

Blueprint for Accelerating Biodiversity Action: A Strategic Roadmap and Action Plan for the Business and Private Sector in Malaysia

As part of Action 2.3(d) of the National Policy on Biological Diversity (NPBD) 2022-2030



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The views expressed in this publication do not necessarily reflect those of MPBB or the organisations represented in the National BAG.

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List of Abbreviations

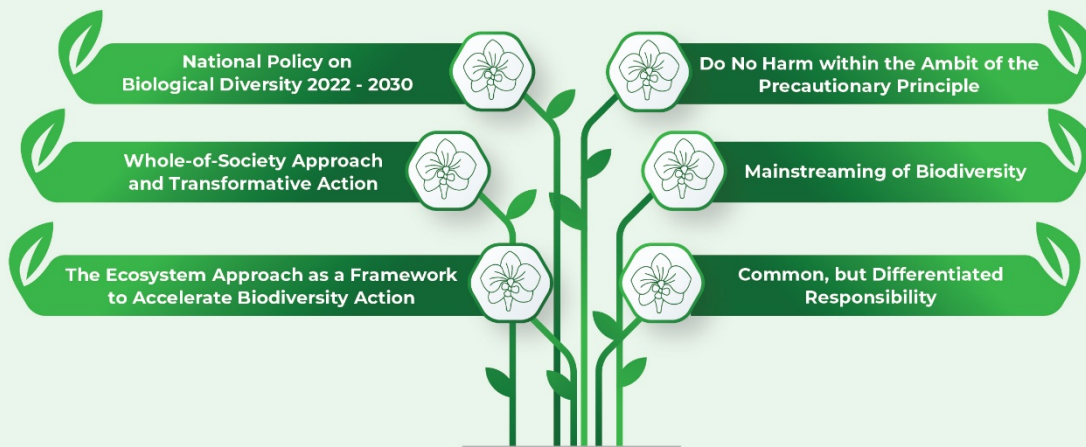
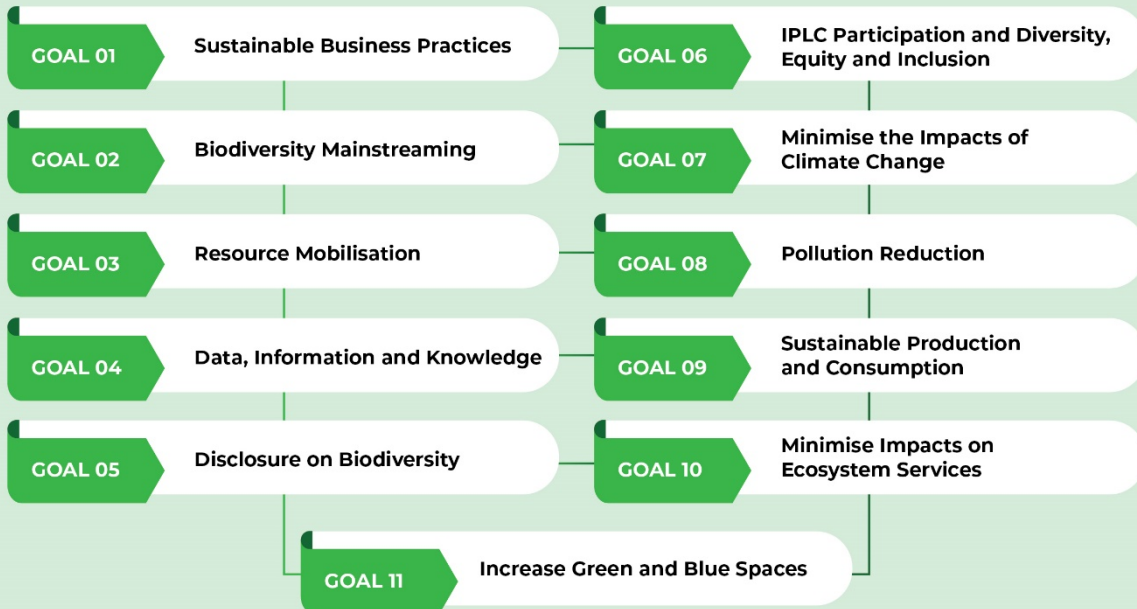
BAG	Business Advisory Group
BMPs	Best management practices
CBD	UN Convention on Biological Diversity
FPIC	Free, Prior and Informed Consent
GBF	Global Biodiversity Framework
IPLC	Indigenous People and Local Communities
MPBB	Malaysia Platform for Business and Biodiversity
NGO	Non-governmental organisation
NPBD	National Policy on Biological Diversity 2022-2030
NRES	Ministry of Natural Resources and Environmental Sustainability
SBTN	Science Based Targets on Nature

Executive Summary (Infographic)

SUSTAINABLE BUSINESS, PRODUCTION AND VALUE AND SUPPLY CHAINS



THE ROAD TO 2030



Guiding Principles and Values

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1 Introduction

The Role of the Business and Private Sector in Malaysia in Biodiversity Conservation Efforts

The business and private sector community (“the community”) in Malaysia plays a vital role in supporting biodiversity conservation efforts. Their involvement goes beyond financial contributions, extending into active participation in policy development and the implementation of conservation actions.

This community recognises its responsibility both as a catalyst for change and as a steward of the nation’s biodiversity. By exercising direct control over their operations, these organisations commit to actions that conserve, use sustainably, and rehabilitate biodiversity. All such efforts are grounded in the best available scientific data, information, and knowledge, with a continual drive to achieve best management practices (BMPs) throughout their activities.

The Need for a Strategic Roadmap and Action Plan

At present, Malaysia lacks a harmonised framework that requires the business and private sector community to tackle biodiversity loss. This Strategic Roadmap and Action Plan seeks to provide clear policy direction, enabling businesses and the private sector to adopt a unified and collective stance in addressing biodiversity challenges. As Malaysia progresses toward developed nation status, it is essential that economic growth is carefully balanced with biodiversity conservation and protection, ensuring long-term sustainability and the well-being of society as a whole.

Scope and Purpose of the Strategic Roadmap and Action Plan

This Strategic Roadmap and Action Plan is designed to empower the business and private sector community in Malaysia to take decisive, transformative action to halt and reverse biodiversity loss, in alignment with the principles, goals, and initiatives outlined in the National Policy on Biological Diversity (NPBD) 2022-2030. It also reflects Malaysia’s commitments under the three objectives of the Convention on Biological Diversity (CBD), ensuring a balanced and integrated approach. It directly supports Action 2.3 (d) of the NPBD.

Focused on delivering tangible results, the Strategic Roadmap and Action Plan serves as a guide for revising, developing, updating, and implementing internal policies, guidelines, and planning processes at all organisational levels. This includes integrating biodiversity considerations throughout the value and supply chains of the business and private sector community, driving the mainstreaming of biodiversity in business practices across Malaysia.

Comprised of 11 Goals to be achieved by 2030, the Strategic Roadmap and Action Plan promotes coherence, complementarity, and cooperation across industries. The extent to which individual companies, businesses, or commercial entities can apply these goals depends on factors such as industry type, company size, business models, operational activities, and existing internal policies and planning processes.

It is especially important for public listed companies (PLCs) in Malaysia to take the lead in adopting and implementing the Strategic Roadmap and Action Plan. At the same time, businesses of all sizes and structures are encouraged to follow the best practices established by PLCs, fostering a culture of biodiversity stewardship throughout the private sector

Approach to Developing the Strategic Roadmap and Action Plan

The development of this Strategic Roadmap was led by the Malaysia Platform for Business and Biodiversity (MPBB) following the five-step process as shown in **Figure 1**.

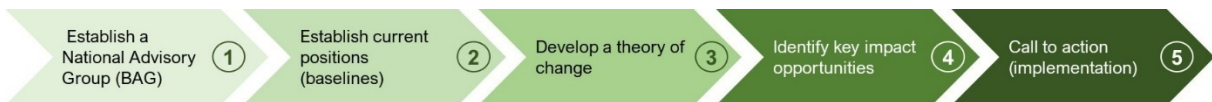


Figure 1 Strategic Roadmap and Action Plan development process

Establish a National Business Advisory Group (BAG)

A National Business Advisory Group (BAG) was established with the aim of providing guidance and support to the government during the updating process of the National Policy on Biological Diversity (NPBD) 2022-2030 on how to effectively incorporate the business and private sector community in its implementation (via this Strategic Roadmap) while keeping the ambition high to ensure the community’s meaningful contribution to the mission to halt and reverse biodiversity loss, within the principles, goals, and aspirations of the NPBD 2022-2030. The National BAG comprises 11 voluntary members (full list as per **Appendix A**) representing different industries and sectors in Malaysia, including the financial sector and non-governmental organisation (NGO). The establishment of the National BAG ensures that the Strategic Roadmap and Action Plan is coherent and can be implemented by all business and private sector entities across industries in Malaysia.

Establish Current Positions (Baseline)

The mapping process included an assessment of the level of engagement between the Government of Malaysia and the business and private sector community in Malaysia on biodiversity conservation, a review of corporate disclosures and a range of external literature sources and understanding the role of the community in the biodiversity conservation efforts to halt and reverse its loss. The members of the National BAG discussed the community’s current level of impact on biodiversity conservation in Malaysia and its potential to contribute to the realisation of the Kunming-Montreal Global Biodiversity Framework (GBF) by either minimising negative or maximising positive impacts.

Develop a Theory of Change

In developing this Strategic Roadmap and Action Plan, it was understood that development and biodiversity conservation challenges are complex caused by many factors that are embedded deeply in the way society functions. To ensure that these challenges are addressed, and a transformative change is achievable, a theory of

change (please see **Section 2**) was developed to describe and outline how the business and private sector community in Malaysia can also contribute to the mission to halt and reverse biodiversity loss, within the principles, goals, and aspirations of the NPBD.

