chains.”

– Laurent-David Charbit, vice president of climate and compass sustainability program, Unilever

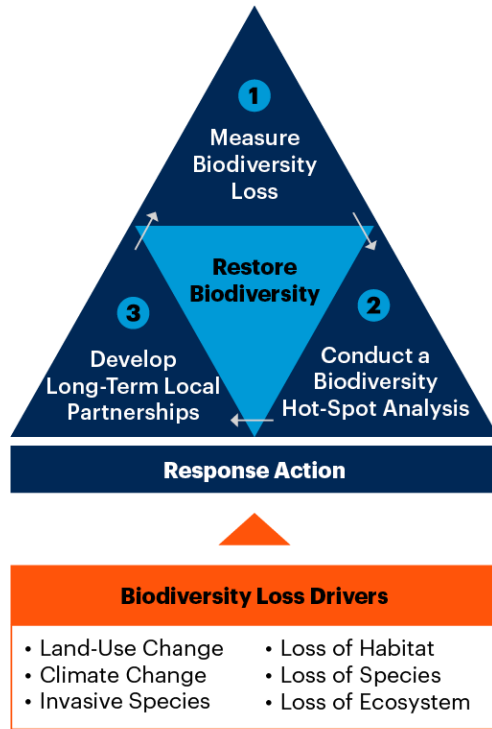
There is no time to lose. Leaders have an urgent need to identify enterprise practices to understand, respond to, limit, halt and restore biodiversity loss. Figure 1 shows the drivers and responses to biodiversity loss. The purpose of this research is to empower executive leaders to establish biodiversity action plans by:

- Demonstrating how to overcome barriers to measuring biodiversity impacts
- Showing how to invest in the most effective projects by understanding biodiversity hot spots
- Defining the ingredients to developing long-term local and sustainable partnerships

Creating a biodiversity action plan is an iterative process leaders can adjust based on increased knowledge of local biodiversity issues and drivers.

Figure 1. Three Leverage Points to Limit, Halt and Restore Biodiversity

Three Leverage Points to Limit, Halt and Restore Biodiversity



Source: Gartner
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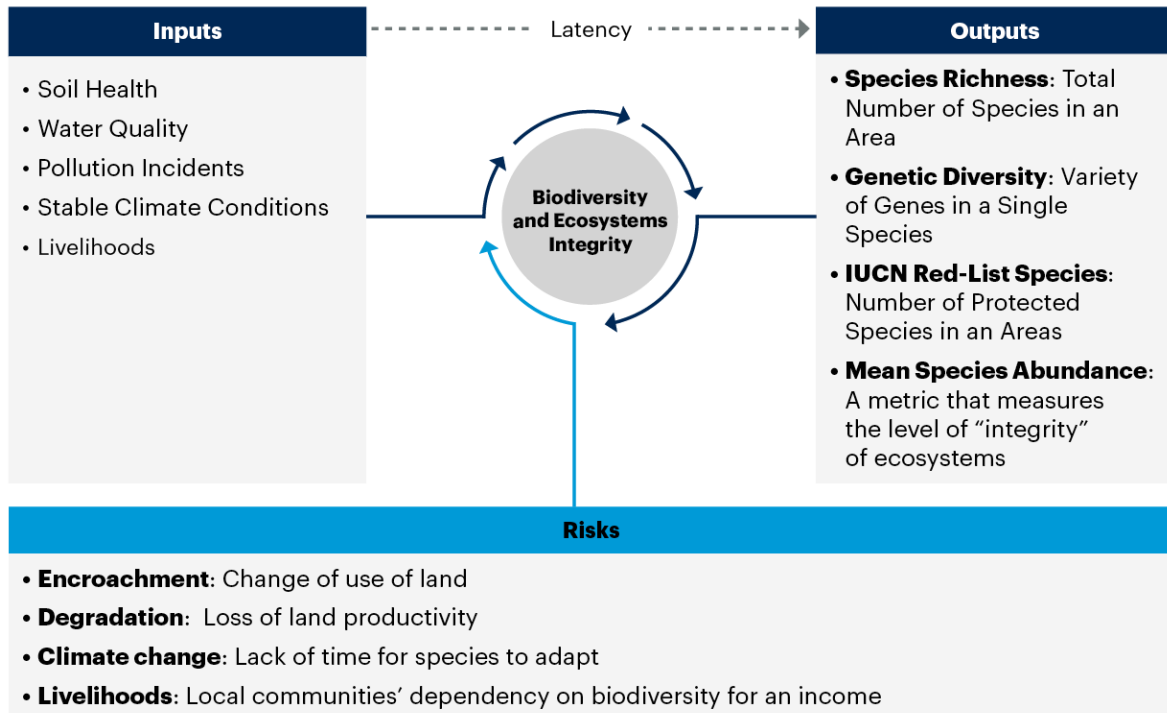
Analysis

