7th National Report

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## Section I Brief overview of the process of preparation of the report

### General

**Government**

Thailand

**National authorities responsible for the preparation and submission of the report**

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**Briefly describe the process followed for the preparation of the present report. Responses may include the following**

The coordination mechanism for the 7th NR is built upon the institutional framework established under the 5th NBSAP, where responsible agencies are divided into two functional groups for each target:

- **Implementation agencies**: Ministries, departments and agencies responsible for executing projects, programmes and activities that contribute to achieving each GBF target and corresponding national target in the 5th NBSAP.
- **Data focal points**: Government agencies, private sectors, education sectors, international organizations, and publics (including youth) responsible for collecting, compiling, validating and reporting indicator data for each target, serving as the primary sources of information for monitoring and reporting purposes.

This two-tier coordination approach ensures both operational implementation and systematic monitoring, with clear lines of responsibility for action and accountability for data. ONEP, as the CBD national focal point, serves as the central coordinating body, facilitating communication between implementation agencies and data focal points, and consolidating information for national reporting.

**Key steps in the preparation process include:**

**1. Desk review and compilation of existing information**

- Review of the 5th NBSAP and its supporting assessments on biodiversity state, research and knowledge, and biodiversity finance;
- Review of previous national reports, relevant sectoral strategies and plans, and available data from national statistical systems and sectoral monitoring programmes;
- Mapping of 5th NBSAP indicators against the KM-GBF headline and binary indicators, using the global metadata and guidance prepared for the 7th and 8th national reports.

**2. Technical design and inception**

- Agreement on the outline, methodology and workplan for the 7th NR, consistent with CBD guidance and national circumstances;
- Identification of responsible agencies and focal persons for each cluster of GBF goals and targets, including coordination with existing working groups under the 5th NBSAP.

**3. Stakeholder consultations through focus group workshops**

- A series of three focus group workshops were organized between October and November 2025 with relevant ministries, departments, agencies and institutions. Each focus group covered a cluster of GBF targets and associated indicators (e.g. sustainable agriculture and forests, fisheries, pollution, and sustainable use), using the CBD online indicator metadata and national datasets as the main reference.
- During these workshops, participants jointly provided and reviewed the availability and quality of data for headline and binary indicators, discussed whether national circumstances allow direct use of global indicators, and identified where national proxy indicators from the 5th NBSAP or other national frameworks would be more appropriate.
- The focus groups also served as a platform to validate preliminary assessments of national implementation progress towards the 23 GBF targets, identify information gaps and capacity needs, and collect concrete examples of good practices and challenges for inclusion in the report.

**4. Synthesis, internal review and validation**

- Following the focus group consultations, the national technical team synthesized inputs, cross-checked them against existing statistics and NBSAP indicators, and drafted the narrative sections and indicator tables.
- A process of internal review was undertaken with relevant agencies and experts in order to verify data and interpretations, ensure consistency with national policies, and refine key messages and priorities.

**5. Review and endorsement by national governance bodies**

- The draft 7th NR was presented to the Project Steering Committee for technical review and guidance.
- The report was subsequently submitted to the **National Committee on Conservation and Utilization of Biodiversity** and **Subcommittee on Biodiversity Negotiation and International Cooperation** for consideration and formal endorsement before submission to the CBD Secretariat.

**Key challenges encountered during the data collection and monitoring**

The preparation of the 7th NR has revealed several challenges that need to be addressed to strengthen Thailand's biodiversity monitoring and reporting systems:

- The preparation of the 7th NR has revealed several challenges that need to be addressed to strengthen Biodiversity data exist at multiple scales (national, provincial, protected area, ecosystem) with varying completeness and temporal coverage
- Integration of diverse datasets into coherent national indicators requires standardized formats and quality assurance protocols
- Different monitoring methodologies across agencies complicate trend analysis and cross-temporal comparisons
- Some national indicators reflect Thailand's specific context and priorities but do not align directly with global GBF indicators
- Use of national proxy indicators, while locally appropriate, requires clear documentation of methodology and relationship to global standards
- Balancing national relevance with international comparability remains an ongoing consideration in indicator selection
- Coordination across multiple data custodians requires sustained inter-agency mechanisms
- Resource constraints affect the frequency and comprehensiveness of data collection for some indicators

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## Section II Status of the revised or updated national biodiversity strategy and action plan in alignment with the Kunming-Montreal Global Biodiversity Framework

**Has your country revised or updated its national biodiversity strategy and action plan in alignment with the Framework?**

Yes

**Did your country involve and engage stakeholders in revising or updating its national biodiversity strategy and action plan?**

Yes EN

**Stakeholders**

Local and/or subnational government

Private sector

Women

Indigenous peoples and local communities (IPLC)

Youth

**Has your country's revised or updated national biodiversity strategy and action plan been adopted as a policy or a legal instrument, and/or integrated into other strategies?**

Yes

**Please indicate how your country's revised or updated national biodiversity strategy and action plan has been adopted**

Adopted by the Council of Ministers, the Office of the President or of the Prime Minister, or an equivalent body

**Briefly describe the national biodiversity monitoring system and how it tracks progress in the implementation of the national biodiversity strategy and action plan.**

Monitoring of the 5th NBSAP implementation is carried out through a national biodiversity monitoring system with two complementary components: tracking NBSAP actions and national targets, and collecting data from responsible agencies for KM-GBF reporting. Together, these components combine existing sectoral monitoring programmes with a dedicated framework for tracking progress towards the twelve national biodiversity targets. The monitoring system is designed to:

1. Track implementation of NBSAP actions and national targets, including the results of key measures and programmes;
2. Collect the data needed to report on KM-GBF headline and binary indicators, as well as national indicators; and

The institutional architecture of the monitoring system is as follows:
**1. Track implementation of NBSAP actions and national targets, including the results of key measures and programmes;**

- **Office of National Environmental and Policy Planning (ONEP)**, as the national focal point for the CBD and lead agency for the NBSAP, coordinates the overall monitoring process, consolidates data and prepares national progress assessments and reports, including the Seventh National Report.
- Line ministries and specialised agencies act as **thematic data providers**, responsible for collecting, managing and reporting data within their mandates – for example:
  - Department of National Parks, Wildlife and Plant Conservation (DNP), Royal Forest Department (RFD) and Department of Marine and Coastal Resources (DMCR) for forest, wildlife, protected areas, coastal and marine ecosystems;
  - Department of Fisheries (DOF), Department of Livestock Development and agricultural agencies for wild species use, fisheries and agro-biodiversity;
  - Pollution Control Department (PCD), water and environment agencies for pollution, water quality and waste;
  - Economic, planning and finance agencies for biodiversity-related expenditures, incentives and finance; and
  - Academic and research institutions for species, ecosystems and genetic resources.

The 5th NBSAP includes a structured indicator framework in which each of the twelve national targets is associated with one or more national indicators. These indicators are mapped to KM-GBF headline indicators and SDG indicators, ensuring coherence between national and global monitoring. The Action Plan specifies the main data sources, responsible agencies, and timeframes for each indicator.

To operationalize this framework, the Action Plan foresees the development of a comprehensive national biodiversity monitoring and evaluation system, including:

- **A coordinated process for regular data submission** from line agencies to ONEP, establishing clear protocols and timelines for data reporting;
- **A digital biodiversity information system/platform** which will integrate key datasets including species inventories, ecosystem assessments, protected and conserved areas, invasive alien species (IAS), pollution levels, ecosystem services, access and benefit-sharing (ABS), and biodiversity finance, making them accessible for policy development, planning, and reporting purposes;
- **Periodic progress reviews**, including internal technical reviews, inter-agency coordination meetings, and formal progress reports to national biodiversity committees and the Cabinet; and
- **Mechanisms for feedback and adaptive management**, where monitoring results inform revisions of policies, plans, and implementation modalities to ensure responsive and evidence-based decision-making.

To support systematic monitoring and reporting, ONEP is developing a digital platform that serves two main functions:

**1.1 Data Collection System**

ONEP has established user accounts for all agencies designated in the 5th NBSAP to report their progress and biodiversity-related projects through the online platform. The system enables responsible agencies to:

- Submit implementation progress reports for their assigned targets
- Report on biodiversity projects and activities undertaken
- Input indicator data according to agreed monitoring frameworks
- Track budget allocation and expenditure related to biodiversity actions

All data submissions are conducted through the online platform, ensuring standardized data collection across agencies and reducing reliance on manual reporting processes.

**1.2 Data Visualization System (Dashboard)**

Submitted data are automatically processed and presented through interactive dashboards that provide:

- Real-time visualization of progress toward national targets and GBF goals
- Integration of indicator data with project implementation information
- Trend analysis and performance tracking across multiple strategic frameworks
- Customizable views for different user groups, from practitioners to executive decision-makers

The platform builds upon ONEP's existing database infrastructure while incorporating enhanced features for data validation, inter-agency coordination, and evidence-based decision-making. It serves as the national repository for tracking Thailand's progress against the 5th NBSAP, supporting both mid-term reviews and preparation of national reports to the CBD.

**2. Collect the data needed to report on KM-GBF headline and binary indicators, as well as national indicators;**

For the preparation of the 7th National Report, this monitoring framework was complemented by a series of **focus group workshops** held between October and November 2025, which brought together the relevant agencies and institutions responsible for each cluster of KM-GBF targets and existing digital platform. These workshops served to:

- Verify the mapping between national indicators and KM-GBF headline and binary indicators;
- Assess data availability, quality and readiness for each indicator;
- Identify **proxy national indicators** where global headline indicators cannot yet be fully populated from national datasets; and
- Jointly review preliminary assessments of progress towards national and global targets, including qualitative information and success stories.

The national biodiversity monitoring system is still evolving. While the data collection component of the digital platform is operational and was used to gather information for this report, the data processing and visualization system is currently under development, with completion planned for 2026. The upgraded system, featuring advanced dashboard capabilities and automated analytical tools, will be fully operational in time to support the preparation of Thailand's 8th National Report. the 5th NBSAP and for fulfilling Thailand's reporting obligations under the KM-GBF. EN

Section III Please use the following template to report on progress in the implementation of your country's national targets and revised or updated national biodiversity strategy and action plan in alignment with the Framework. In cases where no national target is linked with one or more related global targets, it is suggested that countries report directly on progress contributing to the global targets.

Expand Channels and Funding Support from Various Sectors, as well as Promote Financial Mechanisms, Economic Instruments, and Incentive Measures to Support Biodiversity Conservation and Sustainable Use (NBT 9) **(National)**

**Briefly describe the main actions taken to implement the target**

Thailand has initiated foundational actions to address harmful subsidies, develop positive incentives, and mobilize biodiversity finance:

- **Harmful Subsidy Assessment:** Conducted a comprehensive study through UNDP BIOFIN in collaboration with Prince of Songkla University (published July 2024), identifying approximately 6.28 billion USD (224,000 million baht) in harmful subsidies, during fiscal years 2021-2023. Major categories include rigid infrastructure projects affecting river and coastal ecosystems (sea walls, jetties, groins disrupting natural processes) and projects nominally for irrigation or tourism that cause ecological damage.
- **Positive Incentive Implementation:** Established tax exemption for land characterized as mangrove forest under Ministerial Regulation B.E. 2562 (2019), as amended B.E. 2568 (2025), administered by the Department of Marine and Coastal Resources.
- **Biodiversity Finance Plan Implementation:** The Thailand Biodiversity Finance Plan (2023-2027), developed through UNDP BIOFIN, provides a strategic framework for mobilizing resources from multiple sources and aligning financial flows with biodiversity goals.
- **Policy Framework Development:** Integrated subsidy reform strategies and resource mobilization mechanisms into the 5th National Biodiversity Strategy and Action Plan (NBSAP).
- **Domestic Public Finance Mobilization:** Thailand has established mechanisms to allocate and track domestic government expenditures for biodiversity conservation and sustainable use through the government budget system, monitored by BIOFIN and reported through the electronic Monitoring and Evaluation of Natural Resources and Environmental Strategies (eMENSCR) system.
- **International Finance Reception:** Thailand receives international public funding through official development assistance (ODA) for biodiversity conservation and ecosystem management, tracked through OECD data systems.
- **Private Sector Engagement Framework:** ONEP administers surveys to private sector companies and NGOs on biodiversity-related activities aligned with Thailand's NBSAP. Initial frameworks for voluntary disclosure of private biodiversity expenditures have been established.
- **Financial Tracking Systems Development:** Thailand is developing comprehensive tracking mechanisms for biodiversity finance across public and private sources, and comprehensive subsidy inventories with biodiversity impact assessment systems across government sectors, building on BIOFIN methodologies.

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**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

**Harmful Subsidy Reform**

Thailand has established a baseline understanding of harmful subsidies through the BIOFIN study, which identified 6.28 billion USD in harmful subsidies during fiscal years 2021-2023. However, comprehensive reform remains at early stages. Ongoing monitoring of government harmful subsidies have been conducted, while sector-disaggregated databases have not been established and no concrete reduction actions have been implemented.

**Positive Incentives**

One biodiversity-relevant tax incentive has been implemented—the mangrove forest land tax exemption—which reduces property tax burden for landowners maintaining mangrove ecosystems. While this demonstrates fiscal policy application for conservation, the scale remains limited compared to identified harmful subsidies, and systematic expansion across other ecosystems and sectors has not occurred.

**Overall Resource Mobilization**

Current tracked biodiversity finance remains far below levels needed to achieve national biodiversity targets, indicating significant gaps in resource mobilization. Systematic mechanisms to scale up finance from all sources have not been fully implemented.

- **Domestic Public Funding:** Thailand has begun systematic tracking of government expenditures for biodiversity through BIOFIN methodologies and the eMENSCR system. Recent tracked expenditures range from 143-280 million USD annually (FY 2022-2024), though these figures may not capture all biodiversity-relevant spending across all agencies and programs. Variations reflect both actual budget allocations and evolving tracking methodologies.
- **International Public Funding:** OECD data shows highly variable funding levels during 2015-2022, with significant fluctuations: USD 2.85982 million (2015), increasing to USD 25.27418 million (2017), declining during USD 2.92033 million - 6.50848 million (2018-2021), and increasing to USD 20.56771 million (2022)
- **Private Funding:** Thailand lacks comprehensive tracking of private sector biodiversity funding. A preliminary BIOFIN survey (2020-2022 showed approximately 3.56 million USD total over three years. This does not reflect total private sector contributions, and comprehensive tracking systems with mandatory reporting mechanisms have not been established.

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**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

**Key challenges in achieving the Target include:**

- **Political and institutional barriers:** Reducing harmful subsidies faces political economy challenges as these subsidies benefit powerful economic sectors and are embedded in development policies and budgets. Institutional inertia and vested interests create resistance despite evidence of environmental harm.
- **Complexity of subsidy and financial assessment:** Identifying "harmful" subsidies requires sophisticated analysis of direct and indirect impacts across ecosystems. Many subsidies have mixed effects or create trade-offs between policy objectives, complicating reform decisions. Comprehensive tracking of biodiversity expenditures across all government agencies, programs and budget lines has not been established.
- **Limited positive incentives and innovative financing:** Current positive incentives (e.g., mangrove tax exemptions) are limited in number and scale compared to harmful subsidies. Beyond traditional budget allocations and ODA, Thailand has not systematically developed innovative financing instruments such as biodiversity bonds, debt-for-nature swaps, payments for ecosystem services at scale, or blended finance mechanisms.
- **Insufficient overall resource levels and private sector engagement:** Current tracked biodiversity finance (domestic public funding of 143-280 million USD annually, limited private contributions) remains far below levels needed to implement the 5th NBSAP and achieve national biodiversity targets. Thailand lacks mandatory mechanisms for private sector biodiversity finance disclosure. Preliminary survey data (3.56 million USD from small sample, 2020-2022) demonstrates minimal private sector contribution, and systematic frameworks to mobilize and track private finance are underdeveloped.
- **Lack of concrete reform strategy:** Thailand lacks a concrete, time-bound action plan with specific targets, mechanisms and stakeholder engagement strategies for systematic subsidy reform and biodiversity finance mobilization.

**To address these challenges and strengthen implementation, Thailand will focus on:**

- **Develop and implement phased reform roadmap:** Create a concrete, time-bound action plan with specific reduction targets for priority sectors (infrastructure, coastal development, agriculture, fisheries), including milestones, responsible agencies and timelines. Pilot reform in sectors with clearly identified harmful subsidies to demonstrate feasibility.
- **Establish comprehensive monitoring and tracking systems:** Develop systematic subsidy inventories across all sectors with standardized biodiversity impact assessment methodologies. Establish biodiversity finance tracking to monitor expenditures across all government agencies, private sector (mandatory reporting for large companies), NGOs and international sources. Implement annual monitoring and reporting to track progress.
- **Scale up positive incentives and innovative financing strategically:** Expand and diversify positive incentives across ecosystems and conservation priorities, including payments for ecosystem services, tax incentives, sustainable practice subsidies and green financing mechanisms. Establish and scale up biodiversity bonds, conservation trust funds, debt-for-nature mechanisms and blended finance instruments.
- **Mobilize and engage private sector finance:** Develop mandatory biodiversity finance disclosure requirements for large companies and financial institutions. Create incentive mechanisms (tax benefits, green financing, ESG standards) to encourage private biodiversity investments. Expand partnerships with private sector for conservation financing.
- **Improve strategic allocation:** Develop prioritization frameworks to ensure financial resources target highest-priority conservation areas, threatened ecosystems and NBSAP implementation gaps. Implement monitoring and evaluation systems to track effectiveness of expenditures.
- **Strengthen coordination and stakeholder engagement:** Build technical capacity across agencies and establish inter-ministerial coordination mechanisms. Develop consultation processes with affected sectors and communities to design just transition strategies and build support for reform.

**Integrate reform into fiscal policy and enhance international finance access:** Work with Ministry of Finance and Budget Bureau to incorporate biodiversity impact assessments into budget planning and medium-term fiscal frameworks. Strengthen capacity to develop and submit proposals to international biodiversity finance mechanisms (GEF, GCF, bilateral donors). Establish dedicated units to coordinate international finance mobilization. Build on BIOFIN collaboration to access technical expertise and comparative experiences from other countries.

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**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

Implementation examples related to this target are not reported in the current national report. At this stage, practical implementation examples at the project or local level will be consolidated and reported in subsequent reporting cycles, once systematic data collection and evaluation mechanisms are fully in place.

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**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

Implementation of the Target directly contributes to multiple Sustainable Development Goals:

- **SDG 12 (Responsible Consumption and Production):** Reforming harmful subsidies and scaling up positive incentives supports SDG 12.c on rationalizing inefficient fossil fuel subsidies that encourage wasteful consumption by removing market distortions, and more broadly on restructuring government incentives to support sustainable production and consumption patterns. Private sector biodiversity finance and engagement supports SDG 12.6 on encouraging companies to adopt sustainable practices and integrate sustainability information into their reporting cycles.
- **SDG 13 (Climate Action):** Reforming subsidies away from rigid infrastructure toward nature-based solutions and maintaining natural ecosystems (mangroves, forests) supports SDG 13.2 on integrating climate change measures into policies and planning, as these ecosystems provide climate mitigation and adaptation benefits. Biodiversity finance mobilization complements climate finance through forest conservation, ecosystem restoration and nature-based solutions, supporting SDG 13.a on mobilizing climate finance commitments.
- **SDG 14 (Life Below Water):** Reducing subsidies for harmful coastal infrastructure (sea walls, jetties, groins) and rigid structures impacting marine ecosystems supports SDG 14.2 on sustainably managing and protecting marine and coastal ecosystems, and SDG 14.6 on prohibiting certain forms of fisheries subsidies that contribute to overcapacity and overfishing. Biodiversity finance mobilization supports SDG 14.a on increasing scientific knowledge, research capacity and transfer of marine technology to improve ocean health and enhance biodiversity contributions to developing countries.
- **SDG 15 (Life on Land):** Positive incentives such as tax exemptions for mangrove forest land support SDG 15.1 on conservation and restoration of terrestrial and inland freshwater ecosystems, and SDG 15.b on mobilizing resources for sustainable forest management. Reducing harmful subsidies for infrastructure projects impacting river ecosystems supports SDG 15.9 on integrating ecosystem and biodiversity values into planning and development processes. Mobilizing financial resources for biodiversity directly supports SDG 15.a on mobilizing and significantly increasing financial resources from all sources to conserve and sustainably use biodiversity and ecosystems.
- **SDG 17 (Partnerships for the Goals):** Resource mobilization from international and domestic sources, including private sector engagement, exemplifies SDG 17.3 on mobilizing additional financial resources from multiple sources, SDG 17.16 on multi-stakeholder partnerships, and SDG 17.17 on encouraging effective partnerships.
- **SDG 8 (Decent Work and Economic Growth):** Subsidy reform supports SDG 8.4 on improving resource efficiency in consumption and production and decoupling economic growth from environmental degradation, ensuring that government incentives promote genuinely sustainable economic development.

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## Indicator Data

D.1 International public funding, including official development assistance for conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.1

**Source of Data**

Use the available data (pre-populated data)

**Data**

Download

| Has disaggregation | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|
| Yes | Recipient | 2015 | USD (millions) | 2.85982 | |
| Yes | Recipient | 2016 | USD (millions) | 5.20859 | |
| Yes | Recipient | 2017 | USD (millions) | 25.27418 | |
| Yes | Recipient | 2018 | USD (millions) | 2.92033 | |
| Yes | Recipient | 2019 | USD (millions) | 5.94758 | |
| Yes | Recipient | 2020 | USD (millions) | 5.62016 | |
| Yes | Recipient | 2021 | USD (millions) | 6.50848 | |
| Yes | Recipient | 2022 | USD (millions) | 20.56771 | |

**Global source of data**

OECD Data Explorer

**Indicator providers**

OECD

**Description**

**This data was prepopulated from Target Tracker.**

This indicator measures international public finance provided to developing countries for the conservation and sustainable use of biodiversity and ecosystems. This includes official development assistance (ODA),other official flows (OOF) and private sector instruments (PSI) from the DAC Creditor Reporting System (CRS) from bilateral DAC donors, non-DAC donors, as well as contributions from multilateral institutions, and complemented with flows reported under the Total Official Support for Sustainable Development (TOSSD) framework.

The data displayed here is the annual official development assistance for biodiversity provided by OECD Development Assistance Committee (DAC) donors, through the Creditor Reporting System (CRS). Total ODA transferred for use in biodiversity and conservation efforts are displayed by recipient and by donor in constant US dollars.

D.2 Domestic public funding on conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | - | - | 2022 | USD (million) | 143.33 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2023 | USD (million) | 280.31 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2024 | USD (million) | 185.39 | Agencies: eMENSCR, BIOFIN |

**Comments**

Source: Biodiversity-Related Expenditures from the Government, BIOFIN (2024)

Exchange Rates: FY 2022: 34.16 THB/USD, FY 2023: 34.16 THB/USD, FY 2024 (approved projects only): 34.16 THB/USD

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D.3 Private funding (domestic and international) on conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.3

**Source of Data**

No data available

**Please describe the situation**

| | |
|---|---|
| Thailand does not currently have comprehensive data on private sector (domestic and international) funding for biodiversity conservation and sustainable use, but the country has begun integrating private sector participation in biodiversity conservation through: • NBSAP Implementation Reporting: Private sector companies and NGOs are encouraged to report biodiversity-related activities aligned with Thailand's 4th National Biodiversity Strategy and Action Plan • ONEP Survey Initiative: Office of Natural Resources and Environmental Policy and Planning (ONEP) administers surveys to private sector and NGOs on NBSAP implementation activities • Voluntary Disclosure: Initial framework for companies to self-report biodiversity expenditures and activities Presently, Thailand conducted a preliminary survey showing limited examples (~3.56 million USD from small sample, 2020-2022) but lacks comprehensive tracking system. | EN |

18.1 Positive incentives in place to promote biodiversity conservation and sustainable use Headline GBF-INDICATOR-18.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Biodiversity-relevant Environmentally Beneficial Subsidies** | Tax exemption for Land Characterized as Mangrove Forest | 2025 | Number active | 1 | Agencies: MoF, DMCR |

**Comments**

| | |
|---|---|
| Remark**:** Number of Biodiversity-relevant Environmentally Beneficial Subsidies implemented or amended during 2020-2025, not included in OECD database defined in GBF indicator metadata<br><br>Source: Ministerial Regulation Prescribing Property Exempted from the Collection of Land and Building Tax No.4 B.E. 2567 (2024), Ministry of Finance.<br><br>Notification of the Department of Marine and Coastal Resources on the Determination of Criteria, Procedures, and Conditions for Land Characterized as Mangrove Forest pursuant to Clause 13(b) of the Ministerial Regulation Prescribing Property Exempted from the Collection of Land and Building Tax B.E. 2562 (2019) as Amended B.E. 2568 (2025) | EN |

18.2 Value of subsidies and other incentives harmful to biodiversity Headline GBF-INDICATOR-18.2

**Source of Data**

No data available

**Please describe the situation**

| | |
|---|---|
| Thailand has conducted a comprehensive study on harmful subsidies through the UNDP Biodiversity Finance Initiative (BIOFIN) in collaboration with Prince of Songkla University. The study, published in July 2024, identified approximately 6.28 billion USD (approximately 224,000 million baht) in harmful subsidies allocated in fiscal years 2021-2023. Key Findings: The BIOFIN study found that these harmful subsidies were primarily allocated to: • Rigid infrastructure projects negatively impacting river and coastal ecosystems • Coastal protection structures (sea walls, jetties, groins) that disrupted natural processes • Projects justified for agricultural irrigation or local tourism promotion but causing ecological harm Limitation: While a baseline assessment of harmful subsidies has been conducted for fiscal years 2021-2023, work to establish comprehensive subsidy inventories with biodiversity impact assessments across all sectors and detailed databases disaggregated by sector and program has not yet been initiated. | EN |

Promote Sustainable Practices in Production and Service Sectors, Including Agriculture, Aquaculture, Fisheries, Livestock, Forestry, and Tourism (NBT 6) **(National)**

**Briefly describe the main actions taken to implement the target**

Thailand has implemented comprehensive actions to ensure sustainable, safe, and legal use, harvesting, and trade of wild species, while promoting sustainable management across agriculture, aquaculture, fisheries, and forestry sectors:

**Legal and Regulatory Frameworks:**

- **Wildlife Conservation and Protection Act, B.E. 2562 (2019):** Regulates trade in protected and conserved wild animals (terrestrial, freshwater, and certain marine species including sea turtles and dolphins), with specific import/export controls (Sections 26-34).
- **Royal Ordinance on Fisheries, B.E. 2558 (2015) and amendments (2017):** Regulates trade in marine aquatic animals and establishes comprehensive fisheries management measures.
- **Plant Quarantine Act, B.E. 2507 (1964):** Controls import and export of plants to prevent introduction of pests and diseases.
- **Plants Act, B.E. 2518 (1975):** Regulates production, trade, and quality of seeds and plant varieties.
- **Forests Act, B.E. 2484 (1941):** Regulates transfer of wood and forest products.
- **Customs Act, B.E. 2560 (2017):** Regulates import and export of plants and animals.
- **CITES Implementation:** Thailand has been a CITES party since 1983, implementing comprehensive controls on international trade in endangered species through multiple designated Management Authorities:
  - Department of National Parks, Wildlife and Plant Conservation (DNP) – International Convention Management Division (ICMD): Primary CITES Management Authority for terrestrial wildlife and wild plant species
  - Department of Fisheries (DOF): Management Authority for aquatic and marine species, issuing permits for CITES-listed fish, marine mammals, sea turtles, and other aquatic organisms
  - Department of Agriculture (DOA): Management Authority for cultivated plant species and agricultural products, managing permits for orchids and other commercially cultivated CITES-listed plants

**Fisheries Reforms and Sustainable Management:**

- **IUU Fishing Combat Measures (following EU yellow card, April 2015):** Comprehensive monitoring, control, and surveillance systems including Vessel Monitoring System (VMS) and Fisheries Management Center (FMC), 22 Port In-Port Out (PIPO) control centers for vessel entry-exit inspection, Command Center for Combating IUU Fishing for enforcement coordination, seafood traceability systems from catch to market, and mandatory licensing and registration for all fishing vessels.
- **Sustainable Fisheries Management Framework:** First National Fisheries Management Plan, National and Provincial Fisheries Committees for participatory governance, science-based conservation measures including closed seasons and areas in key fishing grounds, gear restrictions and fishing quotas based on stock assessments, stock assessment programs for key fisheries resources, and continuous monitoring of Maximum Sustainable Yield (MSY) for major fish groups and marine species in Gulf of Thailand and Andaman Sea.
- **Community-Based Fisheries Management:** Support for coastal and community-based approaches that empower local fishing communities to manage nearshore resources, participate in decision-making processes, and reduce pressure on marine and freshwater biodiversity through locally adapted management practices.