Identify Key Impact Opportunities

The GBF adopted in December 2022 sets out an ambitious plan to implement broad-based actions to transform society’s relationship with biodiversity, ensuring that by 2050 the shared vision of “living in harmony with nature” is fulfilled. The 23 Targets of the GBF are interlinked by many cross-cutting elements and the business and private sector community in Malaysia has the potential to contribute to all the 23 Targets.

From the 23 GBF Targets, this Strategic Roadmap and Action Plan focuses on the Targets where the business and private sector community can have the greatest impact, within its own individual operations and by leveraging its role in

BOX A:
“High priority” Kunming-Montreal GBF Targets (keywords)

Target 7	Reduce pollution
Target 8	Target 8: Minimise the impact of climate change
Target 10	Sustainable management of agriculture, aquaculture and forestry
Target 11	Regulation of air, water, hazards and extreme events
Target 12	Increase access to green and blue spaces
Target 14	Mainstreaming of biodiversity
Target 15	Sustainable business, production and supply chain
Target 16	Sustainable consumption
Target 19	Financial resources
Target 20	Capacity building and development
Target 21	Data, information and knowledges
Target 22	IPLC participation in decision-making
Target 23	Gender equality



the supply and value chains.

An appraisal of the relevance of the GBF Targets to the business and private sector community in Malaysia was carried out to identify where the community can make the most significant contribution to the GBF within the confines of the NPBD 2022-2030. This led to the identification of 13 Targets of the GBF considered “High Priority” (**Box A**) which then became the basis of the 11 Goals of the Strategic Roadmap and Action Plan (please see **Section 4**). The appraisal was also carried out against the NPBD 2022-2030 to ensure consistency (**Box B**).

A series of discussions, workshops and webinar sessions with the National BAG, the Biodiversity Management Section of

the Ministry of Natural Resources and Environmental Sustainability (NRES), and the wider business and private sector community were carried out to ensure that the Strategic Roadmap is coherent and can be implemented by all business and private sector entities across industries and sectors in Malaysia.

Call to Action (Implementation)

The call-to-action outlines how the business and private sector community in Malaysia and relevant stakeholders can engage with this Strategic Roadmap and how the community can catalyse impact through the implementation of this Strategic Roadmap and Action Plan.

The Development Timeline

The Strategic Roadmap began its development in January 2023, and finalised at the end of June 2024, summarised as follows:

January 2023	National BAG established
April 2023	Inception meeting of the National BAG
May 2023	Second meeting of the National BAG (current positions on baselines established and theory of change developed)
May 2023	Meeting with NRES
June 2023	Third meeting of the National BAG (Goals finalised)
July 2023	Webinar on Draft Strategic Roadmap and Goals for businesses in Malaysia
July 2023	Presentation to Governmental Agencies
August 2023	Meeting with Minister of NRES
February 2024	Fourth meeting of the National BAG (targets and indicators finalised)
June 2024	Draft Blueprint for Accelerating Biodiversity Action: A Strategic Roadmap and Action Plan for the Business and Privates Sector in Malaysia
August 2025	Blueprint for Accelerating Biodiversity Action: A Strategic Roadmap and Action Plan for the Business and Privates Sector in Malaysia

2 The Theory of Change to Accelerate Biodiversity Action by the Business and Private Sector in Malaysia

This Strategic Roadmap and Action Plan is built around a theory of change (**Figure 2**) that recognises that all businesses (regardless of the sector or industry) directly or indirectly impact biodiversity due to their operations including their supply and value chains. However, depending on the sector and industry, not all businesses directly depend on biodiversity in the same proportions.

The theory of change asserts that *sustainable business, production, and value and supply chains* is possible. This can be achieved by enabling mainstreaming of biodiversity into all business operations and decisions, including policies, guidelines, planning and development processes at all organisational levels including the value and supply chains, and reinforced by interventions that are in line with the following outcomes:

- Biodiversity conservation
- Ecosystem rehabilitation
- Resource mobilisation

These outcomes would then result in a *nature positive business* operation that halts and reverses biodiversity loss by 2030 to ensure the *2050 Vision of Living in Harmony with Nature* is achieved considering Malaysia's circumstances, priorities and capabilities in line with the principles, goals and actions of the NPBD 2022-2030.

It is important to note that the business-as-usual scenario with fragmentation and lack of effective engagement between policymakers and the business and private sector community has thus far prevented the transformational change needed. Furthermore, if current unsustainable trends continue, biodiversity and ecosystem services that are available today may become more costly, or worst cease to be available in the future.

Therefore, it makes perfect economic sense that business and private sector community in Malaysia acknowledges its dependencies and impacts on biodiversity (and ecosystem services) within its core strategy and operations. This will then better position the community in avoiding risks and exploiting opportunities.

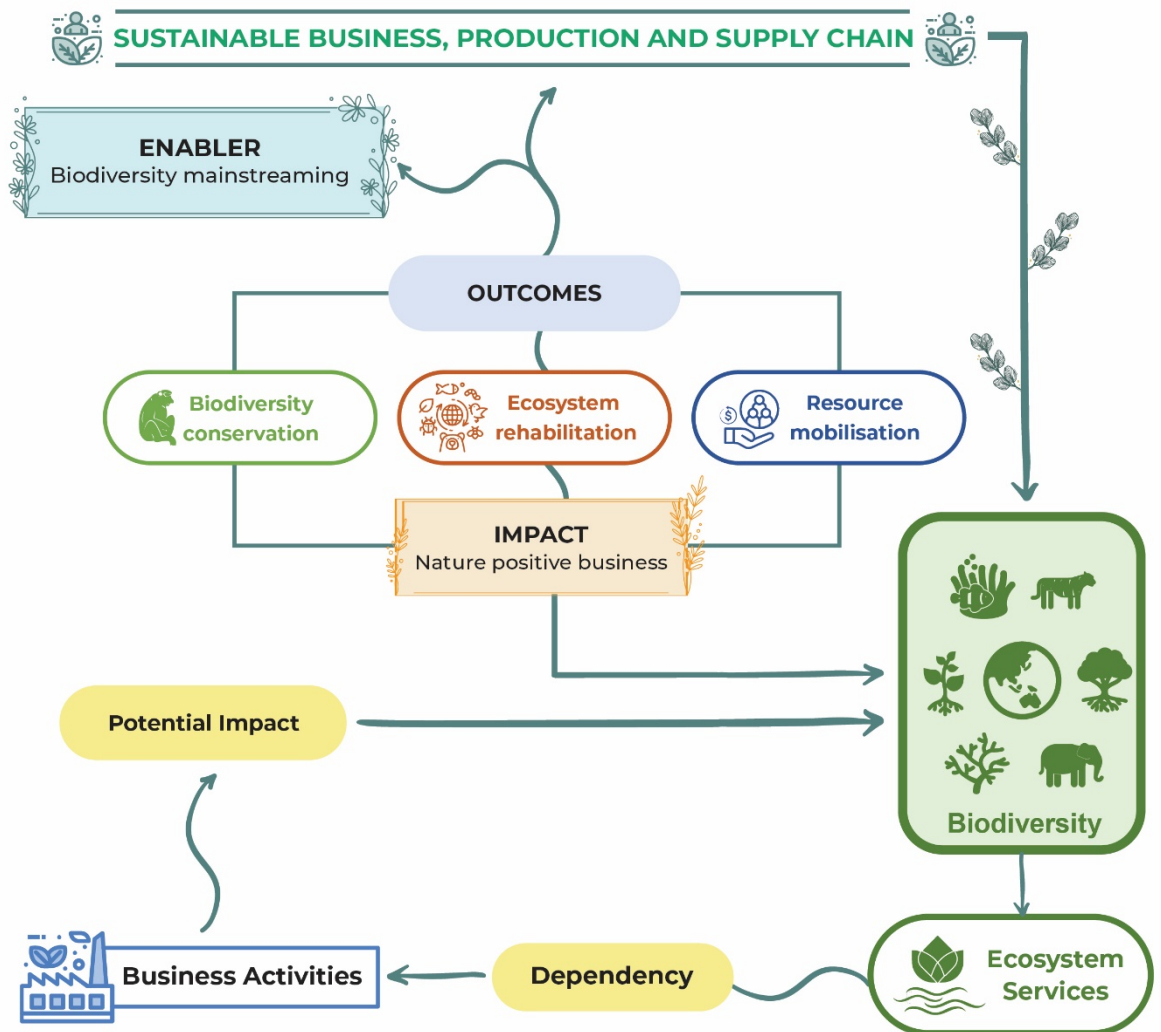
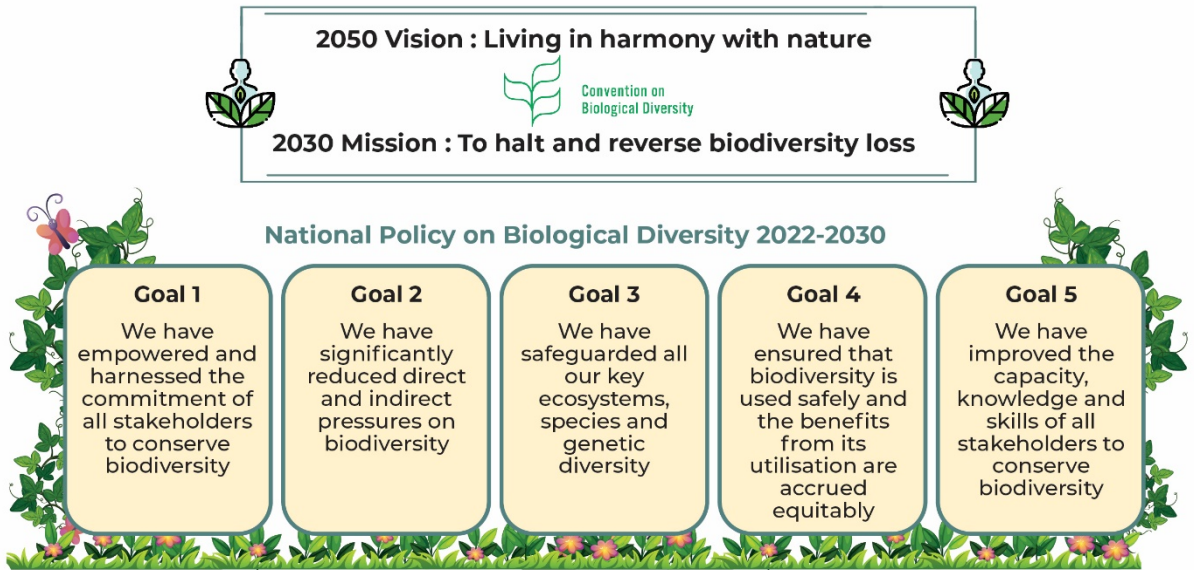