Define Measurement Approach

Biodiversity can be measured in multiple ways. Our interviews show that no single standardized approach or measure is in place, common to all organizations. Instead, a mix of inputs, outputs and risks are assessed (see Figure 2).

Figure 2. Biodiversity Measurement Approaches

Biodiversity Measurement Approaches



Source: Gartner
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- **Inputs** focus on the building blocks needed to create strong biodiversity and ecosystems. This area of measurement includes soil health, water quality, a stable climate and any pollution incidents. Executive leaders must also look to understand any social inputs that may be driving biodiversity loss. Social drivers may include, for example, a community whose income is derived from capitalizing on nature.

There is usually latency between changes, inputs and outputs. For example, if a rainforest has been lost, taking remedial actions to improve soil quality and planting trees will help. However, we will only see the results of this action in rainforest and species restoration over a generation or more.

- **Outputs** focus on the richness and diversity of a species or ecosystem in a given location. Measures include species richness, genetic diversity and the number of species on the International Union for Conservation of Nature's Red List of Threatened Species. Enterprises may also choose to measure mean species abundance (MSA), which monitors and compares the current species to a baseline to understand ecosystem integrity.
- **Risks** may also be considered as part of the measurement process. Three types of risks emerged through our interviews. These risks were highlighted when discussing agricultural practices:
 - **Degradation** – Intensive farming practices result in degradation of land due to overgrazing and intensive cultivation. These practices are often driven by farmers needing to feed their families. Our interviews show that enterprises are increasingly focusing on regenerative agriculture to decrease farming costs in the long term, improve biodiversity and maintain healthy yields.

Regenerative agriculture consists of farming and grazing practices that slow climate change by rebuilding soil organic matter and restoring degraded soil biodiversity – resulting in both carbon drawdown and improving the water cycle.

- **Encroachment** – This risk involves the conversion of natural ecosystems into arable land. For example, between August 2020 and July 2021, 10,476 square kilometers of Brazilian rainforest was lost, according to research group Imazon.³ Executive leaders are leveraging technology to understand the risk of encroachment, using satellite imaging and geospatial data.
- **Climate Change** – The speed of climate change means that species will not be able to adapt quickly enough – resulting in species loss. Climate change will also alter what we grow and where.

Examples of Good Practice

- **Schneider Electric:** Schneider Electric, a French company that provides energy and automation digital solutions, worked with a third party using Global Biodiversity Score (GBS), which looks at MSA for the enterprise and the end-to-end supply chain. The GBS tools were developed in conjunction with the Business for Positive Biodiversity Club of CDC Biodiversité, consisting of more than 30 companies and institutions. ⁴ In an interview, Xavier Houot, senior vice president of sustainable business and operations, said: “The assessment has enabled us to articulate our first ever end-to-end biodiversity footprint and strategy for a multinational company as unveiled at the end of 2020, craft our 2025-2030 sourcing strategies (e.g., copper, aluminum, wood notably), and develop biodiversity action plans for our sites, engaging our people and local communities.”
- **General Mills:** General Mills, an American manufacturer and marketer of branded consumer foods, has set the goal of advancing regenerative agricultural practices on one million acres of farmland by 2030. The organization is applying six principles of regenerative agricultural practices: understanding the local farm context, minimizing soil disturbance, maximizing crop diversity, keeping the soil covered, integrating livestock and maintaining planting year round. ⁵ The company has invested in research, collaborations and direct farmer engagement to increase uptake of regenerative agricultural principles.
- **Fujitsu:** Preventing biodiversity loss can also be achieved through products and services. Fujitsu’s Digital OWL project used high-performance computing, video analytics and drone technology to identify species in an area. Fujitsu is a Japanese information and communications technology equipment and services organization. The Digital OWL project was developed in partnership with the New South Wales Saving Our Species program. ⁶

Actions for Executive Leaders

Executive leaders seeking to identify the enterprise’s impact on biodiversity should:

- Select both input (e.g., soil organic matter) and output (e.g., MSA) measures to assess the enterprise impact on biodiversity loss or restorative actions.
- Assess the risks associated with biodiversity loss by understanding both the environmental and social drivers.
- Determine how biodiversity data will be disclosed to stakeholders. For example, data can be communicated through the annual report to investors or through brands to customers.

