From Concept to Impact: The Biodiversity Mainstreaming Journey under the CBD

Exploring how the Convention on Biological Diversity has shaped the global approach to biodiversity mainstreaming and how countries are putting it into practice

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CONTENT

FROM CONCEPT TO PRACTICE: THE DEVELOPMENT OF BIODIVERSITY MAINSTREAMING IN THE CBD

1. Development of the mainstreaming approach in the context of the CBD

The concept of biodiversity mainstreaming has evolved continuously, progressing from early integration efforts to a more comprehensive, system-wide approach. Foundational provisions were embedded directly in the Convention on Biological Diversity, notably in Article 6(b), and later strengthened through Aichi Target 2, which called for the integration of biodiversity into national development and sectoral strategies. Subsequent refinements include the global 2030 targets set out in Section H and, most recently, the consolidation and expansion of mainstreaming tools and solutions under the Kunming–Montreal Global Biodiversity Framework (KMGBF), including Target 14.

BIODIVERSITY MAINSTREAMING refers to the integration of biodiversity concerns into all relevant policy areas, such as legislation, the private sector, the financial market and the public. The CBD Secretariat defines mainstreaming 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" (→**CBD website**). **Further definitions →** can be found in the **annex** of this publication.

The aim of mainstreaming is to reduce the negative impacts of productive economic sectors on biodiversity, especially outside protected areas, while enhancing the contribution of biodiversity and ecosystem services to economic development and human well-being. This is based on the idea that the causes of biodiversity loss fall within the remit of several policy areas or sectors beyond environmental and nature conservation policy.

Mainstreaming represents a holistic approach: it ensures that biodiversity and ecosystem services (e.g. pollination, water and climate regulation or soil fertility) are considered at the earliest stages of planning in core sectors such as agriculture, infrastructure and urban development. Embedding these considerations increases the likelihood of **reconciling ecological and economic objectives over the long term.**

A central legal basis is **Article 6(b)** (→**"General Measures for Conservation and Sustainable Use"**) of the CBD, which obliges Parties to "as far as possible and as appropriate" integrate conservation and sustainable use of biological diversity into relevant sectoral and cross-sectoral strategies, programmes, and policies. This underscores that biodiversity must be an integral part of policies that depend on, or affect, healthy ecosystems. The CBD thus acknowledges that its objectives can only be met if biodiversity is addressed across all government departments.

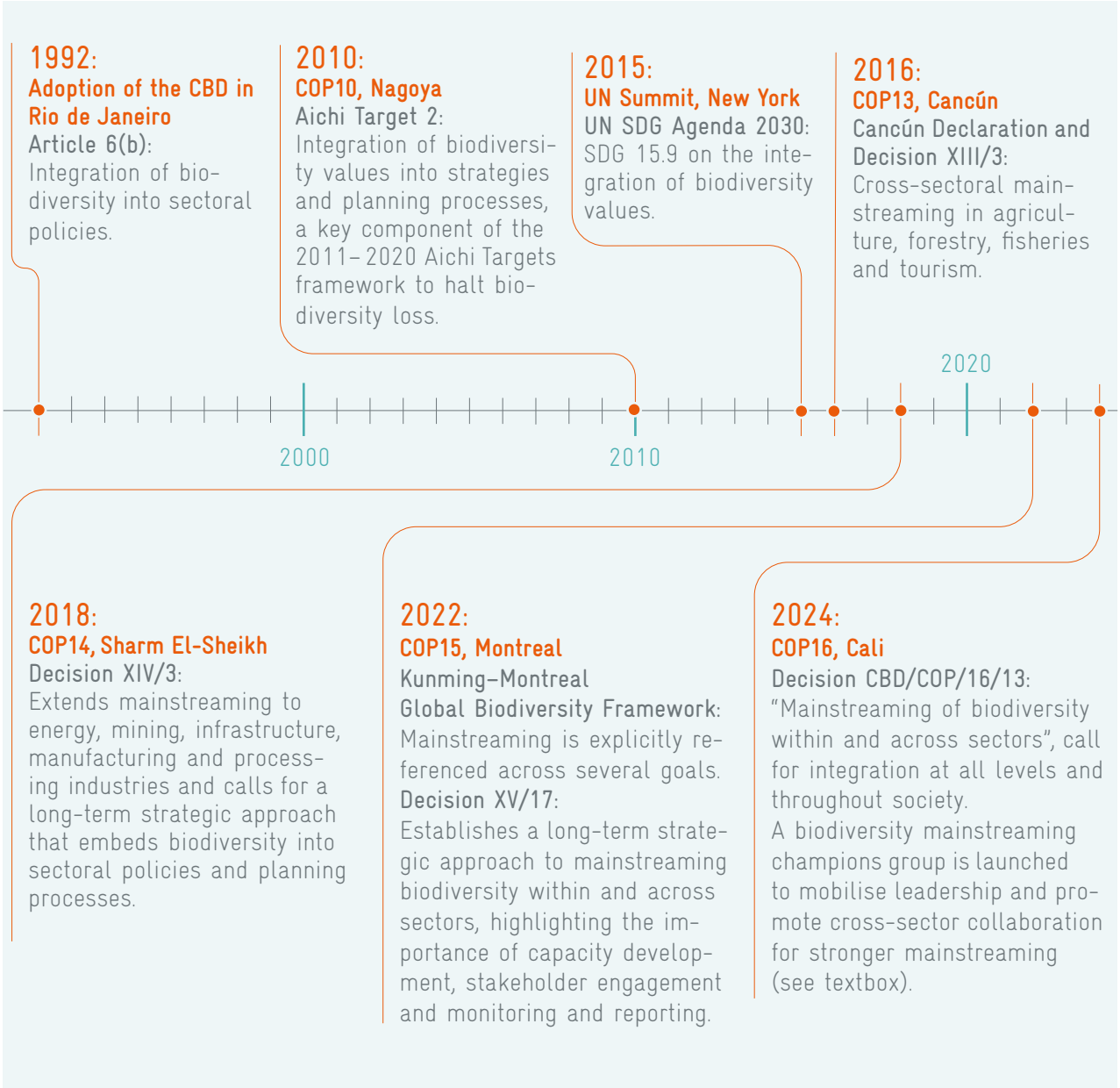
Since the inception of the Convention on Biological Diversity, **the concept of biodiversity mainstreaming has matured from a narrow environmental add-on into a central strategic driver for sustainable development**. In its earliest form, mainstreaming focused on grafting environmental safeguards onto individual sectors. The adoption of the Aichi Targets (2010 – 2020) elevated mainstreaming to a unifying principle, demanding that biodiversity considerations inform policy design and implementation across all economic domains.

Subsequent COP decisions, most notably those adopted at COP13 in Cancún (2016), COP14 in Sharm El-Sheikh (2018), COP15 in Montreal/ Kunming (2022), and COP16 in Cali/Colombia (2024), have further solidified this shift. These milestones have reframed mainstreaming not merely as a technical exercise but as a **cornerstone of global biodiversity governance**. The repeated calls for enhanced political ambition reflect an urgent recognition: only by embedding biodiversity goals across sectors can we halt ecosystem decline.

Moreover, linking biodiversity explicitly to the 2030 Agenda for Sustainable Development highlights its broader relevance. Cross-sectoral collabo- ration, nature-positive investment, and integration of ecosystem services into national accounting are no longer optional, they are prerequisites for meeting climate, poverty-reduction and resilience objectives simultaneously. In this light, biodiversity mainstreaming has emerged as an indispensable lever, weaving ecological integrity into the fabric of policymaking and affirming its role as a linchpin of sustainable policy.

The timeline on the next page highlights key decisions, declarations and COPs that advanced the concept of biodiversity mainstreaming within the CBD. **It illustrates the evolution from a sectorally confined approach to a comprehensive guiding principle, fostering cross-sectoral integration as a cornerstone of international biodiversity policy**. The development shows a clear trend: mainstreaming is now an integral part of international biodiversity and sustainability strategies, yet its effectiveness ultimately depends on systematic integration into sectoral policies and strategies.

Figure 1: From Rio to Cali. The Evolution of Biodiversity Mainstreaming 1992 – 2024



→ BIODIVERSITY MAINSTREAMING CHAMPIONS GROUP

Officially launched during COP 16 to promote the integration of biodiversity across all sectors and to advance transformative actions for implementing the GBF. During SBI 4 and COP 16, many Parties highlighted the need for more ambitious efforts to make biodiversity mainstreaming effective. The Biodiversity Mainstreaming Champions Group (BMCG), co led by Colombia and Mexico is expected to play a key role in mobilizing political attention and coordinating potential actions to advance this agenda.