Figure 2 The theory of change to accelerate biodiversity actions by the business and private sector community in Malaysia

3 Guiding Principles and Values

This Strategic Roadmap and Action Plan is guided by the following principles and values:

National Policy on Biological Diversity 2022-2030

The NPBD 2022-2030 is the main policy instrument for the protection and conservation of biodiversity in Malaysia and is the instrument of implementation of the CBD. This Strategic Roadmap and Action Plan supports and aligns itself with the principles, aspirations, and goals of the NPBD.

Whole-of-Society Approach and Transformative Action

This is a Strategic Roadmap and Action Plan for all businesses, of all sizes and industries. Its success requires the will to transform away from the business-as-usual practices, and recognition at the highest level of organisation and relies on action and cooperation by all businesses across all industries. Transformative action is needed to ensure biodiversity is safeguarded and people continue to receive the services and benefits that nature provides. Businesses are agents of transformative actions; in that they possess the resources needed to ensure that their operations are in line with the aspirations of the nation.

The Ecosystem Approach as a Framework to Accelerate Biodiversity Action

This Strategic Roadmap and Action Plan is based on the ecosystem approach that seeks to maintain the integrity and functioning of ecosystems to avoid rapid undesirable ecological change. It recognises that the impacts of human activities are a matter of social choice and are as integral to ecosystem interactions as ecosystems are to human activities.

Do No Harm within the Ambit of the Precautionary Principle

The “do no harm” approach supports the implementation of this Strategic Roadmap and Action Plan within the ambit of the “precautionary principle”. The “do no harm” approach emphasises that businesses do not support or carry out economic activities that cause significant harm to any environmental components, that these activities safeguard the maintenance of the health, diversity and productivity of ecosystems and natural resources. The “precautionary principle” ensures that where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason to postpone cost-effective measures to prevent environmental or ecological degradation.

Mainstreaming of Biodiversity

To ensure that this Strategic Roadmap and Action Plan is successful, the integration or inclusion of biodiversity into non-biodiversity instruments and processes, like into all business operations and decisions, including policies, guidelines, planning and

development processes at all organisational levels including the value and supply chains.

Common, but Differentiated Responsibility

The business and private sector community has a common responsibility in ensuring its operations and activities, including value and supply chains are in line with the Goals of this Strategic Roadmap and Action Plan. Although this is the case, based on individual circumstance and capabilities, the responsibility differs based on several factors, such as type of industry, company size, business models, operating activities and internal policies, guidelines, planning and development processes.

4 The Road to 2030: Business and Biodiversity Action Plan

Background

Each of the 11 Goals is presented in detail in the sections that follow, outlining their relevance for Malaysia's business and private sector community and describing how each can be achieved through associated Targets, Key Indicators, and Action Areas. Together, these Goals embody the transformational shift required to halt and reverse biodiversity loss by 2030, aligning with the mission of the GBF and NPBD 2022-2030.

The formulation of the Targets, Key Indicators, and Action Areas involved an iterative, collaborative process. Multiple rounds of stakeholder engagement with NRES, under the guidance of the National BAG, took place from December 2023 to June 2024, enabling broad input and consensus. Currently, NRES is focused on collecting baseline data for specific targets within the NPBD 2022-2030 framework. To ensure reliable assessment of progress, any evaluation against baseline figures should reference and align with NRES data, supporting consistency and accuracy in measuring achievements against national biodiversity objectives.

The central aim is to encourage PLCs in Malaysia to adopt and actively implement the outlined Goals, Targets, Key Indicators, and Action Areas. Nonetheless, other businesses are strongly encouraged to follow the leadership and exemplary practices demonstrated by PLCs.



Goal 1 – Sustainable Business Practices

Business and private sector operations are managed sustainably through the application of best management practices (BMPs) ensuring the resilience of biodiversity through conservation, rehabilitation and maintaining nature's contributions to people, including ecosystem functions and services.

Rationale for Goal 1

Land- and sea-use changes drive habitat loss, making it essential to improve the productivity and sustainability of existing agricultural and productive areas. Safeguards must ensure increased productivity aligns with environmental goals. This can be achieved by using land and sea more efficiently, managing inputs like water and agrochemicals carefully, and adopting agroecological approaches and genetic improvements.

Target

By 2030, all business sectors with high dependencies and/or impacts on nature and biodiversity are managed sustainably and contribute towards positive conservation outcomes.

Key Indicator

To achieve Goal 1, we should ensure that:

- At least 50% of the forestry sector has been certified under sustainable management schemes (e.g., MTCS, FSC).
- 100% of the palm oil sector are certified under sustainable management schemes (e.g., MSPO, RSPO).
- For sectors not under any certification schemes, especially for sectors with high dependencies and/or impacts on biodiversity, in particular the real estate, mining, energy, infrastructure, etc., that 100% of PLCs within these sectors implement biodiversity action plans (that set out actions to mitigate impacts and to conserve or enhance biodiversity).

Action Area

- a. By 2027, identify all sectors with high dependencies and/or impacts on biodiversity in Malaysia.
- b. By 2027, identify companies listed in the sectors in (a) that are listed under Bursa Malaysia.
- c. By 2027, relevant industry bodies/agencies (other than the timber and oil palm sectors) to develop sector-specific biodiversity action plans (that set out actions to mitigate impacts and to conserve or enhance biodiversity).
- d. By 2027, identify companies in the forestry and oil palm sectors certified under:

- MTSC and FSC for timber; and
 - MSPO and RSPO for oil palm.
- e. By 2030, all PLCs other than those in the timber and oil palm sectors to publicly disclose in their yearly reporting the implementation of the sector-specific biodiversity action plans.

Goal 2 – Biodiversity Mainstreaming

Integrate biodiversity conservation into all business operations and decisions, including policies, guidelines, planning and development processes at all organisational levels including the value and supply chains.

Rationale for Goal 2

Biodiversity moves from the periphery of decision-making to become a core consideration in decision and planning processes across industries and sectors of the economy, recognising the multiple values of biodiversity. There will be a need for greater and more explicit recognition of all biodiversity values in key business policies, guidelines, planning and development processes documents.

Target

By 2030, biodiversity conservation safeguards are integrated into business operations and decisions.

Key Indicator

To achieve Goal 2, we should ensure that:

- All public-listed companies (PLCs) with high dependencies and/or impacts on biodiversity have a biodiversity or nature policy/strategy¹ that is publicly disclosed.

Action Area

- a. By 2027, all PLCs with high dependencies and/or impacts on biodiversity to have a biodiversity or nature policy/strategy.
- b. By 2030, all PLCs with high dependencies and/or impacts on biodiversity publicly disclose their biodiversity or nature policy/strategy.

¹ To develop a credible nature strategy, companies are encouraged to refer to the Nature Strategy Handbook available as part of the “It’s Now for Nature” campaign- a joint global campaign that aims to bring together all businesses to take action on nature and contribute towards a nature-positive world by 2030. The handbook is a practical step-by-step guide to support businesses in developing a nature strategy. Additionally, to help with this approach, Business for Nature, the World Economic Forum and the World Business Council for Sustainable Development have co-developed **12 sector guides** which highlight the top priority actions business should take to transform their business and meet the ambition they have set out as part of a credible nature strategy.

Goal 3 – Resource Mobilisation

Strengthen commitments and strategies on biodiversity conservation and rehabilitation efforts within Malaysia including mobilisation of financial and non-financial contributions, such as capacity building and development through sharing of knowledge and best practices.

Rationale for Goal 3

Lack of financial resources has frequently been noted as a main obstacle to the conservation and sustainable use of biodiversity. The business and private sector community can also contribute to capacity building and development, especially with its vast practical knowledge.

Target

By 2030, mobilisation of financial and non-financial contributions from the private sector has increased.

Key Indicator

To achieve Goal 3, we should ensure that:

- Financial contributions, including to national or state conservation trust funds for biodiversity conservation and rehabilitation have increased from 2024.
- Private sector spending on biodiversity conservation and rehabilitation efforts in accordance with its own biodiversity action plans has increased from 2024.
- All PLCs are reporting and disclosing on biodiversity conservation initiatives, including financial and non-financial contributions.

Action Area

- a. By 2025, determine baseline (year 2024) of financial contributions to national and/or state conservation trust funds by the private sector in Malaysia.
- b. By 2025, determine baseline (year 2024) on private sector spending by at least 10 PLCs with a biodiversity action plan on biodiversity conservation efforts.