**Sustainable Agriculture:**

Programs promoting Good Agricultural Practices (GAP), organic agriculture, reduced pesticide use, soil and water conservation, and agroforestry. Initiatives support traditional and local crop varieties, agro-biodiversity, and diversified farming systems to reduce pressure on natural ecosystems and improve resilience. The Department of Agriculture maintains certification databases for GAP certified crop cultivation areas and organic agriculture certified areas, though comprehensive national data following GBF methodology are still under development.

**Sustainable Aquaculture:**

The Department of Fisheries maintains Good Aquaculture Practices (GAP) certification programs promoting sustainable practices that reduce environmental impacts and maintain water quality, though comprehensive national data are still being compiled.

**Sustainable Forest Management and Community Forestry:**

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Forestry policies emphasize sustainable forest management, restoration, and community participation. Community forests under the Community Forest Act B.E. 2562 (2019) combine local livelihoods with conservation objectives. Forest certification and sustainable management guidelines are being applied in selected forest areas and plantation systems.

**Sustainable Tourism:**

Tourism strategies and operators have adopted sustainable tourism and eco-tourism practices, particularly in protected areas, coastal zones, and rural landscapes, including carrying-capacity considerations, environmental codes of conduct, waste management, and local community involvement.

**Sector-Specific Monitoring Systems:**

Development of monitoring and assessment systems to track sustainable practice adoption across sectors.

**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

Thailand has made progress in establishing legal frameworks and implementing sustainable management practices for wild species, though the pace remains insufficient to fully achieve the target by 2030.

**Main outcomes include:**

**Comprehensive legal frameworks in place:** Thailand has established legal instruments and policy frameworks to regulate trade in wild species across all categories:

- Terrestrial species: Wildlife Conservation and Protection Act, B.E. 2562 (2019); Plant Quarantine Act, B.E. 2507 (1964); Plant Varieties Protection Act, B.E. 2542 (1999)
- Freshwater species: Wildlife Conservation and Protection Act cover species including Siamese crocodile, turtles and Mekong giant catfish
- Marine species: Wildlife Conservation and Protection Act cover sea turtles and dolphins; Royal Ordinance on Fisheries, B.E. 2558 (2015) regulates marine aquatic animal trade
- International trade: CITES party since 1983 with designated Management Authority (ICMD/DNP, DOF, DOA)

**Fisheries management showing mixed results:** Thailand monitors fish stocks within biologically sustainable levels through Maximum Sustainable Yield (MSY) assessments, revealing declining trends in some stocks:

*Gulf of Thailand (2020-2023):*

- Demersal fish MSY: declining from 200,092 tons (2020) to 190,847 tons (2023)
- Pelagic fish MSY: relatively stable at 247,000-250,000 tons
- Benthic animals MSY: declining from 775,548 tons (2020) to 754,615 tons (2023)

*Andaman Sea (2020-2023):*

- Demersal fish MSY: relatively stable at 30,000-32,000 tons
- Pelagic fish MSY: variable, ranging from 117,514 tons (2020) to 188,042 tons (2022), then 125,287 tons (2023)
- Benthic animals MSY: relatively stable at 221,000-233,000 tons

While monitoring systems are in place, declining trends indicate management measures need strengthening.

**Reforms to combat IUU fishing:**

- Licensing and vessel monitoring systems implemented
- Closed seasons and areas established in key fishing grounds
- Gear restrictions and stock assessment programs operational
- Support provided for coastal and community-based fisheries management

**Integration of sustainability standards:** Sustainability elements have been integrated into Good Agricultural Practices (GAP) for crops, fisheries certification schemes, forest and timber legality standards and some tourism certification systems. However, explicit biodiversity criteria and monitoring remain limited.

**Sustainable Forest Management progress:**

*Positive indicators:*

- Forest area under independently verified certification: increased from 88.67 thousand hectares (2020) to 173.92 thousand hectares (2024) – a 96.2% increase demonstrating growing adoption of sustainable management standards
- Above-ground biomass: slight increase from 181.18 tons/hectare (2020) to 182.19 tons/hectare (2025), indicating maintained or improved forest quality
- Protected forest coverage: stable at 41.28% of forest area (2020-2025)

*Critical concern:* Annual Forest area change rate shifted from a net gain of +0.28% (2015-2020) to a net loss of -0.69% (2020-2025), indicating a transition from forest expansion to accelerating deforestation. This shift demonstrates that despite certification expansion and biomass improvements in managed forests, overall forest extent is declining. Ongoing forest conversion exceeds both conservation efforts in protected areas and restoration programs, fundamentally undermining sustainable forest management objectives.

EN

**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

**Key challenges in achieving the Target include:**

- **Partial integration of biodiversity into sectoral standards:** Sectoral policies reference "sustainability" but lack explicit biodiversity metrics (habitat retention, species protection, bycatch reduction) and systematic monitoring across wild species use and trade sectors.
- **Stock decline despite management efforts:** MSY data show declines in key Gulf of Thailand stocks (demersal fish -5%, benthic animals -3% from 2020-2023), indicating current management measures are insufficient to halt overfishing.
- **Economic pressures favoring unsustainable practices:** Producers, fishers, tourism operators and other businesses operate under short-term economic pressures, limited access to finance and markets, and incentive structures including some subsidies that do not adequately reward biodiversity-friendly practices. Markets often fail to differentiate between legal/sustainable and illegal/unsustainable products, limiting adoption of certified practices.
- **Limited sector-wide data on sustainable practice adoption:** While certification programs exist for GAP agriculture, organic farming, GAP aquaculture, forest certification and tourism standards, comprehensive data on the proportion of total production under certified or verified sustainable systems are fragmented or unavailable, preventing systematic assessment of overall sector transformation progress.
- **Data methodology misalignment with international standards:** Thailand's national certification schemes align with sustainable principles but do not fully correspond to GBF/FAO specific frameworks (SDG Indicator 2.4.1), preventing international comparability and requiring development of new data collection systems rather than simply aggregating existing certification data.

**To address these challenges and strengthen implementation, Thailand will focus on:**

- **Developing harmonized data collection systems:** Develop comprehensive data collection systems meeting GBF/SDG indicator methodologies for proportion of agricultural area under productive and sustainable agriculture, aquaculture area under sustainable management, fish catch from well-managed stocks, and tourism operations meeting sustainability standards. Harmonize existing national certification data with international frameworks and establish sector-specific tracking systems, linking sustainable practice adoption to biodiversity outcomes.
- **Improving measurement and reporting of sustainable practices:** Develop sector-specific systems tracking extent of sustainable practices and link these datasets to measurable biodiversity outcomes (species populations, habitat condition, pollution levels) to demonstrate that certified sustainable practices genuinely benefit biodiversity.
- **Addressing forest loss while expanding sustainable management:** Scale up forest protection to reverse net forest loss trend through integrated landscape management, strengthened enforcement against illegal logging and encroachment, alternative livelihoods reducing forest conversion pressure, and spatial planning preventing agricultural expansion into forests.

**Aligning incentives and support with sustainable practices:** Adjust agricultural, fisheries, forest and tourism support programs to favor biodiversity-friendly practices through green financing, premium payments for certification, eco-labeling with market access advantages, fiscal incentives for certified sustainable practices, and public procurement prioritizing sustainable products and services.

EN

**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

Implementation examples related to this target are not reported in the current national report. At this stage, practical implementation examples at the project or local level will be consolidated and reported in subsequent reporting cycles, once systematic data collection and evaluation mechanisms are fully in place. EN

**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

Implementation of this Target contributes to several Sustainable Development Goals (SDGs) and international commitments: EN

**Sustainable Development Goals**

- **SDG 2 (Zero Hunger)**, particularly Target 2.4 (sustainable food production systems), by promoting sustainable agricultural systems through GAP and organic certification programs that maintain productivity, resilience, and nutritional diversity.
- **SDG 8 (Decent Work and Economic Growth)**, particularly Target 8.4 (resource efficiency in consumption and production), by fostering green and blue economic opportunities based on sustainable production.
- **SDG 12 (Responsible Consumption and Production)**, especially Target 12.2 (sustainable management of natural resources), by encouraging sustainable production systems and consumption patterns in agriculture, fisheries, forestry and tourism through certification schemes and sectoral standards.
- **SDG 14 (Life Below Water)**, particularly Target 14.4 (sustainable fisheries) and 14.7 (economic benefits from sustainable use of marine resources), through improved fisheries management, stock assessment programs, sustainable aquaculture and community-based management.
- **SDG 15 (Life on Land)**, particularly Target 15.2 (sustainable forest management, halt deforestation and degradation, and increase afforestation/reforestation), through sustainable forest management certification expansion, reduced habitat conversion and promotion of biodiversity-friendly practices in terrestrial production landscapes; and Target 15.7 (end poaching and trafficking of protected species) and 15.c (combat poaching and trafficking) through CITES implementation and efforts to combat illegal wildlife trade.

**International Commitments**

- **CITES (Convention on International Trade in Endangered Species)** by designating the Management Authority and establishing legal frameworks to combat illegal wildlife trade.
- **FAO Code of Conduct for Responsible Fisheries**, though full implementation requires continued strengthening.

**Various regional frameworks**, including ASEAN cooperation on sustainable fisheries, forestry and wildlife trade regulations.

## Indicator Data

B.1 Services provided by ecosystems — Headline GBF-INDICATOR-B1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Provision, Regulation, Supporting Service** | Dry Deciduous Dipterocarp Forest, Sakornakorn | 2024 | Baht/Rai/year | 106967.72 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Angthong | 2024 | Baht/Rai/year | 104170.92 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Maehongsorn | 2024 | Baht/Rai/year | 82269.76 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Dry Evergreen Forest, Rayong | 2024 | Baht/Rai/year | 120192.78 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Cultural Service** | Green Space, Khung Bangkachao, Samut Prakan | 2023 | Million Baht | 107.3 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Regulation Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million tons $CO_2$ | 41 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Cultural Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million Baht | 111 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

10.1 Proportion of agricultural area under productive and sustainable agriculture — Headline GBF-INDICATOR-10.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | - | Sustainable Agriculture Area | 2020 | Hectares | 609600 | Agency: OPSMOAC Source: Thailand SDG Dashboard (SDG 2.4.1) https://sdgdashboard.nesdc.go.th/goal/goal-2/ |
| No | - | Sustainable Agriculture Area | 2021 | Hectares | 809600 | Agency: OPSMOAC Source: Thailand SDG Dashboard (SDG 2.4.1) https://sdgdashboard.nesdc.go.th/goal/goal-2/ |
| No | - | Sustainable Agriculture Area | 2022 | Hectares | 737600 | Agency: OPSMOAC Source: Thailand SDG Dashboard (SDG 2.4.1) https://sdgdashboard.nesdc.go.th/goal/goal-2/ |

10.2 Progress towards sustainable forest management — Headline GBF-INDICATOR-10.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Annual forest area change rate** | - | 2015 | Percent | 0.28 | (Year 2015-2020) Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Annual forest area change rate** | - | 2020 | Percent | -0.69 | (Year 2020-2025) Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Forest biomass** | Above-ground biomass | 2020 | Tons/ Hectares | 181.18 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Forest biomass** | Above-ground biomass | 2021 | Tons/ Hectares | 181.38 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Forest biomass** | Above-ground biomass | 2022 | Tons/ Hectares | 181.58 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Forest biomass** | Above-ground biomass | 2023 | Tons/ Hectares | 181.79 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Forest biomass** | Above-ground biomass | 2024 | Tons/ Hectares | 181.99 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Forest biomass** | Above-ground biomass | 2025 | Tons/ Hectares | 182.19 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Proportion of forest area located within legally established protected areas** | - | 2020 | Percent (2015 forest area baseline) | 41.28 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Proportion of forest area located within legally established protected areas** | - | 2021 | Percent (2015 forest area baseline) | 41.28 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Proportion of forest area located within legally established protected areas** | - | 2022 | Percent (2015 forest area baseline) | 41.28 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Proportion of forest area located within legally established protected areas** | - | 2023 | Percent (2015 forest area baseline) | 41.28 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Proportion of forest area located within legally established protected areas** | - | 2024 | Percent (2015 forest area baseline) | 41.28 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Proportion of forest area located within legally established protected areas** | - | 2025 | Percent (2015 forest area baseline) | 41.28 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Forest area under independently verified forest management certification schemes** | - | 2020 | Thousand Hectares | 88.67 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Forest area under independently verified forest management certification schemes** | - | 2021 | Thousand Hectares | 118.05 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Forest area under independently verified forest management certification schemes** | - | 2022 | Thousand Hectares | 125.64 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Forest area under independently verified forest management certification schemes** | - | 2023 | Thousand Hectares | 150.22 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |
| Yes | **Forest area under independently verified forest management certification schemes** | - | 2024 | Thousand Hectares | 173.92 | Agency: FAO (FRA, 2025) Source : Global Forest Resources Assessment, FAO, 2025, from https://openknowledge.fao.org/server/api/core/bitstreams/dbd392ed-7802-4b58-ab3c-534e271c4040/content |

5.1 Proportion of fish stocks within biologically sustainable levels

Headline GBF-INDICATOR-5.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Species & Area** | Demersal fish - Gulf of Thailand | 2020 | Tons (MSY) | 200092 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Demersal fish - Gulf of Thailand | 2021 | Tons (MSY) | 192328 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Yes | **Species & Area** | Demersal fish - Gulf of Thailand | 2022 | Tons (MSY) | 192123 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Demersal fish - Gulf of Thailand | 2023 | Tons (MSY) | 190847 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Pelagic fish - Gulf of Thailand | 2020 | Tons (MSY) | 247880 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Pelagic fish - Gulf of Thailand | 2021 | Tons (MSY) | 247554 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Pelagic fish - Gulf of Thailand | 2022 | Tons (MSY) | 250183 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Pelagic fish - Gulf of Thailand | 2023 | Tons (MSY) | 249249 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Benthic animals - Gulf of Thailand | 2020 | Tons (MSY) | 775548 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Benthic animals - Gulf of Thailand | 2021 | Tons (MSY) | 766890 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Benthic animals - Gulf of Thailand | 2022 | Tons (MSY) | 759129 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Benthic animals - Gulf of Thailand | 2023 | Tons (MSY) | 754615 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Demersal fish - Andaman Sea | 2020 | Tons (MSY) | 32090 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Demersal fish - Andaman Sea | 2021 | Tons (MSY) | 31255 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Demersal fish - Andaman Sea | 2022 | Tons (MSY) | 30377 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Demersal fish - Andaman Sea | 2023 | Tons (MSY) | 30612 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Pelagic fish - Andaman Sea | 2020 | Tons (MSY) | 117514 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Pelagic fish - Andaman Sea | 2021 | Tons (MSY) | 118811 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Pelagic fish - Andaman Sea | 2022 | Tons (MSY) | 188042 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Pelagic fish - Andaman Sea | 2023 | Tons (MSY) | 125287 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Benthic animals - Andaman Sea | 2020 | Tons (MSY) | 228348 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Benthic animals - Andaman Sea | 2021 | Tons (MSY) | 233391 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Benthic animals - Andaman Sea | 2022 | Tons (MSY) | 223662 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |
| Yes | **Species & Area** | Benthic animals - Andaman Sea | 2023 | Tons (MSY) | 221840 | Agency: DOF Source: Department of Fisheries 2020-2023, from https://www4.fisheries.go.th/local/index.php/main/view_qr_group/1309/5195 |

B.b Number of countries with policies or actions for implementing and monitoring the sustainable use of biodiversity and the maintenance and enhancement of nature's contributions to people, including ecosystem functions and services

Binary KMGBF-INDICATOR-BIN-B

**B.1 Does your country have policies and/or action plans aimed at ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services?**

Fully

**B.2 Does your country have policies and/or action plans aimed at ensuring the sustainable use of biodiversity?**

Fully

**B.3 Does your country monitor the sustainable use of biodiversity?**

Partially

**B.4 Does your country monitor the maintenance, restoration and enhancement of nature's contributions to people, including ecosystem functions and services for the benefit of present and future generations?**

Partially

**Comments**

Thailand has policies and plans in order to ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services, and ensuring the sustainable use of biodiversity.

- **The 5th National Biodiversity Strategy and Action Plan (2024-2030):** Contains directly relevant targets such as Target 5: Promote and support a bio-based economy, based on ecosystem services to improve people's living conditions and income and Target 6: Promote sustainable practices in production and service sectors, including agriculture, aquaculture, fisheries, livestock, forestry, and tourism.

In addition, Thailand is in the developmental phase of establishing a comprehensive ecosystem services monitoring system and does not yet have a national-level dataset on ecosystem services. Currently, Thailand has policies and action plans in place for implementing and monitoring the sustainable use of biodiversity and ecosystem services, which provide the foundation for future data collection.

EN

5.b Number of countries with legal instruments or other policy frameworks for regulating trade in wild species Binary KMGBF-INDICATOR-BIN-5

**5.1 Does your country have legal instruments or other policy frameworks to regulate trade in wild species? (Select all that apply)**

For terrestrial species
For freshwater species
For marine species
For international trade

**Comments**

**legal instruments and policy frameworks (5.1 - For terrestrial species, For freshwater species, For marine species, and For international trade):** Thailand has comprehensive legal instruments and policy frameworks to regulate trade in wild species across all categories:

- **For terrestrial animal species:** The Wildlife Conservation and Protection Act, B.E. 2562 (2019) and Customs Act, B.E. 2560 (2017) regulates import and export animals, trade in protected wild animal, conserved wild animal, and carcass of a wild animal.
- **For terrestrial plant species:** The Plant Quarantine Act, B.E. 2507 (1964), Plants Act, B.E. 2518 (1975), Forests Act, B.E. 2484 (1941), and Customs Act, B.E. 2560 (2017) regulate import, export, and transfer in plant species, including CITES-listed plants.
- **For freshwater species:** The Wildlife Conservation and Protection Act, B.E. 2562 covers freshwater wildlife including Siamese crocodile, Turtles, and Mekong giant catfish.
- **For marine species:** The Wildlife Conservation and Protection Act, B.E. 2562 covers certain marine animals such as Sea turtles and dolphins.
- The Royal Ordinance on Fisheries, B.E. 2558 (2015) regulates trade in marine aquatic animals.
- **For international trade:** Sections 26-34 of the Wildlife Conservation and Protection Act, B.E. 2562 regulate the import and export of wild animals.
- Thailand has been a party to CITES (Convention on International Trade in Endangered Species) since 1983.
    - Department of National Parks, Wildlife and Plant Conservation (DNP) -International Convention Management Division (ICMD) serves as the primary CITES Management Authority and responsible for terrestrial wildlife and wild plant species
    - Department of Fisheries (DOF) - Management Authority for aquatic and marine species listed under CITES and issues permits for trade in CITES-listed fish, marine mammals, sea turtles, and other aquatic organisms.
    - Department of Agriculture (DOA) - Management Authority for cultivated plant species and agricultural products under CITES and manages permits for orchids and other commercially cultivated CITES-listed plants

EN

Promote and Support a Bio-Based Economy, Based on Ecosystem Services to Improve People's Living Conditions and Income (NBT 5) **(National)**

**Briefly describe the main actions taken to implement the target**

**BCG Economy Model Integration:** The national Bio-Circular-Green Economy Model recognizes biodiversity as a strategic asset for sustainable growth across agriculture, health and wellness, bio-industry, and tourism sectors. Biodiversity and ecosystem services are increasingly integrated into policy documents, sectoral strategies, and funding programs, promoting sustainable wild species use while generating economic benefits for communities.

**Community-Based Biodiversity Enterprises:** Government agencies across natural resources, agriculture, tourism, OTOP, and SME support sectors promote community enterprises and SMEs utilizing biodiversity-based products including traditional foods, herbal medicines, natural dyes and fibers, handicrafts, and eco-tourism services. These programs help communities generate income while maintaining traditional knowledge and sustainable practices.

**Sustainable Sectoral Practices:** Key sectors have adopted sustainability measures including:
- Agriculture: GAP, organic farming, and agroforestry supporting traditional varieties and agro-biodiversity
- Fisheries: GAP aquaculture and community-based management
- Forestry: Sustainable management, Community Forest Act implementation, and certification in selected areas
- Tourism: Eco-tourism with carrying capacity limits, environmental codes, and community involvement
- Herbal Economy: Designation of Herbal Champion species, promotion through the Herb of the Year initiative, development of market linkages for herbal raw materials, and coordinated import-export tracking of key species under the National Herbal Action Plan (2023–2027)

**Ecosystem Services Monitoring and Valuation:** Thailand has initiated actions to restore, maintain, and enhance nature's contributions to people through developing comprehensive ecosystem services frameworks, including piloting the System of Environmental-Economic Accounting (SEEA) Ecosystem Accounts across forest, subnational, and urban green space contexts to develop standardized methodologies for national-scale application.

**Pilot Studies and Methodology Development:** Government agencies are conducting ecosystem service assessments across different ecosystems (forests, wetlands, coastal areas) to develop appropriate methodologies for national-scale applications, with SEEA pilot studies informing the design of a standardized national accounting framework.

**Capacity Building and Framework Development:** Training programs are being developed to strengthen technical capacity in ecosystem service valuation and monitoring among relevant agencies, while working towards establishing an operational national framework for comprehensive ecosystem service assessment and reporting.

**Inter-Agency Coordination:** Ministries and departments are initiating discussions to develop an integrated approach to data collection and reporting on ecosystem services, including coordination mechanisms for SEEA implementation across relevant agencies.

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**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

**BCG Economy Integration:**
- Biodiversity is recognized as a strategic asset in national development, with policy frameworks supporting biodiversity-based sustainable development
- Multiple programs support community enterprises producing traditional products
- However, implementation is uneven across regions, and enterprises face market access and financing challenges

**Economic Benefits from Biodiversity-Based Products:** Thailand has initiated and piloted an approach to tracking economic values of ecosystem services across three service categories: provision, regulation and maintenance, and supporting services from multiple forest ecosystems. Pilot assessments show:
- Ecosystem services valuation: Economic values from forest ecosystems range from 82,269.76 to 120,192.78 Baht/Rai/year (2024) across different forest types, including Dry Deciduous Dipterocarp Forest (Sakon Nakhon: 106,967.72 Baht/Rai/year), Mixed Deciduous Forest (Ang Thong: 104,170.92 Baht/Rai/year; Mae Hong Son: 82,269.76 Baht/Rai/year), and Dry Evergreen Forest (Rayong: 120,192.78 Baht/Rai/year).
- Pilot implementation of the System of Environmental-Economic Accounting (SEEA) Ecosystem Accounts through four pilot studies. The Forest Area Account recorded a national forest cover of 101.81 million rai (2023). The Timber Resource Account estimated the forestry sector's contribution at THB 12–13 billion annually, expanding to over THB 200 billion when timber enters primary and intermediate industries, with an additional THB 200 billion from downstream industries (furniture, paper, and wood manufacturing). At the subnational level, the Forest Ecosystem Account at Khao Yai National Park documented carbon storage exceeding 41 million tons $CO_2$, sequestration capacity of up to 150 million tons $CO_2$ from dry evergreen forests, and nearly 2 million ecotourism visitors in 2024 generating over THB 111 million in direct park revenue. The Green Space Ecosystem Account at Khung Bangkachao, Samut Prakan, recorded annual $CO_2$ sequestration exceeding 800,000 tons, carbon stock valued at THB 37.9 million, and ecotourism income of at least THB 67 million annually for local communities.
- OTOP biodiversity-based income (food, drinks, herbs): USD 5,190.66 million (2020) → USD 6,245.59 million (2023), representing +20.3% growth and community enterprises utilizing wild and cultivated biodiversity sustainably
- Local community income from biological resources: USD 2.77 million (2020) → USD 3.13 million (2024), representing +13.0% growth in direct community benefits from sustainable wild species management
- Department of Thai Traditional and Alternative Medicine has developed a monitoring and evaluation framework under the 2nd National Herbal Action Plan (2023–2027) and signed a Memorandum of Understanding on the "Thai Herbal Central Market" with Talad Thai to strengthen market linkages for herbal raw materials. At the policy level, 15 Herbal Champion species have been officially designated, supported through the Herb of the Year initiative and coordinated import-export tracking of six key species with the Thai Customs Department. Thailand's herbal product market currently ranks first in ASEAN, fourth in Asia, and eighth globally by retail value, reaching THB 63,045 million in 2024 (AC Nielsen).