2. Key CBD decisions and recommendations on biodiversity mainstreaming

Key decisions adopted by the CBD COPs are grouped into two periods: 2010 – 2020 and from 2020 onward. The distinction between these timeframes highlights the transition from earlier, sector-focused mainstreaming efforts to the more comprehensive and globally coordinated approach established under the Kunming-Montreal Global Biodiversity Framework.

2.1. 2010 – 2020

2010

COP 10 in Nagoya

Establishing the groundwork for incorporating biodiversity considerations into development strategies and policy frameworks.

At COP10 in Nagoya, Parties adopted the **Strategic Plan for Biodiversity 2011 – 2020**, including the Aichi Targets **(→ CBD/COP/DEC/X/2)**. **Aichi Target 2** calls for "biodiversity values [to be] integrated into national and local development and poverty reduction strategies and planning processes" and to be incorporated, as appropriate, into national accounting and reporting systems by 2020 **(→ COP/10/INF/12/Rev.1)**. In addition, **Aichi Target 17** provides for the development of National Biodiversity Strategies and Action Plans (NBSAPs), which are the most important instrument for implementing the Convention at the national level. The NBSAPs, updated based on the 20 Aichi Biodiversity Targets, are to be incorporated into specific policy instruments and thus support biodiversity mainstreaming in the activities of the sectors with the greatest impact on biodiversity.

2012

COP11 in Hyderabad

Laying the foundation for a stronger link between biodiversity conservation and sustainable development.

At COP11 in Hyderabad, the importance of mainstreaming biodiversity into sectoral and overarching strategies was clearly emphasized. In **decisions XI/3 (→ CBD/COP/DEC/XI/3)** and **XI/22 (→ CBD/COP/DEC/XI/22)**,

the Parties called for greater integration of biodiversity into national development plans, poverty reduction strategies and relevant economic sectors. It is particularly emphasized that effective mainstreaming measures are only possible through improved cross-sectoral coordination and by anchoring biodiversity goals in other policy areas.

2014

COP12 in Pyeongchang

Emphasizing the need for accelerated mainstreaming efforts.

At COP12 in Pyeongchang, **decision XII/1 (→CBD/COP/DEC/XII/1)** states that biodiversity loss can only be halted if biodiversity targets are systematically embedded in sectors such as agriculture, forestry, fisheries and energy. In addition, **decision XII/5 (→CBD/COP/DEC/XII/5)** emphasizes the central role of biodiversity in the context of the global sustainability agenda and calls for biodiversity to be anchored as a cross-cutting issue in the global sustainability agenda.

2015

UN Summit on Sustainable Development

Linking biodiversity mainstreaming to the global sustainable development agenda through SDG 15.9

The United Nations 2030 Agenda with its 17 Sustainable Development Goals (SDGs) also addresses this topic. **SDG 15.9** calls for "ecosystem and biodiversity values [to be integrated] into national and local planning, development processes, poverty reduction strategies and accounts" by 2020 **(→A/RES/70/1)**. **Aichi Target 2** and SDG 15.9 are directly related: both emphasize the need to mainstream nature's values into the economy and governance and are considered important targets for the biodiversity and development agenda.

2016

COP13 in Cancún

Moving mainstreaming to the centre of the agenda.

At a high-level meeting, the heads of state and government adopted the Cancún Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity for Well-Being **(→Cancún Declaration 2016)**. It explicitly states that sectors such as agriculture, forestry, fisheries and tourism are highly dependent on biodiversity and ecosystem services and at the same time have a major impact on biodiversity and eco-

systems. The declaration therefore rejects sectoral policy approaches that neglect biodiversity aspects and calls for "raising the level of ambition and political will for mainstreaming the conservation and sustainable use of biodiversity". These demands were also taken up directly in Decision XIII/3 **(→CBD/COP/DEC/XIII/3)**, which recognizes that the mainstreaming of biodiversity into the forest, agriculture, fisheries, aquaculture and tourism sectors is "essential to halt biodiversity loss and achieving the Aichi Biodiversity Targets". This resolution also expressly welcomes the Cancún Declaration and reaffirms that the Parties should implement cross-sectoral measures to achieve the Aichi Targets. COP13 thus made it clear that biodiversity issues affect not only environmental policy but also key economic sectors.

2018

COP14 in Scharm El-Sheikh

Extending the mainstreaming focus to other key economic sectors.
Decision XIV/3 (→CBD/COP/DEC/14/3) provides for energy, mining, infrastructure, manufacturing and processing industries to be included in the mainstreaming process. The Parties emphasized that these sectors also depend heavily on ecosystem services and, conversely, potentially cause considerable damage to biodiversity. The decision emphasizes that biodiversity aspects must be systematically integrated into strategic planning and spatial planning. It explicitly recommends the application of environmental and social impact assessments (ESIAs) and strategic environmental assessments (SEAs), as well as the implementation of incentive measures. COP 14 also called for the hierarchy of avoidance, mitigation and compensation measures to be applied consistently (mitigation hierarchy) and for relevant laws and regulations to be adapted. Financial institutions and companies are called upon to identify dependencies on biodiversity and disclose risks. Overall, COP 14 reaffirmed in the Sharm El-Sheikh Declaration **(→Sharm El-Sheik Declaration 2018)** and in **decision XIV/3** the need to mainstream holistically in politics and business. The decision also includes the decision to establish a so-called "long-term strategic approach to mainstreaming biodiversity".

2.2. Since 2020

2022

COP15 in Montreal/Kunming

The transition to a period in which mainstreaming is anchored as a central instrument for achieving global biodiversity and development goals.

As part of COP15, the mainstreaming approach was integrated into the Kunming-Montreal Global Biodiversity Framework **(→CBD/COP/DEC/15/4)**. The post-2020 agreement contains 4 long-term and 23 action targets for 2030, with targets 14–23 addressing the instruments and solutions for implementation and mainstreaming. **Target 14** "Integrate Biodiversity in Decision-Making at Every Level" explicitly addresses mainstreaming. Target 10, 12, 15, 16 and 18[1] are also particularly relevant. With **decision 15/17** "Long-term strategic approach to mainstreaming biodiversity" **(→CDB/COP/DEC/15/17)**, the conference also emphasized the importance of mainstreaming for long-term success. It again refers to Article 6(b) and underlines the "critical importance of mainstreaming biodiversity across government and society". It emphasizes that intensified mainstreaming measures are necessary to achieve the ambitious KMGBF's Vision 2050. Decision 15/17 however provided no clear guidance or approach for mainstreaming but rather requested the Parties and invited other governments and stakeholders to submit their views on the draft long-term strategic approach and corresponding action plan.

2024

COP16 in Cali

Positioning the Kunming-Montreal Framework as the principal vehicle for mainstreaming biodiversity.

The recent COP16 decision **"Mainstreaming of biodiversity within and across sectors" (→CBD/COP/DEC/16/13)** emphasizes that the Kunming-Montreal framework "provides a wide range of options for mainstreaming". Parties and other levels (federal, regional and local governments) are called upon to integrate biodiversity "in particular to enable mainstreaming at all levels of government and society".

1 Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry (Target 10), Enhance Green Spaces and Urban Planning for Human Well-Being and Biodiversity (Target 12), Businesses Assess, Disclose and Reduce Biodiversity-Related Risks and Negative Impacts (Target 15), Enable Sustainable Consumption Choices To Reduce Waste and Overconsumption (Target 16) and Reduce Harmful Incentives by at Least $500 Billion per Year, and Scale Up Positive Incentives for Biodiversity (Target 18).

KEY OUTCOMES OF COP16 IN CALI

Decision COP/DEC/16/13 builds on previous decisions on mainstreaming biodiversity. → COP14/3 (2018) had already emphasized that mainstreaming is essential to achieve the CBD goals. → COP15/17 (2022) highlighted the need for increased efforts around mainstreaming and mandated the Secretariat and relevant CBD bodies to develop a long-term strategic approach. However, at SBI-4, delegates agreed that the Long-Term Approach to Mainstreaming (LTAM's) objectives were already subsumed by the broader KMGBF, casting doubt on the need for a separate mechanism. Moreover, governments had had little input in drafting the LTAM, undermining its legitimacy and rendering its implementation impractical. The new decision links these targets to the Kunming-Montreal Framework as a Strategic Plan for 2022 – 2030. This decision thus formally positions the KMGBF as the principal vehicle for mainstreaming biodiversity, with a wide range of options; it mobilizes Parties and stakeholders at all levels, including subnational and local governments, the private and financial sectors, and tasks the Secretariat with facilitating peer-learning, capacity-building and development and iterative progress reporting ahead of COP17 and COP18.