Goal 4 – Data, Information and Knowledge

All business and financial decisions, which may impact biodiversity are made based on and guided by the best available scientific data, information, knowledge and BMPs.

Rationale for Goal 4

Effective decision-making on biodiversity relies on objective, scientific data and quantitative techniques such as baseline assessment, risk analysis, cost-benefit analysis, and simulation modelling. Collecting sufficient data and asking the right questions are essential to eliminate confounding factors and support robust choices.

Target

By 2030, relevant and current biodiversity data are made available for risk management to be embedded into all business and financial decisions impacting biodiversity and nature.

Key Indicator

To achieve Goal 4, we should ensure that:

- A framework for biodiversity-related disclosure is developed to regulate and support biodiversity reporting and risk assessments that are based on robust and quantitative data.
- Biodiversity assessment of the Environmental Impact Assessment (EIA) studies of all projects with high impacts on biodiversity and nature are based on robust and quantitative data following the mitigation hierarchy (i.e., avoid, minimise, restore, and offset).

Action Area

- a. By 2027, develop a framework for biodiversity-related disclosure to be used by PLCs in their yearly reporting.
- b. By 2027, develop a Guideline for Biodiversity Assessment to guide EIA studies by all businesses.

Goal 5 – Disclosure on Biodiversity

Include information on biodiversity dependencies and impacts into sustainability commitments and strategies ensuring transparent disclosure.

Rationale for Goal 5

Every business, regardless of sector or industry, influences biodiversity through its operations, including those within its supply and value chains. While the degree of direct dependence on biodiversity varies by industry, all businesses contribute in some way to its impact. Currently, private sector reporting on biodiversity-related risks and opportunities falls short of what investors and financial stakeholders require to make well-informed decisions. Companies that provide clearer, higher-quality biodiversity disclosures are likely to become more attractive to investors, helping to mitigate various risks, such as reputational, operational, regulatory, market, and financial, that could affect their financial performance.

Target

By 2030, biodiversity dependencies and impacts of businesses are reported and disclosed annually.

Key Indicator

To achieve Goal 5, we should ensure that:

- 100% of PLCs with high dependencies and/or impacts on biodiversity and nature are reporting and disclosing on them annually following relevant science-based national or international frameworks.

Action Area

- a. By 2027, develop a framework for biodiversity-related disclosure to be used by PLCs in their yearly reporting.
- b. By 2030, all PLCs with high dependencies and/or impacts on biodiversity to disclose their biodiversity-related disclosure in their yearly reporting.

Goal 6 – IPLC Participation and Diversity, Equity, and Inclusion

Include the participation of Indigenous People and Local Communities (IPLC) in all pertinent decision-making processes by applying the Free, Prior and Informed Consent (FPIC) approach, promoting diversity, equity, and inclusion.

Rationale for Goal 6

Reaching the goals and aspirations of the National Policy on Biological Diversity (2022-2030) requires a whole-of-society approach. It is important that the views, perspectives, and experiences of all groups are considered in the decision-making processes related to biodiversity taken by the business and private sector community. This will require equitable and transparent participation in decision-making processes, with a view to ensure that indigenous peoples and local communities can effectively shape these decisions and that their rights are respected.

Target

By 2030, all business decisions on biodiversity affecting IPLC are carried out applying the FPIC approach.

Key Indicator

To achieve Goal 6, we should ensure that:

- At least 75% of PLCs that conduct business affecting IPLC, have a framework following the FPIC approach.

Action Area

- a. By 2027, develop a framework for FPIC to be used by PLCs.
- b. By 2030, all PLCs with high dependencies and/or impacts on biodiversity and conduct business affecting IPLCs to disclose their FPIC approach in their yearly reporting.

Goal 7 – Minimise the Impacts of Climate Change

Minimise the risks and impacts of climate change on biodiversity and nature through among others, the application of high-quality nature-based solutions and/or ecosystem-based approaches.

Rationale for Goal 7

Climate change is already affecting biodiversity and is expected to become the leading cause of biodiversity loss in the latter half of this century. Taking effective, sustainable action to combat climate change, including significant reductions in fossil fuel use, is essential to slow and reverse the decline in biodiversity. Additionally, ecosystem-based solutions such as conservation, restoration, and improved management of agriculture, forestry, fisheries, and aquaculture can help mitigate and adapt to climate change. These approaches not only support climate goals, but also promote biodiversity, maintain ecosystem services, and reduce the risk of natural disasters.

Target

By 2030, all business activities that contribute to climate change impacting biodiversity and nature to adopt measures to minimise their risks and impacts.

Key Indicator

To achieve Goal 7, we should ensure that:

- All High Conservation Value (HCV) areas are maintained and rehabilitated.
- All conservation efforts and initiatives² by PLCs focus on identifying and prioritising sites for rehabilitation, including ecological corridors and natural ecosystems that have been degraded due to anthropogenic or natural stresses, and ensuring these areas are well-managed and protected.
- All business activities impacting biodiversity and nature to consider and adopt alternatives and implement technically and financially feasible options³ to reduce greenhouse gas (GHG) emissions.

Action Area

- a. By 2027, all PLCs to focus all their conservation efforts and initiatives on identifying and prioritising sites for rehabilitation, including ecological corridors and natural ecosystems that have been degraded due to anthropogenic or natural stresses, and ensuring these areas are well-managed and protected.

² These efforts and initiatives should use science-based methodologies appropriate to site-specific conditions and rehabilitation objectives such as Climate Vulnerability Index Measures.

³ These options may include, but not limited to, alternative project location, adoption of renewable or low carbon energy sources, sustainable agricultural, forestry and livestock management practices, the reduction of fugitive emissions and reduction of gas flaring.

- b. By 2030, all HCV areas are maintained and rehabilitated, and these efforts are reported by companies in the timber and oil palm sectors as part of their reporting to the relevant certification bodies.
- c. By 2030, a policy is in place that requires all business activities impacting biodiversity and nature to consider and adopt alternatives and implement technically and financially feasible options to reduce greenhouse gas (GHG) emissions.

Goal 8 – Pollution Reduction

All pollution sources from all business operations are reduced to levels that minimise harm to biodiversity and ecosystem services, including human health.

Rationale for Goal 8

Most pollutants also have negative impacts on human health and some groups (such as indigenous peoples and local communities, women, children, and people living in vulnerable situations) may be disproportionately affected. Substantial reduction of levels of pollution, focusing on nutrients, pesticides, and plastics due to business operations is needed to ensure that biodiversity and ecosystem services are protected.

Target

By 2030, all pollution sources from business operations are reduced from 2024 levels to comply with the Environmental Quality Act 1974.

Key Indicator

To achieve Goal 8, we should ensure that:

- All PLCs have in place pollution reduction measures that significantly reduce the pollution sources from their business activities compared to 2024 levels.
- All PLCs report and disclose on their pollution reduction activities⁴ on a yearly basis.
- All businesses to implement a due diligence process to prevent offences under the Environmental Quality Act 1974.

Action Area

- a. By 2030, all PLCs with high dependencies and/or impacts on biodiversity to disclose in their yearly reporting:
 - the levels of pollution and sources compared to 2024 levels;

⁴ These reduction activities apply to the release of pollutants to air, water, and land due to routine, non-routine, and accidental circumstances with the potential for local, regional, and transboundary impacts.

- the measures taken to reduce their pollution; and
- a due diligence framework to prevent the disclosed pollutions and sources.

Goal 9 – Sustainable Production and Consumption

Substantially reduce waste generation, including plastics, from business operations and supply chain by encouraging sustainable production and consumption practices toward circularity.

Rationale for Goal 9

Unsustainable consumption causes each of the main direct drivers of biodiversity loss. It is important to note that the use of biological resources does not exceed the capacity of the Earth to generate them. Unsustainable production and supply chains used to meet the demand for goods and services globally are one of the main drivers of biodiversity loss and a factor contributing to unsustainable consumption. Reducing the negative impacts on biodiversity from production practices and supply chains will be important in making progress.

Target

By 2030, sustainable production and responsible consumption practices by all businesses, including waste management towards circularity should be mainstreamed.

Key Indicator

To achieve Goal 9, we should ensure that:

- All new and existing business operations implement technically and financially feasible measures for improving efficiency of the consumption of energy, water, as well as other resources and material inputs, with a focus on areas that are considered core business activities.
- All new and existing business operations adopt measures that promote circularity principles such as reusing, reducing, repurposing, and recycling of by-products and waste.
- All PLCs that practice pest management using chemical pesticides have in place policies and public commitments to use chemical pesticides that adhere to public health and safety procedures and have minimal effects on non-target species and the environment.
- All PLCs utilising chemical fertilisers have in place policies and measures to manage and reduce their use and explore substitution with natural alternatives that minimise effect on biodiversity and nature.

Action Area

- a. By 2030, all new and existing business operations are encouraged to adopt resource efficiency and circularity in their business model.

- b. By 2030, all PLCs that practice pest management using chemical pesticides to disclose in their yearly reporting policies and public commitments to use chemical pesticides that adhere to public health and safety procedures and have minimal effects on non-target species and the environment
- c. By 2030, all PLCs utilising chemical fertilisers to disclose in their yearly reporting policies and measures to manage and reduce their use and explore substitution with natural alternatives that minimise effect on biodiversity and nature.

Goal 10 – Minimise Impacts on Ecosystem Services

Reduce and gradually minimise the risks of business operations to ecosystem functions and services, including eliminating and reducing the impacts of invasive alien species (IAS) through among others the application of high-quality nature-based solutions and ecosystem-based approaches.