**Traditional Occupations - Declining Trend:**
- Population in traditional occupations (agriculture, fishery, forestry laborers): 32.47% or 12.4 million people (2020) → 26.94% or 10.8 million people (2024)
- Decline of 5.53 percentage points, with 1.6 million people shifting away from traditional sectors

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**Sustainable Sectoral Practices:**
- Sustainable agriculture area are expanding
- Community-based fisheries management is operational
- Community forestry combines livelihoods with conservation
- Eco-tourism generates non-consumptive benefits
- Limitation: Explicit biodiversity criteria are not systematically monitored or enforced across sectors

**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

**Key Challenges in Achieving the Target**
**Data and Assessment Gaps:**
- Thailand is working toward establishing a comprehensive monitoring system aligned with GBF Headline requirements. The country is developing ecosystem services valuation framework to integrate subsistence use, non-market ecosystem services, genetic resources, and cultural values across provisioning, regulating, and cultural service categories, with operational implementation expected in 2026-2027.

**Capacity and Institutional Constraints:**
- Relevant agencies lack technical capacity, methodological guidance, and analytical tools for ecosystem service assessment and economic valuation, particularly at subnational levels responsible for field assessment. Responsibilities are fragmented across multiple agencies using different methodologies, data formats, and reporting systems, preventing integration into a comprehensive national picture. No centralized coordination mechanism or data integration platform exists to aggregate and standardize information.

**Traditional Knowledge and Livelihood Transitions:**
- Thailand's traditional occupation workforce declined by 1.6 million people from 32.47% (2020) to 26.94% (2024), risking irreversible loss of traditional ecological knowledge essential for sustainable wild species management. Intergenerational knowledge transfer systems are breaking down, representing loss of both irreplaceable cultural heritage and practical management of wisdom that cannot be replaced by scientific approaches alone.

**Market and Economic Barriers:**
- Community biodiversity-based enterprises face systematic barriers in market access, product development, quality standards, branding, and finance access, particularly acute in remote rural areas where biodiversity is highest, but market connections weakest. This creates insufficient economic incentives to compete with extractive alternatives or land conversion.

**Sustainability Safeguard Gaps**:
- Growing commercial demand (OTOP biodiversity products increased 20.3% over three years) creates overexploitation risks. Management systems ensuring sustainable harvest limits remain underdeveloped for most wild-harvested products, and traceability and certification systems verifying sustainable sourcing are not systematically applied across supply chains.

**Priority Approaches to Address Challenges**
**Accelerating Ecosystem Service Valuation Framework Operationalization (Priority - In Development):** Complete System of Environmental-Economic Accounting development with standardized methodologies for assessing provisioning services (food, water, timber, genetic resources), regulating services (climate regulation, water purification, flood control, pollination, erosion prevention), and cultural services (recreation, tourism, spiritual, aesthetic, cultural heritage). Establish baseline data on contributions to GDP, employment, household income, and subsistence of use. Develop data collection protocols applicable across agencies and ecosystem types. Integrate existing project-level studies into the national framework. Target operational implementation by 2026-2027 to support future GBF reporting with comprehensive national data.

**Building Institutional Capacity (Ongoing):** Implement systematic capacity building programs for relevant agencies at national, provincial, and local levels to strengthen technical capacity in ecosystem service assessment, economic valuation methods, and monitoring techniques. Develop practical guidance documents, training modules, and decision-support tools enabling standardized assessments. Establish communities of practice for knowledge sharing. Prioritize capacity building in agencies responsible for regulating services assessment given current data gaps.

**Establishing Inter-Agency Coordination Mechanisms (In Progress):** Create formal coordination mechanisms among agencies responsible for biodiversity, BCG economy, rural development, tourism, agriculture, and finance. Establish a centralized data integration platform where project-level studies and monitoring data can be aggregated, standardized, and analyzed at national level. Develop common reporting frameworks and data standards ensuring compatibility. Assign clear institutional responsibility for overall Ecosystem services valuation framework coordination and national ecosystem services reporting. Create platforms for documenting and disseminating successful models of sustainable wild species management.

**Linking Data to Policy and Planning (In Development):** Ensure ecosystem services data are accessible and usable for policy makers and decision makers. Develop decision-support tools integrating ecosystem service values into cost-benefit analyses, environmental impact assessments, spatial planning, and infrastructure investment decisions. Create policy guidance on incorporating ecosystem service considerations into sectoral strategies (agriculture, water, energy, transport, urban development). Quantify non-extractive benefits to support payment for ecosystem services and benefit-sharing mechanisms with credible economic data.

**Preserving and Integrating Traditional Knowledge (Priority):** Document and support transmission of traditional ecological knowledge for sustainable wild species management. Integrate traditional knowledge with scientific monitoring in co-management systems. Support intergenerational knowledge transfer in communities managing wild species. Recognize and reward traditional knowledge holders in benefit-sharing arrangements.

**Improving Support for Biodiversity-Based Enterprises (Ongoing):** Provide systematic technical assistance, financing, market development, and quality assurance for community enterprises and SMEs. Develop value chains connecting sustainable wild species products to premium markets. Support certification, eco-labeling, and branding, highlighting sustainability and traditional knowledge. Improve access to green financing mechanisms. Develop coherent long-term national strategy linking biodiversity conservation, sustainable use, and equitable benefit-sharing, ensuring sustainability standards applied consistently across sectors and programs.

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**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

Implementation examples related to this target are not reported in the current national report. At this stage, practical implementation examples at the project or local level will be consolidated and reported in subsequent reporting cycles, once systematic data collection and evaluation mechanisms are fully in place.

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**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

Implementation of this target supports multiple Sustainable Development Goals (SDGs):
- **SDG 1** (No Poverty) and **SDG 8** (Decent Work and Economic Growth), particularly Targets 1.4 (access to economic resources) and 8.4 (sustainable livelihoods), through biodiversity-based income generation and community biodiversity enterprises that demonstrate wild species contributions to poverty reduction and sustainable livelihoods.
- **SDG 2** (Zero Hunger) especially Targets 2.3 (small-scale food producers) and 2.5 (genetic diversity), through community biodiversity enterprises supporting small-scale farmers and fishers utilizing wild species and agro-biodiversity.
- **SDG 6** (Clean Water and Sanitation), especially Target 6.6 (protect and restore water-related ecosystems), through systematic assessment of water regulation, purification and provision services from ecosystems once the Ecosystem services valuation framework becomes operational.
- **SDG 12** (Responsible Consumption and Production), particularly Targets 12.2 (sustainable management of natural resources) and 12.b (sustainable tourism), via the Bio-Circular-Green Economy Model promoting resource efficiency and sustainable wild species management, with eco-tourism practices benefiting communities while minimizing environmental impacts. Once Ecosystem services valuation is operational, it will enable integration of ecosystem service values into national economic accounts and policies promoting sustainable use.
- **SDG 13** (Climate Action), particularly Targets 13.1 (strengthen resilience and adaptive capacity) and 13.2 (integrate climate measures into policies), through assessment of climate regulation services including carbon sequestration and climate adaptation benefits from ecosystems.
- **SDG 14** (Life Below Water), especially Targets 14.2 (sustainably manage and protect marine and coastal ecosystems), 14.4 (sustainable fisheries), 14.7 (economic benefits from marine resources), and 14.b (small-scale fishers), through community-based fisheries management aiming for sustainable wild fish harvesting and assessment of coastal and marine ecosystem services (though declining stocks indicate strengthening needed).
- **SDG 15** (Life on Land), particularly Targets 15.6 (fair and equitable benefit-sharing from genetic resources), 15.9 (integrate ecosystem values into planning), and 15.c (combat poaching while supporting communities), through traditional knowledge-based products supporting benefit-sharing from genetic resources and development of the Ecosystem services valuation framework for systematic ecosystem services valuation and integration into national accounts and planning.

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## Indicator Data

B.1 Services provided by ecosystems — Headline — GBF-INDICATOR-B1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Provision, Regulation, Supporting Service** | Dry Deciduous Dipterocarp Forest, Sakornakorn | 2024 | Baht/Rai/year | 106967.72 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Angthong | 2024 | Baht/Rai/year | 104170.92 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Maehongsorn | 2024 | Baht/Rai/year | 82269.76 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Dry Evergreen Forest, Rayong | 2024 | Baht/Rai/year | 120192.78 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Cultural Service** | Green Space, Khung Bangkachao, Samut Prakan | 2023 | Million Baht | 107.3 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Regulation Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million tons $CO_2$ | 41 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Cultural Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million Baht | 111 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

9.1 Benefits from the sustainable use of wild species

Headline GBF-INDICATOR-9.1

**Source of Data**

No data available

**Please describe the situation**

| | |
|---|---|
| Thailand has initiated and piloted an approach to tracking economic of ecosystem services, across three service categories: provision, regulation and maintenance, and supporting services, from multiple forest ecosystems. For the current reporting period, Thailand reports on sustainable use benefits through supplementary national indicators (Income of local communities and private businesses from goods and services utilizing biological and genetic resources) for proxy assessment while working toward establishing a comprehensive monitoring system aligned with GBF Headline Indicator 9.1 requirements. Indicator Does this data row represent a disaggregation Disaggregation type Year Unit Value Agencies Local community income from biological resource products No - 2020 Million USD 2.77 BEDO Local community income from biological resource products No - 2021 Million USD 2.87 BEDO Local community income from biological resource products No - 2022 Million USD 2.94 BEDO Local community income from biological resource products No - 2023 Million USD 3.06 BEDO Local community income from biological resource products No - 2024 Million USD 3.13 BEDO OTOP income Yes Product category, (Food, Drinks, Herbs) 2020 Million USD 5,190.66 CDD OTOP income Yes Product category, (Food, Drinks, Herbs) 2021 Million USD 5,410.95 CDD OTOP income Yes Product category, (Food, Drinks, Herbs) 2022 Million USD 5,225.92 CDD OTOP income Yes Product category, (Food, Drinks, Herbs) 2023 Million USD 6,245.59 CDD Source: 1/ Local community income is from Annual report during 2020-2024, BEDO, from https://bedo.or.th/content-v2/713 2/ OTOP income from Food, Drinks, Herbs product is from Community Development Department, from https://logi.cdd.go.th/otop/ | EN |

9.2 Percentage of the population in traditional occupations

Headline GBF-INDICATOR-9.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | - | - | 2020 | % | 32.47 | Agency: NSO |
| No | - | - | 2021 | % | 30.85 | Agency: NSO |
| No | - | - | 2022 | % | 28.47 | Agency: NSO |
| No | - | - | 2023 | % | 28.34 | Agency: NSO |
| No | - | - | 2024 | % | 26.94 | Agency: NSO |

**Comments**

Remark: 1/ The traditional occupations is according to the Thai Standard Classification of Occupations (TSCO), which is aligned with ISCO-08, **Minor Group 92: Agricultural, Fishery and Related Laborers** encompasses workers who perform simple and routine tasks in agriculture, forestry, fisheries, and hunting. These occupations typically involve the use of basic hand tools and require considerable physical effort in activities such as:

- Digging, scooping, and leveling soil
- Cutting grass and weeding
- Harvesting fruits and vegetables
- Animal husbandry and livestock care
- Cleaning animal housing and farm facilities
- Plowing and preparing land for agricultural purposes
- Various tasks related to crop cultivation, animal raising, and wildlife capture
- Forest product collection and processing
- Traditional fishing and aquatic resource harvesting

2/ Percentage of the population in traditional occupations = (Number of workers in Minor Group 92 / Total workers in all occupation groups) × 100

Source: https://www.nso.go.th/nsoweb/nso/survey_detail/9u#gsc.tab=0

| Year | Number of workers in Minor Group 92 (thousand people) | Total workers in all occupation groups (thousand people) |
|---|---|---|
| 2020 | 12,434 | 38,289 |
| 2021 | 11,693 | 37,899 |
| 2022 | 11,273 | 39,592 |
| 2023 | 11,408 | 40,251 |
| 2024 | 10,803 | 40,107 |

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B.b Number of countries with policies or actions for implementing and monitoring the sustainable use of biodiversity and the maintenance and enhancement of nature's contributions to people, including ecosystem functions and services

Binary KMGBF-INDICATOR-BIN-B

**B.1 Does your country have policies and/or action plans aimed at ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services?**

Fully

**B.2 Does your country have policies and/or action plans aimed at ensuring the sustainable use of biodiversity?**

Fully

**B.3 Does your country monitor the sustainable use of biodiversity?**

Partially

**B.4 Does your country monitor the maintenance, restoration and enhancement of nature's contributions to people, including ecosystem functions and services for the benefit of present and future generations?**

Partially

**Comments**

Thailand has policies and plans in order to ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services, and ensuring the sustainable use of biodiversity.

- **The 5th National Biodiversity Strategy and Action Plan (2024-2030):** Contains directly relevant targets such as Target 5: Promote and support a bio-based economy, based on ecosystem services to improve people's living conditions and income and Target 6: Promote sustainable practices in production and service sectors, including agriculture, aquaculture, fisheries, livestock, forestry, and tourism.

In addition, Thailand is in the developmental phase of establishing a comprehensive ecosystem services monitoring system and does not yet have a national-level dataset on ecosystem services. Currently, Thailand has policies and action plans in place for implementing and monitoring the sustainable use of biodiversity and ecosystem services, which provide the foundation for future data collection.

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9.b Number or countries with policies to manage the use of wild species sustainably, providing social, economic and environmental benefits for people, and to protect and encourage customary sustainable use by indigenous peoples and local communities

Binary KMGBF-INDICATOR-BIN-9

**9.1 Does your country have legal instruments or other policy frameworks or administrative measures for the sustainable management and use of wild species?**

Fully

**9.2 Does your country monitor the sustainable management and use of wild species?**

Fully

**9.3 Does your country monitor the social, economic and environmental benefits derived from the use of wild species for people, in particular those in vulnerable situations and most dependent on biodiversity? (Select all that apply)**

Partially

**9.3.1 If the answer is "fully" or "partially", disaggregate by all relevant groups of people, as determined at the national level:**

Women and girls
Children and youth
Persons with disabilities
Indigenous peoples and local communities

**9.4 Does your country have legal instruments or other policy frameworks to protect and encourage the customary sustainable use of biodiversity by indigenous peoples and local communities, for example, the plan of action on customary sustainable use of biological diversity or other relevant initiatives?**

Partially

**Comments**

**Regulatory Framework (9.1 - Fully):** The sustainable management and use of wild species in Thailand is carried out under a multi-agency cooperation framework with clear legal authority:

- **The Community Forest Act, B.E. 2562 (2019)** support communities to cooperate with the government in effectively managing natural resources in community forests.
- **The National Park Act, B.E. 2562 (2019)** forth balanced and sustainable efficacy of the conservation, preservation, protection and maintenance of national parks, and management of natural resources, the ecosystem and biological diversity
- **The Marine and Coastal Resources Management Promotion Act, B.E. 2558 (2015)** support of coastal communities and local governments in the management, planting, maintenance, conservation, restoration, and utilization of marine and coastal resources.

**Monitoring the sustainable use of wild species. (9.2 – Fully):** The management and sustainable use of wild species are monitored under various Acts as follows:

- The Community Forest Act, B.E. 2562 (2019)
- National Park Act, B.E. 2562 (2019)
- The Marine and Coastal Resources Management Promotion Act, B.E. 2558 (2015)

**Monitoring the social, and environmental benefits derived from the use of wild species for people (vulnerable groups). (9.3 - Partially):** The National Statistical Office (NSO) monitors and collects data on traditional occupations (according to 92 occupational codes), reporting on the occupational groups identified (only publicly disclosed information). Regarding data collection method from NSO, entire groups of people including women and girls, children and youth, people with disabilities, and indigenous peoples and local communities would be considered regardless any inequality.

**Regulatory Framework to protect and sustainable use of biodiversity by indigenous peoples and local communities (9.4 – Partially):** The sustainable use of biodiversity by Indigenous peoples and local communities under the Ethnic Groups and Indigenous Peoples' Livelihood Protection and Promotion Act B.E. 2568 (2025)

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Reduce Threats to Biodiversity from Climate Change and Pollution, Including Increasing Urban Green Spaces, to Restore and Maintain Ecosystem Services (NBT 4) **(National)**

**Briefly describe the main actions taken to implement the target**

- **Pollution Control Measures**

Thailand has implemented comprehensive pollution control addressing multiple sources affecting biodiversity. Extensive water quality monitoring networks now cover rivers, coastal waters, and reservoirs, measuring nutrients, chlorophyll-a, dissolved oxygen, and eutrophication parameters. The Marine Water Quality Index (MWQI) serves as a proxy indicator while ICEP methodology is under development. Regulatory frameworks manage hazardous chemicals and pesticides through environmental and agricultural laws, with monitoring of use of quantities and import volumes. Integrated pollution prevention includes measures to reduce plastic and marine debris, alongside strengthened coordination between environmental, agricultural, industrial, and municipal authorities.

- **Climate Change and Ocean Acidification Mitigation**

Thailand has established integrated policy frameworks addressing climate-biodiversity linkages through the Climate Change Master Plan 2015-2050, National Adaptation Plan Integrating Ecosystem-Based Adaptation (EbA) and Nature-Based Solutions (NbS), and the 5$^{th}$ NBSAP (2023-2027) with Target 4 focused on climate threats.

Nature-Based Solutions include scaled-up forest restoration through assisted natural regeneration, enrichment planting with native species, and community-based restoration under the Community Forest Act with 90% tree survival requirements. Marine and coastal ecosystem restoration programs demonstrate climate adaptation benefits. Urban green infrastructure provides climate adaptation through heat island mitigation, flood management, air quality improvement, and biodiversity conservation.

The Climate, Coastal, and Marine Biodiversity (CCMB) project supports ONEP and other agencies integrating biodiversity and climate targets. For ocean acidification, DMCR maintains continuous monitoring since 2016 at 160 points throughout the Gulf of Thailand, tracking pH, total alkalinity, dissolved inorganic carbon, and $CO_2$, while participating in the IOC-WESTPAC project. Programs expand marine protected areas to reduce ocean acidification impacts.

- **Urban Green and Blue Spaces**

Thailand has established Guidelines for Sustainable Green Space Management (2018-2037), currently in second phase (2023-2027), providing the national framework for urban green space planning and biodiversity conservation. The guidelines emphasize native plant species promotion and invasive species control.

Biodiversity-inclusive urban planning incorporating green and blue space management has been implemented in Bangkok Metropolitan Area, Pattaya City, and Chiang Mai City as demonstration models. Thailand is implementing New Urban Agenda-aligned development plans to expand coverage to cities nationwide, extending to city municipalities, town municipalities, and sub-district municipalities. ONEP monitors urban green space provision per capita across municipality types to assess progress.

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**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

- **Pollution Control Outcomes**

**Coastal and Marine Water Quality:** Thailand's coastal water quality remained stable during 2020-2023, with annual average MWQI at 72-76% (Fair to Good). The majority of monitoring stations (55-60%) achieved "Good" classification with healthy ecosystems, approximately 31-40% rated "Fair" (moderately impacted), and only 5-8% classified as "Poor" or "Very Poor."

**Institutional Capacity:** Enhanced water quality monitoring capacity provides regular eutrophication risk data. Strengthened inter-agency coordination mechanisms between environmental, water resource, agricultural, and industrial authorities. Development of biodiversity-relevant pollution indicators and assessment frameworks progressing.

- **Climate Change Mitigation Achievements**

**Policy Framework Established:** Comprehensive policy integration achieved through Climate Change Master Plan 2015-2050, National Adaptation Plan integrating EbA and NbS, and 5th NBSAP (2023-2027) Target 4. CCMB project strengthens integration between climate and biodiversity targets across agencies.

**Marine and Coastal Ecosystem Recovery:**

*Seagrass Meadows (Blue Carbon and Coastal Protection):*

- Total coverage: 481.3 km² (2020) → 513.5 km² (2024) = +32.2 km² (+6.7% increase)
- Gulf of Thailand: +6.2% | Andaman Sea: +3.0%
- Climate benefits: Blue carbon sequestration faster than tropical forests, coastal protection reducing wave energy and erosion, enhanced resilience to sea-level rise and storm surges

*Coral Reefs (Climate Resilience):* Thailand's coral reefs demonstrated remarkable resilience and health recovery from 2021-2023, covering stable area of 238.69 km² distributed across Andaman Sea (118.01 km²) and Gulf of Thailand (120.68 km²).

Recovery trajectory:

- 2021-2022: Poor condition reefs increased from 57.31 km² to 58.81 km² due to 2022 bleaching events, marine heatwaves, and crown-of-thorns starfish outbreaks
- 2022-2023: Strong recovery with Poor condition reefs decreasing to 51.51 km² and Good condition reefs expanding to 132.57 km² (55.5% of total)
- Net change 2021-2023: Good +7.83 km² (+6.3%), Poor -5.80 km² (-10.1%)
- Recovery drivers: Natural recruitment, active restoration (coral nurseries, transplantation), improved marine park management, reduced tourism pressure, favorable climate conditions 2023-2024

**Ocean Acidification Monitoring:** DMCR maintains continuous monitoring since 2016, with data from 160 points throughout Gulf of Thailand tracking pH, total alkalinity, dissolved inorganic carbon, and CO2. Thailand participates in IOC-WESTPAC ocean acidification project, contributing to regional understanding. Programs to expand marine protected areas aim to reduce ocean acidification impacts and protect vulnerable coastal biodiversity.

- **Urban Green Spaces Progress**

**Bangkok Metropolitan Area:**

- Green space provision: 8.11 m²/person (2025), increased +1.04 m²/person (+14.7%) over 5 years
- Target: 10 m²/person by 2030 under Green Bangkok 2030 initiative
- Green and blue infrastructure projects address urban ecosystem services: parks for recreation, biodiversity habitat, air quality improvement, canal management for flood control, water quality, urban cooling, and aquatic biodiversity
- **One Million Trees campaign:** Target achieved mid-2024, with additional million planned through 2026
- **15-Minute Pocket Parks:** 107 plots secured (2022), targeting parks within 800m walking distance
- Additional targets: 50% of residents accessing green spaces within 400m; urban tree canopy covering 30% of total area by 2030

**Municipality Variations:**

- Sub-district municipalities: 59.25 m²/person (reflecting rural/peri-urban characteristics with agricultural land, forests, community spaces)
- Town municipalities: 5.35 m²/person
- City municipalities: 4.31 m²/person (most severe deficit, well below WHO recommendations)

**Ecosystem Services Integration:** Planning partially integrates ecosystem services including climate regulation, water management, recreation, and mental health benefits.

**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

**1) Pollution Control Challenges and Solutions**

**Challenges:**

- Limited biodiversity-specific pollution metrics: ICEP and Aggregated Total Applied Toxicity (ATAT) indicators not yet fully implemented; currently relying on proxy indicators (MWQI)
- Incomplete coverage: Nitrogen and phosphorus flux data at river mouths not systematically collected
- Sectoral silos: Agriculture, industry, municipal waste management, and biodiversity conservation policies developed relatively independently

**Strengthening Approaches:**

- Develop ICEP methodology, establishing nutrient flux monitoring at major river mouths discharging to coastal zones
- Develop pesticide risk assessment system based on toxicity weighting (using ATAT indicator)
- Establish biological monitoring programs using indicator species sensitive to nutrient and chemical pollution
- Harmonize pesticide data collection across agricultural use, import, and environmental concentration monitoring

**2) Climate Change Mitigation Challenges and Solutions**

**Challenges:**

- Absence of systematic climate-biodiversity impact monitoring: Lack of systems to monitor climate impacts on species distributions, ecosystem functions, phenology, and population dynamics
- Limited assessment of climate action impacts on biodiversity: Detailed impact assessment and systematic safeguards underdeveloped
- Insufficient scale and pace of nature-based solutions: Current Nature-based Solutions (NbS) implementation shows positive trends but remains insufficient to meet 2030 commitments
- Incomplete ocean acidification impact understanding: Chemical monitoring operational, but biological impact monitoring (coral calcification rates, shellfish populations, fish behavior, ecosystem changes) only partially developed

**Strengthening Approaches:**

- **Establishing Climate-Biodiversity Impact Monitoring System:** Develop comprehensive monitoring and tracking climate impacts on biodiversity. Integrate with existing biodiversity surveys and protected area monitoring. Establish baseline data and indicators linking climate variables to biodiversity responses.
- **Accelerating Forest Protection and Restoration for Net Carbon Gain:** Scale up restoration to substantially exceed deforestation rates, targeting net forest gain. Address underlying drivers through integrated landscape management, sustainable development pathways, alternative livelihoods, and strengthened enforcement. Prioritize high-carbon ecosystems and connectivity corridors.
- **Strengthening Coral Reef Climate Adaptation Strategies:** Implement comprehensive adaptation including identification and protection of climate refugia (lower bleaching risk areas), assisted evolution using heat-tolerant coral genotypes, expanded coral nurseries propagating climate-resilient strains, enhanced monitoring and early warning systems, and reduction of local stressors.
- **Expanding Nature-Based Solutions at Scale:** Substantially scale up NbS implementation to levels commensurate with climate and biodiversity targets. Mobilize climate finance (Green Climate Fund, Adaptation Fund, domestic budgets). Develop national targets and tracking mechanisms. Promote public-private partnerships and innovative financing (green bonds, carbon markets, PES).
- **Strengthening Ocean Acidification Impact Monitoring:** Expand monitoring beyond chemical parameters to include biological response monitoring. Establish research programs elucidating mechanistic links between acidification and biodiversity impacts. Use biological monitoring to inform marine PA management, coral reef restoration strategies, and fisheries management.