Key points of COP16/13 include:

- **Integration across all levels and sectors:** Biodiversity and environmental concerns should be systematically incorporated into policies, planning, and decision-making at all governance levels (including all levels of governments and society with full and effective contributions of women, youth, indigenous peoples and local communities, civil society organizations and stakeholders, within and across all sectors – in particular energy and mining, infrastructure, manufacturing and processing, (agriculture, forestry, fisheries and aquaculture, and tourism), in an inclusive manner and across all relevant sectors (paragraph 2 of the decision).

- **Documentation of good practices:** National states should disclose their good practices, new and innovative tools, mechanisms, challenges and lessons learnt in biodiversity mainstreaming in the national reports under CBD and non-state actors and subnational and local governments through their voluntary commitments (paragraph 3 of the decision).

- **Involvement of the private and financial sector:** The decision invites the private and financial sector to actively contribute to achieving CBD objectives, including by aligning business practices with biodiversity goals and supporting sustainable sectoral development (paragraph 4 of the decision).

- **Actors and partnerships:** Governments, multilateral environmental agreements, science, the private sector, financial institutions and civil society are called upon to take biodiversity into account in all relevant processes (paragraph 5 of the decision).

- **Role of the CBD Secretariat:** The Secretariat should (among others)

  - involve regional and subnational dialogue meetings forums, identify research gaps, promote the exchange of experience via the Clearing House Mechanism and support capacity building,

  - strengthen collaboration with relevant convention secretariats, organizations and institutions and foster collaboration and cooperation,

  - support capacity-building and development activities in collaboration with Parties and other Governments, subnational and local

governments, the regional and subregional support centers of the technical and scientific cooperation mechanism, indigenous peoples and local communities and networks of women and youth, as well as relevant stakeholders, such as non-governmental organizations, international financial institutions and private sector entities.

- It should also compile and map out existing good practices, tools, guidance and solutions for biodiversity mainstreaming and establish sector specific "communities of practice" (e.g. via webinars) to share lessons learned, tools, guidance and innovative approaches across key economic sectors.

- The Executive Secretary shall prepare and submit a progress report on those pre-COP17 activities to the Subsidiary Body on Implementation (paragraph 6 of the decision).

2.3 Concluding reflections

Within the CBD, mainstreaming has evolved from a marginal, sector-specific concern into a core guiding principle of international biodiversity policy and its implementation. Its growing prominence reflects the recognition that biodiversity objectives cannot be achieved in isolation but require integration across all sectors of society and the economy.

While progress has been made, the decisive step now lies in translating mainstreaming commitments into concrete sectoral policies, strategies, and practices. Looking ahead, effective mainstreaming will depend on stronger political will, accountability mechanisms, and synergies with climate and development agendas, as well as shifts in mindsets and narratives that position biodiversity as fundamental to societal well-being and economic resilience.

3. Core areas for biodiversity mainstreaming

The conceptual foundations of biodiversity mainstreaming encompass key policy and coordination interfaces across land use planning, agriculture, forestry, infrastructure, tourism, and other relevant sectors (CBD/COP/DEC/16/13). Progress achieved and persistent challenges relate, among other aspects, to the still limited linkage between mainstreaming efforts and the transformative change concepts emerging from IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) and others and increasingly incorporated into CBD processes.

Biodiversity mainstreaming aims to reconcile development objectives with biodiversity conservation, promoting coherence between sectoral policies such as agriculture, forestry, tourism and ecosystem health. For example, biodiversity underpins key economic sectors: agriculture supports more than half of the world's population (including approx. 1.5 billion smallholderfarmers) and over 3 billion people depend on fisheries; forests harbour over 75 % of terrestrial species[2]. Thus, mainstreaming efforts focus on redirecting subsidies, investments and regulations in these sectors to sustain ecosystem services and halt biodiversity loss.

2 OECD (2018): → **Mainstreaming Biodiversity for Sustainable Development**.

Overview of thematic areas and possible entry points for biodiversity mainstreaming

Table 1: Topic areas and entry-points for biodiversity mainstreaming.
Own elaboration, based on CBD, GIZ (2024), IIED (2020), IIED (2023), ISO (2022), OECD (2018), OECD (2021), OECD (2025)

THEMATIC AREA	POSSIBLE ENTRY POINTS
Strategic approaches: **Strengthening coherence and continuity across policy cycles**	**Strategy design:** • Support decision-making on whether biodiversity is best nested under environment mainstreaming or as part of a package of cross-cutting priorities. • Co-design a mainstreaming architecture (roles, mandates, budget lines). **Political economy and resonance analysis:** • Assess where mainstreaming will be resonant (national vs. subnational, priority sectors, land uses). • Identify goal conflicts and trade-offs early. • Map power relations, incentives, and decision-making processes. • Identify political "triggers" and windows of opportunity (budget cycles, procurement cycles, donor planning moments) to time interventions strategically. **Climate–biodiversity policy coherence and synergistic planning and implementation:** • Facilitate joint policy making, planning, guidance and pilot actions that combine NDC/NAP/NBSAP planning and implementation of common targets to reduce stovepipe planning.[3] **Narratives and mindsets:** • Identify narrative and mindset barriers across sectors. • Assess opportunities for reframing biodiversity in terms of risk management, competitiveness, resilience, and local benefits.
Technical guidance for planning and operations	• Update/align NBSAP and subnational plans, embed biodiversity and ecosystem services risk screening into sectoral plan reviews and Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) processes. • Co-create (simple) indicator sets for sector ministries and integrate into existing monitoring frameworks. • Deliver short, issue-driven technical notes (e.g. agri-extension guidance for pollinator-friendly crops).

3 GIZ, IISD (2024): → **Effectively delivering on Climate and Nature: NDCs, NAPs and NBSAPs Synergies – A checklist for national policymakers.**

Coordination and stakeholder and rightsholder engagement: **Breaking silos and building ownership**	Facilitate cross-sectoral platforms, inter-ministerial dialogues and multi-stakeholder workshops that surface trade-offs and incentives. Map stakeholders and rightsholders (incl. power relations and key decision-making processes) and identify "triggers" or motivations (procurement windows, budget cycles, donor co-financing) to time interventions. Ensure meaningful voice and participation. Identify and support champions.
Finance and fiscal instruments: **Creating incentives and redirecting harmful flows**	Support fiscal diagnostics (identify harmful subsidies and opportunities to reallocate). Co-develop biodiversity tagging systems for public budgets and major donor flows and pilot biodiversity filters in public procurement. (Re-)design funding mechanisms, fiscal instruments, mobilization of finance, support for proposal development and pilot incentive schemes. Work with finance ministries and development finance institutions to build biodiversity risk assessments into credit/loan processes.
Evidence, tools and decision support for informed policy choices	Demonstrate long-term impacts associated with improved status of biodiversity and co-benefits (e.g. support research). Support analysis of trade-offs and communication and negotiation of conflicting policy objectives and related trade-offs. Support development of monitoring frameworks. Develop dashboards and synthesis products that present co-benefits (resilience, livelihoods, savings) in policymaker-friendly formats.
Learning-oriented, adaptive management: **Strengthening continuous improvement**	Translate national biodiversity strategies into practice through subnational or landscape-level mainstreaming pilots. Systematically document and synthesise lessons learned ("what worked/why/how") to support scaling and adaptive management. Promote multi-year, iterative programmes embedded in partner country strategies, not one-off projects. Support stepwise targets, learning agendas, south-south exchanges and communities of practice.

3.1. Sectors and core areas

Effective mainstreaming is typically promoted through National Biodiversity Strategies and Action Plans (NBSAPs) and cross-sectoral plans, development of "business cases" for conservation or sustainable use, and the use of legal and economic instruments. The 2030 Agenda and the KMGBF reinforce this, calling for biodiversity objectives in all policies. Coordinating mechanisms are crucial: many countries form inter-ministerial committees or working groups that bring together environment, agriculture, forestry, tourism and finance ministries. For instance, Brazil's National Environment Council CONAMA and Mexico's National Commission for the Knowledge and Use of Biodiversity CONABIO are high-level multi-sector councils for environmental policy.

Embedding dedicated biodiversity units or "green teams" within sectoral ministries (as in Ethiopia, Madagascar) is another practice. These bodies help reduce siloed decisionmaking and ensure that ecosystem considerations inform planning across departments. At local levels, spatial planning agencies or environmental planning authorities similarly incorporate ecosystem data into land-use plans.