Rationale for Goal 10

Invasive alien species are a leading cause of biodiversity loss worldwide and can also be responsible for spreading infectious diseases. Addressing this challenge requires both preventing their introduction and controlling or eradicating those that pose significant risks to threatened species and ecosystem services. The goal is to protect ecosystem regulation services – such as clean air, water, and natural buffers – that are fundamental to human health and well-being. Safeguarding these natural systems ensures that communities continue to benefit from the vital contributions that ecosystems provide.

Target

By 2030, the risks of business operations to ecosystem functions and services, including IAS, are reduced from 2024 level through the application of nature-based solutions and ecosystem-based approaches.

Key Indicator

To achieve Goal 10, we should ensure that:

- All PLCs conduct materiality and risk assessments on biodiversity, and report and disclose the findings.
- All PLCs that have high dependencies and/or impacts on biodiversity and nature, have in place measures that reduce the risks to biodiversity and nature from their business activities compared to 2024 levels.
- All new business operations and developments avoid operating and developing in environmentally sensitive areas (ESA) Levels 1 and 2, and all protected areas, including important terrestrial and marine ecological corridors.

Action Area

- a. By 2027, all PLCs to conduct their materiality and risk assessments on biodiversity, and to report and disclose the findings in their yearly reporting.
- b. By 2030, all PLCs with high dependencies and/or impacts on biodiversity to disclose in their yearly reporting the measures that reduce the risks to biodiversity and nature from their business activities compared to 2024 levels.
- c. By 2030, a policy is in place that requires all new business operations and developments avoid operating and developing in environmentally sensitive areas (ESA) Levels 1 and 2, and all protected areas, including important terrestrial and marine ecological corridors.

Goal 11 – Increase Green and Blue Spaces

Embrace biodiversity-inclusive urban and/or infrastructure planning and development that minimises harm and enhances native biodiversity and promotes ecological connectivity and integrity by increasing the area and quality of green and blue spaces.

Rationale for Goal 11

Green and blue spaces have a range of positive effects on human physical and mental well-being. These can have a range of positive effects on human physical and mental well-being and provide opportunities to reconnect with nature. Further, these spaces can provide important habitats for species, improve habitat connectivity, provide ecosystem services, and help mediate extreme events, if managed with such objectives in mind.

Target

By 2030, biodiversity and nature are effectively managed and/or enhanced in urban and/or infrastructure planning and development.

Key Indicator

To achieve Goal 11, we should ensure that:

- All individual urban and/or infrastructure developments include more than 10% green and blue spaces as part of the design criteria.
- All urban and/or infrastructure developments support local authorities and municipalities to repurpose or rehabilitate empty spaces/brownfield areas for urban forests, green lungs, pocket parks, and urban gardens/farms.

Action Area

- a. By 2027, a policy is in place that requires all individual urban and/or infrastructure developments include more than 10% green and blue spaces as part of the design criteria.

- b. By 2030, a policy is in place that requires all urban and/or infrastructure developments support local authorities and municipalities to repurpose or rehabilitate empty spaces/brownfield areas for urban forests, green lungs, pocket parks, and urban gardens/farms.

5 Implementation of the Strategic Roadmap

The Strategic Roadmap and Action Plan is to be understood, acted upon, implemented, reported, and evaluated by the business and private sector community in Malaysia, consistent with the following:

Roles and Responsibilities of Key Partners

Federal Government

The Federal Government, via the Ministry of Natural Resources and Environmental Sustainability (NRES) will lead the implementation of this Strategic Roadmap and Action Plan as the custodian of the NPBD 2022-2030, particularly in accordance with Action 2.3 of Target 2 of the NPBD.

State Governments

As land (and natural resources, including biodiversity) is a State matter as enshrined in the Federal Constitution, the State Governments will assist the NRES and the business and private sector community in ensuring an enabling environment for the implementation of this Strategic Roadmap and Action Plan.

Malaysia Platform for Business and Biodiversity (MPBB)

The MPBB will play a major role in implementing this Strategic Roadmap and Action Plan, working in close coordination with NRES. The MPBB will have a coordinating role in the implementation of this Strategic Roadmap and Action Plan by facilitating resource mobilisation, undertake coordination among stakeholders, monitoring, review and provide strategic and technical guidance on its implementation.

Business and Private Sector Community

Malaysia's business and private sector will play a key role in implementing the Strategic Roadmap and Action Plan. Their proactive participation will help meet the plan's goals, targets, indicators, and action areas, either independently or with other stakeholders.

Implementation Framework

Implementation Timeline

The implementation timeline of this Strategic Roadmap and Action Plan is set for 2030 following the implementation timeline of the NPBD 2022-2030.

Action Targets

Each Goal specified in this Strategic Roadmap and Action Plan has been provided with specific Targets, Key Indicators and Action Areas that spell out the steps to be taken to achieve all Goals. Each Target is accompanied by measurable Key Indicators and Action Areas that will enable its progress to be monitored.

Reporting, Monitoring and Review

MPBB will monitor the progress of the Strategic Roadmap and Action, which then will report to the NRES.

Organisational Circumstances and Capabilities

The business and private sector community would contribute to attaining the Goals in accordance with the individual circumstance and capabilities, based on several factors, such as type of industry, company size, business models, operating activities and internal policies, guidelines, planning and development processes.

Collective Effort towards the Goals

The business and private sector community will catalyse the implementation of the Strategic Roadmap and Action Plan through the mobilisation of broad support at all internal organisational levels.

Cooperation and Engagement

Enhance collaboration, cooperation, and engagement between the business and private sector community and relevant stakeholders particularly the Government and IPLC in line with their respective mandates would contribute and promote the implementation.

6 Glossary

Term	Definition
Biodiversity or Biological diversity	The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems. (Article 2 of the Convention on Biological Diversity)
Dependencies on biodiversity	Aspects of ecosystem services that an organisation or other actor relies on to function. Dependencies include ecosystems' ability to regulate water flow, water quality, and hazards like fires and floods; provide a suitable habitat for pollinators (who in turn provide a service directly to economies), and sequester carbon (in terrestrial, freshwater, and marine realms). (SBTN (2022) Working Definitions [unpublished])
Ecosystem	A dynamic complex of plant, animal and microorganism communities and their non-living environment interacting as a functional unit. (Article 2 of the Convention on Biological Diversity)
Ecosystem approach	A strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. (COP-5 Decision V/6)
Ecosystem/Ecological integrity	An ecosystem is generally understood to have integrity when its dominant ecological characteristics (e.g., elements of composition, structure, function, and ecological processes) occur within their natural ranges of variation and can withstand and recover from most perturbations. (Paragraph 18 of CBD/SBSTTA/24/3/Add.2/Rev.1).
Ecosystem functions	The flow of energy and materials through the biotic and abiotic components of an ecosystem. It includes many processes such as biomass production, trophic transfer through plants and animals, nutrient cycling, water dynamics and heat transfer. (https://www.ipbes.net/glossary-tag/ecosystem-function)
Ecosystem services	The benefits people obtain from ecosystems. (Millennium Ecosystem Assessment)
Free, Prior and Informed Consent (FPIC) (Institute of Human Rights and Business)	<ul style="list-style-type: none"> <i>Free</i>: consent is given voluntarily and absent of coercion, intimidation, or manipulation. The process is self-directed by the community from whom consent is being sought unencumbered by coercion,

Term	Definition
	<p>expectations or timelines that are externally imposed.</p> <ul style="list-style-type: none"> • <i>Prior</i>: consent is sought sufficiently in advance of any authorization or commencement of activities. • <i>Informed</i>: engagement and type of information that should be provided prior to seeking consent and as part of the ongoing process. Information should be accessible, clear, consistent, accurate, constant, and transparent and delivered in an appropriate language and culturally appropriate format. • <i>Consent</i>: refers to the collective decision made by the rights-holders and reached through the customary decision-making processes of the communities. <p>(Institute of Human Rights and Business)</p>
Green and blue spaces	<p>Areas of vegetation, inland and coastal waters, generally in or near urban areas including green roofs and walls, and other green infrastructure.</p> <p>(CBD/WG2020/5/4)</p>
Impacts on biodiversity	<p>Positive or negative contributions of a company or other actor toward the state of nature, including pollution of air, water, soil; fragmentation or disruption of ecosystems and habitats for (human and) non-human species; alteration of ecosystem regimes.</p> <p>(SBTN (2022) Working Definitions [unpublished])</p>
Invasive alien species	<p>A species introduced outside its natural past or present distribution whose introduction and/or spread threaten biological diversity.</p> <p>(https://www.cbd.int/invasive/terms.shtml)</p>
Indigenous people and local community (IPLC)	<p>Indigenous people are also known as first peoples, aboriginal peoples, native peoples, or autochthonous peoples, are ethnic groups who are descended from and identify with the original inhabitants of a given region, in contrast to groups that have settled, occupied, or colonized the area more recently. The distinctive groups, usually maintaining traditions or other aspects of an early culture that is associated with a given region, are protected in international or national legislation as having a set of specific rights based on their linguistic and historical ties to a particular territory, prior to later settlement, development, and or occupation of a region. Local community is a self-identified human group that relates to a life environment in collective ways that participate to define a shared territory and culture. The members of a local community have frequent chances of</p>