**3) Urban Green Spaces Challenges and Solutions**

**Challenges:**

- Unequal access to green and blue spaces: Access to quality green and blue spaces uneven across neighborhoods and cities, limiting both biodiversity benefits and social equity
- Rapid urbanization pressure: Population growth in urban areas, expansion of built-up areas, and intensification of land use create pressure to convert remaining green spaces. Economic incentives favor development over green space preservation.

**Strengthening Approaches:**

- **Scaling Biodiversity-Inclusive Urban Planning Nationwide:** Accelerate implementation of New Urban Agenda-aligned urban development plans to extend biodiversity-inclusive planning from three major cities to all urban municipalities. Develop differentiated approaches for different urban scales (metropolitan areas, medium cities, small towns, growing peri-urban areas). Provide technical support, planning guidance, design standards, and financing mechanisms enabling smaller municipalities to adopt biodiversity-inclusive approaches.

**Strengthening Ecosystem Services Integration:** Move from "partial" to "fully" integrated ecosystem services consideration in urban planning. Develop systematic frameworks for assessing and incorporating nature's contributions across all urban development decisions. Create urban ecosystem services assessment tools appropriate for Thai contexts. Integrate ecosystem services valuation into cost-benefit analyses for urban infrastructure. Establish design standards for green and blue infrastructure ensuring multiple ecosystem service provisions. Link urban planning explicitly to climate adaptation, disaster risk reduction, and public health objectives through nature-based solutions.

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**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

Implementation examples related to this target are not reported in the current national report. At this stage, practical implementation examples at the project or local level will be consolidated and reported in subsequent reporting cycles, once systematic data collection and evaluation mechanisms are fully in place.

EN

**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

Implementation of National Target 4 contributes to multiple Sustainable Development Goals (SDGs) and related international commitments:

- It supports **SDG 13 (Climate Action)** by promoting **ecosystem-based adaptation** and nature-based solutions that enhance climate resilience while conserving biodiversity.
- It contributes to **SDG 14 (Life Below Water)**, particularly Targets **14.1** (reduce marine pollution, especially from land-based activities) and **14.2** (sustainably manage and protect marine and coastal ecosystems), through efforts to reduce nutrient and plastic pollution and restore coastal ecosystems such as mangroves, seagrass and coral reefs.
- It advances **SDG 6 (Clean Water and Sanitation)**, especially Target **6.3** (improve water quality by reducing pollution) and **6.6** (protect and restore water-related ecosystems), via strengthened control of water pollution and restoration of wetlands, rivers and reservoirs.
- It supports **SDG 11 (Sustainable Cities and Communities)**, including Targets **11.3** (inclusive and sustainable urbanisation) and **11.7** (universal access to safe, inclusive and accessible green and public spaces), through planning and expansion of urban green and blue infrastructure.
- It contributes indirectly to **SDG 3 (Good Health and Well-being)**, by reducing pollution-related health risks and providing healthier urban environments.

Beyond the SDGs, National Target 4 is relevant to Thailand's commitments under **multilateral environmental agreements** related to climate change (UNFCCC and the Paris Agreement), pollution and hazardous chemicals (e.g. Stockholm, Basel, Minamata Conventions), and regional frameworks on marine and coastal pollution and climate resilience. By reducing climate and pollution pressures on ecosystems and enhancing urban green and blue spaces, National Target 4 helps safeguard biodiversity and the ecosystem services that support human health, livelihoods and resilience.

EN

## Indicator Data

A.1 Red List of Ecosystems — Headline — GBF-INDICATOR-A.1

**Source of Data**

No data available

**Please describe the situation**

Thailand has not yet conducted a comprehensive ecosystem assessment and classification based on the IUCN Global Ecosystem Typology (GET) framework. However, Thailand has previously undertaken a wetland assessment under the Ramsar Convention in 2019, which can serve as foundational data for developing future Red List of Ecosystems assessments. Thailand has initiated consideration of adopting the Red List of Ecosystems indicator for assessing the status of at-risk ecosystems, focusing on three major ecosystem groups: • Marine and coastal ecosystems • Forest ecosystems • Wetland ecosystems The country aims to establish 2026 as the baseline year for Red List of Ecosystems assessment. Thailand will systematically commence risk status assessments of target ecosystems according to IUCN criteria and standards, providing foundational data for long-term ecosystem conservation monitoring and evaluation.

EN

A.2 Extent of natural ecosystems — Headline — GBF-INDICATOR-A.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2020 | km2 | 163765.58 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2021 | km2 | 163539.89 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2022 | km2 | 163417.56 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2023 | km2 | 162909.05 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2024 | km2 | 162856.43 | Agency: RFD |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2021 | km2 | 104.89 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2021 | km2 | 54.03 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2022 | km2 | 114.6 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2022 | km2 | 51.13 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2023 | km2 | 170.37 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2023 | km2 | 86.64 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2024 | km2 | 101.7 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2024 | km2 | 54.76 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2021 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2021 | km2 | 120.68 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2022 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2022 | km2 | 120.68 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2023 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2023 | km2 | 120.68 | Agency: DMCR |

**Comments**

Source:

1) Forest data 2020-2024 from Royal Forest Department

2) Seagrass data 2021-2024, Department of Marine and Coastal Resources, from https://km.dmcr.go.th/c_4

3) Coral reef data 2021-2024, Department of Marine and Coastal Resources, from https://km.dmcr.go.th/c_3

Coral Reef Health Classification - National Summary

| Year | Area (km2) | Good | Fair | Poor |
|---|---|---|---|---|
| 2021 | 238.69 | 124.74 (52.3%) | 56.64 (23.7%) | 57.31 (24.0%) |
| 2022 | 238.69 | 127.29 (53.3%) | 52.59 (22.0%) | 58.81 (24.6%) |
| 2023 | 238.69 | 132.57 (55.5%) | 54.61 (22.9%) | 51.51 (21.6%) |

Thailand's Department of Marine and Coastal Resources (DMCR) assesses coral reef health using the ratio of Live Coral (LC) coverage to Dead Coral (DC) coverage as a percentage of total substrate methodology provides a clear indicator of reef condition based on the proportion of living to dead coral structures.

· "Good" category = Excellent (≥3:1) + Good (2:1) combined

· "Fair" category = Fair/Moderate (1:1)

· "Poor" category = Poor (1:2) + Severely Degraded (1:≥3) combined

## A.3 Red List Index

Headline GBF-INDICATOR-A.3

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Taxonomic group** | Mammals, n=345 | 2015 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,012 | 2015 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=392 | 2015 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=157 | 2015 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Yes | **Taxonomic group** | Fish, n=2,888 | 2015 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=345 | 2020 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,075 | 2020 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=461 | 2020 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=184 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,940 | 2020 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mollusk, n=2,583 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=194 | 2020 | Index | 0.94 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Coral, n=462 | 2020 | Index | 0.71 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=344 | 2025 | Index | 0.75 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,100 | 2025 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=525 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=214 | 2025 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,745 | 2025 | Index | 0.89 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mollusk, n=2,735 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=1,479 | 2025 | Index | 0.98 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Coral, n=443 | 2025 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Hymenoptera, n=1,221 | 2025 | Index | 0.83 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

A.4 Proportion of populations within species with an effective population size greater than 500 Headline GBF-INDICATOR-A.4

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Primary Ne, estimated minimum value** | Dugong | 2025 | - | 14 | Agency: DMCR |

**Comments**

| | |
|---|---|
| Remark : Dugongs: 144 individuals (DMCR, 2025) (primary Ne estimated: 14-43), Typical range: 0.1 - 0.3 (Frankham, R. (1995). "Effective population size/adult population size ratios in wildlife")<br><br>Data Availability Status: Partially Available - Requires Compilation and Processing, Thailand currently does not have systematic Effective Population Size (Ne) data for most species. However, census population data exists for certain species from various agencies. The country is in the developing stage for this indicator and requires significant methodological development and inter-agency coordination. | EN |

B.1 Services provided by ecosystems Headline GBF-INDICATOR-B1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Provision, Regulation, Supporting Service** | Dry Deciduous Dipterocarp Forest, Sakornakorn | 2024 | Baht/Rai/year | 106967.72 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Angthong | 2024 | Baht/Rai/year | 104170.92 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Maehongsorn | 2024 | Baht/Rai/year | 82269.76 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Dry Evergreen Forest, Rayong | 2024 | Baht/Rai/year | 120192.78 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Cultural Service** | Green Space, Khung Bangkachao, Samut Prakan | 2023 | Million Baht | 107.3 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Regulation Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million tons $CO_2$ | 41 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Yes | **Cultural Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million Baht | 111 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

7.1 Index of coastal eutrophication

Headline GBF-INDICATOR-7.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | **No** | MWQI (Proxy) | 2020 | % | 76 | Agencies: PCD, DMCR |
| No | **No** | MWQI (Proxy) | 2021 | % | 72 | Agencies: PCD, DMCR |
| No | **No** | MWQI (Proxy) | 2022 | % | 74 | Agencies: PCD, DMCR |
| No | **No** | MWQI (Proxy) | 2023 | % | 74 | Agencies: PCD, DMCR |

**Comments**

Remark: 1/ Thailand is currently developing the methodology and data collection system for the Index of Coastal Eutrophication Potential (ICEP) as defined in the Global Biodiversity Framework. While the standard ICEP calculation requires nitrogen, phosphorus, and silica flux data at river mouths, Thailand currently uses the Marine Water Quality Index (MWQI) as a proxy indicator pending full ICEP implementation.

2/ The MWQI is calculated from eight parameters: Dissolved Oxygen (DO), Total Coliform Bacteria (TCB), Phosphate-Phosphorus ($PO_4^{3-}$-P), Nitrate-Nitrogen ($NO_3^-$-N), Temperature (Temp.), Suspended Solids (SS), Acidity-Alkalinity (pH), Ammonia-Nitrogen ($NH_3$-N)

3/ The MWQI classification scale

| MWQI Score | Classification | Water Quality Status | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|
| 90-100 | Excellent | Pristine/Near-pristine | 5 | 3 | 1 | n.a. |
| 80-90 | Good | Healthy ecosystem | 60 | 47 | 59 | 55 |
| 50-80 | Fair | Moderately impacted | 26 | 40 | 31 | 39 |
| 25-50 | Poor | Degraded ecosystem | 8 | 7 | 7 | 5 |
| 0-25 | Very Poor | Severely degraded | 1 | 3 | 2 | 1 |
| Annual Average MWQI | | | 76 | 72 | 74 | 74 |

Remark : Annual Average MWQI = Σ(Class Midpoint × Percentage in Class)

Source : NSO, 2024 (https://www.nso.go.th/public/e-book/Indicators-Environment/Environment-Indicators-2567/150/#zoom=z)

EN

7.2 Pesticide environment concentration and/or aggregated total applied toxicity

Headline GBF-INDICATOR-7.2

**Source of Data**

No data available

**Please describe the situation**

Thailand does not currently calculate pesticide environment concentration or aggregated total applied toxicity directly. EN

12.1 Average share of the built-up area of cities that is green or blue space for public use for all

Headline GBF-INDICATOR-12.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Province** | Bangkok Metropolitan | 2020 | m2/person | 7.07 | Agency: BMA |
| Yes | **Province** | Bangkok Metropolitan | 2021 | m2/person | 7.31 | Agency: BMA |
| Yes | **Province** | Bangkok Metropolitan | 2022 | m2/person | 7.64 | Agency: BMA |
| Yes | **Province** | Bangkok Metropolitan | 2023 | m2/person | 7.75 | Agency: BMA |
| Yes | **Province** | Bangkok Metropolitan | 2024 | m2/person | 7.88 | Agency: BMA |
| Yes | **Province** | Bangkok Metropolitan | 2025 | m2/person | 8.11 | Agency: BMA |
| Yes | **Municipality Type** | City Municipalities | 2025 | m2/person | 4.31 | Agency: ONEP |
| Yes | **Municipality Type** | Town Municipalities | 2025 | m2/person | 5.35 | Agency: ONEP |
| Yes | **Municipality Type** | Sub-district Municipalities | 2025 | m2/person | 59.25 | Agency: ONEP |

**Comments**

Source: 1/ Bangkok Metropolitan data 2020-2025, Bangkok Metropolitan Administration

2/ Municipality Type data 2025, Office of Natural Resources and Environmental Policy and Planning, from Thai Green Urban (TGU) : https://tgu.onep.go.th/#/

EN

B.b Number of countries with policies or actions for implementing and monitoring the sustainable use of biodiversity and the maintenance and enhancement of nature's contributions to people, including ecosystem functions and services

Binary KMGBF-INDICATOR-BIN-B

**B.1 Does your country have policies and/or action plans aimed at ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services?**

Fully

**B.2 Does your country have policies and/or action plans aimed at ensuring the sustainable use of biodiversity?**

Fully

**B.3 Does your country monitor the sustainable use of biodiversity?**

Partially

**B.4 Does your country monitor the maintenance, restoration and enhancement of nature's contributions to people, including ecosystem functions and services for the benefit of present and future generations?**

Partially

**Comments**

Thailand has policies and plans in order to ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services, and ensuring the sustainable use of biodiversity.

- **The 5th National Biodiversity Strategy and Action Plan (2024-2030):** Contains directly relevant targets such as Target 5: Promote and support a bio-based economy, based on ecosystem services to improve people's living conditions and income and Target 6: Promote sustainable practices in production and service sectors, including agriculture, aquaculture, fisheries, livestock, forestry, and tourism.

In addition, Thailand is in the developmental phase of establishing a comprehensive ecosystem services monitoring system and does not yet have a national-level dataset on ecosystem services. Currently, Thailand has policies and action plans in place for implementing and monitoring the sustainable use of biodiversity and ecosystem services, which provide the foundation for future data collection.

EN

8.b Number of countries with policies to minimize the impact of climate change and ocean acidification on biodiversity and to minimize negative and foster positive impacts of climate action on biodiversity

Binary KMGBF-INDICATOR-BIN-8

**8.1 Does your country's national biodiversity strategy and action plan include actions to prevent or minimize the impacts of the following (select all that apply):**

Climate change

**8.2 Do your country's climate change policies address the impacts of climate change on biodiversity?**

Partially

**8.3 Do your country's other policies address the impacts of climate change on biodiversity?**

Partially

**8.4 Do your country's other policies address the impacts of ocean acidification on biodiversity?**

Partially

**8.5 Are the impacts of climate change on biodiversity monitored and reported on?**

No

**8.6 Are the impact of ocean acidification on biodiversity monitored and reported on?**

Partially

**8.7 Do your country's policies or action plans on the impact of climate change and ocean acidification contain the following types of actions designed to increase biodiversity resilience or reduce impacts (select all that apply):**

Mitigation
Adaptation
Disaster risk reduction
Nature-based solutions and/or ecosystem-based approaches
Policies to minimize negative and foster positive impacts of climate action on biodiversity

**8.8 Are measures included in your country's policies or actions plans to minimize the negative impacts of climate actions on biodiversity?**

Fully

**8.9 Are measures included in your country's policies or actions plans to foster positive impacts of climate actions on biodiversity?**

Fully

**Comments**

**The National Biodiversity Strategy and Action Plan include actions (8.1 - Climate change):** Thailand's 5th NBSAP comprises 3 strategies and 12 targets, with climate change impacts integrated into Target 4: Reduce threats to biodiversity arising from climate change. The NBSAP includes:

- Increasing of green spaces and efficiency in managing green areas in urban zones.
- Monitoring the implementation of Nature-based Solutions (NbS) to mitigate the impacts of climate change.

**Thailand's National Adaptation Plan (8.2 – Partially):** Focus on adaptation measures with co-benefits for greenhouse gas reduction, such as reforestation and development of green spaces that increase carbon storage while reducing floods and droughts. Conservation and restoration of ecosystems and biodiversity. Biodiversity is identified as one of the adaptation sectors (Natural Resources Management). However,a detailed impact analysis and assessment of potential negative impacts are still lacking.

**The policies address the impacts of climate change (8.3 – Partially):** Thailand's National Adaptation Plan Integration of Ecosystem-based Adaptation (EbA) and NbS principles in policies, with consideration of linkages to CBD and other conventions. However, the plan does not yet include an assessment of the potential negative impacts of climate measures on biodiversity.

**The policies address s the impacts of ocean acidification (8.4 – Partially):** Thailand has participated in the Ocean Acidification project with IOC-WESTPAC as specified under SDG 14.3.1. Various programs initiated to expand marine protected areas, reduce ocean acidification impacts, and protect coastal biodiversity.

**Monitoring the impacts of climate change on biodiversity (8.5 - No ):** Thailand has not yet analyzed and assessed the climate change on biodiversity, therefore there is no monitoring of the impacts.

**Monitoring the impacts of ocean acidification on biodiversity (8.6 - Partially):** The Department of Marine and Coastal Resources (DMCR) actively:

- Participates in the ongoing ocean acidification monitoring project by IOC-WESTPAC
- reviewed monitoring ocean acidification monitoring results from 160 points throughout the Gulf of Thailand and continuous monitoring of ocean acidification changes in Thai waters since 2016
- Report 4 parameters consist of pH, total alkalinity, dissolved inorganic carbon, and $CO_2$

**Policies or action plans on the impact of climate change and ocean acidification (8.7 – Mitigation, Adaptation, Disaster risk reduction, Nature-based solutions and/or ecosystem-based approaches, and Policies to minimize negative and foster positive impacts of climate action on biodiversity):** Thailand has comprehensive policies or action plans regarding the impacts of climate change and ocean acidification as follows:

- **Climate Change Master Plan 2015-2050** serves as the policy framework: Adaptation to climate change impacts, GHG reduction and promotion of low-carbon development, and Capacity building for climate change management.
- **Thailand's NAP** has been developed in alignment with relevant national policies, including the Climate Change Master Plan (2015-2050), the 5$^{th}$ NBSAP (2023-2027), and integrated with adaptation strategies such as Ecosystem-Based Adaptation (EbA) and Nature-Based Solutions (NbS).
- **Target 4 of the 5$^{th}$ NBSAP:** focuses on Reduce threats to biodiversity arising from climate change and pollution, including increasing urban green spaces, to restore and maintain ecosystem services, and monitoring the implementation of natural mitigation measures to reduce the impacts of global warming.

**Policies or actions plans to minimize the negative impacts of climate actions on biodiversity (8.8 – Fully):** Climate Change Master Plan 2015-2050 includes objectives to mitigate negative impacts, and Thailand's NAP integrate the EbA/NbS principles. However, a systematic and comprehensive approach encompassing all climate actions is still under development.

**Policies or actions plans to foster positive impacts of climate actions on biodiversity (8.9 – Fully):** Thailand has policies that promote positive impacts on biodiversity through several climate action initiatives:

- **BCG Economy Action Plan (2021-2027)** aims for the sustainability of resources and the environment, with relevant indicators including reducing natural resource consumption and increasing forest area.
- The CCMB project which supports ONEP and other agencies in integrating biodiversity and climate change targets and pursuing international goals.

EN

12.b Number of countries with biodiversity-inclusive urban planning referring to green or blue urban spaces — Binary — KMGBF-INDICATOR-BIN-12

**12.1 Does your country have urban areas under biodiversity-inclusive urban planning that incorporates the management of green or blue spaces for the conservation and sustainable use of biodiversity?**

Fully

**12.2 Does your country have urban areas under biodiversity-inclusive urban planning incorporating the management of green or blue spaces for ecosystem services and nature's contributions to people?**

Partially

**Comments**

**Urban areas under biodiversity-inclusive urban planning for the conservation and sustainable use of biodiversity (12.1 – Fully):** Thailand has implemented comprehensive under biodiversity-inclusive urban planning in key urban area, including Bangkok city, Pattaya pity, and Chiang Mai city by following these guidelines:

- **The Guidelines for the Implementation of Sustainable Green Space Management (2018-2037)**, which is currently in its second phase (2023-2027)
- **Measures for managing green spaces** with biodiversity considerations include promoting native plant species and controlling invasive alien species.

**Urban areas under biodiversity-inclusive urban planning for ecosystem services and nature's contributions to people (12.2 – Partially):** Thailand has implemented comprehensive under biodiversity-inclusive urban planning in primary urban area such as:

- **Bangkok's** Green and Blue Infrastructure projects specifically address urban ecosystem services (parks and manage canals for an urban ecosystem.)
- **Pattaya** has urban development plan that considers blue space and the conservation of coastal resources.
- **Chiang Mai** has an integrated urban planning that combines green space management with the conservation of biodiversity urban area.

Currently, Thailand is implementing new urban development plans in line with the New Urban Agenda to cover all cities nationwide.

EN

Develop and Improve Existing Legal Tools and Regulations to Effectively Support the Achievement of National Biodiversity Targets (NBT 12) **(National)**

**Briefly describe the main actions taken to implement the target**

Thailand has undertaken comprehensive actions to integrate biodiversity into decision-making frameworks at multiple levels:

- **National-level integration**: Biodiversity has been incorporated into Thailand's 20 Year National Strategy (2018-2037), particularly strategies 4 and 6, and the Thirteenth National Economic and Social Development Plan (2023-2027), which integrates environmental development with community income generation. The Master Plan under The National Strategy (2023-2037) Issue 19 addresses Integrated Water Resources Management to promote conservation and restoration of natural water sources.
- **Legal and institutional frameworks**: The Community Forest Act B.E. 2562 (2019) recognizes community rights in forest management, linking conservation with income generation through highland development projects and community-based ecotourism. Local Development Plans (2023-2027) are beginning to integrate natural resource conservation with community economic development. Additionally, Thailand is in the process of developing a Biodiversity Act to establish a comprehensive legal framework for biodiversity conservation and sustainable use at the national level.
- **Sectoral mainstreaming**: Multiple sectors have integrated biodiversity through policies and regulations: agriculture (Good Agricultural Practices by MOAC, Organic Farming Handbook by DOA, New Theory Agriculture by DOAE); fisheries (Royal Ordinance on Fisheries No.2 B.E.2017, Sustainable Management of Fisheries); forestry (Community Forest Act B.E. 2562, Thailand Criteria and Indicators for Sustainable Management of Planted Forests and Community Forests); aquaculture (Good Aquaculture Practice); and tourism (ecotourism management knowledge development by DOT).
- **Policy alignment**: Thailand's 5th NBSAP aligns implementation with all 23 GBF targets, supported by cross-sectoral policies and Thailand's Biodiversity Finance Plan (2023-2027) developed through BIOFIN ensures fiscal and financial flows support GBF goals and is linked to the 5th NBSAP.

EN

**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

Thailand has made progress in integrating biodiversity into decision-making across multiple dimensions, though significant gaps remain:

- **Fully achieved Policy and Financial alignment**: Thailand has established comprehensive frameworks to align national policies and financial flows with the Kunming-Montreal Global Biodiversity Framework. The 5th National Biodiversity Strategy and Action Plan (NBSAP) provide systematic alignment with all 23 GBF targets, supported by cross-sectoral policies that ensure coordinated implementation. Complementing this policy framework, the Thailand Biodiversity Finance Plan (2023-2027), developed through the BIOFIN initiative, provides a strategic approach to mobilizing and directing fiscal and financial resources toward biodiversity conservation and sustainable use, ensuring that funding mechanisms support the achievement of both national and global biodiversity objectives.
- Partially achieved **Government integration**: Biodiversity considerations have been embedded in key national frameworks including the 20 Year National Strategy, the Thirteenth National Economic and Social Development Plan, and the Master Plan for Integrated Water Resources Management. The Community Forest Act B.E. 2562 (2019) represents a significant achievement in **recognizing community rights in forest management and linking conservation with income generation.** Local Development Plans (2023-2027) are beginning to integrate natural resource conservation with community economic development. However, integration is not yet systematic across all levels of government, with biodiversity often treated as an add-on rather than a core component of decision-making.
- **Under development of Environmental economic accounting**: Thailand has initiated efforts to develop environmental economic accounting systems. The National Statistical Office (NSO) is working on the SEEA Central Framework with some partial environmental accounts established for water, energy, and air emissions. SEEA Ecosystem Accounting is under development through collaboration between NSO, ONEP, and NESDC. Natural Capital Accounting and Ecosystem Services Valuation have begun in pilot areas, and specific studies have been conducted on ecosystem service values including mangroves for coastal protection, coral reefs, and headwater forests. However, comprehensive environmental economic accounting that covers all ecosystems remains a significant gap, limiting the ability to fully integrate biodiversity values into economic planning and decision-making processes.
- **Partially achieved Sectoral mainstreaming**: Biodiversity integration is evident across key economic sectors through specific policies and practices. Agriculture has integrated biodiversity through Good Agricultural Practices, organic farming programs, and New Theory Agriculture. The Fisheries sector has adopted sustainable management frameworks through the Royal Ordinance on Fisheries (No.2). The Forestry sector has implemented the Community Forest Act and sustainability criteria for planted and community forests. Aquaculture has adopted Good Aquaculture Practice standards. The tourism sector has promoted ecotourism management through knowledge development and dissemination to tourism personnel and communities. While these sectoral initiatives demonstrate progress, mainstreaming remains inconsistent and not yet comprehensive across all relevant sectors.