Conduct a Biodiversity Hot-Spot Analysis

Biodiversity loss occurs through enterprise direct action as well as in the value chain. Executive leaders must make a holistic, end-to-end assessment using a biodiversity hot-spot analysis.

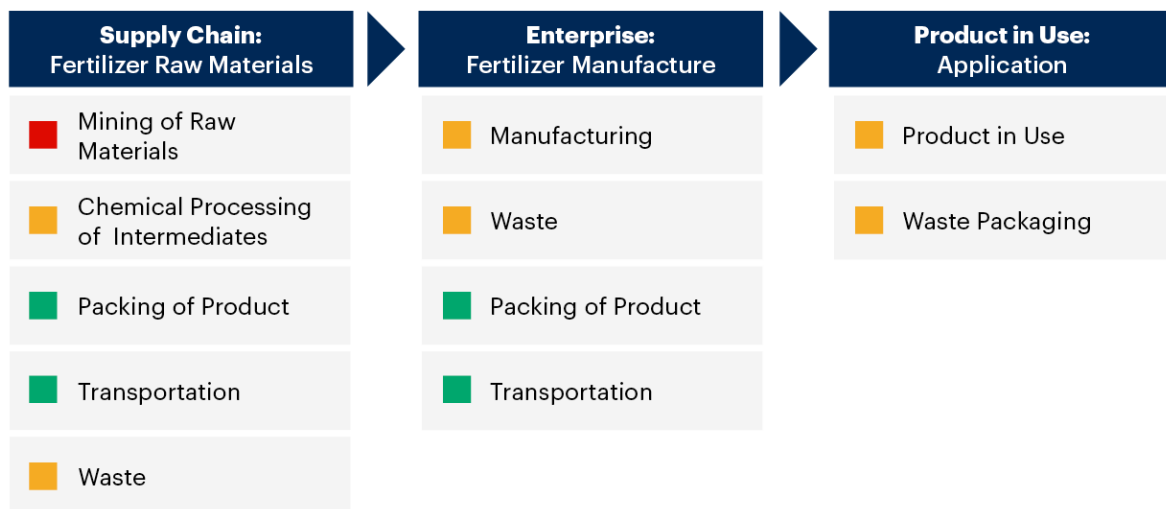
The biodiversity hot-spot analysis enables enterprises to identify areas that are irreplaceable. This means that a high percentage of species are found in a particular area and nowhere else on the planet.

Figure 3 shows the areas that should be considered in this analysis, using the example of fertilizer manufacturing. The areas highlighted in red show the example organization's actions are damaging an ecosystem that is considered irreplaceable. Orange indicates a risk of biodiversity loss, but the impacts on species are considered less severe.

Figure 3. Biodiversity Hot-Spot Analysis (Illustrative Example)

Biodiversity Hot-Spot Analysis Illustrative Example

- **Biodiversity Risk:** Biodiversity is being lost
- **Potential Biodiversity Risk:** Risk of biodiversity loss
- **No Biodiversity Risk:** Activity is not contributing to biodiversity loss



Source: Gartner
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A hot-spot analysis for the example organization, involved in fertilizer manufacturing, could subsequently reveal three areas of focus:

- **Suppliers** – Assess biodiversity impacts from the supply chain back to the source. Significant biodiversity impacts are likely to come from extracting and producing materials, for example from mining or agriculture. Biodiversity impacts can also result from unscrupulous waste management, such as illegal dumping.
- **Enterprise** – The enterprise causes direct biodiversity loss, depending on where manufacturing plants are built. Indirect biodiversity loss can be caused through activities such as energy use. For example, being dependent on coal for electricity, sourced from opencast mines, affecting local land and habitats.
- **Product in use** – The use of products can create separate biodiversity impacts. A farmer over applying fertilizer may risk harming avian, aquatic and insect life. This action can have a material impact, resulting in a reduction in pollination.