Term	Definition
	<p>direct (possibly face-to-face) encounters and possess some common history, traditions, institutions, language, values and life plans. A local community can be long-standing ("traditional") or relatively new, include a single or multiple ethnic identities and be permanently settled or mobile. A local community should have a form of political identity that enables it to exercise its rights and responsibilities with respect to its territory and neighbours.</p> <p>(https://www.ipbes.net/glossary-tag/indigenous-peoples-and-local-communities)</p>
Mainstreaming of biodiversity	<p>Biodiversity mainstreaming is generally understood as ensuring that biodiversity, and the services it provides, are appropriately and adequately factored into policies and practices that rely and have an impact on it.</p> <p>(Convention on Biological Diversity)</p>
Nature-based solutions	<p>Actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits.</p> <p>(UN Environment Assembly 5.2, Resolution 5, Doc.: UNEP/EA.5/Res.5)</p>
Nature's contribution to people	<p>All the contributions, both positive and negative, of living nature (i.e., diversity of organisms, ecosystems, and their associated ecological and evolutionary processes) to the quality of life for people.</p> <p>(https://www.ipbes.net/glossary-tag/natures-contributions-people)</p>
Pollution	<p>The indirect or direct alteration of the biological, thermal, physical, or radioactive properties of any medium in such a way as to create a hazard or potential hazard to human health or to the health, safety, or welfare of any living species.</p> <p>(https://leap.unep.org/knowledge/glossary/pollution)</p>
Rehabilitation	<p>Rehabilitation refers to restoration activities that move a site towards a natural state baseline in a limited number of components (i.e., soil, water, and/or biodiversity), including natural regeneration, conservation agriculture, and emergent ecosystems.</p> <p>(https://www.ipbes.net/glossary-tag/rehabilitation)</p>
Restoration	<p>Any intentional activity that initiates or accelerates the recovery of an ecosystem from a degraded state. Active restoration includes a range of human interventions</p>

Term	Definition
	<p>aimed at influencing and accelerating natural successional processes to recover biodiversity ecosystem service provision. Passive restoration includes reliance primarily on natural process of ecological succession to restore degraded ecosystems but may include measures to protect a site from processes that currently prevent natural recovery (e.g., protection of degraded forests from overgrazing by livestock or unintentional human-induced fire). (https://www.ipbes.net/glossary-tag/restoration)</p>
Supply chain	<p>A network of individuals and companies who are involved in creating a product and delivering it to the consumer. (https://www.investopedia.com/terms/s/supplychain.asp)</p>
Sustainable use of biodiversity	<p>The use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations. (Article 2 of the Convention on Biological Diversity)</p>
Value chain	<p>A series of consecutive steps that go into the creation of a finished product, from its initial design to its arrival at a customer's door. (https://www.investopedia.com/terms/v/valuechain.asp)</p>

APPENDIX A

National Business Advisory Group (BAG) Members

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1 National-Level Business Advisory Group (National BAG)

The members of the National-Level Business Advisory Group (National BAG) were selected based on the following criteria:

- 1 Company is headquartered in Malaysia.
- 2 Company with operations and/or supply chains in Malaysia.
- 3 A leader in its industry.
- 4 A leader in sustainability.
- 5 Has a good rapport with the Government.
- 6 Technically robust in addressing issues related to sustainability, particularly on its impacts on biodiversity.
- 7 High dependency and/or impact on biodiversity.
- 8 Company with large annual revenue.
- 9 A financial institution.
- 10 A non-governmental organisation (NGO).

Based on the above criteria, an initial list of potential companies was prepared (Table 1), and a letter of invitation was sent to these companies. The invitation letter specifically mentioned that the members of the National BAG must be selected from personnel with the capability to make key decisions regarding the policy recommendations and ensure that these decisions are aligned with Malaysia's strategic priorities, and relevant for implementation by the business community. Most importantly, members agreeing to be part of the National BAG must also agree to the Code of Conduct of Business for Nature (BfN). Additionally, a specific Terms of Reference (TOR) was also adopted to guide the work of the National BAG.

Table 2 details the list of confirmed Working Group members as of 30 June 2023.

Table 1 Initial list of potential organisations

No.	Sector	Sub-Sector	Company/Organisation	Remarks
1.	Manufacturing	Oil & Gas	Petronas	Nationally owned
2.		Utility	Tenaga Nasional Berhad	A private company wholly owned by the government
3.	Commodity	Plantation	IOI Corporation Berhad	A privately-owned company, oil palm-based
4.		Plantation	Sime Darby Plantation	A privately-owned company, oil palm-based
5.		Plantation	Sawit Kinabalu Sdn. Bhd.	A state-owned company, oil palm-based
6.		Timber	Sarawak Timber Association	Sarawak-based timber trade association (upstream and downstream sectors)
7.		Timber	Sapulut Forest Development Sdn. Bhd.	Sabah-based privately owned timber company
8.		Timber	Ta Ann Berhad	Sarawak-based privately owned timber company
9.	Infrastructure	Property and Construction	Gamuda Berhad	A privately-owned company
10.		Port	Westports Sdn Bhd	A privately-owned company, port operations
11.	Transport	Land	PLUS Malaysia Berhad	Toll expressway operator
12.		Maritime	MISC Berhad	Privately-owned company
13.	Financial Institution	Bank	CIMB	-
14.		Bank	Maybank	-

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No.	Sector	Sub-Sector	Company/Organisation	Remarks
15.	Mining	-	Malaysian Chamber of Mines	Mining-based trade association
16.	National-Level Working Group	Private Sector	National Biodiversity Roundtable (NBR)	An advisory group established under Malaysia's NBSAP
17.	Business Organisation	Non-Profit Organisation	BCSD Malaysia	Malaysian chapter of WBCSD
18.	Business Organisation	-	SME Corporation Malaysia	A coordinating agency that coordinates the implementation of development programmes for small and medium enterprises (SMEs) across all related Ministries and agencies.
19.	NGO	-	WWF Malaysia	-

Table 2 List of Confirmed National BAG Members (as of 30 June 2024)

No.	Company/Organisation	Sector	Sub-Sector	Name of Member	Designation
1	Malaysia Platform for Business and Biodiversity (MPBB)	-	-	Syed Mohazri Syed Hazari (M)	Interim Chair
2	IOI Corporation Berhad	Commodity	Plantation	Dr Surina Ismail (F)	Group Head of Sustainability
3	Sime Darby Plantation	Commodity	Plantation	Rasyid Redza Anwarudin (M)	Head, Group Sustainability
4	National Biodiversity Roundtable (NBR)	National-Level Working Group	Private Sector Representative	Haji Mohd. Nizam Basiron (M)	Head, Natural Resource Management
5	CIMB Group	Financial Institution	Bank	Luanne Sieh (F)	Group Chief Sustainability Officer

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No.	Company/Organisation	Sector	Sub-Sector	Name of Member	Designation
6	MISC Berhad	Transport	Maritime	Kee Alfian Abdul Adzis (M)	Manager Biodiversity Conservation (Group HSSE)
7	Petroleum Nasional Berhad (PETRONAS)	Manufacturing	Oil & Gas	Nurul Akmar Amran (F)	Head, Biodiversity & Ecosystem Services
8	Gamuda Berhad	Infrastructure	Property and Construction	Rowena Emma Anak Ngadan (F)	Senior Executive (Sustainability)
9	Khazanah Nasional Berhad	Financial Institution	Financial Institution	Dr Muhammad Hafiz Wan Rosli (M)	Senior Vice President Investments
10.	TNB Research Sdn. Bhd.	Manufacturing	Utility	Aisah Md Shukor (F)	Principal Researcher
11.	Malaysian Chamber of Mines (MCOM)	Mining	-	Teoh Lay Hock (M)	Technical Consultant
12.	HeiZel & Co	Legal	Legal Services	Tan Hei Zel (F)	Principal
13.	WWF Malaysia	Non-Governmental Organisation	-	Dr Henry Chan Chok Khuang (M)	Director of Conservation

APPENDIX B

Guidelines on Biodiversity Mainstreaming by the Private Sector

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1 Introduction

Mainstreaming biodiversity in the private sector involves integrating biodiversity considerations into business operations, strategies, and decision-making processes. This approach ensures that companies recognize their impact on biodiversity and take actions to mitigate negative effects while enhancing positive contributions.

2 Definitions

- **Convention on Biological Diversity (CBD) (2019):** Integrating or including actions related to conservation and sustainable use of biodiversity at every stage of the policy, plan, programme and project cycle, regardless of whether international organisations, businesses or governments lead the process.
- **South African National Biodiversity Institute (2020):** Incorporating biodiversity considerations directly into the policies and planning of business or industry and organs of state. Mainstreaming biodiversity ensures that addressing development needs and protecting the environment is not an either-or situation, but rather that development is supported by the sustainable use of natural resources.

3 Entry Points for Mainstreaming

- Plans (especially national and sectoral development strategies, plans and programmes)
- Processes (especially routine economic planning and budgeting)
- Opportunities (responding to politically ‘hot’ issues with comprehensive implications)

4 Key Strategies for Biodiversity Mainstreaming in the Private Sector

a. Policy Integration

- **Corporate Policies:** Developing policies that explicitly include biodiversity conservation and sustainable use.
- **Environmental Management Systems:** Implementing ISO 14001 or other systems that incorporate biodiversity management.

b. Sustainable Supply Chains

- **Supplier Engagement:** Working with suppliers to ensure that raw materials are sourced sustainably.
- **Certifications:** Adopting certifications like FSC (Forest Stewardship Council) for wood products, or MSC (Marine Stewardship Council) for seafood.

c. Impact Assessment

- **Biodiversity Assessments:** Conducting environmental impact assessments (EIAs) that include biodiversity.
- **Monitoring and Reporting:** Regularly monitoring biodiversity impacts and publicly reporting on biodiversity performance.

d. Restoration and Conservation

- **Offsets and Restoration Projects:** Investing in biodiversity offset projects to compensate for unavoidable impacts.
- **Protected Areas:** Supporting the creation and management of protected areas or reserves.

e. Research and Development

- **Innovation:** Developing new products and processes that have less impact on biodiversity.
- **Partnerships:** Collaborating with research institutions and NGOs on biodiversity research and conservation projects.

f. Stakeholder Engagement

- **Community Involvement:** Engaging with local communities to ensure their knowledge and needs are integrated into biodiversity strategies.
- **Transparency:** Maintaining open communication channels with stakeholders about biodiversity initiatives and outcomes.