EN

**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

Key challenges in achieving Target include:

- **Lack of systematic integration**: Biodiversity is often treated as an add-on component rather than being systematically embedded as a core element in decision-making processes across all levels of government and sectors.
- **Incomplete environmental economic accounting systems** do not yet comprehensively cover all ecosystems, limiting the ability to fully value and integrate biodiversity considerations into economic planning and decision-making.
- **Implementation gaps between policy and practice**: While frameworks and policies exist, translating these into consistent on-the-ground action across all administrative levels remains challenging.

To address these challenges and further strengthen implementation, Thailand will focus on the following approaches:

- **Expand environmental economic accounting**: Complete the SEEA Ecosystem Accounting framework and extend Natural Capital Accounting to cover all major ecosystem types, ensuring biodiversity values are consistently reflected in national and sectoral economic planning.
- **Strengthen capacity building**: Implement comprehensive training programs for government officials at all levels on biodiversity integration, environmental accounting, and ecosystem-based decision-making.
- **Enhance coordination mechanisms**: Establish clear inter-agency coordination platforms and accountability frameworks to ensure biodiversity considerations are systematically integrated across sectors and administrative levels.

**Improve data and monitoring systems**: Develop comprehensive biodiversity monitoring and information systems that support evidence-based decision-making and track progress in biodiversity mainstreaming.

EN

**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

Implementation examples related to this target are not reported in the current national report. At this stage, practical implementation examples at the project or local level will be consolidated and reported in subsequent reporting cycles, once systematic data collection and evaluation mechanisms are fully in place.

EN

**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

Implementation of this target, once comprehensive monitoring systems are established, will contribute to multiple Sustainable Development Goals and international commitments:

- **SDG 15 (Life on Land)**: Biodiversity integration in forestry policies and the Community Forest Act supports SDG 15.1, 15.2, and 15.9 by ensuring sustainable forest management and mainstreaming biodiversity values into decision-making at all levels.
- **SDG 2 (Zero Hunger)**: Integration of biodiversity in agricultural policies through Good Agricultural Practices, organic farming, and New Theory Agriculture supports SDG 2.4 on sustainable food production systems that maintain ecosystems and strengthen capacity for adaptation to climate change.
- **SDG 17 (Partnerships for the Goals)**: Multi-agency collaboration between NSO, ONEP, and NESDC in developing SEEA Ecosystem Accounting, cross-sectoral biodiversity mainstreaming, and the Thailand Biodiversity Finance Plan exemplifies SDG 17.14 on policy coherence for sustainable development and SDG 17.16 on multi-stakeholder partnerships.

EN

## Indicator Data

D.1 International public funding, including official development assistance for conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.1

**Source of Data**

Use the available data (pre-populated data)

**Data**

Download

| Has disaggregation | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|
| Yes | Recipient | 2015 | USD (millions) | 2.85982 | |
| Yes | Recipient | 2016 | USD (millions) | 5.20859 | |
| Yes | Recipient | 2017 | USD (millions) | 25.27418 | |
| Yes | Recipient | 2018 | USD (millions) | 2.92033 | |
| Yes | Recipient | 2019 | USD (millions) | 5.94758 | |
| Yes | Recipient | 2020 | USD (millions) | 5.62016 | |
| Yes | Recipient | 2021 | USD (millions) | 6.50848 | |
| Yes | Recipient | 2022 | USD (millions) | 20.56771 | |

**Global source of data**

OECD Data Explorer

**Indicator providers**

OECD

**Description**

**This data was prepopulated from Target Tracker.**

This indicator measures international public finance provided to developing countries for the conservation and sustainable use of biodiversity and ecosystems. This includes official development assistance (ODA),other official flows (OOF) and private sector instruments (PSI) from the DAC Creditor Reporting System (CRS) from bilateral DAC donors, non-DAC donors, as well as contributions from multilateral institutions, and complemented with flows reported under the Total Official Support for Sustainable Development (TOSSD) framework.

The data displayed here is the annual official development assistance for biodiversity provided by OECD Development Assistance Committee (DAC) donors, through the Creditor Reporting System (CRS). Total ODA transferred for use in biodiversity and conservation efforts are displayed by recipient and by donor in constant US dollars.

## D.2 Domestic public funding on conservation and sustainable use of biodiversity and ecosystems

Headline GBF-INDICATOR-D.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | - | - | 2022 | USD (million) | 143.33 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2023 | USD (million) | 280.31 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2024 | USD (million) | 185.39 | Agencies: eMENSCR, BIOFIN |

**Comments**

| | |
|---|---|
| Source: Biodiversity-Related Expenditures from the Government, BIOFIN (2024)<br>Exchange Rates: FY 2022: 34.16 THB/USD, FY 2023: 34.16 THB/USD, FY 2024 (approved projects only): 34.16 THB/USD | EN |

## D.3 Private funding (domestic and international) on conservation and sustainable use of biodiversity and ecosystems

Headline GBF-INDICATOR-D.3

**Source of Data**

No data available

**Please describe the situation**

| | |
|---|---|
| Thailand does not currently have comprehensive data on private sector (domestic and international) funding for biodiversity conservation and sustainable use, but the country has begun integrating private sector participation in biodiversity conservation through: • NBSAP Implementation Reporting: Private sector companies and NGOs are encouraged to report biodiversity-related activities aligned with Thailand's 4th National Biodiversity Strategy and Action Plan • ONEP Survey Initiative: Office of Natural Resources and Environmental Policy and Planning (ONEP) administers surveys to private sector and NGOs on NBSAP implementation activities • Voluntary Disclosure: Initial framework for companies to self-report biodiversity expenditures and activities Presently, Thailand conducted a preliminary survey showing limited examples (~3.56 million USD from small sample, 2020-2022) but lacks comprehensive tracking system. | EN |

## 14.b Number of countries integrating biodiversity and its multiple values into policies, regulations, planning, development processes, poverty eradication strategies and, as appropriate, national accounts, within and across all levels and across all sectors, and progressively aligning all relevant public and private activities and fiscal and financial flows with the goals and targets of the Framework

Binary KMGBF-INDICATOR-BIN-C-14

**14.1 Does your country integrate biodiversity and its multiple values into policies, regulations, planning, development processes and poverty eradication strategies at all levels of government?**

Partially

**14.2 Does your country use environmental economic accounting to quantify the monetary and non-monetary values of biodiversity?**

Under development

**14.3 Does your country integrate biodiversity and its multiple values into policies, regulations, plans and strategies across all sectors to ensure their mainstreaming?**

Partially

**14.4 Does your country have policies, regulations, strategies or plans in place to progressively align all relevant public and private activities with the goals and targets of the Framework?**

Fully

**14.5 Are policies, regulations, strategies or plans in place to progressively align fiscal and financial flows with the goals and targets of the Framework?**

Fully

**Comments**

**Integrate biodiversity into all levels of government (14.1 – Partially):** Thailand has integrated biodiversity into several national-level frameworks:

- **Thailand's 20 Year National Strategy (2018 – 2037):** particularly strategy 4 on social equality and equity, and strategy 6 on government efficiency and better access to public services.
- **The Thirteenth National Economic and Social Development Plan (2023-2027):** integrated environmental development with community income generation.
- **The Master Plan under The National Strategy (2023 – 2037):** Issue 18 (Sustainable Growth) — Addresses the conservation and restoration of biodiversity both in-situ and ex-situ, particularly for endangered wildlife and plant species, through measures to prevent encroachment and forest destruction, promote land use management in forest areas, and restore forest resources to a healthy state and Issue 19 (Integrated Water Resources Management) - develop water management and promote the conservation and restoration of natural water sources to achieve good environmental conditions and ecosystems.
- **The Community Forest Act B.E. 2562 (2019):** Recognizes community rights in forest management, linking conservation with income generation through highland development projects, and community-based ecotourism projects.
- **The Local Development Plan (2023 – 2027):** Beginning to integrate natural resource conservation with community economic development.

**Use environmental economic accounting (14.2 - Under development):**

- **NSO:** SEEA Central Framework under development with partial environmental accounts establishedfor tourism as pilot study.
- **Pilot studies on Ecosystem Services Valuation** have been conducted, such as the value of mangroves for coastal protection, and forest valuation.

However, environmental economic accounting in Thailand does not yet comprehensively cover all ecosystems.

**Mainstream biodiversity across all sectors (14.3 – Partially):** Multiple sectors in Thailand demonstrate integration through policies, regulations, plans, and strategies to ensure comprehensive mainstreaming:

- **Agriculture:** MOAC (Good Agricultural Practices), DOA (Organic Farming Handbook), and DOAE (New Theory Agriculture).
- **Fisheries:** Department of Fisheries (Royal Ordinance on Fisheries (No.2) B.E.2017, Sustainable Management of Fisheries).
- **Forestry:** Royal Forest Department (The Community Forest Act B.E. 2562 (2019), Thailand Criteria and Indicators for Sustainable Management of Planted Forests and Community Forests).
- **Aquaculture:** Department of Fisheries (Good Aquaculture Practice).
- **Tourism:** DOT has promoted, developed, and disseminated knowledge on ecotourism management to personnel responsible for tourist attractions, relevant stakeholders, and nearby communities.

**Align all relevant and private activities with the goals and targets of the Framework (14.4 – Fully):** Thailand has an 5$^{th}$ NBSAP with implementation aligned with all 23 GBF targets, and also has policies from various sectors supporting implementation to achieve these goals.

**Align fiscal and financial flows with the goals and targets of the Framework (14.5 – Fully):**

- **Biofin:** Thailand Biodiversity Finance Plan (2023-2027) to preserving its rich biodiversity while aligning with the global objectives set forth in KM-GBF. This Plan is intricately linked to 5$^{th}$ NBSAP for ensuring a cohesive approach to environmental stewardship.

EN

Strengthen and Develop Capabilities and Partnerships, Including Technology Transfer in Research, Science, and Innovation for Biodiversity (NBT 11) **(National)**

**Briefly describe the main actions taken to implement the target**

Thailand has taken the following significant actions in order to strengthen capacity-building, technology transfer, and scientific and technical cooperation for biodiversity:

**Institutional Framework Development:**

- Established mechanisms to strengthen capacity-building related to biodiversity at national level, including through the 20-Year National Strategy (2018-2037), 13th National Economic and Social Development Plan (2023-2027), and Master Plan Issue 19 on Natural Resources and Environmental Management.
- Prepared National Biodiversity Strategy and Action Plan (NBSAP) consistent with international standards

**Capacity Building Programs:**

- Programs enhancing capacity for protected area management, community forests, coastal ecosystem management, forest fire management, and multi-sector cooperation
- Community-based ecotourism training and sustainable management of biological diversity

**Financial and Technical Support:**

- Department of National Parks (DNP) provides capacity building and technical support to communities
- Department of Marine and Coastal Resources (DMCR) implements capacity building on coastal ecosystem management
- Office of Natural Resources and Environmental Policy and Planning (ONEP) conduct capacity building through GEF Projects and BIOFIN Thailand, including Needs Assessment for financial and capacity gaps
- Ministry of Agriculture and Cooperatives works with communities to strengthen capacity for sustainable biodiversity use
- International Cooperation: The documents highlight Thailand's participation in North-South Cooperation and South-South Cooperation.
- Technology Transfer and Innovation:
  - Participation in GBIF and Asia-Pacific Biodiversity Observation Network
  - Biodiversity monitoring, eDNA, molecular techniques, and citizen science platforms

However, many cooperation projects focus on providing financial support rather than technology transfer itself, requiring more emphasis on appropriate technology transfer.

EN

**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

The main outcomes achieved comprise

- **Enhanced Institutional Capacity:** Successfully integrated biodiversity considerations into national planning frameworks and created coordination mechanisms between multiple government departments.
- **Strengthened Human Resource Capacity**: Trained over 500 communities in various biodiversity management skills including protected area management, community forest management, sustainable ecotourism, forest fire management, and biological diversity sustainable use
- **Educational Infrastructure:** Established extensive network of over 10,000 schools incorporating biodiversity education
- **Scientific and Technical Cooperation:** Active participation in global biodiversity information networks (GBIF), Regional cooperation through ASEAN mechanisms, Multiple bilateral and multilateral research partnerships.

EN

**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

**Key Challenges Identified:**

- **Systematic Coordination Gaps:** Current implementation lacks systematic coordination between different levels and sectors, insufficient integration between various national projects and programs, need for better alignment of capacity building efforts across agencies
- **Technology Transfer Limitations:** Many international cooperation projects focus primarily on financial support, insufficient emphasis on actual technology transfer and adaptation, gap between available technologies and local capacity to absorb and apply them, need for more appropriate and context-specific technology solutions
- **Sustainability of Capacity Building:** Concern about long-term sustainability of capacity once external support ends, need for institutionalized, ongoing capacity development mechanisms, dependence on project-based rather than programmatic approaches

**Resource Constraints:** Limited financial resources for scaling successful initiatives, insufficient technical personnel at subnational levels. need for increased investment in capacity building infrastructure

EN

**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

Implementation examples related to this target are not reported in the current national report. At this stage, practical implementation examples at the project or local level will be consolidated and reported in subsequent reporting cycles, once systematic data collection and evaluation mechanisms are fully in place.

EN

**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

Implementation of this target will contribute to several Sustainable Development Goals (SDGs) and international agreements:

**SDG 17 (Partnerships for the Goals)** is most directly aligned, particularly:

- Target 17.6 on enhancing North-South, South-South and triangular cooperation on science, technology and innovation

- Target 17.7 on promoting development, transfer and diffusion of environmentally sound technologies
- Target 17.9 on enhancing capacity-building support to developing countries

**SDG 15 (Life on Land)** benefits through strengthened technical capacity to implement terrestrial biodiversity conservation measures, supporting targets 15.1-15.9 on ecosystem restoration, sustainable forest management, and combating desertification.

**SDG 14 (Life Below Water)** is supported through enhanced capacity for marine and coastal biodiversity management, particularly targets 14.2 on sustainable ocean management and 14.a on increasing scientific knowledge and research capacity.

**SDG 2 (Zero Hunger)** connects through capacity-building for agrobiodiversity conservation and sustainable agricultural practices (Target 2.5 on genetic diversity).

**SDG 13 (Climate Action)** intersects through technology transfer for nature-based solutions and ecosystem-based adaptation approaches.

Beyond the SDGs, implementation relates to **UNFCCC and Paris Agreement**: Technology transfer and capacity-building mechanisms support climate-biodiversity synergies, particularly for nature-based solutions and ecosystem-based adaptation. **UNCCD** (Desertification Convention): Shared focus on capacity-building for land restoration and sustainable land management in dryland ecosystems. **Ramsar Convention**: Scientific cooperation strengthens wetland conservation and wise use practices. **CITES**: Capacity-building supports wildlife trade monitoring and enforcement capabilities.

EN

## Indicator Data

D.1 International public funding, including official development assistance for conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.1

**Source of Data**

Use the available data (pre-populated data)

**Data**

Download

| Has disaggregation | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|
| Yes | Recipient | 2015 | USD (millions) | 2.85982 | |
| Yes | Recipient | 2016 | USD (millions) | 5.20859 | |
| Yes | Recipient | 2017 | USD (millions) | 25.27418 | |
| Yes | Recipient | 2018 | USD (millions) | 2.92033 | |
| Yes | Recipient | 2019 | USD (millions) | 5.94758 | |
| Yes | Recipient | 2020 | USD (millions) | 5.62016 | |
| Yes | Recipient | 2021 | USD (millions) | 6.50848 | |
| Yes | Recipient | 2022 | USD (millions) | 20.56771 | |

**Global source of data**

OECD Data Explorer

**Indicator providers**

OECD

**Description**

**This data was prepopulated from Target Tracker.**

This indicator measures international public finance provided to developing countries for the conservation and sustainable use of biodiversity and ecosystems. This includes official development assistance (ODA),other official flows (OOF) and private sector instruments (PSI) from the DAC Creditor Reporting System (CRS) from bilateral DAC donors, non-DAC donors, as well as contributions from multilateral institutions, and complemented with flows reported under the Total Official Support for Sustainable Development (TOSSD) framework.

The data displayed here is the annual official development assistance for biodiversity provided by OECD Development Assistance Committee (DAC) donors, through the Creditor Reporting System (CRS). Total ODA transferred for use in biodiversity and conservation efforts are displayed by recipient and by donor in constant US dollars.

D.2 Domestic public funding on conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | - | - | 2022 | USD (million) | 143.33 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2023 | USD (million) | 280.31 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2024 | USD (million) | 185.39 | Agencies: eMENSCR, BIOFIN |

**Comments**

Source: Biodiversity-Related Expenditures from the Government, BIOFIN (2024)

Exchange Rates: FY 2022: 34.16 THB/USD, FY 2023: 34.16 THB/USD, FY 2024 (approved projects only): 34.16 THB/USD

EN

D.3 Private funding (domestic and international) on conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.3

**Source of Data**

No data available

**Please describe the situation**

Thailand does not currently have comprehensive data on private sector (domestic and international) funding for biodiversity conservation and sustainable use, but the country has begun integrating private sector participation in biodiversity conservation through: • NBSAP Implementation Reporting: Private sector companies and NGOs are encouraged to report biodiversity-related activities aligned with Thailand's 4th National Biodiversity Strategy and Action Plan • ONEP Survey Initiative: Office of Natural

Resources and Environmental Policy and Planning (ONEP) administers surveys to private sector and NGOs on NBSAP implementation activities • Voluntary Disclosure: Initial framework for companies to self-report biodiversity expenditures and activities Presently, Thailand conducted a preliminary survey showing limited examples (~3.56 million USD from small sample, 2020-2022) but lacks comprehensive tracking system. EN

20.b Number of countries that have taken significant action to strengthen capacity-building and development and access to and transfer of technology, and to promote the development of and access to innovation and technical and scientific cooperation Binary KMGBF-INDICATOR-BIN-20

**20.1 Does your country have plans, policies or instruments for addressing capacity-building and development needs for biodiversity?**

Partially

**20.2 Does your country have measures to ensure the full and effective participation of indigenous peoples and local communities, women and girls, children and youth and people with disabilities in capacity-building and development for the conservation and sustainable use of biodiversity? (Select all that apply)**

Women and girls
Children and youth
Persons with disabilities
Indigenous peoples and local communities

**20.3 Has your country undertaken a national capacity self-assessment or other processes for assessing the capacity needs for the conservation and sustainable use of biodiversity?**

Partially

**20.4 Has your country undertaken a national assessment of the capacity-building and development needs of indigenous peoples and local communities, women and girls, children and youth and people with disabilities for the conservation and sustainable use of biodiversity? (Select all that apply)**

Women and girls
Children and youth
Persons with disabilities
Indigenous peoples and local communities

**20.5 Has your country established partnerships to foster joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capabilities, including through South-South, North-South and triangular cooperation?**

Partially

**Comments**

**Taken significant action to strengthen capacity-building and development and access to and transfer of technology, and to promote the development of and access to innovation and technical and scientific cooperation (20.1 - Partially)** There are national-level plans that integrate capacity development issues related to natural resources, such as the 20-Year National Strategy (2018-2037), the 13th National Economic and Social Development Plan (2023-2027), and Master Plan Issue 19 on Natural Resources and Environmental Management. An NBSAP exists but is currently being updated to a new version. Key agencies such as the Department of National Parks, Wildlife and Plant Conservation, the Department of Marine and Coastal Resources, and the Department of Water Resources. There are highland development and coastal community projects, Community-based Ecotourism projects, and degree-level and short-term courses on conservation.

However, there is no specific integrated national capacity development plan dedicated to biodiversity.

**Measures to ensure the full and effective participation of indigenous peoples and local communities, women and girls, children and youth and people with disabilities in capacity-building and development for the conservation and sustainable use of biodiversity (20.2 - Women and girls, Children and youth, People with disabilities, and Indigenous peoples and local communities)** Thailand has the Community Forest Act, constitutional guarantees of rights, and capacity development programs for community forest committees in over 500 communities across various areas regardless of inequalities in various areas such as gender, disability, and ethnic groups.

There is also have specific projects for women such as women in mangrove management and farmer housewife groups. However, these are not systematic and not comprehensive. There is a lack of sex-disaggregated data, and participation at the policy level remains limited.

**Undertaken a national capacity self-assessment or other processes for assessing the capacity needs for the conservation and sustainable use of biodiversity (20.3 - Partially)**

There are assessments within the CBD National Report framework (the 6th National Report and currently preparing the 7th National Report) and NBSAP Review that identify capacity gaps.

Sector-specific agencies conduct assessments, such as:

- **DNP:** assesses personnel needs and skills in protected area management
- **DMCR:** assesses capacity for marine protected area management
- **TSRI (Thailand Science Research and Innovation):** assesses research capacity
- **The National Research Council of Thailand (NRCT):** assesses research potential through international frameworks such as GEF Projects and the BIOFIN Thailand Needs Assessment, which evaluates the financial gap and capacity gap.
- **The Department of Agriculture**, in collaboration with agencies involved in plant genetic conservation: assess the management potential for the conservation and sustainable use of biodiversity.

However, there is no comprehensive system-wide assessment. Assessments across different agencies and projects are not integrated, and there is no central database to compile all assessment results.

**Undertaken a national assessment of the capacity-building and development needs of indigenous peoples and local communities, women and girls, children and youth and people with disabilities for the conservation and sustainable use of biodiversity (20.4 – Women and girls, Children and youth, People with disabilities, and Indigenous peoples and local communities)** Thailand has Capacity development programs for community forest committees in over 500 communities across various areas, with national community forest networks and community learning centers regardless any unequity. For children and youth, there is a basic education curriculum that integrates environmental content, over 10,000 Green Schools projects, youth nature conservation camps, and youth environmental networks. However, participation is mostly informational rather than joint decision-making.

**Established partnerships to foster joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capabilities, including through South-South, North-South and triangular cooperation (20.5 - Partially):**

**North-South Cooperation:** includes bilateral cooperation with Japan (JICA), Germany (GIZ), United States, Europe, and Australia (ACIAR) on projects for protected area management system development, sustainable forest management, and natural resources research. Multilateral cooperation exists with UNDP (GEF-UNDP Projects and BIOFIN Thailand), UNESCO (MAB Programme and World Heritage), and IUCN (Red List and protected area management).

**South-South Cooperation:** operates within the ASEAN framework through the ASEAN Centre for Biodiversity (ACB), bilateral cooperation in ASEAN with Malaysia, Indonesia, Vietnam, Laos, Cambodia, and cooperation with China through Lancang-Mekong Cooperation and with India.

**Triangular Cooperation:** includes the Japan-ASEAN Integration Fund (JAIF), EU-ASEAN Cooperation, and Australia-Mekong Partnership, where Thailand serves as both a recipient and provider of knowledge.

**International research networks:** include GBIF BarCode of Life, and Asia-Pacific Biodiversity Observation Network. Technology development includes Remote Sensing, eDNA, Molecular Techniques, and Citizen Science Platforms.

However, many cooperation projects end when funding support expires (lacking continuity), some technologies have high costs and are difficult to maintain, and budget allocation from Thailand is insufficient. EN

Develop a Biodiversity Data System and Knowledge Connected with All Sectors to Support Decision-Making and Operations in Biodiversity Management, and Raise Awareness about Biodiversity and Ecosystems (NBT 10) **(National)**

**Briefly describe the main actions taken to implement the target**

Thailand has undertaken significant actions to enhance biodiversity knowledge accessibility and stakeholder participation through the following key initiatives:

**Biodiversity Monitoring Platform:**
Thailand is currently developing a biodiversity monitoring platform to track progress toward national targets in NBSAP 2023-2027 and compile data for GBF indicators and binary indicators reporting. Future steps will require consultation with relevant data-collecting agencies to systematically assess: (a) availability, coverage, and quality of data for each indicator; (b) integration of traditional knowledge in target assessments.
As part of this effort, Thailand has begun integrating indigenous and local knowledge (ILK) into its national ecosystem assessment (NEA) process through a multi-evidence based approach. The Field School Project (2023–2025), implemented by the Princess Maha Chakri Sirindhorn Anthropology Centre (SAC) and the Social Research Institute of Chulalongkorn University (CUSRI), engaged Chao Lay communities in Phang Nga and Krabi Provinces in participatory biodiversity data collection and ecosystem mapping. This initiative demonstrates a practical model for incorporating ILK alongside scientific datasets in national biodiversity monitoring.

**Development of the Thailand Biodiversity Information Facility (TH-BIF):**
- Establishing a centralized national database system to compile, manage and disseminate biodiversity information, including species occurrence records, distribution data and ecological information from various sources across the country
- Integrating Thailand's Red List assessments and conservation status information for threatened species into the platform to support conservation planning and decision-making
- Developing governance structures, data-sharing protocols and institutional arrangements to facilitate collaboration among stakeholders

**Legal frameworks for participation and rights:**
- The Constitution of the Kingdom of Thailand B.E. 2560 (2017) recognizes citizens' rights to participate in natural resource management and environmental decision-making processes
- The Protection and Promotion of Ethnic Groups' Way of Life Act, B.E. 2568 (2025), effective September 19, 2025, provides Thailand's first comprehensive legal framework protecting cultural rights and promoting the capacity of ethnic groups

**Land use documentation systems:**
- Recording and monitoring land use in forest areas where local and indigenous communities reside, providing conditional use permits and tracking land tenure arrangements.
- Implemented under the Wild Animal Conservation and Protection Act, B.E. 2562 (2019), Section 121, covering land holdings in wildlife preservation zones and hunting prohibited zones
- Implemented under the National Parks Act, B.E. 2562 (2019), Section 64, covering land holdings in national parks (total area: 408,947.647 hectares)

EN

**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

**Monitoring and Evaluation Framework:** A national monitoring and evaluation system for NBSAP 2023-2027 and national targets is currently under development. Thailand is establishing a comprehensive methodology to assess NBSAP indicators, which will be analyzed and refined for alignment with headline indicators in future reporting.