Land-use planning

Land-use planning and spatial planning are foundational interfaces for mainstreaming biodiversity. Planning instruments can require that infrastructure, industry and agriculture projects consider ecosystem services before development decisions. Many national development plans now explicitly mandate biodiversity-sensitive land zoning or spatial plans. In practice, this means using tools like zoning maps, ecological networks, and EIA/SEA to direct new roads, settlements or energy facilities away from high-value habitats. Adoption of the mitigation hierarchy[4] (avoid, minimize, restore, offset) is promoted: over 100 countries have policies on biodiversity offsets or no-net-loss, often tied to planning permissions. For instance, the European Union's Biodiversity Strategy explicitly links green infrastructure planning with no-net-loss of habitats. In many countries, "green corridors" and wildlife crossings are planned into highway and urban developments to maintain connectivity.

TRANSFORMATIVE CHANGE, BIODIVERSITY MAINSTREAMING AND THE NEXUS PERSPECTIVE (IPBES)

The → **IPBES assessment on transformative change** calls for system-wide reorganization of how societies value, govern, and manage nature. It emphasizes that addressing biodiversity loss requires tackling indirect drivers such as unsustainable consumption, inequitable power structures, harmful subsidies, and worldviews that disconnect people from nature. Recent → **IPBES work on the biodiversity–water–food–health–climate nexus** further underlines that biodiversity,

4 TNFD (2023): The mitigation hierarchy is the sequence of actions to anticipate and avoid, and where avoidance is not possible, minimise, and, when impacts occur, restore, and where significant residual impacts remain, offset for biodiversity-related risks and impacts on affected communities and the environment.

water security, food systems, human health and climate stability are tightly interconnected, and that single-sector solutions often generate trade-offs rather than system-wide benefits.

Against this backdrop, biodiversity mainstreaming needs to be understood not as a narrow technical exercise of "adding biodiversity" to sectoral plans, but as part of a broader transformative agenda. Transformative change reframes mainstreaming as:

- **Cross-sectoral and nexus-oriented:** Embedding biodiversity across agriculture, forestry, fisheries, infrastructure, health and finance in ways that simultaneously supports water security, sustainable food systems, human health and climate goals.
- **Institutional and economic:** Reforming incentives, subsidies, and decision-making systems so that public budgets, private investment and fiscal instruments are aligned with biodiversity-positive and nexus-sensitive outcomes, and harmful financial flows are reduced.
- **Inclusive and value-based:** Ensuring the meaningful participation and rights of Indigeneous Peoples and Local Communities (IP&LC), drawing on diverse knowledge systems, and fostering societal value shifts that recognize human–nature interdependence and equity.
- **Monitored, adaptive and learning-oriented:** Using indicators and governance systems that track both ecological outcomes and structural change, support iterative learning and enable adjustment of policies and investments over time.

In this perspective, mainstreaming is no longer about incremental adjustments at the margins of existing systems. It becomes a deliberate contribution to transforming economic structures, governance arrangements and societal values so that nature-positive options become the default across the interconnected domains of biodiversity, water, food, health and climate. In this way, it would also reach beyond these domains, potentially influencing how societies define prosperity, well-being and development as a whole.

Operationally, land-use mainstreaming is implemented via technical tools and guidelines. Geographic Information Systems (GIS) and spatial multi-criteria analysis are used to identify priority conservation areas and overlay them with development plans. National resource and development agencies often maintain biodiversity information portals to guide planners. Capacity-building materials (e.g. CBD/UNDP guidelines) and mandatory SEA procedures help planners include biodiversity from the outset. In summary, strategic land-use planning functions as a cross-cutting interface: it embeds biodiversity criteria into siting and permitting across sectors.

Agriculture

The agriculture sector has been a major focus of mainstreaming, and a range of policy and market instruments are used to make farming more biodiversity-friendly or at least less harmful. The UK Environmental Stewardship and Germany's Naturschutzflächen (nature compensation areas) require farmers to set aside farmland for meadow birds or rare flora. Sri Lanka's Land Use Policy Plan integrates biodiversity by zoning areas for agro-biodiversity and agro-tourism. Many countries use their national biodiversity strategies to embed agriculture goals, such as

conserving landraces (seed banks) and pollinators. Agri-environmental schemes and subsidies are common. For example, the EU's Common Agricultural Policy (CAP) now makes approx. 30 % of direct farm payments conditional on environmental management practices. Under these "greening" measures, farmers must maintain ecological focus areas or crop diversity. Additional voluntary payments (contractual schemes) reward farmers for specific actions (e.g. maintaining hedgerows, fallow fields or breeding sites) over multi-year commitments. France pioneered regionalized agri-environment measures to target biodiversity hotspots. However, → reviews note that CAP reforms still fall short and national schemes must further refine incentives to safeguard agro-ecosystem services.

Payments for Ecosystem Services (PES) have been scaled up in agriculture. The world's largest PES-like approach is → China's Grain-for-Green program, which by 2012 had reforested over 9 million hectares of eroded farmland. In South Africa, a → national land stewardship programme pays landowners in biodiversity-rich areas to manage their land for conservation (expanding protected areas at roughly one-tenth the cost of land purchase). These schemes show that ecosystem values (e.g. pollination, water purification) can be quantified, creating a business case for stewardship.

Standards, certification and technical guidelines are another interface. Organic and sustainable-label standards (e.g. Rainforest Alliance, Fair Trade, Marine Stewardship Council (MSC) Fisheries Standard drive biodiversity-friendly practices through market preferences. Governments publish technical handbooks (e.g. on pest control, planting native species hedges) to farmers. Research agencies develop bio-diversity indicators for monitoring agricultural lands. Finally, many countries have livestock grazing or irrigation plans that aim to optimize stocking rates or water use to reduce habitat conversion.

Forestry

Mainstreaming in forestry overlaps with sustainable forest management (SFM). Forests are major biodiversity reservoirs (especially tropical forests with more than 75 % of terrestrial species) and provide critical services (carbon sequestration, soil and water protection). Policies to integrate biodiversity include requiring management plans that conserve habitat mosaics, strict controls on logging in high-conservation-value areas and promoting native species regeneration. Internationally, certifications like Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification (PEFC) ensure timber supply chains demand conservation practices.

Many countries incorporate biodiversity into their national forest programs and land-use laws. For example, the UN Sustainable Development Goal 15 (Target 15.2) sets a global no-deforestation target, which is reflected in national commitments and programs. Some governments subsidize reforestation with native species and penalize illegal logging through stricter enforcement and satellite monitoring. Payment for forest ecosystem services schemes exist in Vietnam and Costa Rica, where downstream users (hydropower, irrigation) pay upstream communities for watershed protection. The → EU Forest Strategy

and the → land use and land use change and forestry (LULUCF) regulation encourage member states to afforest degraded lands and maintain forest carbon sinks, implicitly benefiting biodiversity.

Spatial planning (forest zoning maps) designates protected core areas, sustainable-use zones and buffer areas. Technical manuals (often developed by FAO and national forestry agencies) guide silvicultural practices that favour diversity (e.g. mixed-species stands, uneven-aged management). Landscape-scale initiatives connect forest patches (e.g. corridors). Fire and pest management plans are designed with ecosystem objectives (e.g. controlled burns, biological control agents). In Europe, → Natura 2000 network guidelines require forestry operations (through EIA/SEA) to minimize impacts on key habitats and species.

Infrastructure

Infrastructure planning (roads, railways, energy, water) directly intersects with land use and biodiversity. Infrastructure development is a major driver of habitat loss: road and dam construction fragment ecosystems and open new areas to deforestation or poaching. Mainstreaming in this sector works by tightening project planning and impact mitigation.

Many countries now require biodiversity-inclusive EIAs/SEAs for infrastructure, following → CBD decision guidance. For example, the → IFC Performance Standard 6 (biodiversity) is applied by development banks to projects, requiring offsets if impacts are unavoidable. National policies promote the mitigation hierarchy: for infrastructure, avoid/minimize impacts through route selection and design, restore affected areas, then offset any residual loss. Over 100 countries have laws or guidelines on biodiversity offsets or compensation, and some incorporate them into permitting (e.g. US mitigation banks under the Endangered Species Act).

As noted, integrating biodiversity into zoning and land-use planning is crucial. The → CBD infrastructure review emphasizes that *"national development plans and policies can promote or require land use planning that integrates biodiversity and ecosystem services"*. This means, for example, that a national highway plan will avoid key wildlife corridors or wetlands as a rule. Green Infrastructure is a related concept: it involves designing infrastructure projects to provide ecosystem services (e.g. engineered wetlands for stormwater) and to maintain connectivity. The → EU biodiversity strategy explicitly encourages linking transport/energy planning with green infrastructure and no-net-loss goals.