5 Benefits of Biodiversity Mainstreaming in the Private Sector

a. Risk Management

- **Regulatory Compliance:** Staying ahead of regulations and reducing the risk of legal penalties.
- **Reputational Benefits:** Enhancing corporate reputation by demonstrating commitment to environmental stewardship.

b. Operational Efficiency

- **Resource Efficiency:** Improving resource use efficiency can lead to cost savings and reduced environmental impact.
- **Sustainable Practices:** Adopting sustainable practices can lead to long-term operational stability.

c. Market Opportunities

- **Consumer Demand:** Meeting increasing consumer demand for sustainably produced goods.
- **Access to New Markets:** Gaining access to markets and funding opportunities that prioritize sustainability.

d. Innovation

- **Product Development:** Driving innovation in product development and sustainable technologies.
- **Competitive Advantage:** Gaining a competitive edge by leading in sustainability practices.

e. Biodiversity and Ecosystem Services

- **Ecosystem Services:** Protecting biodiversity ensures the continued provision of ecosystem services essential for business operations, such as pollination, water purification, and climate regulation.

6 Examples of Success

- Unilever:** Implemented sustainable sourcing policies for agricultural raw materials, leading to significant positive impacts on biodiversity.
- Patagonia:** Engages in habitat restoration projects and uses sustainable materials to minimize its ecological footprint.
- Nestlé:** Works with farmers to promote sustainable agricultural practices that protect biodiversity.

7 Challenges

- Complexity:** Biodiversity issues can be complex and site-specific, making it challenging to develop universal solutions.
- Costs:** Initial costs of implementing biodiversity-friendly practices can be high, though they often lead to long-term savings and benefits.
- Measurement and Reporting:** Difficulty in measuring and reporting biodiversity impacts and outcomes accurately.

8 Summary

Mainstreaming biodiversity in the private sector requires a commitment to sustainability and a strategic approach to integrating biodiversity considerations into

all aspects of business operations. While there are challenges, the benefits in terms of risk management, market opportunities, and corporate reputation make it a worthwhile endeavour.

APPENDIX C

Guidance Note on Disclosure of Dependencies and Impacts on Biodiversity by Businesses

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1 Introduction

Disclosing dependencies and impacts on biodiversity involves transparently communicating how a business or organization relies on and affects natural ecosystems. This disclosure is increasingly recognized as crucial for sustainable operations and accountability to stakeholders. The key elements to include in such a disclosure are as follows:

2 Dependencies on Biodiversity

- **Raw Materials:** Detail how the extraction or use of raw materials (e.g., timber, fish, crops) depends on biodiversity.
- **Ecosystem Services:** Explain reliance on ecosystem services such as pollination, water purification, and soil fertility.
- **Supply Chain:** Describe how suppliers depend on biodiversity, including any reliance on sustainable sourcing practices.

3 Impacts on Biodiversity

- **Direct Impacts:** Assess direct impacts such as habitat destruction, pollution, and resource depletion caused by the organization's activities.
- **Indirect Impacts:** Evaluate indirect impacts through supply chain operations, including effects on land use, water use, and emissions.
- **Positive Contributions:** Highlight efforts to mitigate negative impacts, such as conservation projects, habitat restoration, and sustainable practices.

4 Measurement and Monitoring

- **Biodiversity Indicators:** Use metrics and indicators (e.g., species richness, habitat quality) to measure impacts and dependencies.
- **Regular Monitoring:** Implement systems for regular monitoring and reporting on biodiversity impacts and dependencies.

5 Risk Management

- **Risk Assessment:** Identify risks to the business from biodiversity loss, such as supply chain disruptions, regulatory changes, and reputational damage.
- **Mitigation Strategies:** Develop and implement strategies to mitigate these risks, including adopting sustainable practices and engaging in conservation efforts.

6 Stakeholder Engagement

- **Community Involvement:** Engage local communities and indigenous groups in biodiversity-related decisions and activities.
- **Partnerships:** Collaborate with NGOs, governmental bodies, and other stakeholders on biodiversity conservation initiatives.

7 Transparency and Reporting

- **Public Disclosure:** Include biodiversity information in sustainability reports, annual reports, and other public documents.
- **Compliance:** Ensure compliance with relevant regulations and standards, such as the Global Reporting Initiative (GRI), the Task Force on Climate-related Financial Disclosures (TCFD), and the upcoming Taskforce on Nature-related Financial Disclosures (TNFD).

8 Case Studies and Examples

- **Success Stories:** Provide examples of successful biodiversity initiatives and their outcomes.
- **Challenges:** Be transparent about challenges faced and lessons learned in managing biodiversity impacts.

9 Frameworks and Standards

- **Natural Capital Protocol:** This framework helps businesses identify, measure, and value their impacts and dependencies on natural capital.
- **Biodiversity Impact Assessment (BIA):** A tool for evaluating the potential effects of projects on biodiversity.
- **Corporate Ecosystem Services Review (ESR):** A structured methodology to help managers develop strategies for managing business risks and opportunities arising from their company's dependence on ecosystems.

By thoroughly disclosing dependencies and impacts on biodiversity, organizations can better understand their environmental footprint, improve sustainability practices, and build trust with stakeholders.

APPENDIX D

Guidance Note on Ecosystem Approach and Its Application for the Private Sector in Conserving Biodiversity

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1 Introduction

The ecosystem approach in biodiversity conservation by businesses is a comprehensive strategy that emphasises the management of entire ecosystems rather than individual species or habitats. This approach integrates the conservation of biodiversity with sustainable use and equitable sharing of resources. The key principles and actions businesses can take to apply this approach:

2 Definition

The Convention on Biological Diversity defines the ecosystem approach as a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.

3 Principles of the Ecosystem Approach (Convention on Biological Diversity)

Principle	Description
Principle 1: The objectives of management of land, water and living resources are a matter of societal choices.	Different sectors of society view ecosystems in terms of their own economic, cultural and societal needs. Indigenous peoples and other local communities living on the land are important stakeholders and their rights and interests should be recognized. Both cultural and biological diversity are central components of the ecosystem approach, and management should take this into account. Societal choices should be expressed as clearly as possible. Ecosystems should be managed for their intrinsic values and for the tangible or intangible benefits for humans, in a fair and equitable way.
Principle 2: Management should be decentralized to the lowest appropriate level.	Decentralized systems may lead to greater efficiency, effectiveness and equity. Management should involve all stakeholders and balance local interests with the wider public interest. The closer management is to the ecosystem, the greater the responsibility, ownership, accountability, participation, and use of local knowledge.
Principle 3: Ecosystem managers should consider the effects (actual or potential) of	Management interventions in ecosystems often have unknown or unpredictable effects

Principle	Description
their activities on adjacent and other ecosystems.	on other ecosystems; therefore, possible impacts need careful consideration and analysis. This may require new arrangements or ways of organization for institutions involved in decision-making to make, if necessary, appropriate compromises.
Principle 4: Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context.	<p>Any such ecosystem-management programme should:</p> <ul style="list-style-type: none"> • Reduce those market distortions that adversely affect biological diversity; • Align incentives to promote biodiversity conservation and sustainable use; • Internalize costs and benefits in the given ecosystem to the extent feasible. <p>The greatest threat to biological diversity lies in its replacement by alternative systems of land use. This often arises through market distortions, which undervalue natural systems and populations and provide perverse incentives and subsidies to favor the conversion of land to less diverse systems.</p> <p>Often those who benefit from conservation do not pay the costs associated with conservation and, similarly, those who generate environmental costs (e.g. pollution) escape responsibility. Alignment of incentives allows those who control the resource to benefit and ensures that those who generate environmental costs will pay.</p>
Principle 5: Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.	Ecosystem functioning and resilience depends on a dynamic relationship within species, among species and between species and their abiotic environment, as well as the physical and chemical interactions within the environment. The conservation and, where appropriate, restoration of these interactions and processes is of greater significance for the

Principle	Description
	long-term maintenance of biological diversity than simply protection of species.
Principle 6: Ecosystem must be managed within the limits of their functioning.	In considering the likelihood or ease of attaining the management objectives, attention should be given to the environmental conditions that limit natural productivity, ecosystem structure, functioning and diversity. The limits to ecosystem functioning may be affected to different degrees by temporary, unpredictable or artificially maintained conditions and, accordingly, management should be appropriately cautious.
Principle 7: The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.	The approach should be bounded by spatial and temporal scales that are appropriate to the objectives. Boundaries for management will be defined operationally by users, managers, scientists and indigenous and local peoples. Connectivity between areas should be promoted where necessary. The ecosystem approach is based upon the hierarchical nature of biological diversity characterized by the interaction and integration of genes, species and ecosystems.
Principle 8: Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term.	Ecosystem processes are characterized by varying temporal scales and lag-effects. This inherently conflicts with the tendency of humans to favour short-term gains and immediate benefits over future ones.
Principle 9: Management must recognize the change is inevitable.	Ecosystems change, including species composition and population abundance. Hence, management should adapt to the changes. Apart from their inherent dynamics of change, ecosystems are beset by a complex of uncertainties and potential "surprises" in the human, biological and environmental realms. Traditional disturbance regimes may be important for ecosystem structure and functioning and may need to be maintained or restored. The

Principle	Description
	ecosystem approach must utilize adaptive management in order to anticipate and cater for such changes and events and should be cautious in making any decision that may foreclose options, but, at the same time, consider mitigating actions to cope with long-term changes such as climate change.
Principle 10: The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.	Biological diversity is critical both for its intrinsic value and because of the key role it plays in providing the ecosystem and other services upon which we all ultimately depend. There has been a tendency in the past to manage components of biological diversity either as protected or non-protected. There is a need for a shift to more flexible situations, where conservation and use are seen in context and the full range of measures is applied in a continuum from strictly protected to human-made ecosystems.
Principle 11: The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.	Information from all sources is critical to arriving at effective ecosystem management strategies. A much better knowledge of ecosystem functions and the impact of human use is desirable. All relevant information from any concerned area should be shared with all stakeholders and actors, taking into account, inter alia, any decision to be taken under Article 8(j) of the Convention on Biological Diversity. Assumptions behind proposed management decisions should be made explicit and checked against available knowledge and views of stakeholders.
Principle 12: The ecosystem approach should involve all relevant sectors of society and scientific disciplines.	Most problems of biological-diversity management are complex, with many interactions, side-effects and implications, and therefore should involve the necessary expertise and stakeholders at the local, national, regional and international level, as appropriate.