**Thailand Biodiversity Information Facility (TH-BIF):** Thailand has developed TH-BIF as its national biodiversity information system (https://thbif.onep.go.th/), providing species occurrence data, conservation status and Red List assessments. The system incorporates georeferenced data and threatened species information from Red List assessments, supporting conservation prioritization, planning and management at multiple scales.

**Land Use and Tenure Measurement for Indigenous Peoples and Local Communities:** Thailand has established a data collection methodology for land use and land tenure in forest areas where indigenous peoples and local communities reside, aligned with international standards for measuring land tenure security. Data is collected from:

- Forest villages and national park use zones inside protected areas: 1,090,118.61 hectares as of 2025 (Department of National Parks, Wildlife and Plant Conservation)

The methodology covers land holdings under the Wild Animal Conservation and Protection Act, B.E. 2562 (2019) Section 121 (681,170.96 hectares in wildlife sanctuaries and non-hunting zones) and National Parks Act, B.E. 2562 (2019) Section 64 (408,947.65 hectares in national parks).

**Legislative Milestone:** A significant achievement was the enactment of the Protection and Promotion of Ethnic Groups' Way of Life Act, B.E. 2568 (2025), effective September 19, 2025. This landmark legislation represents Thailand's first comprehensive legal framework protecting cultural rights and promoting the capacity of ethnic groups. Key provisions include recognition of rights to maintain traditional lifestyles, cultures, languages and beliefs; establishment of the National Committee and Council for Ethnic Groups; creation of a central ethnic database for policy planning; and designation of protected areas for ethnic group livelihoods with co-management arrangements between communities and the state for natural resource governance.

While this framework provides proxy data for indicator 22.1, further development is needed to comprehensively capture traditional territories of indigenous peoples and local communities to fully achieve the GBF target.

**Integration of Indigenous and Local Knowledge into Biodiversity Assessment**
- Thailand has accumulated over two decades of experience in community-based biodiversity monitoring through participatory research methodologies, most notably Thai Baan Research and its derivatives — Tai Baan Research, Chao Baan Research, and Pagaka'nyaw Research. These approaches, developed and refined since year 2000 across river basins, coastal areas, and marine ecosystems, have generated substantial datasets on species occurrence, ecosystem change, and traditional resource management practices that complement and, in many cases, fill gaps in formal scientific datasets.
- The national ecosystem assessment process has formally incorporated ILK through structured participatory methods, including interviews, participatory mapping, focus groups, oral history documentation, and field schools. Data collected through these methods has contributed to assessments of coastal and marine ecosystem status in the Gulf of Thailand and the Andaman Sea, with knowledge holders from Chao Lay communities and small-scale fisherfolk providing observations on species abundance, seasonal patterns, habitat change, and climate-related shifts that extend beyond the temporal and spatial coverage of scientific monitoring programmes.

EN

**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

**Key Challenges and Gaps:**

- **International Connectivity Gap:** TH-BIF is not connected to the Global Biodiversity Information Facility (GBIF), limiting international data sharing and Thailand's participation in global biodiversity knowledge networks.
- **Institutional Coordination Challenges:** Fragmented data ownership across multiple government agencies, universities and research institutions, coupled with lack of clear data-sharing policies, formal coordination mechanisms, and disconnect between academic research and government databases.
- **Data Aggregation and Assessment Gap:** While national biodiversity datasets exist across various government agencies (DNP, DOF, DMR, etc.), these have not yet been systematically assessed or aggregated to calculate the percentage of headline indicators with available data sources as required by indicator 21.1, hindering comprehensive evaluation of data availability and identification of monitoring gaps.
- **Information Gaps on Inclusive Participation:** Thailand lacks comprehensive disaggregated data to monitor inclusive participation in biodiversity decision-making and access to justice. Insufficient quantitative and qualitative information exists on participation rates and quality across different stakeholder groups (indigenous peoples, local communities, women, youth, persons with disabilities and marginalized groups), making it difficult to assess whether participation meaningfully influences biodiversity and natural resource decisions.
- **Incomplete Recognition of Indigenous Peoples and Local Communities' Land Rights:** Despite data collection on land use in forest areas, formal legal recognition of customary land tenure and traditional territories remains limited. Many communities living in or near protected areas lack secure land rights, creating ongoing conflicts and limiting their ability to participate meaningfully in decision-making.
- **ILK Documentation and Integration Gap**: Despite more than two decades of participatory research generating substantial ILK datasets on coastal and marine ecosystems, this knowledge has not yet been systematically aggregated or integrated into national biodiversity information systems such as TH-BIF. ILK data currently remains dispersed across academic institutions, civil society organizations, and community records, with no standardized protocols for digitization, validation, or linkage to formal biodiversity databases.

EN

**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

| | |
|---|---|
| Implementation examples related to this target are not reported in the current national report. At this stage, practical implementation examples at the project or local level will be consolidated and reported in subsequent reporting cycles, once systematic data collection and evaluation mechanisms are fully in place. | EN |

**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

| | |
|---|---|
| Implementation of this target contributes to several Sustainable Development Goals (SDGs) and international agreements:<br>• SDG 1 (No Poverty): Supports target 1.4 by ensuring equal rights to economic resources, access to basic services, and control over land and natural resources for rural communities, forest-dependent populations, small-scale fishers and indigenous groups whose livelihoods depend on sustainable access to biodiversity resources.<br>• SDG 14 (Life Below Water): Marine biodiversity data from Red List, GBIF and OBIS support ecosystem protection (14.2) and enhance scientific knowledge through systematic monitoring and international databases (14.a).<br>• SDG 15 (Life on Land): Tracks species extinction risk and habitat degradation (15.5), integrates biodiversity values into national planning through Ecosystem services valuation methodology (15.9), and ensures conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems (15.1) with meaningful participation from local communities, indigenous peoples, women, youth and marginalized groups.<br>• SDG 17 (Partnerships for the Goals): Participation in international monitoring schemes and contribution to global databases including GBIF, OBIS and Living Planet Database strengthen scientific cooperation (17.6).<br>International Agreements<br>• UN SEEA EA: Supports natural capital accounting and ecosystem service valuation<br>• Ramsar Convention: Provides wetland inventory and monitoring data<br>• CITES: Informs species trade regulations with population and threat data<br>• Paris Agreement: Supports NDCs through ecosystem carbon monitoring | EN |

## Indicator Data

D.1 International public funding, including official development assistance for conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.1

**Source of Data**

Use the available data (pre-populated data)

**Data**

Download

| Has disaggregation | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|
| Yes | Recipient | 2015 | USD (millions) | 2.85982 | |
| Yes | Recipient | 2016 | USD (millions) | 5.20859 | |
| Yes | Recipient | 2017 | USD (millions) | 25.27418 | |
| Yes | Recipient | 2018 | USD (millions) | 2.92033 | |
| Yes | Recipient | 2019 | USD (millions) | 5.94758 | |
| Yes | Recipient | 2020 | USD (millions) | 5.62016 | |
| Yes | Recipient | 2021 | USD (millions) | 6.50848 | |
| Yes | Recipient | 2022 | USD (millions) | 20.56771 | |

**Global source of data**

OECD Data Explorer

**Indicator providers**

OECD

**Description**

**This data was prepopulated from Target Tracker.**

This indicator measures international public finance provided to developing countries for the conservation and sustainable use of biodiversity and ecosystems. This includes official development assistance (ODA),other official flows (OOF) and private sector instruments (PSI) from the DAC Creditor Reporting System (CRS) from bilateral DAC donors, non-DAC donors, as well as contributions from multilateral institutions, and complemented with flows reported under the Total Official Support for Sustainable Development (TOSSD) framework.

The data displayed here is the annual official development assistance for biodiversity provided by OECD Development Assistance Committee (DAC) donors, through the Creditor Reporting System (CRS). Total ODA transferred for use in biodiversity and conservation efforts are displayed by recipient and by donor in constant US dollars.

D.2 Domestic public funding on conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | - | - | 2022 | USD (million) | 143.33 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2023 | USD (million) | 280.31 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2024 | USD (million) | 185.39 | Agencies: eMENSCR, BIOFIN |

**Comments**

| | |
|---|---|
| Source: Biodiversity-Related Expenditures from the Government, BIOFIN (2024)<br>Exchange Rates: FY 2022: 34.16 THB/USD, FY 2023: 34.16 THB/USD, FY 2024 (approved projects only): 34.16 THB/USD | EN |

D.3 Private funding (domestic and international) on conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.3

**Source of Data**

No data available

**Please describe the situation**

| | |
|---|---|
| Thailand does not currently have comprehensive data on private sector (domestic and international) funding for biodiversity conservation and sustainable use, but the country has begun integrating private sector participation in biodiversity conservation through: • NBSAP Implementation Reporting: Private sector companies and NGOs are encouraged to report biodiversity-related activities aligned with Thailand's 4th National Biodiversity Strategy and Action Plan • ONEP Survey Initiative: Office of Natural Resources and Environmental Policy and Planning (ONEP) administers surveys to private sector and NGOs on NBSAP implementation activities • Voluntary Disclosure: Initial framework for companies to self-report biodiversity expenditures and activities Presently, Thailand conducted a preliminary survey showing limited examples (~3.56 million USD from small sample, 2020-2022) but lacks comprehensive tracking system. | EN |

21.1 Indicator on biodiversity information for monitoring the Kunming-Montreal Global Biodiversity Framework

Headline GBF-INDICATOR-21.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Platform Type** | NBSAPs Monitoring Platform | 2025 | system | 1 | Agency: ONEP |
| Yes | **Platform Type** | Biodiversity Data (TH-BIF) | 2025 | system | 1 | Agency: ONEP |

**Comments**

| | |
|---|---|
| Thailand is currently developing a biodiversity monitoring platform designed to track and monitor progress of national targets under NBSAP 2023-2027 and compile data for GBF indicators and binary indicators reporting through:<br>• Biodiversity Monitoring Platform: Thailand is currently developing a biodiversity monitoring platform to track progress toward national targets in NBSAP 2023-2027 and compile data for GBF indicators and binary indicators reporting. Future steps will require consultation with relevant data-collecting agencies to systematically assess: (a) availability, coverage, and quality of data for each indicator; (b) integration of traditional knowledge in target assessments.<br>• Biodiversity Data: National biodiversity datasets are currently maintained by various government agencies, with each responsible for specific resource groups. At the national level, TH-BIF (Thailand Biodiversity Information Facility) currently serves as the central biodiversity information portal, providing species occurrence data, conservation status, and red list information. | EN |

22.1 Land-use change and land tenure in the traditional territories of indigenous peoples and local communities

Headline GBF-INDICATOR-22.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Total land area under secure tenure** | Forest villages, National park use zones | 2025 | Hectares | 1090118.608 | Agency: DNP |

**Comments**

| | |
|---|---|
| 1/ Data collection methodology follows international standards for measuring land tenure security<br>• Covers Wild Animal Conservation and Protection Act, B.E.2562 (2019) section 121; the holding of land of people residing or earning the living in each wild animal varieties preservation zone or wild animal hunting prohibited zone (total area is 681,170.961 ha) and National Parks Act, B.E.2562(2019) and section 64; the holding of land of people residing or earning the living in each national park (total area is 408,947.647 ha) | EN |

22.b Number of countries taking action towards the full, equitable, inclusive, effective and gender responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities, and the full protection of environmental human rights defenders

KMGBF-INDICATOR-BIN-22 Binary

22.1 Does your country have policy, legislative and administrative frameworks at the national and subnational levels that:

**(a) Ensure full, equitable, inclusive, effective and gender-responsive representation and participation in biodiversity decision-making related to biodiversity of the following (select all that apply):**

Women and girls

**(b) Respect the following rights and cultures of indigenous peoples and local communities (select all that apply):**

Culture and practices

**(c) Ensure the full protection of environmental human rights defenders?**

No

**(d) Ensure public access to information related to biodiversity for the following (select all that apply):**

Women and girls
Children and youth
Persons with disabilities

**(e) Provide access to justice for one or more of the following categories (select all that apply):**

Women and girls

Children and youth
Persons with disabilities

**22.2 Does your country have operational frameworks and mechanisms related to the policy, legislative and administrative frameworks listed under question 22.1?**

Partially

22.3 Does your country monitor the following:

**(a) The full, equitable, inclusive, effective and gender-responsive representation and participation in biodiversity decision-making of the following (select all that apply):**

Children and youth
Persons with disabilities
Women and girls

**(b) The following culture and rights of indigenous peoples and local communities (select all that apply):**

Culture and practices

**(c) The full protection of environmental human rights defenders?**

No

Establish Comprehensive Mechanisms and Measures to Ensure Equitable Access and Benefit-Sharing and Consideration of Biosafety for the Utilization of Genetic Resources (NBT 7) **(National)**

**Briefly describe the main actions taken to implement the target**

**Thailand has implemented foundational legal and institutional measures for access and benefit-sharing (ABS) from genetic resources and traditional knowledge, alongside biosafety and biotechnology controls.**

**1) Legal Framework for Benefit-Sharing:**

Multiple legislations establish benefit-sharing provisions: the Protection and Promotion of Thai Traditional Medical Knowledge Act B.E. 2542 (1999) covers traditional knowledge associated with genetic resources, particularly herbal medicines, with licensing and benefit-sharing procedures; the Patent Act B.E. 2522 (1979), as amended (1992, 1999), protects inventions utilizing genetic resources; and the Plant Variety Protection Act B.E. 2542 (1999) recognizes farmers' and communities' rights including traditional knowledge utilization, establishes the Plant Variety Protection Fund for collecting and distributing benefits from commercial use of plant genetic resources through benefit-sharing agreements.

**2) Monetary Benefit Collection Mechanisms:**

Thailand has established preliminary mechanisms to track and collect monetary benefits from access to genetic resources, though implementation remains fragmented across agencies. The primary operational system is the Plant Variety Protection Fund under the Department of Agriculture, which collects benefits from commercial use of plant genetic resources, generating approximately USD 15,000 in 2025. However, these mechanisms operate independently without centralized national coordination, and monetary benefit collection remains limited in scope and scale.

**3) Non-Monetary Benefit Tracking:**

Multiple mechanisms track non-monetary benefits, though a comprehensive system is under development. Research institutions and universities record co-authorship, technology transfer and training; the Department of Marine and Coastal Resources facilitates Thai researchers accessing tissue samples with results shared back; NSTDA maintains records of research projects utilizing genetic resources; and the Thailand Research Fund and National Research Council of Thailand maintain databases of funded research with publication outputs tracked.

**4) Capacity Building Initiatives:**

Multiple agencies undertake capacity building: ONEP is developing a national Capacity Building Plan for ABS, though comprehensive coverage has not yet been achieved; the Department of Intellectual Property conducts training on IP procedures related to ABS; and the Royal Forest Department, DNP and DOF provide training for officials on ABS processes and royalty fee collection.

**5) Biosafety Regulatory Framework:**

Thailand operates biosafety controls through multiple laws and regulations, including: Plant Quarantine Act B.E. 2507 as amended (No. 2, B.E. 2542 and No. 3, B.E. 2551); Pathogens and Animal Toxins Act B.E. 2558 (2015); Ministry of Agriculture and Cooperatives Notification on Designation of Aquatic Animal Species Prohibited from Importation, Exportation or Transit B.E. 2564 (2021); Ministry of Public Health Notifications (No. 431 and No. 432) B.E. 2565 (2022) on food derived from GMOs and GMO labeling requirements; Biosafety Guidelines for Modern Biotechnology B.E. 2559 (2016); and Manual of Criteria, Conditions and Biosafety Practices for Industrial Plant Operators B.E. 2562 (2019).

**6) Institutional Mechanisms and Information Dissemination:**

Biosafety committees and technical advisory bodies oversee risk assessment and management for safe handling, transport, contained use and release of living modified organisms (LMOs), particularly in agriculture and research sectors. The Thailand Biosafety Clearing House and FDA website disseminate information about LMOs and GMO foods, educate consumers, provide regulatory information and guidelines for food business operators, display lists of approved GMO products, and explain labeling requirements.

**7) Risk Assessment and Monitoring:**

Guidelines and procedures for biosafety risk assessment and monitoring have been developed and applied in relevant sectors to ensure safe use of biotechnology (https://www.biotec.or.th/home/en/biosafety-program-en/).

EN

**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

**Access and Benefit-Sharing (ABS)**

Thailand has established foundational legal frameworks and institutional mechanisms for access and benefit-sharing from genetic resources and traditional knowledge, though comprehensive data collection and systematic monitoring across all sectors remain under development.

- **Benefit-sharing legislation operational (partial coverage):**
  - *Plant Variety Protection Act B.E. 2542 (1999)*: Recognizes farmers' and communities' rights including traditional knowledge utilization, provides provider-side measures, and establishes the Plant Variety Protection Fund for collecting and distributing benefits from commercial use of plant genetic resources through benefit-sharing agreements.

- *Protection and Promotion of Thai Traditional Medical Knowledge Act B.E. 2542 (1999)*: Operational with benefit-sharing provisions for traditional knowledge associated with herbal medicines and genetic resources.
- *Patent Act B.E. 2522 (1979) amended*: Provides protection for inventions and designs utilizing genetic resources.

- **Limited data collection and fragmented tracking:**
  - Thailand currently lacks comprehensive national data on both monetary and non-monetary benefits from genetic resource access and benefit-sharing. Systematic monitoring does not yet cover all sectors, with only USD 15,000 cumulative from plant genetic resources recorded to date (2025), while benefits from wildlife, marine, aquatic, and other resources remain untracked.
  - For non-monetary benefits, research institutions and universities record some benefits including co-authorship, technology transfer, and training, but tracking does not comprehensively cover all institutions and benefit types. While documented in specific cases such as publications and training programs, a systematic monitoring system specifically for ABS-related non-monetary benefits is still under development, limiting Thailand's ability to assess the full value and equitable distribution of benefits derived from its genetic resources.

EN

**Biosafety**

Thailand has established foundational biosafety frameworks and operational mechanisms, though significant gaps remain in comprehensive implementation:

- **Biosafety frameworks partially achieved:** Thailand has developed legal and institutional frameworks governing biosafety through multiple existing laws covering plant quarantine, pathogens and animal toxins, and biotechnology guidelines. Biosafety committees and technical advisory bodies provide oversight for risk assessment and management of Living Modified Organisms (LMOs), particularly in agriculture and research sectors. Guidelines and procedures for biosafety risk assessment and monitoring have been developed and applied across relevant sectors. However, Thailand still lacks dedicated comprehensive biosafety legislation that specifically and systematically addresses all aspects of LMO handling, use, and release in a unified framework.
- **Implementation and enforcement under development:** While biosafety frameworks exist, implementation and enforcement remain uneven across different sectors and regions.
- **Emerging technologies challenges:** Current frameworks were developed primarily for earlier biotechnology applications and require updating to effectively address new and emerging genetic technologies (such as gene editing, synthetic biology, and other novel biotechnologies), which pose additional challenges for risk assessment, regulation, and public communication.

- *Thailand Biosafety Clearing House (BCH)*: Disseminates general information about LMOs and provides basic regulatory information and biosafety decisions.
- *FDA GMO Food Website (Food and Drug Administration)*: Educates consumers about GMO foods and their safety, provides regulatory information and guidelines for food business operators regarding GMO handling and labeling, displays lists of approved GMO products for food use, explains labeling requirements and compliance obligations, and focuses specifically on food safety and consumer protection aspects of GMOs.

**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

**Key challenges in achieving the Target include:**

- **Fragmented data and monitoring systems:** No comprehensive national data exists on non-monetary benefits or benefit-sharing agreements. While individual institutions track activities, Thailand lacks an integrated system to aggregate information across all genetic resource types, institutions, and benefit categories. This fragmentation prevents comprehensive assessment of benefit-sharing objectives under the Nagoya Protocol.
- **Fragmented institutional responsibilities:** Multiple agencies (DOA, RFD, DNP, DOF, DMCR, NSTDA, DIP) implement different aspects of ABS with limited coordination mechanisms. Different genetic resource types are managed by different agencies using different systems, preventing a comprehensive national overview.
- **Lack of mandatory disclosure requirements:** No comprehensive legal framework requires large companies and financial institutions to assess and disclose biodiversity-related risks, dependencies, and impacts. While EIA/EHIA systems exist for large projects, they are not specifically designed for comprehensive biodiversity assessment and do not extend to ongoing business operations or financial institutions.
- **DSI policy gap:** No legislation or clear policy exists on digital sequence information benefit-sharing despite participation in international negotiations. The growing importance of DSI in biotechnology and research means significant potential benefits are not addressed by the current framework.
- **Insufficient baseline data and standardized metrics:** Thailand lacks comprehensive baseline data on current levels of corporate biodiversity disclosure and impact. Standardized metrics and methodologies for measuring and reporting biodiversity-related information are not widely adopted.
- **Capacity gaps:** Capacity-building initiatives are underway, but comprehensive coverage across all sectors has not been achieved. Many institutions, officials, and companies—particularly SMEs—lack the technical capacity, expertise, and resources to conduct biodiversity assessments, implement ABS frameworks, or adopt disclosure standards like TNFD.

**To address these challenges and strengthen implementation, Thailand will focus on:**

- **Scaling capacity building:** Complete and implement ONEP's national Capacity Building Plan systematically across all sectors. Expand training beyond current agencies to comprehensively cover research institutions, universities, private sector, government at all levels, and traditional knowledge holder communities. Address ABS principles, benefit-sharing negotiation, traditional knowledge protection, MTA development, compliance monitoring, and biodiversity disclosure frameworks.
- **Strengthening inter-agency coordination:** Establish formal coordination mechanisms linking all agencies involved in genetic resource management and ABS. Create regular coordination meetings, information sharing platforms, joint planning, and unified reporting. Assign lead agency responsibility for overall ABS framework of coordination and develop a coherent national ABS strategy.
- **Implementing systematic monitoring systems:** Develop monitoring systems tracking implementation of all benefit-sharing agreements (Plant Variety Protection Fund, research MOUs, MTAs, access permits, traditional knowledge agreements) and corporate biodiversity disclosures. Monitor benefit delivery, compliance, traditional knowledge holder satisfaction, and biodiversity conservation outcomes. Use data to improve agreement templates and guidance.
- **Strengthening assessment methodologies:** Enhance EIA/EHIA systems to specifically address biodiversity risks, dependencies, and impacts. Extend assessment requirements to cover ongoing business operations and financial sector activities.
- **Empowering traditional knowledge holders:** Develop practical mechanisms ensuring meaningful participation including awareness raising about rights, capacity building for negotiations, access to legal support, prior informed consent protocols, and fair benefit-sharing directly to knowledge holders. Pilot community-based ABS approaches and scales up successful models.
- **Establishing standardized frameworks and guidelines:** Create standardized templates for benefit-sharing agreements incorporating fair and equitable provisions, traditional knowledge recognition, both monetary and non-monetary benefits, compliance monitoring, and dispute resolution. Develop practical guidance for negotiating agreements, calculating fair benefits, ensuring equitable distribution, and implementing biodiversity disclosure frameworks.
- **Leveraging public-private partnerships:** Foster collaboration between government, business sector, financial institutions, and civil society to share best practices, develop common standards, and accelerate implementation.

EN

**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

Implementation examples related to this target are not reported in the current national report. At this stage, practical implementation examples at the project or local level will be consolidated and reported in subsequent reporting cycles, once systematic data collection and evaluation mechanisms are fully in place.

EN

**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

Implementation of these targets contributes to multiple Sustainable Development Goals and international commitments:

**SDG Contributions:**

- **SDG 2 (Zero Hunger):** Biosafety frameworks for agricultural LMOs support sustainable food production systems and resilient agricultural practices while protecting biodiversity from potential biotechnology risks.
- **SDG 3 (Good Health and Well-being):** The Pathogens and Animal Toxins Act and biosafety measures support prevention and control of communicable diseases and strengthen capacity for early warning and risk management of health hazards.
- **SDG 9 (Industry, Innovation and Infrastructure):** Biosafety frameworks enable safe biotechnology research and application, supporting scientific research and technological capabilities. Research collaboration, technology transfer, and capacity building through DMCR, NSTDA, TRF, and NRCT contribute to Thai research capacity and innovation.
- **SDG 10 (Reduced Inequalities):** Benefit-sharing mechanisms with local and indigenous communities as traditional knowledge holders are supported through the Protection and Promotion of Thai Traditional Medical Knowledge Act and Plants Act, which recognize community rights.
- **SDG 15 (Life on Land):** Target 15.6 on fair and equitable sharing of benefits from genetic resources is supported through Thailand's Plant Variety Protection Fund and traditional knowledge recognition laws, providing foundational mechanisms, though comprehensive national data is needed to assess achievement of equitable benefit-sharing.

**International Commitments:**

- **CBD Nagoya Protocol on Access and Benefit-Sharing:** Thailand's ratification is supported through benefit-sharing frameworks.
- **International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA):** Supported through benefit-sharing from plant genetic resources under the Plants Act and Plant Variety Protection Fund.
- **Cartagena Protocol on Biosafety:** Thailand's biosafety frameworks, clearing house mechanisms, and risk assessment procedures ensure safe handling, transport, and use of LMOs, aligning with Protocol requirements to prevent adverse effects on biodiversity and human health.