Engineers now use GIS-based planning tools that overlay biodiversity values with proposed routes to identify "avoidance zones". Wildlife crossings (overpasses/underpasses) and eco-ducts are installed on highways. Best-practice handbooks exist for rail, road and power sectors on minimizing disturbance (e.g. low-impact piling in marine areas, or timing construction to avoid breeding seasons). Some regions

establish ecological masterplans: e.g. China's "Green Great Wall" includes plans for eco-corridors in development projects. Climate-resilient design also aligns with biodiversity (e.g. river restoration along dams to mitigate flood risk). The Pan-Borneo highway (Malaysia/Indonesia) is rerouting sections to preserve orangutan habitat. The Asian Infrastructure Investment Bank now screens projects for biodiversity and finances rerouting or green bridges if needed.

Tourism

Tourism is a significant economic sector (→ approx. 10% of global GDP and 1 in 10 jobs) that often depends on nature attractions. Mainstreaming in tourism focuses on making tourism development sustainable and beneficial to conservation.

Sustainable tourism policies have been adopted by many countries (often as standalone tourism strategies or NBSAP components). These policies encourage coordination between tourism, environment, culture and local communities. For example, the → CBD recommends establishing or strengthening "governance and management structures for sustainable tourism" that span the ministries of tourism, environment, culture, health, and others. Partnerships with UNESCO (e.g. World Heritage sites) or UN Tourism „International Network of Sustainable Tourism Observatories" help ensure that development in national parks or heritage sites follows biodiversity guidelines.

Certification and ecolabels are widely used: the Global Sustainable Tourism Council (GSTC) sets baseline criteria (endorsed by UN bodies) that hotels and tour operators can meet for "green" certification. Beach and marina ecolabels (e.g. → Blue Flag) promote ecosystem cleanliness. Tour operators increasingly adopt biodiversity guidelines (e.g. → CBD/IUCN ecotourism concession guide) as best practices. Governments may levy entrance fees for parks and earmark revenue for conservation. In some countries, concessions or contracts with private operators include biodiversity clauses (e.g. in lodge permits).

Community-based ecotourism (often in rural or indigenous areas) is supported as a mainstreaming tool. It links local livelihoods to forest or wildlife conservation. For instance, Nepal's community forest user groups earn income from ecotourism while maintaining forest habitat. In Madagascar, homestay tourism in national parks is promoted under NBSAPs.

Similarly, Costa Rica and Ecuador's Galápagos Islands leverage tourism revenues as a sustainable financing mechanism to directly fund protected area management. → UNESCO's World Heritage Sustainable Tourism Toolkit provides guidelines used in dozens of sites worldwide.

3.2. Coordination and implementation interfaces for biodiversity mainstreaming

Across all sectors, effective biodiversity mainstreaming relies on coordination mechanisms and practical interfaces between development and conservation. Key instruments include:

- **National Biodiversity Strategies and Action Plans:** Many NBSAPs now include sector-specific targets and seek to integrate biodiversity concerns into agriculture, forestry, infrastructure, and other key sectors. Increasingly, they also establish cross-sectoral working groups that support coordination and help translate national biodiversity commitments into sectoral policies and actions.

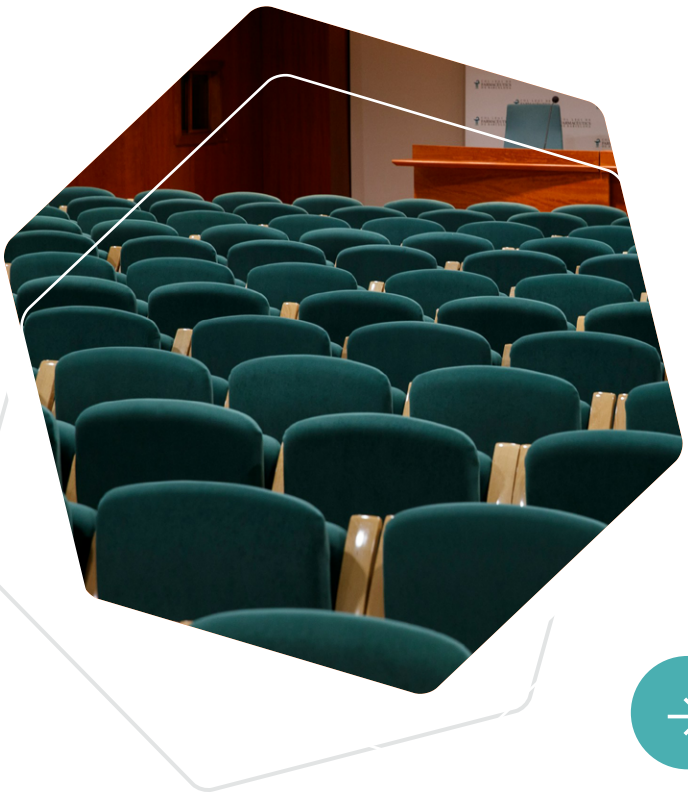
- **Inter-agency committees:** Inter-ministerial committees (such as CONABIO in Mexico) spanning sectors such as environment, agriculture, energy, transport, and tourism are often formalized in law or executive decrees. These committees coordinate across ministries, review major plans (e.g. national development plans) for biodiversity implications and co-benefits and help ensure that sectoral decisions are aligned with national biodiversity objectives.

- **Vertical coordination:** National policies are often cascaded to states/provinces (e.g. Ecuador's National System of Environmental Information guides regional land-use plans). Conversely, local plans (zoning bylaws, landscape conservation plans) feed into national reporting on biodiversity.

- **Financial mechanisms:** Budget lines can be allocated for cross-cutting programs (e.g. UNDP-GEF mainstreaming projects often establish a multi-sector trust fund or environmental fund to co-finance biodiversity-friendly actions in each sector). In addition, innovative financing instruments such as green bonds, biodiversity offsets fees or trust funds can help to operationalize commitments.

- **Data and monitoring interfaces:** Shared information platforms (databases on species, ecosystems, and land use) can be used by multiple sectors. For example, a national biodiversity geo-portal can provide data to agricultural extension officers and urban planners alike. Joint indicator frameworks (tying to SDGs or NBSAP targets) are increasingly used to monitor sector contributions to biodiversity outcomes.

- **Private sector engagement:** Tools like sustainability guidelines for banks and investors increasingly help to ensure that development projects follow mainstreaming best practices. Industry associations (e.g. tourism councils, forestry federations) often develop voluntary sustainability standards in cooperation with NGOs.



Integrating biodiversity into land-use planning, agriculture, forestry, infrastructure and tourism involves a mix of conceptual mainstreaming (policy coherence and high-level mandates) and operational interfaces (laws, incentives, tools and stakeholder mechanisms). Countries deploy sector-specific measures (e.g. agri-environmental subsidies, forestry certification, eco-tourism guidelines, infrastructure EIA rules, spatial zoning) supported by coordination platforms (inter-ministerial councils, NBSAP processes) to achieve this. Although approaches vary by region, successful cases often share common elements, which are

- high-level commitment (e.g. inclusion in national strategies),
- clear institutional roles,
- participatory planning processes, and
- incentives or regulations that align sectoral activities with ecosystem health.

3.3. Remaining challenges

Despite two decades of policy commitments on the international level, progress on biodiversity mainstreaming remains slow and uneven worldwide. Global assessments (→ CBD/GBO 5, → OECD 2020, → IPBES 2019 and → IPBES 2024) show that biodiversity objectives are still rarely embedded in core economic sectors in a way that significantly alters decision-making or investment patterns. Most sectoral drivers of biodiversity loss (agriculture, forestry, fisheries, infrastructure, extractives) continue to expand, with harmful subsidies outweighing biodiversity-positive incentives.

Nevertheless, it is undeniable that mainstreaming has progressed beyond rhetoric and is now reflected in concrete policy instruments, national strategies and an expanding portfolio of practical pilot initiatives. Several countries now align NBSAPs with the KMGBF, pilots have demonstrated workable approaches for sector engagement, and promising finance instruments and information systems are beginning to emerge. These advances create a realistic pathway to scale, but progress remains partial and uneven.

Major constraints remain and are at the root of the slow or inconsistent results:

- **Political economy and harmful incentives:** Powerful sectoral interests (agriculture, energy, transport, mining) and entrenched subsidy regimes defend short-term revenues and status-quo practices. The costs of biodiversity loss are commonly externalised, reducing incentives for reform and creating strong resistance to policy change.
- **Fragmented governance and institutional weakness:** Environment authorities frequently have weaker mandates, budgets and influence compared with finance, planning or sectoral ministries. Formal coordination platforms often lack authority, resources or enforcement powers, producing siloed decision-making and limited cross-sector accountability.
- **Policy–practice gap:** National targets and strategies often remain aspirational because they are not translated into sector laws, licensing criteria,

budget lines or routine performance metrics, so stated ambitions do not alter incentives or operations on the ground.