4 Concepts of the Ecosystem Approach

- **Holistic Management:** Focus on managing ecosystems as whole units, recognizing the interconnections among species, habitats, and ecological processes.
- **Sustainable Use:** Utilize natural resources in ways that do not compromise the health of ecosystems or their ability to provide essential services in the future.
- **Stakeholder Involvement:** Engage all relevant stakeholders, including local communities, governments, NGOs, and other businesses, in conservation efforts.
- **Adaptive Management:** Implement a flexible management strategy that can be adjusted based on monitoring and feedback to improve outcomes over time.
- **Long-term Perspective:** Consider the long-term impacts of business activities on ecosystems and strive for sustainable practices that benefit future generations.

5 Actions Businesses Can Take

a. Environmental Impact Assessment:

- Conduct thorough assessments of the environmental impacts of business activities.
- Identify and mitigate potential harm to ecosystems and biodiversity.

b. Sustainable Resource Management:

- Adopt sustainable sourcing practices to minimize the exploitation of natural resources.
- Support sustainable agriculture, forestry, and fishing practices.

c. Habitat Protection and Restoration:

- Invest in projects that protect and restore critical habitats.
- Participate in reforestation, wetland restoration, and other habitat enhancement initiatives.

d. Corporate Biodiversity Policies:

- Develop and implement corporate policies that prioritize biodiversity conservation.
- Set measurable targets for biodiversity and report progress publicly.

- e. Partnerships and Collaboration:
 - Collaborate with conservation organizations, research institutions, and local communities.
 - Engage in public-private partnerships to leverage resources and expertise.
- f. Innovation and Technology:
 - Invest in research and development of technologies that reduce environmental impact.
 - Utilise remote sensing, GIS, and other tools for better ecosystem management and monitoring.
- g. Education and Awareness:
 - Raise awareness about biodiversity conservation within the company and among stakeholders.
 - Provide training and education to employees on sustainable practices and biodiversity issues.
- h. Financial Contributions and Incentives:
 - Allocate funds for biodiversity conservation projects.
 - Offer incentives for sustainable practices within supply chains and among partners.

6 Case Studies

- **Unilever:** This multinational company has committed to sustainable sourcing of agricultural raw materials and has developed biodiversity action plans for key sourcing regions.
- **IKEA:** IKEA invests in forest projects to ensure sustainable wood supply and has a comprehensive forest management policy aimed at protecting biodiversity.
- **Patagonia:** Known for its environmental activism, Patagonia supports habitat conservation and restoration projects and advocates for sustainable business practices across industries.

7 Conclusion

By adopting the ecosystem approach, businesses can play a crucial role in the conservation of biodiversity. This requires a shift from traditional business practices to

more sustainable, inclusive, and adaptive strategies that recognize the intrinsic value of ecosystems and their importance for human well-being.

APPENDIX E

Guidance Note on the Precautionary Principle and Its Application for the Private Sector in Conserving Biodiversity

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1 Introduction

The precautionary principle is a guiding approach for decision-making that advocates for proactive action to prevent harm to the environment or human health, even if there is scientific uncertainty about the potential risks. It advocates for proactive measures to prevent damage to ecosystems and species, even if there is no conclusive proof that such damage will occur. In the context of biodiversity conservation, this principle can be particularly relevant for the private sector.

2 Understanding the Precautionary Principle

Definition: The precautionary principle asserts that the lack of full scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation or loss of biodiversity. Essentially, it means "better safe than sorry."

The precautionary principle can be summarised as follows:

- **Preventive Action:** Taking measures to avoid harm when there is a possibility of serious or irreversible damage, even in the absence of complete scientific certainty.
- **Shifting the Burden of Proof:** The responsibility to demonstrate that an action is not harmful lies with those proposing the action, not with those opposing it.
- **Public Participation:** Involving all stakeholders, including the public, in decision-making processes.
- **Alternatives Assessment:** Exploring and assessing alternatives to potentially harmful actions, including the option of no action.

3 International Agreements:

- The Convention on Biological Diversity (CBD) incorporates the precautionary principle, urging countries to take measures to conserve biodiversity and use biological resources sustainably.
- The Rio Declaration on Environment and Development, particularly Principle 15, emphasizes the need for a precautionary approach in protecting the environment.

4 Application in Biodiversity

- **Conservation Efforts:** It encourages the preservation of species and habitats even when the precise risks of their loss are not fully known.

- **Policy and Legislation:** Governments and organizations may implement policies or laws that restrict certain activities (like deforestation, pollution, or introduction of non-native species) that could harm biodiversity.
- **Environmental Impact Assessments:** Requires thorough evaluations of potential impacts on biodiversity before proceeding with development projects.
- **Sustainable Practices:** Promotes sustainable practices in agriculture, fisheries, and other industries to minimize their impact on ecosystems.

5 Application in the Private Sector for Biodiversity Conservation

a) Risk Assessment and Management

- Conduct thorough environmental impact assessments (EIA) before initiating projects, especially in ecologically sensitive areas.
- Implement biodiversity risk assessments as part of corporate due diligence.
- Ensure products and processes comply with health and safety standards. This can prevent harm to consumers and employees.

b) Adopting Sustainable Practices

- Incorporate sustainable resource management practices to reduce negative impacts on ecosystems.
- Promote the use of certified sustainable products (e.g., FSC-certified wood, MSC-certified seafood).
- Evaluate the environmental impact of a product throughout its life cycle, from raw material extraction to disposal, and adjust to minimise negative impacts.

c) Investment in Biodiversity-Friendly Technologies

- Invest in and develop technologies that minimize environmental footprints, such as renewable energy sources, waste management systems, and sustainable agriculture practices.
- Support innovation in biodiversity conservation through research and development.

d) Corporate Policies and Standards

- Develop and enforce corporate biodiversity policies that align with international standards and frameworks such as the Convention on Biological Diversity (CBD) and the International Union for Conservation of Nature (IUCN).

- Set measurable biodiversity conservation targets and report on progress transparently.
- e) **Engagement and Collaboration**
- Engage with stakeholders, including local communities, NGOs, and government agencies, to understand their concerns and incorporate their feedback into decision-making processes.
 - Participate in public-private partnerships and conservation initiatives that aim to protect and restore biodiversity.
- f) **Regulatory Compliance**
- Keep abreast of regulations and standards relevant to the industry to ensure compliance and avoid potential legal issues.
 - Go beyond mere compliance by adopting best practices that anticipate future regulatory trends.
- g) **Transparent Communication**
- Be transparent about the risks associated with products and services. This builds trust with consumers and other stakeholders.
 - Develop and maintain robust crisis management plans to quickly and effectively address any issues that arise.
- h) **Ethical Decision-Making:**
- Implement Corporate Social Responsibility (CSR) initiatives that go beyond compliance and proactively contribute to societal well-being.
- i) **Monitoring and Adaptive Management**
- Implement monitoring systems to track the impact of business activities on biodiversity.
 - Employ adaptive management strategies to modify practices based on monitoring results and new scientific knowledge.
- j) **Education and Awareness**
- Educate employees, customers, and suppliers about the importance of biodiversity and the company's role in its conservation.
 - Promote biodiversity awareness campaigns and initiatives both internally and externally.
- k) **Innovation and R&D:**
- Foster a culture of cautious innovation where new ideas are thoroughly tested and assessed before large-scale implementation.

- Start with small-scale pilot projects to test new products or processes in controlled environments before full-scale rollouts.

6 Challenges

- **Scientific Uncertainty:** Balancing precaution with the need for scientific evidence can be challenging.
- **Economic Considerations:** Preventative measures might have economic costs, and there can be tension between economic development and environmental protection.
- **Implementation:** Ensuring global cooperation and consistency in applying the precautionary principle can be difficult, especially in regions with differing priorities and resources.

7 Case Studies and Examples

- **Unilever:** The multinational company has committed to sustainable sourcing of raw materials, reducing deforestation, and improving water management. Unilever's Sustainable Agriculture Code guides suppliers on maintaining biodiversity.
- **IKEA:** Through its IWAY Forestry Standard, IKEA ensures that wood and other forest-based materials are sourced responsibly, contributing to forest conservation and biodiversity protection.
- **Shell:** The energy company has implemented biodiversity action plans (BAPs) for its operations, particularly in sensitive habitats, and engages in habitat restoration projects.

8 Conclusion

Applying the precautionary principle in the private sector requires companies to integrate biodiversity conservation into their core operations and decision-making processes. By proactively managing risks, adopting sustainable practices, investing in green technologies, and engaging with stakeholders, businesses can significantly contribute to the preservation and enhancement of global biodiversity. This approach not only helps in conserving nature but also ensures long-term sustainability and resilience of business operations.