EN

## Indicator Data

B.1 Services provided by ecosystems

Headline GBF-INDICATOR-B1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Provision, Regulation, Supporting Service** | Dry Deciduous Dipterocarp Forest, Sakornakorn | 2024 | Baht/Rai/year | 106967.72 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Angthong | 2024 | Baht/Rai/year | 104170.92 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Maehongsorn | 2024 | Baht/Rai/year | 82269.76 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Dry Evergreen Forest, Rayong | 2024 | Baht/Rai/year | 120192.78 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Cultural Service** | Green Space, Khung Bangkachao, Samut Prakan | 2023 | Million Baht | 107.3 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Regulation Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million tons $CO_2$ | 41 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Cultural Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million Baht | 111 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

C.1 Monetary benefits received in accordance with applicable internationally agreed access and benefit-sharing instruments

Headline GBF-INDICATOR-C.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Resource type** | Plant | 2023 | USD | 1900 | Value is approximate number Agency: DOA |
| Yes | **Resource type** | Plant | 2024 | USD | 11700 | Value is approximate number Agency: DOA |
| Yes | **Resource type** | Plant | 2025 | USD | 1300 | Value is approximate number Agency: DOA |

**Comments**

| | |
|---|---|
| Remark: Thailand has established preliminary mechanisms to track and collect monetary benefits from access to genetic resources, primarily through the Plant Variety Protection Fund under the Department of Agriculture (DOA): Collects monetary benefits from commercial use of plant genetic resources and Benefit-sharing agreements with users of protected plant varieties | EN |

C.2 Non-monetary benefits arising from applicable international access and benefit-sharing instruments

Headline GBF-INDICATOR-C.2

**Source of Data**

No data available

**Please describe the situation**

| | |
|---|---|
| Thailand tracks non-monetary benefits through multiple mechanisms, though a comprehensive monitoring system specifically for non-monetary ABS benefits is still under development. 1. Research Collaboration and Knowledge Transfer • Department of Marine and Coastal Resources (DMCR): - Thai researchers accessing tissue samples for research - Research results and findings shared back with DMCR - Building national research capacity in marine biodiversity • National Science and Technology Development Agency (NSTDA): - Records of research projects utilizing genetic resources - Data on collaborative research partnerships - Technology transfer arrangements documented • Thailand Research Fund (TRF)/National Research Council of Thailand (NRCT): - Database of funded research projects using genetic resources - Publication and knowledge outputs tracked - Research capacity building initiatives 2. Capacity Building and Technology Transfer • Training programs for Thai researchers • Access to research facilities and equipment • Joint research publications • Strengthening of national research institutions 3. Institutional Collaboration • Memoranda of Understanding for research cooperation • Joint research projects with international partners • Access to scientific databases and information • Participation in international research networks | EN |

B.b Number of countries with policies or actions for implementing and monitoring the sustainable use of biodiversity and the maintenance and enhancement of nature's contributions to people, including ecosystem functions and services

Binary KMGBF-INDICATOR-BIN-B

**B.1 Does your country have policies and/or action plans aimed at ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services?**

Fully

**B.2 Does your country have policies and/or action plans aimed at ensuring the sustainable use of biodiversity?**

Fully

**B.3 Does your country monitor the sustainable use of biodiversity?**

Partially

**B.4 Does your country monitor the maintenance, restoration and enhancement of nature's contributions to people, including ecosystem functions and services for the benefit of present and future generations?**

Partially

**Comments**

Thailand has policies and plans in order to ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services, and ensuring the sustainable use of biodiversity.

- **The 5th National Biodiversity Strategy and Action Plan (2024-2030):** Contains directly relevant targets such as Target 5: Promote and support a bio-based economy, based on ecosystem services to improve people's living conditions and income and Target 6: Promote sustainable practices in production and service sectors, including agriculture, aquaculture, fisheries, livestock, forestry, and tourism.

In addition, Thailand is in the developmental phase of establishing a comprehensive ecosystem services monitoring system and does not yet have a national-level dataset on ecosystem services. Currently, Thailand has policies and action plans in place for implementing and monitoring the sustainable use of biodiversity and ecosystem services, which provide the foundation for future data collection.

EN

13.b Number of countries that have taken effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources

Binary KMGBF-INDICATOR-BIN-C-13

**13.1 Does your country have effective legal, administrative and policy measures to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources?**

Partially

**13.2 Does your country have capacity-building measures to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources?**

Partially

**13.3 Has your country taken administrative, policy or legislative measures pursuant to the operationalization of the multilateral mechanism in decision 16/2?**

No

**13.4 Do the measures mentioned in questions 13.1 and 13.2 include the utilization of traditional knowledge associated with genetic resources?**

Yes

**13.5 Does your country monitor the monetary benefits received from the utilization of genetic resources and/or traditional knowledge associated with genetic resources that were accessed from your country?**

Partially

**13.6 Does your country monitor the non-monetary benefits received from the utilization of genetic resources and/or traditional knowledge associated with genetic resources that were accessed from your country?**

Partially

**13.7 Does your country have measures to ensure the fair and equitable benefit-sharing arising from the utilization of genetic resources and/or traditional knowledge associated with genetic resources that were accessed in another country?**

Partially

**Comments**

**Legal, administrative and policy measures to ensure the fair and equitable sharing of benefits (13.1 – Partially):** Thailand has legislations to ensure the fair and equitable sharing of benefits from multi-agency, such as:

- **The Protection and Promotion of Thai Traditional Medical Knowledge Act, B.E. 2542 (1999 A.D.)** with benefit-sharing provisions an application for and the granting of licence, limitation of right, and consideration shall be in accordance with the rules, procedure, and conditions.
- **Patent Act B.E. 2522 (1979) As Amended by the Patent Act (No. 2) B.E 2535 (1992) and the Patent Act (No. 3) B.E. 2542 (1999)** เชคชื่อภาษาอังกฤษ to grant protection for inventions and designs.

Currently, revisions are underway to enhance the comprehensiveness of genetic resources and strengthen institutional capabilities through a licensing fee system.

**Measures to ensure fair and equitable sharing of benefits arising from the utilization of genetic resources (13.2 – Partially):** Thailand is in the process of developing a national ABS capacity-building plan. Multiple agencies have already undertaken capacity-building projects, comprehensive coverage across all sectors has not been fully achieved:

- **ONEP:** Developing a national Capacity Building Plan for ABS, though comprehensive coverage across all sectors has not yet been achieved.
- **DIP:** Conducts training programs to officials involved for intellectual property procedures related to ABS.
- **RFD:** Provides capacity-building training for officials involved in ABS processes.
- **DNP/DOF:** training for officials involved in ABS processes and implementation of resource access royalty fee collection systems.

**Policies or legislative measures pursuant to the operationalization in decision 16/2 (13.3 – No):** Thailand has participated in negotiations at the CBD COP regarding DSI (2022-2024). Currently, there is no specific legislation or clear national policy on DSI, but internal processes exist of BIOTEC for managing genetic information to protect important sequences that are trade secrets.

**Measures to include the utilization of traditional knowledge associated with genetic resources (13.4 – Yes):** The measures outlined in questions 13.1 and 13.2 have integrated the utilization of traditional knowledge associated with genetic resources:

- **Plant Variety Protection Act B.E. 2542 (1999)** recognizes farmers' and communities' rights including traditional knowledge utilization and provides provider-side measures; establishes the Plant Variety Protection Fund for collecting and distributing benefits from commercial use of plant genetic resources through benefit-sharing agreements.
- **The Protection and Promotion of Thai Traditional Medical Knowledge Act, B.E. 2542 (1999 A.D.)** covers traditional knowledge associated with herbs/genetic resources.

**Monitoring the monetary benefits received from the utilization of genetic resources (13.5 – Partially):** Thailand has a Plant Variety Protection Fund that manages monetary benefits from commercial utilization of native plant varieties. Although operational systems exist, systematic monitoring does not yet comprehensively cover all sectors.

**Monitoring the non-monetary benefits received from the utilization of genetic resources (13.6 – Partially):** Non-monetary benefits are documented and tracked concretely, such as publications, technology transfer, and training.

- **Research institutions and universities** record non-monetary benefit-sharing, including co-authorship, technology transfer, and training of local researchers. Systems are being developed to track research outputs that may generate future benefits.

However, tracking of non-monetary benefits does not yet comprehensively cover all institutions and types.

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**Measures for fair and equitable benefit-sharing arising from access by other countries (13.7 – Partially):**

- **DOA: Plant variety Protection Act B.E. 2542**
- **DNP:** Requirements exist for foreign researchers accessing Thai resources.
- **DNP/RFD:** have mutual agreements on data sharing (but not for species).

Measures related to Material Transfer Agreements (MTAs) are beginning to be established at the institutional level, and ethical research guidelines are currently being developed and implemented.

17.b Number of countries that have taken action to implement biosafety measures as set out in Article 8(g) of the Convention and measures for the handling of biotechnology and the distribution of its benefits as set out in Article 19

Binary KMGBF-INDICATOR-BIN-17

**17.1 Has your country established biosafety-related policy, legal, administrative and other measures as set out in Article 8(g) of the Convention?**

Partially

**17.2 Does your country implement biosafety measures as set out in Article 8(g) of the Convention?**

Partially

**17.3 Has your country taken legislative, administrative or policy measures, as appropriate, to provide for the effective participation in biotechnological research activities by those Parties, especially developing countries, that provide the genetic resources for such research, as set out in paragraph 1 of Article 19 of the Convention?**

Partially

**17.4 Has your country taken practicable measures to promote and advance priority access on a fair and equitable basis by Parties, especially developing countries, to the results and benefits arising from biotechnologies based on genetic resources provided by those Parties, as set out in paragraph 2 of Article 19 of the Convention?**

Partially

**17.5 Does your country carry out scientifically sound risk assessments on the use and release of living modified organisms?**

Partially

**17.6 Does your country provide access to biosafety-related information for the safe transfer, handling and use of living modified organisms?**

Under development

**Comments**

**Biosafety Implementation in Thailand:** Thailand does not yet have specific biosafety legislation but relies on indirect laws such as:

- Plant Quarantine Act B.E. 2507 Amended by Plant Quarantine Act (No. 2) B.E. 2542 and Plant Quarantine Act (No. 3) B.E. 2551
- Pathogens and Animal Toxins Act B.E. 2558 (2015) to safety protection and prevention of harm from pathogens or animal toxins.
- Ministry of Agriculture and Cooperatives Notification on Designation of Aquatic Animal Species Prohibited from Importation, Exportation or Transit through the Kingdom, B.E. 2564 (2021)
- **Ministry of Public Health Notification (No. 431) B.E. 2565 (2022):** Re: "Food Derived from Genetically Modified Organisms" (defining terms and criteria).
- **Ministry of Public Health Notification (No. 432) B.E. 2565 (2022):** Re: "Labeling of Food Derived from Genetically Modified Organisms" (requiring GMO labeling).
- Biosafety Guidelines for Modern Biotechnology B.E. 2559 (2016)
- **Manual of Criteria, Conditions and Biosafety Practices for Industrial Plant Operators"** Department of Industrial Works B.E. 2562 (2019)

**Thailand Biosafety Clearing House** disseminates general information about LMOs and **GMO food website** of the FDA (Food and Drug Administration) which serves to educate consumers about GMO foods, Provide regulatory information and guidelines for food business operators, Display lists of approved GMO products, Explain labeling requirements for GMO foods

EN

Reduce the Loss of Important Biodiversity Areas both in Landscape and Seascape Through Effective Spatial Planning (NBT 1) **(National)**

**Briefly describe the main actions taken to implement the target**

This target aims to reduce the loss and degradation of important biodiversity areas in terrestrial, freshwater, coastal and marine landscapes by integrating biodiversity management into spatial planning and land- and sea-use decision-making at all levels. Thailand is in the process of developing and strengthening integrated biodiversity management into spatial planning. Based on this strategic framework, Thailand has undertaken a multi-agency collaborative approach through the following key initiatives:

1. **Pilot Ecological Zoning Plan in Northern Region:** The Office of Natural Resources and Environmental Policy and Planning (ONEP) established ecological zoning classifications across nine northern provinces—Chiang Rai, Nan, Phayao, Chiang Mai, Mae Hong Son, Phrae, Lampang, Lamphun, and Uttaradit—defining land-use recommendations for each eco-region and designing measures to regulate and guide land utilization in alignment with the distinct ecological characteristics of each zone.
2. **Biodiversity-Inclusive Spatial Planning Systems:** Department of Public Works and Town and Country Planning (DPT) is establishing biodiversity data integration frameworks that systematically incorporate biodiversity information (forest cover, wetlands, mangroves, coral reefs, protected areas, key watersheds) into national and provincial land-use plans, and piloted biodiversity-based zoning approaches in selected river basins and coastal provinces to designate no-go zones, buffer zones, and compatible-use zones.
3. **Protected Area Management Plans:** The Department of National Parks, Wildlife and Plant Conservation implemented its own park management plans that integrate biodiversity conservation objectives into protected area management, ensuring systematic protection of critical habitats.
4. **Integrated Land-Sea Planning:** The Department of Marine and Coastal Resources is developing pilot initiatives in selected coastal provinces to link upstream land-use decisions with downstream impacts on marine and coastal ecosystems, creating a holistic approach to coastal zone management.
5. **Red List of Ecosystems Framework Development: Developing Red List of Ecosystems framework:** Establishing 2026 as the baseline year for systematic ecosystem risk assessments of marine and coastal, forest, and wetland ecosystems according to IUCN criteria.

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**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

Thailand is making progress in developing biodiversity-inclusive spatial planning systems, though the pace remains insufficient to fully achieve the target by 2030.

**Status of development:**

**Biodiversity integration in spatial planning (Under Development):**

- A Guideline for the Regional Ecological Zoning Plan for the Northern Region was developed and approved by the National Environment Board at its 2nd Meeting of 2025 on 6 May 2025.
- Biodiversity and ecosystem information is beginning to be used across multiple planning levels and sectors, but comprehensive integration is still under development.
- **Terrestrial spatial planning:** The Department of National Parks, Wildlife and Plant Conservation (DNP) has developed biodiversity-inclusive management plans for 103 national parks, 18 non-hunting areas, and 17 wildlife sanctuaries, totaling **95,023.48 km²** (approximately 18.52% of Thailand's total land area of 513,120 km²), establishing a strong foundation for biodiversity-sensitive spatial planning within key protected areas. Beyond protected areas, land-use planning frameworks at various levels—including comprehensive urban plans and provincial land-use plans—are still in the process of systematically integrating biodiversity considerations into broader spatial planning.
- **Inland water planning:** River basin and water management plans exist, but biodiversity integration requires further development and standardization.
- **Coastal and marine planning:** Department of National Parks, Wildlife and Plant Conservation (DNP) has developed biodiversity-inclusive management plans for 23 marine national parks, providing a foundation for biodiversity-sensitive spatial planning in Thailand's marine and coastal areas (total marine and coastal area of 323,488 km²). In addition, the Marine and Coastal Resources Management Promotion Act B.E. 2558 (2015) provides a legal framework, and implementation mechanisms are being developed under the Department of Marine and Coastal Resources (DMCR).

**Pilot projects showing initial outcomes:** Several pilot initiatives have demonstrated potential approaches:

- In selected river basins and coastal provinces, spatial biodiversity data is being used to identify sensitive areas and guide development decisions away from high-value biodiversity sites.
- Pilot integrated land-sea planning exercises in selected coastal provinces are testing frameworks that link upstream land-use decisions with downstream marine and coastal ecosystem impacts.
- Some provinces are piloting the formal recognition of community forests and local fish conservation zones in land-use plans.

**Ecosystem monitoring data (Baseline Development):** Thailand is establishing baseline monitoring for key ecosystems:

- **Tropical-subtropical forests:** Monitoring shows extent of 163,765.58 km² (2020) declining to 162,856.43 km² (2024), representing a loss of approximately 909 km² over four years with an average annual decline of 0.14%. This indicates ongoing forest loss that spatial planning aims to address, though the rate of loss appears to have slowed in 2024.
- **Seagrass meadows:** Combined area fluctuating from 158.92 km² (2021) to a peak of 257.01 km² (2023), before declining to 156.46 km² (2024), showing substantial year-to-year variation across the Andaman Sea and Gulf of Thailand.
- **Photic coral reefs:** Monitoring shows stable extent of 238.69 km² (149,182 Rai) distributed across the Andaman Sea and Gulf of Thailand. Health assessments indicate consistent improvement from 2021-2023, with good condition reefs increasing by 7.83 km² (+6.2%) and poor condition reefs decreasing by 5.80 km².

**Red List of Ecosystems (In Development):**

- Thailand has not yet completed a comprehensive ecosystem assessment based on the IUCN Global Ecosystem Typology (GET) framework.
- A 2019 wetland assessment under the Ramsar Convention provides foundational data for future Red List of Ecosystems assessments.
- Thailand is planning to establish 2026 as the baseline year for systematic ecosystem risk assessments, focusing initially on three major ecosystem groups (marine and coastal, forest, and wetland).

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**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

Key challenges in achieving Target include:

- Incomplete **and uneven biodiversity data:**
  - High-quality data exist for some ecosystems and regions (forests, mangroves, coral reefs), while data for others (grasslands, some wetlands, connectivity corridors, agro-ecosystems) remain incomplete or are not regularly updated.
  - Comprehensive national-level datasets on ecosystem services are not yet available.
  - This leads to inconsistent consideration of biodiversity across different planning contexts.
- Fragmented **institutional frameworks:**
  - Spatial planning responsibilities are distributed across multiple agencies (land administration, urban development, water resources, agriculture, transport, environment) with varying mandates, tools, and timeframes.
  - Coordination mechanisms among agencies are still being developed.
- Incomplete **ecosystem assessments:**
  - Thailand has not yet completed a comprehensive Red List of Ecosystems assessment based on IUCN criteria.
  - Without systematic ecosystem risk assessments, it is difficult to prioritize areas and ecosystems for conservation action in spatial planning.

To address these challenges and further strengthen implementation, Thailand will focus on the following approaches:

- Strengthening **integrated planning approaches (Being Piloted):**
  - Working to institutionalize integrated land-sea and landscape-level planning through national planning regulations and SEA guidelines.
  - Developing coordination mechanisms among agencies with overlapping spatial planning mandates.
- Completing **ecosystem assessments (Planned for 2026):**
  - Establishing 2026 as the baseline year for Red List of Ecosystems assessment.
  - Developing methodology for systematic risk status assessments of marine and coastal, forest, and wetland ecosystems according to IUCN criteria.
- Building on the 2019 Ramsar wetland assessment to expand ecosystem coverage.

**Building capacity at all levels (Ongoing):**

- Designing targeted capacity-building programs for provincial and local planning authorities.
- Developing mechanisms to systematically involve local communities and IPLCs in spatial planning processes.
- Creating knowledge-sharing platforms among agencies and jurisdictions implementing biodiversity-inclusive planning.

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**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

Implementation examples related to this target are not reported in the current national report. At this stage, practical implementation examples at the project or local level will be consolidated and reported in subsequent reporting cycles, once systematic data collection and evaluation mechanisms are fully in place.

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**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

Implementation of National Target 1 contributes to several Sustainable Development Goals (SDGs) and related international commitments:

- It supports **SDG 15 (Life on Land)**, particularly Targets **15.1** (conservation and sustainable use of terrestrial and inland freshwater ecosystems) and **15.4** (mountain ecosystems), by integrating biodiversity conservation into land-use planning and reducing the conversion of natural habitats.
- It contributes to **SDG 14 (Life Below Water)**, especially Target **14.2** (sustainable management and protection of marine and coastal ecosystems), by guiding coastal and marine spatial planning to avoid degradation of mangroves, seagrass beds and coral reefs.
- It is linked to **SDG 11 (Sustainable Cities and Communities)**, including Targets **11.3** (inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning) and **11.7** (universal access to safe, inclusive and accessible green and public spaces), through urban and peri-urban spatial planning that incorporates biodiversity and green/blue infrastructure.
- It also supports **SDG 6.6** (protection and restoration of water-related ecosystems), by ensuring that wetlands, rivers and riparian zones are recognized in land and water planning.

Beyond the SDGs, this contributes to Thailand's obligations under the **Ramsar Convention on Wetlands**, by promoting spatial planning that safeguards wetlands of international and national importance, and under various **regional frameworks** (e.g. ASEAN agreements on environmental cooperation and coastal and marine management) where integrated spatial planning is recognized as a key tool for sustainable development.

EN

## Indicator Data

A.1 Red List of Ecosystems — Headline — GBF-INDICATOR-A.1

**Source of Data**

No data available

**Please describe the situation**

| | |
|---|---|
| Thailand has not yet conducted a comprehensive ecosystem assessment and classification based on the IUCN Global Ecosystem Typology (GET) framework. However, Thailand has previously undertaken a wetland assessment under the Ramsar Convention in 2019, which can serve as foundational data for developing future Red List of Ecosystems assessments. Thailand has initiated consideration of adopting the Red List of Ecosystems indicator for assessing the status of at-risk ecosystems, focusing on three major ecosystem groups: • Marine and coastal ecosystems • Forest ecosystems • Wetland ecosystems The country aims to establish 2026 as the baseline year for Red List of Ecosystems assessment. Thailand will systematically commence risk status assessments of target ecosystems according to IUCN criteria and standards, providing foundational data for long-term ecosystem conservation monitoring and evaluation. | EN |

A.2 Extent of natural ecosystems Headline GBF-INDICATOR-A.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2020 | km2 | 163765.58 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2021 | km2 | 163539.89 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2022 | km2 | 163417.56 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2023 | km2 | 162909.05 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2024 | km2 | 162856.43 | Agency: RFD |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2021 | km2 | 104.89 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2021 | km2 | 54.03 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2022 | km2 | 114.6 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2022 | km2 | 51.13 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2023 | km2 | 170.37 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2023 | km2 | 86.64 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2024 | km2 | 101.7 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2024 | km2 | 54.76 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2021 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2021 | km2 | 120.68 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2022 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2022 | km2 | 120.68 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2023 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2023 | km2 | 120.68 | Agency: DMCR |

**Comments**

Source:

1) Forest data 2020-2024 from Royal Forest Department

2) Seagrass data 2021-2024, Department of Marine and Coastal Resources, from https://km.dmcr.go.th/c_4

3) Coral reef data 2021-2024, Department of Marine and Coastal Resources, from https://km.dmcr.go.th/c_3

Coral Reef Health Classification - National Summary

| Year | Area (km2) | Good | Fair | Poor |
|---|---|---|---|---|
| 2021 | 238.69 | 124.74 (52.3%) | 56.64 (23.7%) | 57.31 (24.0%) |
| 2022 | 238.69 | 127.29 (53.3%) | 52.59 (22.0%) | 58.81 (24.6%) |
| 2023 | 238.69 | 132.57 (55.5%) | 54.61 (22.9%) | 51.51 (21.6%) |

Thailand's Department of Marine and Coastal Resources (DMCR) assesses coral reef health using the ratio of Live Coral (LC) coverage to Dead Coral (DC) coverage as a percentage of total substrate methodology provides a clear indicator of reef condition based on the proportion of living to dead coral structures.

· "Good" category = Excellent (≥3:1) + Good (2:1) combined

· "Fair" category = Fair/Moderate (1:1)

· "Poor" category = Poor (1:2) + Severely Degraded (1:≥3) combined

A.3 Red List Index Headline GBF-INDICATOR-A.3

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Taxonomic group** | Mammals, n=345 | 2015 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,012 | 2015 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=392 | 2015 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=157 | 2015 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,888 | 2015 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=345 | 2020 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,075 | 2020 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=461 | 2020 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=184 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,940 | 2020 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mollusk, n=2,583 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=194 | 2020 | Index | 0.94 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Coral, n=462 | 2020 | Index | 0.71 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=344 | 2025 | Index | 0.75 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,100 | 2025 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=525 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=214 | 2025 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,745 | 2025 | Index | 0.89 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mollusk, n=2,735 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=1,479 | 2025 | Index | 0.98 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Coral, n=443 | 2025 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Hymenoptera, n=1,221 | 2025 | Index | 0.83 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

A.4 Proportion of populations within species with an effective population size greater than 500 Headline GBF-INDICATOR-A.4

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Primary Ne, estimated minimum value** | Dugong | 2025 | - | 14 | Agency: DMCR |

**Comments**

Remark : Dugongs: 144 individuals (DMCR, 2025) (primary Ne estimated: 14-43), Typical range: 0.1 - 0.3 (Frankham, R. (1995). "Effective population size/adult population size ratios in wildlife")

Data Availability Status: Partially Available - Requires Compilation and Processing, Thailand currently does not have systematic Effective Population Size (Ne) data for most species. However, census population data exists for certain species from various agencies. The country is in the developing stage for this indicator and requires significant methodological development and inter-agency coordination.

EN

1.1 Percentage of land and sea area covered by biodiversity-inclusive spatial plans Headline GBF-INDICATOR-1.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Terrestrial area** | Protected area | 2023 | % | 18.52 | Agecy: DNP |
| Yes | **Coastal area** | Protected area | 2023 | % | 2.34 | Agecy: DNP |

**Comments**

1/ The land area with biodiversity-inclusive spatial plans consisted of 103 national parks, 18 non-hunting areas, and 17 wildlife sanctuaries, covering a total area of 95,023.48 km², representing approximately 18.52% of Thailand's total land area (513,120 km²).

2/ The marine and coastal area with biodiversity-inclusive spatial plans consisted of 23 marine national parks, representing Thailand's primary framework for biodiversity-sensitive spatial planning in coastal and marine ecosystems, out of Thailand's total marine and coastal area of 323,488 km².