Enterprises that have significant biodiversity impacts should integrate biodiversity risk and opportunities into core business decisions, including mergers, acquisitions, divesture, innovations and supplier selection.

Biodiversity assessment may also be integrated into projects through mandatory environmental impact assessments. Alternatively, consider voluntary standards, such as the U.S. Green Building Council's Leadership in Energy and Environmental Design or the Buildings Research Establishment's Environmental Assessment Method. These broad standards have elements that can enable local biodiversity management.

Additionally, executive leaders must prepare themselves for new approaches and standards, which may affect the scope and depth of their biodiversity hot-spot analysis. Standards under development include the Taskforce on Nature-Related Financial Disclosures and Science-Based Targets Network. Just as stakeholder pressure has increased on climate change issues and emissions management, executive leaders should expect the same for biodiversity issues.

Examples of Good Practice

- **IKEA:** Per Stoltz, sustainability developer for IKEA, a Dutch-headquartered company that designs and sells furniture and various home goods, said in an interview: "We use certifications like BREEAM when thinking about biodiversity for our retail stores. It is not only important to involve local NGOs in our biodiversity plans, but it is important to involve our employees and wider community too."

- **L'Oréal:** L'Oréal was an early adopter of the Convention on Biological Diversity framework and used it to build its sustainable sourcing policy for bio-based raw materials. The French personal care company has stated that by 2030, 100% of bio-based ingredients in formulas will be traceable, coming from sustainable sources, not linked to deforestation. Nisrine Zaaraoui, head of sustainable sourcing of materials, said: "L'Oréal takes suppliers through a four-step pathway to identify the origin, biodiversity and social risks and define a corrective action plan with its suppliers. These steps include knowing the origin of materials, putting in place action plans where there are high risks, onboarding and ensuring suppliers respect sustainable sourcing criteria. Lastly, only when there is positive accountable sourcing will L'Oréal make any claim about biodiversity in its sourcing practices." The organization is also partnering with the Union for Ethical BioTrade, among others, on key commodities.

Actions for Executive Leaders

Executive leaders conducting a hot-spot analysis of biodiversity issues should:

- Take a holistic view of biodiversity issues by assessing risk, impacts and opportunities throughout the value chain at least on an annual basis. For areas of high risk, ongoing monitoring should be implemented.
- Integrate a biodiversity assessment into additional strategic decision making forums, including mergers, acquisitions, divestitures, innovation and supplier selection.
- Ensure awareness of new biodiversity protocols and standards by conducting a quarterly review. Assess how these standards may affect the scope, depth and breadth of the biodiversity hot-spot analysis.

Build Local Partnerships

Biodiversity loss and restoration is a local issue. Organizations must take action with local communities to closely understand interrelated factors, such as economic welfare, education and health. From the interview process, we identified four characteristics for developing strong community partnerships (see Figure 4).

Figure 4. Community Partnership Characteristics

Community Partnership Characteristics



Source: Gartner
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To build an effective community partnership, leaders should:

- **Engage with local NGOs** – Biodiversity is a local, community issue. By working with local NGOs, organizations can collaborate with communities to generate ideas and fund the most appropriate projects. Start by selecting NGOs with aligned objectives and formulating terms of reference for the collaboration. Also, work with NGOs to assess how coalitions with other businesses can be built to manage local biodiversity impacts.
- **Assess root causes and interconnectivity of issues** – There are always reasons behind the destruction of habitats, ecosystems and the loss of biodiversity. For any solutions to be successful, these underlying drivers must be surfaced. Do a root-cause analysis, looking for the interconnectivity of issues.
- **Community-owned solutions** – For projects to be sustainable, make sure communities own the ideation, implementation and ongoing support activities. Projects that are being “done to” others, rather than “done with” others, are likely to fail. Community-led projects are also likely to avoid any unintended consequences. Any biodiversity actions should be independently verifiable to instill confidence in the actions and benefits.

- **Share knowledge and learning** – Share the successes and failures of working with NGOs and communities across different enterprise projects. Share more broadly across other businesses, where these collaborative partnerships are in place. Look for points of common learning that can be applied, which will enable the organization to accelerate its biodiversity efforts.