- **Implementation disconnect between national and subnational levels:** National policies and international targets commonly fail to be operationalised at provincial and district levels due to mismatched mandates, insufficient resources, different planning cycles and uneven technical capacity, leaving subnational actors unable to implement or monitor mainstreaming measures.

- **Insufficient and poorly targeted finance:** Biodiversity-relevant finance is fragmented, under-tagged and concentrated at national levels, the pipeline of bankable, catalytic projects is limited and funding often fails to reach subnational and catalytic investments.

- **Data, indicator and capacity shortfalls:** The absence of compact, common indicator sets, weak data-sharing arrangements and constrained technical capacity, especially at subnational levels, impedes credible monitoring, adaptive management and the scaling of successful pilots.

- **Weak private-sector alignment:** Markets, procurement rules and corporate incentives remain only partially aligned with biodiversity goals. Private actors are not yet systematically integrated into mainstreaming strategies, limiting opportunities to leverage supply-chain and investment levers at scale.

- **Short-termism and limited political will:** Electoral and growth-driven agendas prioritise immediate, visible outcomes (jobs, infrastructure), while the diffuse, long-term benefits of ecosystem resilience are harder to quantify and less politically salient, reducing the appetite for transformational reforms.

Critically, biodiversity mainstreaming has too often been treated as an "add-on" through environmental units or pilot projects, rather than as a restructuring of sectoral policies, incentives, and financial flows. Experience shows that progress is possible when strong institutions, sustained financing, and clear stakeholder incentives align. Yet at the global level, entrenched economic structures, weak enforcement, and the absence of systemic reform continue to constrain transformative change and explain the overall slow pace of progress.

MAINSTREAMING HAS ADVANCED CONCEPTUALLY AND INSTITUTIONALLY, AND PROGRESS IS INCREASINGLY VISIBLE IN POLICY AND PLANNING. However, it has not yet fundamentally altered the trajectory of biodiversity loss. While the approach has gained prominence, it is often criticized for falling short of the transformative shifts needed to move beyond business as usual. Without stronger political commitment, enabling legal and policy frameworks, the reform of harmful subsidies, integration into national budgets, and genuine cross-sector accountability, biodiversity mainstreaming risks remaining an aspiration rather than a driver of real change. Yet with growing political attention, new partnerships, and an expanding evidence base, the conditions for meaningful, transformative mainstreaming are stronger than ever, offering a real opportunity to accelerate positive impact.

FROM PRACTICE TO IMPACT: INSIGHTS FROM COUNTRY EXPERIENCES

Brief case studies from Indonesia, Mexico and Thailand illustrate how biodiversity mainstreaming is put into practice through policy instruments and planning processes.

1. Indonesia

Biodiversity mainstreaming in Indonesia has moved from a conservation-only agenda to an explicit, cross-sectoral aim anchored in the new Indonesian Biodiversity Strategy and Action Plan (→ IBSAP 2025–2045) and existing biodiversity law. Progress includes stronger planning alignment, but implementation gaps, competing sectoral incentives (agribusiness, mining, infrastructure), and finance and governance constraints remain.

Regulatory and institutional basis

Indonesia is a Party to the Convention on Biological Diversity and has been updating its national targets and NBSAP to align with the Kunming-Montreal Global Biodiversity Framework. The government launched the updated Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025 – 2045 in August 2024 which explicitly frames biodiversity as cross-cutting and introduces tools (e.g. a proposed Biodiversity Management Index) for tracking progress that offer a simple score of biodiversity management performance. The legal backbone for conservation and environmental protection includes → Law No. 5/1990 (with later amendments into Law No 32/2024) on conservation of living natural resources and ecosystems and → Law No. 32/2009 on Environmental Protection and Management. These laws provide legal duties, protected area frameworks and EIA/process requirements that support mainstreaming. National initiatives such as the → One Map Policy and strengthened regional spatial planning are intended to reduce contradictory sectoral land allocation and to provide the technical basis for mainstreaming biodiversity into land-use decisions. The Ministry of Environment (KLH), Ministry of Forestry, the Ministry of Marine Affairs and Fisheries (KKP), the National Development Planning Agency (BAPPENAS), provincial and district governments, and sector ministries (Agriculture, Energy and Mineral Resources, Public Works) are the main actors for translating biodiversity policy into sector plans. Multilateral and bilateral partners such as the UN, World Bank, GEF and Germany support implementation and finance.

The achievement: A new strategic framework (IBSAP 2025 – 2045)

The launch of the IBSAP, which reframes biodiversity as a strategic development asset and sets long-term, budgeted goals with quantitative indicators, marks a major policy milestone for mainstreaming. The IBSAP's explicit alignment with the National Long-Term Development Plan (RPJPN) 2025-2045 and the National Medium-Term Development Plan (RPJMN) 2025-2029 as well as the SDGs and KMGBF have improved the narrative and planning alignment across development agendas. In addition, the IBSAP places

strong emphasis on a multi-stakeholder approach and on integrating traditional knowledge from local communities, recognizing the critical contribution of local expertise to biodiversity management.

The way ahead

The successful implementation of the IBSAP will hinge on interlinked enabling conditions: predictable and blended financing, robust monitoring and evaluation, clear tenure and spatial governance, and the systematic translation of national targets into sectoral laws, indicators and budgets.

To be effective, IBSAP commitments must be operationalized at sectoral and subnational levels, and agriculture, fisheries, energy, infrastructure, mining and finance need measurable performance indicators and regulatory adjustments, with the proposed Biodiversity Management Index explicitly linked to sectoral performance and budget cycles.

Overlapping mandates and fragmented legal frameworks require clarification, including the definition of clearer roles, coordination mechanisms and accountability to convert good policy into consistent implementation. Decentralization has improved local ownership but also complicated implementation. Equally critical is addressing harmful incentives that continue to drive land conversion (notably for palm oil, mining and infrastructure), which cannot be solved by moratoria alone but need incentive alignment and regulatory reform.

Finally, closing finance gaps will demand both scaling of existing instruments (e.g. ecosystem restoration concessions, social forestry programme) and the development of new financing structures that can attract private and public investment, including blended finance instruments, green and blue bonds, debt-for-nature swaps and other innovative mechanisms, paired with targeted capacity building for provincial and district governments and stronger private-sector engagement (→ UNEP-WCMC 2025).

KEY FACTORS AND OPPORTUNITIES TO MAKE BIODIVERSITY MAINSTREAMING A DRIVER FOR NATURE-POSITIVE DEVELOPMENT

Indonesia has the policy architecture and planning instruments needed to mainstream biodiversity. Among the decisive factors over the next 5–10 years are:

- Converting IBSAP commitments into sectoral regulations, budgets and enforcement at provincial/district level.
- Strengthening engagement with the private sector.
- Mobilizing blended public-private finance linked to measurable biodiversity outcomes.
- Strengthening spatial governance and tenure clarity so economic development does not undermine conservation gains.

GIZ support to its development partners in Indonesia related to biodiversity mainstreaming:

- **IBSAP 2025 – 2045 preparation and update.** Supporting the formulation of the new Indonesian Biodiversity Strategy and Action Plan, including the design of a monitoring mechanism to link biodiversity management efforts with national planning and budget processes.
- **National development indicators.** Introducing the Biodiversity Management Index into the Long-term National Development Plan 2025 – 2045 to institutionalize regular tracking of biodiversity performance.
- **Subnational integration.** Promoting a whole-of-government approach to biodiversity mainstreaming at provincial level through multi-stakeholder collaboration and technical support.
  - Ecoregion Biodiversity Status assessments. Preparing and updating biodiversity status reports as core reference documents for IBSAP implementation. (ongoing)
  - Provincial and district biodiversity profiles and biodiversity strategies and action plans (i.e. biodiversity master plan). Establishing current state of biodiversity and elaborating biodiversity master plans at subnational level that align with national targets, priorities and reporting requirements. (ongoing)
- **Private sector contribution.** Bringing together the private sector to better align its activities with and contribute to the IBSAP targets.

WHAT MAKES THE SUPPORT TO THE IBSAP SUCCESSFUL

Support was anchored in the Ministry of National Planning and delivered together with line ministries, UNDP (early action), BIOFIN Indonesia, Yayasan Konservasi Indonesia and Burung Indonesia, combining a whole-of-society process with a strong political entry point. Integration of the Action Plan into the National Development Plan and alignment of headline indicators with national metrics secured policy traction and accountability. Equally important was the rigorous preparatory work: a baseline and evaluation of Aichi targets, an updated biodiversity status assessment, a study on biodiversity-climate interlinkages, and a financial status review, all of which provided the technical foundation and created legitimacy and credibility.

2. Mexico

Mexico played a pioneering role in putting biodiversity mainstreaming on the global agenda by making it the theme of the High-Level Segment at CBD COP-13 (Cancún, 2016). Ahead of the COP, Mexico developed sectoral strategies for agriculture, forestry, fisheries and tourism[5] and convened a high-level ministerial meeting, bringing together not only environment ministers but also agriculture, fisheries, forestry, and tourism ministers for the first time in CBD history.

This cross-sector dialogue resulted in the adoption of the Cancún Declaration on Mainstreaming Biodiversity for Well-being and positioned mainstreaming as a political and strategic priority. This strengthened the country's international reputation and produced advanced information systems and planning instruments. However, implementation and financing gaps, competing sector incentives and complex land-tenure arrangements continue to limit delivery at scale. In particular, agricultural expansion, intensive forestry, mining, and infrastructure development often prioritize short-term economic returns over ecosystem conservation, creating trade-offs between production, resource extraction, and biodiversity conservation.

Additionally, fragmented governance and overlapping land-use rights, including *ejidos*[6] and communal lands, can complicate coordination and enforcement of biodiversity-friendly policies. Recent national commitments, such as the update of the National Biodiversity Strategy and Action Plan (→ **ENBioMex** 2016 – 2030), provide an opportunity to move from policy frameworks to measurable, sector-integrated implementation. Mexico has been awarded the 2025 Reverse the Red NBSAP Medal for excellence in the development and delivery of evidence-based NBSAPs.

Regulatory and institutional basis

Mexico has a robust regulatory framework and coordination mechanisms (inter-ministerial commissions, land-use planning, an updated NBSAP) that provide a basis for cross-sectoral work. Key public actors include the Secretariat of Environment and Natural Resources (SEMARNAT), the inter-ministerial CONABIO[7], and CONANP, responsible for managing federal protected areas. CONABIO functions as a strong science–policy interface, linking knowledge, policy and implementation across levels of government. Subnational governments and sector ministries are crucial for translating national biodiversity commitments into sector-specific, on-the-ground decisions, with focal points in each ministry responsible for integration of national targets into sector programmes. State-level strategies (ECUSBE) and state commissions (COESBIO) help translate national priorities into local action.

Mexico´s ENBioMex sets strategic axes (e.g. knowledge, sustainable use, reduction of drivers and causes of biodiversity loss, integration/governance) and actions to align national policy with global goals. The

5 With participation from SADARPA (Department of Agriculture, Ranching, Rural Development, Fisheries and Food), CONAPESCA (National Commission of Aquaculture and Fisheries), SECTUR (Secretariat of Tourism), CONAFOR (National Forestry Commission) and CONABIO (National Commission for Knowledge and Use of Biodiversity), and others.

6 Ejidos are a form of 'social property' in Mexico created under Article 27 of the Constitution, where land is owned collectively by the community but worked individually or commonly.

7 CONABIO was established in 1992, forming an inter-ministerial science-informed institution dedicated to collecting biodiversity data, advising policymakers, and supporting conservation decisions.

first version of the ENBioMex from 2016 was developed in a participatory process involving over 300 stakeholders from government, civil society and academia and is currently being revised (ENBioMex2.0).

The achievement: International reputation as a pioneer in mainstreaming and consolidated national and subnational instruments

Mexico, together with Colombia, co-leads the →"Biodiversity Mainstreaming Champions Group", a coalition of countries established to provide high-level political leadership to accelerate the integration of biodiversity across sectors and development agendas. The country has one of the most advanced biodiversity information systems and an updated ENBioMex to further position biodiversity as a development priority and expand instruments for mainstreaming. Although not yet officially published, ENBioMex aligns hundreds of actions with global targets, offering a consolidated framework for policy and planning. State strategies further translate these national priorities into local action. Within this framework, biodiversity state commissions act as institutional coordination bodies that align state governments, local communities, academia, and civil society. They strengthen governance for biodiversity mainstreaming by fostering cross-sector collaboration and supporting the effective implementation of state strategies.

The way ahead

To convert strategy into nature-positive, sector-integrated development, ENBioMex targets must be translated into sectoral laws, budgets, and measurable indicators and further aligned with the National Development Plan. Close collaboration with productive sectors is essential to reconcile biodiversity goals with powerful sector incentives driving farming, livestock, aquaculture, logging, mining, and large-scale infrastructure. Realigning these incentives through subsidy reform, ecosystem service payments, and biodiversity-friendly value chains is a priority. Deeper engagement with the private sector, communities, local landholders and Indigenous peoples is essential. Expanded monitoring, public awareness and sustained capacity building will be key to turning commitments into measurable outcomes.

KEY FACTORS AND OPPORTUNITIES TO MAKE BIODIVERSITY MAINSTREAMING AN ENGINE FOR NATURE-POSITIVE DEVELOPMENT

Mexico has the policy architecture and planning instruments needed to mainstream biodiversity. Among the decisive factors over the next 5–10 years are:

- Embed ENBioMex across the system by converting targets into sector laws, planning instruments and budgeted indicators.
- Reform harmful subsidies, expand payments for ecosystem services, and develop blended public-private instruments and environmental funds that tie finance to verifiable biodiversity outcomes.

- Strengthen land-use governance, clarify tenure, and reinforce the role of Indigenous peoples, ejidos and communal landholders and integrate spatial planning with conservation and restoration.
- Upgrade monitoring and mainstream biodiversity indicators into budget cycles, public procurement and sector performance reviews so ministries can track and be held accountable for biodiversity outcomes.

GIZ support to its development partners in Mexico related to biodiversity mainstreaming:

GIZ's biodiversity portfolio in Mexico blends national strategy support, sectoral mainstreaming, subnational planning and monitoring, private-sector engagement, and on-the-ground conservation and sustainable-use actions. Biodiversity is actively mainstreamed across projects in Mexico, notably in tourism, urban development and climate-change work (e.g. ADAPTUR, BIOCITIS). This support is structured around several pillars:

- **ENBioMex operationalization.** Helping translate ENBioMex strategic targets into concrete, budget-linked actions, capacity-building and programmatic entry points across national, state and local levels.
- **Support to sector strategies.** Facilitating sector diagnostics, multi-stakeholder workshops and technical advisory to prepare the agricultural, forestry, fisheries and tourism mainstreaming strategies.
- **Sustainable agriculture.** Providing technical advice, practical tools and facilitation to create institutional spaces for cross-sector dialogue between agriculture and environment authorities.
- **Linking biodiversity and finance.** Advancing the integration of biodiversity into financial decision-making, e.g., sustainability taxonomies, investment criteria and the evolution of public incentive systems, to mobilize finance aligned with biodiversity outcomes.
- **Nature-based solutions with the private sector.** Promoting public-private pilots and partnerships for nature-based solutions, especially in water resources management.

WHAT MAKES THE SUPPORT SUCCESSFUL

GIZ's support succeeded through a combination of institutional support, sectoral engagement and capacity development. The CIB (Centro de Integración de la Biodiversidad – Mainstreaming Biodiversity Center), housed within the Ministry of Agriculture, provides a trusted space for projects supported by GIZ, GEF, and other partners to hold meetings, training courses, and other activities. It serves as a platform for cross-sectoral dialogue, while targeted, interconnected projects in agriculture have effectively translated policy into practice. Engaging committed "champions" within government fostered open exchange on barriers and opportunities, helping advance ideas. Robust capacity-building, such as training on biodiversity

policy advice and integrating ecosystem services into development planning, equipped officials to implement new approaches. Crucially, partners learned that mainstreaming is more than good practices: it must be embedded in sectoral regulations, planning instruments, and incentives to be systemic and durable. Achieving this required the environmental ministry to evolve from a primarily regulatory body to a facilitative, advisory partner for sector ministries and other stakeholders.

3. Thailand

Biodiversity mainstreaming in Thailand has evolved from focusing on protected areas and conservation to a cross-sectoral approach anchored in the National Biodiversity Action Plan (2023–2027), the Biodiversity Long-Term Strategy (LTSc 2018-2037), and draft provisions in the Biodiversity Act. Progress includes strengthened institutional coordination, subnational planning through Provincial Climate and Biodiversity Coordination Centers (PCCBs) and Local/Provincial Biodiversity Plans (LBSAPs) and pilot initiatives such as OECMs (Other Effective Area-Based Conservation Measures) and nature-based solutions.