Examples of Good Practice

- **Nestlé:** Nestlé, a Swiss food and drink processing company, is acting on biodiversity at a corporate and local community level. The enterprise is working with local communities on reforestation projects and wetland preservation. For example, a partnership with Project RELeaf in Sabah, Malaysia, will see three million trees planted as part of reforestation efforts. In the U.S., Nestlé's Purina PetCare brand is partnering with a local governmental organization on presenting wetlands in Des Moines, Iowa. Nestlé has also conducted hot-spot analysis to understand deforestation risks for communities that may lead to biodiversity and forestry loss. ⁷
- **HP Inc.:** James McCall, chief sustainability officer at HP, highlighted that the enterprise has formed a partnership with the World Wildlife Fund to protect, improve and restore critical ecosystems. HP, an American IT company, is already responsibly sourcing its own HP branded paper. This \$80 million investment, which represents over one million acres of forest landscapes, will address the impact on forests from every page printed through an HP printer. "This is not only the right thing to do, but it is important that we are helping our customers in addressing their impacts," McCall said. "This is where sustainability is smart for business and the planet. Customers know that their dollars spent are making a positive impact."

Actions for Executive Leaders

Executive leaders looking to build local partnerships should

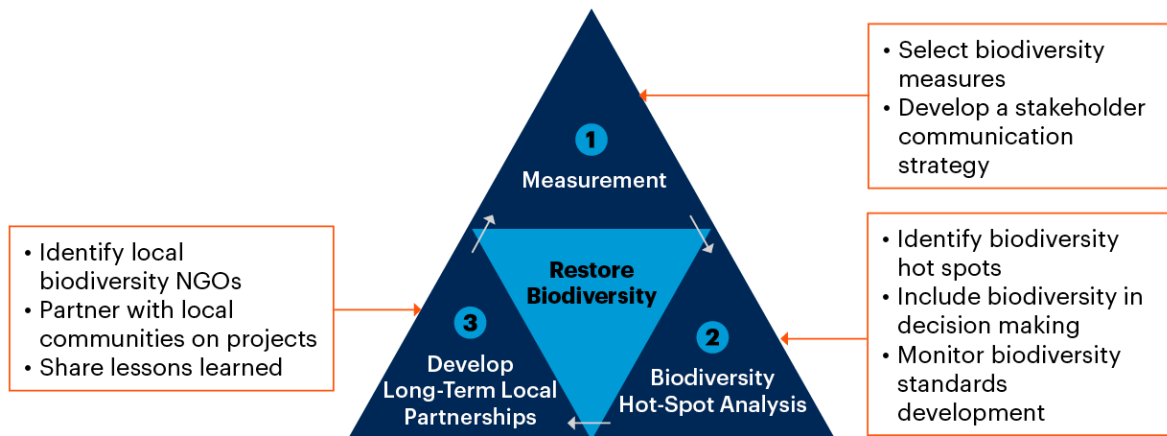
- Identify local NGOs to partner with, starting by formulating joint terms of reference covering decision making, funding and measures of success.
- Take action to prevent biodiversity loss by working with local community leaders. Start by conducting a root-cause analysis of drivers for biodiversity loss and identify projects to address these losses. Ensure there is equity in voice, with women and young people being heard.
- Share successes and failures across biodiversity projects as a mechanism to accelerate activities.

Conclusion

Our research identified three actions executive leaders can take to manage biodiversity loss: put in place biodiversity measures, assess biodiversity hot spots and develop local partnerships. Figure 5 offers a summary of these actions.

Figure 5. Summary of Biodiversity Loss Response Actions

Summary of Biodiversity Loss Response Actions



Source: Gartner
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Evidence

Note: The interviews quoted in this research were conducted with Gartner between October and December 2021.

¹ UN Report: Nature’s Dangerous Decline “Unprecedented”; Species Extinction Rates “Accelerating”, United Nations.

² Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy, World Economic Forum.

³ Deforestation in the Brazilian Amazon Reached 2,095 km² in July, and the Last 12 Months Cumulative Is the Highest in 10 Years, Imazon.

⁴ Global Biodiversity Score: A Tool to Establish & Measure Corporate & Financial Commitments for Biodiversity, Capitals Coalition.

⁵ Regenerative Agriculture, General Mills.

⁶ The Digital Owl, Fujitsu.

⁷ Protecting Natural Capital, Nestlé.

Recommended by the Authors

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