Remaining challenges include translating national biodiversity targets to the local level, enhancing capacities to promote collaborative actions on the ground, addressing organizational, legal, and budgetary constraints, aligning mainstreaming across sectors, creating effective incentives in tourism, agriculture, fisheries, and coastal management, and mobilizing finance while ensuring private-sector engagement and effective monitoring.

Regulatory and institutional basis

Thailand has established a comprehensive regulatory and institutional framework for biodiversity governance. The Office of Natural Resources and Environmental Policy and Planning (ONEP) leads national coordination through the National Committee on

Conservation and Sustainable Use of Biodiversity and a set of specialized subcommittees dedicated to legislation, policy integration, technical matters and negotiation and international cooperation. Implementation rests on the collaboration of key line agencies, including the Department of Marine and Coastal Resources (DMCR), the Department of National Parks, Wildlife and Plant Conservation (DNP), the Royal Forest Department (RFD), and the Department of Fisheries (DoF), alongside the Biodiversity-Based Economy Development Office (BEDO), which promotes biodiversity-related business models and community support for bioeconomy development.

At the subnational level, Provincial Environmental Offices (PEOs) oversee natural resources and environmental activities, enforce laws, monitor progress, and promote public participation for sustainable conservation and restoration. Provincial Climate and Biodiversity Coordination Centers (PCCBs), established in 2023, serve as information hubs, raise awareness, coordinate cross-sectoral activities, and support GHG and biodiversity data collection, carbon sink management, and conservation efforts. The PCCBs serve as

the main coordination bodies, ensuring that national strategies and biodiversity and climate objectives are translated into provincial planning and practice. The country's strategic and legal foundations for mainstreaming are being consolidated through the following pillars:

- The draft Biodiversity Act is under revision to address feedback from the State Council Office. Once adopted, it will provide a legal basis for conservation and sustainable use across sectors.
- The updated → National Biodiversity Action Plan (2023 – 2027) which aligns with the Kunming-Montreal Global Biodiversity Framework and includes 3 strategies and 12 national targets and focusses on measurable targets across ecosystems, species and genetic resources.
- The Biodiversity Long-Term Strategy, which is under construction and will set out a 20-year vision to integrate biodiversity and nature-positive pathways into national development pathways, supporting the implementation of the action plan.
- The → National Biodiversity Finance Plan (2023 – 2027), that aims to mobilize $200 million for conservation over the next five years.

The achievement: An aligned National Action Plan and the development of a Long-Term Strategy with a 20-year vision to integrate biodiversity and development

Thailand has aligned its National Action Plan with a 20-year Long-Term Strategy to integrate biodiversity into national development planning. Together with draft provisions in the Biodiversity Act, these instruments provide the regulatory backbone and the strategic direction for mainstreaming. At the subnational level, they are supported through LBSAPs and implemented through PEOs, which are responsible for natural resources and environmental activities, and for monitoring progress toward sustainable conservation and restoration and PCCBs. This enables coordinated action across sectors, nature-based solutions, promotion of a bioeconomy, financing, and private-sector engagement.

The way ahead

Thailand has established clear entry points for biodiversity mainstreaming, including an active NBSAP revision aligned with the KMGBF, the Biodiversity Long-Term Strategy, piloted OECMs, and the → national biodiversity data platform (TH-BIF). Institutional coordination mechanisms link the environment and planning sectors with key economic areas such as tourism and fisheries, providing a solid foundation for moving from policy to implementation.

The next step is to operationalize the NBSAP and Biodiversity LTS by embedding objectives into sectoral laws, budgets, and indicators, translating national targets into measurable metrics and budget lines. Scaling pilot initiatives like marine/coastal OECMs or mangrove safeguards can expand nature-based solutions into national instruments with replicable management models. Strengthening subnational capacities, through technical skills in PCCBs, improved province-level data, and access to financing (green bonds, PES), will be essential. Aligning incentives with biodiversity outcomes also requires private-sector engagement, voluntary instruments such as eco-tourism standards, and safeguards integrated into restoration and Nature-based Solutions (NbS) projects. Finally, monitoring and adaptive management depend on harmonizing biodiversity data and reporting systems (incl. joint indicators for biodiversity and climate). Integrating TH-BIF with KMGBF indicators and sectoral reporting allows Thailand to track progress, adjust strategies, and ensure accountability across scales.

KEY FACTORS AND OPPORTUNITIES TO MAKE BIODIVERSITY MAINSTREAMING AN ENGINE FOR NATURE-POSITIVE DEVELOPMENT

Thailand already has clear national entry points, practical pilots and formal cross-sector coordination. To convert these strengths into scaled, durable change, priorities over the next 5 – 10 years include:

- Translate strategic plans into sectoral law and budget instruments so that mainstreaming is measurable and enforceable.
- Scale OECMs and NbS by converting pilot evidence into national instruments and finance-able project pipelines.
- Mobilize blended finance and budget tagging to close local financing gaps and incentivize biodiversity-positive practices.
- Invest in subnational capacities and data systems (PCCBs, TH-BIF) to ensure vertical integration and adaptive management.

GIZ support to its development partners in Thailand related to biodiversity mainstreaming includes:

- **Providing support for aligning global biodiversity indicators with Thailand's Biodiversity Long-Term Strategy to guide the revision and operationalization of Thailand's NBSAP and Long-Term Strategy.** At the subnational level, translating and rolling out national targets into local actions and improving vertical integration while also strengthening PCCBs to enhance synergies between climate and biodiversity protection objectives.
- **In sectoral planning,** support is provided for embedding biodiversity into tourism, fisheries, agriculture, and coastal management through technical guidance, multi-stakeholder processes, and pilot initiatives such as sustainable tourism, integrated coastal management, and locally managed marine areas.
- **Strengthening data and monitoring systems,** notably enhancing the management efficiency of the Thailand Biodiversity Information Facility (TH-BIF).
- Identification of policy gaps and the overall policy landscape related to **NbS**. Capacity enhancement for policymakers to strengthen NbS implementation.
- For **OECMs and protected areas,** marine and coastal pilots inform national definitions, criteria, and management guidance toward Thailand's 30 x 30 commitments, in collaboration with DMCR and ONEP.

WHAT MAKES THE SUPPORT SUCCESSFUL

Meaningful contributions to partners in Thailand stems from combining capacity development, cross-sector collaboration, and policy integration with a strong focus on linking climate change and biodiversity. Inter-agency collaboration mechanisms and partnerships create synergies across sectors, while mainstreaming into marine, coastal, and tourism policies ensures that biodiversity and climate are not treated separately but as mutually reinforcing priorities. Pilot initiatives, such as OECM guidelines, co-developed with local stakeholders, and the promotion of citizen science for ecosystem monitoring, provide practical models of climate–biodiversity action on the ground.

ANNEX

1. Selected definitions of biodiversity mainstreaming

CBD

"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'." (→ CBD-Website)

"[Mainstreaming] means the integration of the conservation and sustainable use of biodiversity in both cross-sectoral and sectoral plans such as national development, poverty reduction, climate change adaptation/mitigation, and trade and international cooperation strategies." (→ CBD COP Decision XIII/3)

IPBES Glossary

"Mainstreaming, in the context of biodiversity, means integrating actions or policies related to biodiversity into broader development processes or policies such as those aimed at poverty reduction, or tackling climate change." (→ IPBES Glossary)

"Mainstreaming means integrating actions related to conservation of biodiversity into strategies relating to production sectors." (→ IPBES Glossary)

International Institute for Environment and Development (IIED)

"Biodiversity mainstreaming is a process of getting biodiversity concerns – potentials, needs and risks – fully reflected in development policies, plans and activities in order to achieve sustainable outcomes for both biodiversity and development. It is more than applying 'safeguards' to make sure development processes do no harm to biodiversity. It is also about recognising the potential of biodiversity to achieve desirable development outcomes." (→ IIED 2017)

Global Environment Facility (GEF)

"Mainstreaming is the process of embedding biodiversity considerations into policies, strategies and practices of key public and private actors whose actions have an impact on or depend on biodiversity, so that it is conserved and sustainably used." (→ GEF 2016)

Organisation for Economic Co-operation and Development (OECD)

"Mainstreaming biodiversity refers to integrating biodiversity and ecosystem services into development policies, plans and processes, and into sectors such as agriculture, forestry, fisheries, mining, energy, tourism and transport." (→ OECD 2019)

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