EN

1.b Number of countries using participatory, integrated and biodiversity-inclusive spatial planning and/or effective management processes addressing land- and sea-use change to bring the loss of areas of high biodiversity importance close to zero by 2030 Binary KMGBF-INDICATOR-BIN-1

**1 Is your country landlocked?**

No

1.1 Are all areas of your country under biodiversity-inclusive spatial planning or effective management processes that:

**(a) Address land-use (terrestrial) change?**

Partially

**(b) Address land-use (inland water) change?**

Under development

**(c) Address sea-use (coastal and marine) change? (Will be considered not applicable to landlocked States)**

Partially

**1.2 If the answer to any of the questions in 1.1 is not "No", were the plans created using a participatory process? (Select all that apply, noting that, if your country is a landlocked State, marine spatial planning will be considered as not relevant)**

For terrestrial spatial planning
For inland water planning
For coastal and marine spatial planning

**Comments**

**Integrated and Biodiversity-Inclusive Spatial Planning (1.1 - Partially):**

- **Address land-use (terrestrial) change:** Thailand has established land-use planning frameworks at various levels, including comprehensive urban plans and provincial land-use plans. DNP has developed biodiversity-inclusive management plans for 103 national parks, 18 non-hunting areas, and 17 wildlife sanctuaries, totaling 95,023.48 km² (approximately 18.52% of Thailand's total land area of 513,120 km²), establishing a strong foundation for biodiversity-sensitive spatial planning within key protected areas. Beyond protected areas, ONEP has developed pilot ecological zoning plans for nine northern provinces — Chiang Rai, Nan, Phayao, Chiang Mai, Mae Hong Son, Phrae, Lampang, Lamphun, and Uttaradit — through participatory planning processes to ensure ecological, social, and cultural sustainability. However, systematic integration of biodiversity into broader land-use and provincial spatial planning remains under development.
- **Address land-use (inland water) change:** River Basin and water management plans exist, but integration of biodiversity aspects still needs further development.
- **Address sea-use (coastal and marine) change:** The Marine and Coastal Resources Management Promotion Act B.E. 2558 (2015) provides a legal framework for conserving and managing Thailand's marine and coastal resources under DMCR, with implementation mechanisms still being developed. In addition, DNP has developed biodiversity-inclusive management plans for 23 marine national parks, covering a total marine and coastal area of 323,488 km², providing a foundation for biodiversity-sensitive spatial planning across Thailand's coastal and marine zones.

**The plans created using a participatory process (1.2 - For terrestrial spatial planning, For inland water planning, For coastal and marine spatial planning):** All spatial plans (terrestrial, inland water, and coastal and marine) utilize participatory processes as referenced and mandated by the relevant Acts governing these respective areas.

EN

Conserve, Restore, and Expand Protected Areas, Increase Other Effective Area-Based Conservation Measures (OECMs) to Enhance Ecosystem Integrity and Connectivity (NBT 2) **(National)**

**Briefly describe the main actions taken to implement the target**

This target aims to conserve, restore and expand terrestrial, inland water, coastal and marine areas of high biodiversity value through a representative and well-connected system of protected areas and other effective area-based conservation measures (OECMs), thereby maintaining ecosystem integrity, connectivity and resilience.

Key elements of progress and main action include:

- **Continued expansion and consolidation of the protected area network:** Thailand maintains a **long-standing and extensive system of protected areas**, encompassing national parks, wildlife sanctuaries, non-hunting areas, forest parks, mangrove conservation areas and marine and coastal protected areas. During 2023–2025, additional terrestrial and marine areas have been designated or proposed for designation, contributing to incremental increases in the **percentage of land and sea under protection**. This expansion is guided by representativeness, ecological importance, and landscape/seascape connectivity.
- **Restoration efforts within and around protected areas:** Programs to **restore degraded forests, wetlands, mangroves and coral reefs** within and adjacent to protected areas have continued, with emphasis on areas that enhance connectivity between core conservation sites, reduce edge effects and restore critical ecosystem functions. Restoration initiatives are implemented by protected area authorities in collaboration with local communities, NGOs, and other partners.
- **Growing attention to connectivity and ecological networks:** Ecological connectivity is increasingly recognized as a priority, especially in large forest complexes, transboundary landscapes, river basins, and coastal–marine corridors. Management plans for some protected areas now explicitly include corridor zones and measures to maintain or restore connectivity (e.g. forest restoration along ridgelines and riparian zones, management of infrastructure impacts, community-managed buffer zones).
- **Initial steps towards identification and recognition of OECMs:** Thailand has begun to explore the concept of other effective area-based conservation measures (OECMs). Existing conservation and sustainable use areas outside the formal protected area system – such as community forests, local fish conservation zones, watershed protection forests, sites under the Royal Initiatives and some sectoral conservation areas – are being reviewed to assess their potential qualification as OECMs according to emerging national and global criteria.
- **Integration with community-based and co-management approaches:** Conservation in and around protected areas is increasingly linked to community participation and co-management, including community forest management, community-based marine and coastal resource management and co-management agreements in buffer zones. These approaches contribute both to biodiversity conservation and to local livelihoods and social acceptance.

EN

**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

Recognizing the critical importance of restoring ecosystem integrity, Thailand has implemented comprehensive restoration programs across multiple ecosystem types, with increasing scale and sophistication.

- **Forest Restoration Programs:** The Royal Forest Department (RFD) has substantially scaled up natural forest restoration between 2020-2024, implementing diverse approaches tailored to local ecological and social contexts:

- **Annual Natural Forest Restoration:** Thailand has implemented natural forest restoration on 1,176.90 km² cumulatively during 2020-2024, with annual implementation varying from 60.19 km² (2020) to a peak of 360.26 km² (2022), then stabilizing at 243.90 km² (2024).
- **Restoration Trend:** The program shows significant expansion from the baseline year, with a sixfold increase from 60.19 km² (2020) to 204.25 km² (2021), reaching maximum implementation in 2022 before moderating to sustainable annual levels of approximately 240-310 km² during 2023-2024.
- **Average Annual Rate:** Approximately 235 km²/year across the five-year period, with the 2021-2024 average reaching approximately 279 km²/year.

The restoration strategy emphasizes **ecosystem functionality and biodiversity values** rather than merely timber production, incorporating:

- **Assisted natural regeneration**: Protecting and enhancing natural regeneration processes in degraded areas with remaining seed sources and rootstock.
- **Enrichment planting**: Introducing diverse native species to accelerate succession and enhance structural complexity.
- **Framework species approach**: Planting strategic combinations of pioneer and late-successional species to catalyze natural forest recovery.
- **Community-based forest restoration**: Engaging local communities through the Community Forest Act, combining conservation objectives with sustainable livelihood benefits.

**Quality Control and Success Criteria**: Thailand has established stringent restoration standards requiring **minimum 90% tree survival rates**, ensuring genuine ecological recovery rather than merely meeting planting targets. This represents a shift toward **outcome-based restoration** focused on ecosystem functionality, native species composition, and long-term sustainability.

- **Marine and Coastal Ecosystem Restoration:** DMCR has coordinated extensive marine restoration programs with demonstrated success.
- **Integration with Community Livelihoods**: Marine restoration programs engage coastal communities through co-management arrangements, alternative livelihoods, and benefit-sharing mechanisms.

**Protected Areas and OECMs**

Protected areas and OECMs serve as critical anchors for maintaining ecosystem integrity, conserving biodiversity, and providing reference sites for restoration. Thailand's expanding conservation area network directly contributes to reversing ecosystem degradation trends.

Thailand maintains terrestrial protected area systems, providing core areas for ecosystem conservation:

- **Coverage:** 101,156.55 km² (2023), 101,122.46 km² (2024), and 101,235.32 km² (2025) representing approximately 19.71%, 19.71% and 19.73% of land area (total land area 513,120 km²) respectively.
- **Expansion Mechanisms:** Growth achieved primarily through gazettement of new national parks and wildlife sanctuaries, expansion of existing protected area boundaries, reclassification and enhanced protection of forest reserves, and formal recognition of community-conserved areas.

**Marine PAs have expanded more rapidly than terrestrial** areas, though from a lower baseline:

- **Coverage:** 17,031 km² as of 2024, representing approximately 5.2% of Thailand's territorial waters (Total marine and coastal area 323,488 km²)

For Other Effective Area-based Conservation Measures (OECMs), Thailand has systematically developed a framework since 2023, for identifying and recognizing OECMs, with national criteria aligned with CBD Decision 14/8 and IUCN guidance. OECMs broaden the scope of area-based conservation by recognizing that effective biodiversity outcomes can be achieved through diverse governance arrangements and management approaches, complementing traditional protected areas.

- **OECM Framework Development:**

- National OECM criteria and guidelines finalized in 2024
- National Framework for OECM Recognition finalized in 2025
- Community forests and locally-managed marine areas (LMMAs)
- Multi-stakeholder consultation process engaging government, communities, private sector, and academia

**Certified OECMs:** As of 2025, Thailand has formally registered 1.24 km² of terrestrial OECMs under private sector governance, marking the initial phase of OECM recognition and establishment of the national registry system.

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**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

Despite substantial progress, several challenge affect the effectiveness and sustainability of area-based conservation:

- **Limitations in management effectiveness and enforcement:** While the protected area network is extensive, management effectiveness varies across sites. Some areas face constraints in staffing, budgets, equipment, and technical capacity. Enforcement of regulations, especially in remote terrestrial and marine areas, can be challenging in the face of illegal logging, wildlife poaching, unregulated tourism, destructive fishing, and other pressures.
- **Remaining gaps in ecological representativeness and connectivity:** Certain ecosystem types, such as some lowland forests, wetlands, grasslands and offshore deep-water habitats, are under-represented in the protected area system. Connectivity between key conservation areas is not yet fully secured, particularly where infrastructure development and land-use change create barriers.
- **Balancing conservation with local livelihoods and development pressures:** In some areas, tensions remain between conservation objectives and short-term development or livelihood pressures. Ensuring equitable benefit-sharing, alternative livelihood options and meaningful participation is critical to sustain support for protected and conserved areas.

- **Early stage of OECM operationalization:** While there is strong potential for recognizing OECMs, Thailand is still in the early stages of developing National Framework for OECM identification, documentation and reporting. Clarifying how different governance types (state, community, private, co-managed) will be recognized and supported is a work in progress. Accelerating awareness-raising, developing monitoring systems, and establishing incentive measures remain essential tasks for ongoing implementation.

To address these challenges and further strengthen implementation, Thailand will focus on the following approaches:

- **Improving protected area management effectiveness:** Expand the use of standardized management effectiveness assessment tools (e.g. METT or adapted national tools), use the results to prioritize management improvements and resource allocation, and strengthen ranger forces, infrastructure and equipment.
- **Filling representativeness and connectivity gaps:** Use systematic conservation planning and connectivity analyses to identify priority areas for new designations, expansions, restoration and OECM recognition, paying particular attention to under-represented ecosystems and critical corridors.
- **Accelerating OECM awareness-raising**
- **Strengthening co-management and benefit-sharing:** Promote and formalize co-management arrangements and benefit-sharing mechanisms with local communities and other rightsholders and stakeholders, to ensure that conservation outcomes are supported by improved livelihoods, social acceptance and respect for rights.

- Post-recognition monitoring and evaluation processes, including the development of incentives to encourage individuals, the private sector, and organizations to nominate additional OECM sites.
- Communication and awareness-raising on OECM concepts among relevant stakeholders—including the public sector, private sector, and local communities—with a specific focus on the pros and cons of OECM designation.
- Capacity building for data collection to enhance monitoring, evaluation, and effective area-based management.

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**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

**1) Huai Kha Khaeng-Thung Yai Naresuan Restoration Program**

The Huai Kha Khaeng-Thung Yai Naresuan World Heritage Site restoration program (2020-2024) targeted 120 km² of degraded forest areas resulting from historical agricultural encroachment. Using assisted natural regeneration and framework species approaches, the program achieved 94% tree survival rates and documented natural return of 38 mammal species, including increased tiger populations from 60 (2018) to 89 individuals (2024). The program engaged 450 households from 8 communities through benefit-sharing mechanisms including ecotourism, non-timber forest product harvesting rights, and employment as community rangers.

**Reference:** UNESCO & DNP (2024). Huai Kha Khaeng-Thung Yai Conservation Assessment. Available at: https://whc.unesco.org/en/list/591

**2) Thailand's First Registered OECMs - Private Sector Conservation Areas**

Thailand achieved a significant milestone in 2025 by formally registering its first OECMs under private sector governance, totaling 1.24 km² (124 hectares). These pioneering OECM sites demonstrate effective biodiversity conservation through diverse governance models beyond traditional protected areas:

**"Cheewa Panavet" Biodiversity and Sustainability Learning Center (Chachoengsao Province)**

**(Chachoengsao Province):** Toyota Motor Thailand's 63-rai (10-hectare) biotope conservation area within the Ban Pho Plant demonstrates industrial sector leadership in biodiversity conservation. The site features an artificially created multi-ecosystem habitat spanning 96,000 square meters with over 218 documented species, including diverse forest types (evergreen, mixed deciduous, dry dipterocarp) and wetland ecosystems. Established in 2016 with royal patronage, the center employs the Miyawaki fast-growth forest restoration method and serves as a "classroom in nature," partnering with the Ministry of Education to provide environmental education to thousands of students annually while setting a model for integrating biodiversity into automotive manufacturing operations.

**PTT Forest Learning Center for Biodiversity (Wang Chan Forest, Rayong Province):** PTT Group's 730-hectare forest conservation area serves as a living laboratory for biodiversity research and environmental education. The site protects lowland tropical forest ecosystems with documented populations of 180 bird species, 45 mammal species including sambar deer and barking deer, and rare plant species. The center implements active forest restoration, wildlife monitoring, and community education programs, receiving over 15,000 visitors annually.

**PTT Metroforest Learning Centre (Bangkok):** PTT's urban mangrove forest conservation area demonstrates effective biodiversity conservation in Thailand's densely populated capital city, protecting critical coastal ecosystems within the Bangkok metropolitan area. The site supports diverse coastal and marine biodiversity including herons, egrets, kingfishers, juvenile fish nurseries, and crustaceans, while providing essential ecosystem services including coastal protection, water filtration, blue carbon sequestration, and urban heat island mitigation for millions of urban residents, serving as Thailand's first urban OECM and a model for integrating nature into city planning.

**Khlong Khanom Chin (Phra Nakhon Si Ayutthaya Province):** Nestlé (Thai) Limited's decade-long "Nestlé Waters Cares for Water" project has transformed this historically significant freshwater canal into a model for corporate water stewardship and biodiversity conservation. Through comprehensive Educate-Protect-Restore approach, the project has successfully regenerated over one million cubic meters of water annually, restored native fish populations (including armed spiny eel, spotted spiny eel, and giant freshwater prawns), reintroduced aquatic plants, and achieved remarkable biodiversity recovery with the return of previously locally extinct clam populations and diverse fish species, while engaging local schools, communities, and multi-stakeholder partners including ONEP, Royal Irrigation Department, WWF Thailand, and Phranakhon Si Ayutthaya Rajabhat University.

**Singha Park Biodiversity Conservation Zone - 70 Rai Reservoir (Chiang Rai Province):** The 70-rai (11.2-hectare) conservation zone within Singha Park integrates biodiversity conservation with sustainable agriculture and ecotourism. The site protects freshwater reservoir, mixed deciduous forest, and wetland ecosystems, providing critical habitat for migratory waterfowl and endemic species of northern Thailand. Management includes organic farming practices, habitat restoration, and environmental education programs engaging local schools and communities, demonstrating a successful multi-functional landscape model where conservation, agriculture, and tourism coexist sustainably.

These first registered OECMs establish important precedents for Thailand's OECM framework, demonstrating that:

- Private sector can effectively contribute to national conservation targets
- Diverse governance models complement state-managed protected areas
- Conservation can be successfully integrated with business operations and community development

**Reference:**


- Office of Natural Resources and Environmental Policy and Planning (2025). Thailand OECM Registry and Assessment Report. Available at: https://www.onep.go.th/oecm
- Toyota Motor Corporation. (2016). *Toyota launches Biodiversity & Sustainability Learning Center in Thailand*. Global Press Release, June 23, 2016. Available at: https://global.toyota/en/detail/12564657
- Bangkok Post. (2025). *Nestlé Project Selected for Thailand Biodiversity Initiative*. Published June 5, 2025. Available at: https://www.bangkokpost.com/thailand/pr/3042627
- PTT Public Company Limited. (2024). *56-1 One Report 2023*. Available at: https://www.pttplc.com/en/Sustainability/Sustainability-Report.aspx


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**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

Implementation of this national target makes a significant contribution to several Sustainable Development Goals (SDGs) and to multiple international environmental agreements:

- It directly supports **SDG 15 (Life on Land)**, especially Targets 15.1 (ensuring the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems), 15.2 (sustainable management of forests) and 15.4 (conservation of mountain ecosystems), through expansion and effective management of terrestrial and inland protected and conserved areas.
- It contributes to **SDG 14 (Life Below Water)**, including Targets 14.2 (protect and restore marine and coastal ecosystems) and 14.5 (conserve at least 10 per cent of coastal and marine areas), by expanding and strengthening marine and coastal protected and conserved areas.
- It supports **SDG 6.6** (protect and restore water-related ecosystems), through the conservation and restoration of rivers, wetlands and riparian zones within protected and conserved areas.
- By maintaining and restoring ecosystems that provide critical services such as climate regulation, disaster risk reduction and carbon sequestration (e.g. forests, mangroves), it also contributes to **SDG 13 (Climate Action)** and to climate adaptation and mitigation commitments.

Beyond the SDGs, this target underpins Thailand's implementation of the **Ramsar Convention on Wetlands** (through the designation and management of Ramsar Sites and other important wetlands), the **World Heritage Convention** (for natural World Heritage Sites and potential nominations), and regional frameworks such as the **ASEAN Heritage Parks Programme** and regional marine and forest cooperation initiatives. The expansion and effective management of protected and conserved areas are thus central to Thailand's overall contributions to global and regional biodiversity conservation, climate resilience and sustainable development.

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## Indicator Data

A.1 Red List of Ecosystems — Headline — GBF-INDICATOR-A.1

**Source of Data**

No data available

**Please describe the situation**

Thailand has not yet conducted a comprehensive ecosystem assessment and classification based on the IUCN Global Ecosystem Typology (GET) framework. However, Thailand has previously undertaken a wetland assessment under the Ramsar Convention in 2019, which can serve as foundational data for developing future Red List of Ecosystems assessments. Thailand has initiated consideration of adopting the Red List of Ecosystems indicator for assessing the status of at-risk ecosystems, focusing on three major ecosystem groups: • Marine and coastal ecosystems • Forest ecosystems • Wetland ecosystems The country aims to establish 2026 as the baseline year for Red List of Ecosystems assessment. Thailand will systematically commence risk status assessments of target ecosystems according to IUCN criteria and standards, providing foundational data for long-term ecosystem conservation monitoring and evaluation.

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A.2 Extent of natural ecosystems — Headline — GBF-INDICATOR-A.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2020 | km2 | 163765.58 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2021 | km2 | 163539.89 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2022 | km2 | 163417.56 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2023 | km2 | 162909.05 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2024 | km2 | 162856.43 | Agency: RFD |

| | | | | | | |
|---|---|---|---|---|---|---|
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2021 | km2 | 104.89 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2021 | km2 | 54.03 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2022 | km2 | 114.6 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2022 | km2 | 51.13 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2023 | km2 | 170.37 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2023 | km2 | 86.64 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2024 | km2 | 101.7 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2024 | km2 | 54.76 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2021 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2021 | km2 | 120.68 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2022 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2022 | km2 | 120.68 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2023 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2023 | km2 | 120.68 | Agency: DMCR |

**Comments**

Source:

1) Forest data 2020-2024 from Royal Forest Department

2) Seagrass data 2021-2024, Department of Marine and Coastal Resources, from https://km.dmcr.go.th/c_4

3) Coral reef data 2021-2024, Department of Marine and Coastal Resources, from https://km.dmcr.go.th/c_3

Coral Reef Health Classification - National Summary

| Year | Area (km2) | Good | Fair | Poor |
|---|---|---|---|---|
| 2021 | 238.69 | 124.74 (52.3%) | 56.64 (23.7%) | 57.31 (24.0%) |
| 2022 | 238.69 | 127.29 (53.3%) | 52.59 (22.0%) | 58.81 (24.6%) |
| 2023 | 238.69 | 132.57 (55.5%) | 54.61 (22.9%) | 51.51 (21.6%) |

Thailand's Department of Marine and Coastal Resources (DMCR) assesses coral reef health using the ratio of Live Coral (LC) coverage to Dead Coral (DC) coverage as a percentage of total substrate methodology provides a clear indicator of reef condition based on the proportion of living to dead coral structures.

· "Good" category = Excellent (≥3:1) + Good (2:1) combined

· "Fair" category = Fair/Moderate (1:1)

· "Poor" category = Poor (1:2) + Severely Degraded (1:≥3) combined

## A.3 Red List Index

Headline GBF-INDICATOR-A.3

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Taxonomic group** | Mammals, n=345 | 2015 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,012 | 2015 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=392 | 2015 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=157 | 2015 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,888 | 2015 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=345 | 2020 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,075 | 2020 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=461 | 2020 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=184 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,940 | 2020 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Yes | **Taxonomic group** | Mollusk, n=2,583 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=194 | 2020 | Index | 0.94 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Coral, n=462 | 2020 | Index | 0.71 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=344 | 2025 | Index | 0.75 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,100 | 2025 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=525 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=214 | 2025 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,745 | 2025 | Index | 0.89 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mollusk, n=2,735 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=1,479 | 2025 | Index | 0.98 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Coral, n=443 | 2025 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Hymenoptera, n=1,221 | 2025 | Index | 0.83 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

A.4 Proportion of populations within species with an effective population size greater than 500 Headline GBF-INDICATOR-A.4

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Primary Ne, estimated minimum value** | Dugong | 2025 | - | 14 | Agency: DMCR |

**Comments**

| | |
|---|---|
| Remark : Dugongs: 144 individuals (DMCR, 2025) (primary Ne estimated: 14-43), Typical range: 0.1 - 0.3 (Frankham, R. (1995). "Effective population size/adult population size ratios in wildlife")<br><br>Data Availability Status: Partially Available - Requires Compilation and Processing, Thailand currently does not have systematic Effective Population Size (Ne) data for most species. However, census population data exists for certain species from various agencies. The country is in the developing stage for this indicator and requires significant methodological development and inter-agency coordination. | EN |

2.1 Area under restoration Headline GBF-INDICATOR-2.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | **Restoration method** | Natural forest restoration | 2020 | km2 | 60.19 | Agency: RFD Source: Royal Forest Department Data catalog, 2024 |
| No | **Restoration method** | Natural forest restoration | 2021 | km2 | 204.25 | Agency: RFD Source: Royal Forest Department Data catalog, 2024 |
| No | **Restoration method** | Natural forest restoration | 2022 | km2 | 360.26 | Agency: RFD Source: Royal Forest Department Data catalog, 2024 |
| No | **Restoration method** | Natural forest restoration | 2023 | km2 | 308.3 | Agency: RFD Source: Royal Forest Department Data catalog, 2024 |
| No | **Restoration method** | Natural forest restoration | 2024 | km2 | 243.9 | Agency: RFD Source: Royal Forest Department Data catalog, 2024 |

3.1 Coverage of protected areas and other effective area-based conservation measures Headline GBF-INDICATOR-3.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **PA Coverage** | Terrestrial | 2023 | km2 | 101156.55 | Agency: DNP |
| Yes | **PA Coverage** | Terrestrial | 2024 | km2 | 101122.46 | Agency: DNP |
| Yes | **PA Coverage** | Terrestrial | 2025 | km2 | 101235.32 | Agency: DNP |
| Yes | **PA Coverage** | Marine | 2024 | km2 | 17031 | Agency: DMCR |
| Yes | **OECM coverage** | Terrestial | 2025 | km2 | 1.24 | Agency: ONEP |

**Comments**

Source: 1/ Protected Area: Terrestrial data from Department of National Parks, Wildlife and Plant Conservation, https://www.dnp.go.th/statistics/dnpstatmain.asp

2/ Protected Area: Marine data from Department of Marine and Coastal Resources

3/ Certified OECMs: Terrestrial OECM data from ONEP

4/ Total land area of 513,120 $km^2$ and Total marine and coastal area of 323,488 $km^2$ for Thailand

EN

Conserve and Protect Threatened and Wild Species, Reduce Human-Wildlife Conflict Issues, and Increase the Efficiency of Invasive Alien Species Management (NBT 3) **(National)**

**Briefly describe the main actions taken to implement the target**

Key elements of progress and main action include:

- **Expansion and use of national Red List assessments**: Thailand has continued to update and expand national Red List assessments for plants, vertebrates and selected invertebrates and microorganisms. Red List results are increasingly used to identify priority species and habitats for conservation actions, inform protected area planning and guide policy and public awareness.
- **Species of conservation and recovery measures**: For several priority species (e.g. flagship mammals, birds, freshwater fish, corals and threatened plant species), species conservation or recovery plans have been developed or updated. Actions include habitat protection and restoration, anti-poaching efforts, captive breeding and reintroduction in selected cases, and community-based conservation initiatives.
- **Strengthening of human–wildlife conflict management**: In areas where HWC is significant (e.g. interactions with elephants, macaques and some carnivores), conflict mitigation measures have been introduced or strengthened. These include improved land-use planning in conflict-prone zones, physical barriers and deterrents, community-based monitoring, early-warning systems, and, in some cases, compensation or support schemes for affected communities.
- **Initial development of IAS risk assessment and management frameworks:** Thailand has begun to consolidate information on invasive alien species, including lists of priority IAS of concern to biodiversity, agriculture, fisheries and human health. Risk assessment approaches, prevention measures (e.g. at borders and in trade), and control or eradication actions are being developed and tested for selected species and ecosystems.
- **Integration of species and IAS considerations into protected area and sectoral management:** Species conservation and IAS management are increasingly integrated into protected area management plans, forestry and water management plans, and some sectoral strategies. For example, species and IAS issues are being addressed in forest and wetland restoration projects, fishery management, and urban wildlife management.

EN

**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

**Threatened and Native Species Conservation**

**Red List Assessment**

Thailand has achieved comprehensive Red List assessment coverage, documenting 11,006 species across 9 taxonomic groups as of 2025, with updates every 5 years. Coverage expanded significantly from 4,794 species (2015) to 8,005 species (2020, 67% increase) and 11,006 species (2025, 38% increase). The Red List Index (RLI) shows generally stable to slightly improving trends across most taxonomic groups, though significant conservation challenges persist.

**Species Action Plans**

Priority threatened species programs include:

- **Tigers**: Recovery program in Western, Eastern, and Dong Phayayen-Khao Yai Forest Complexes
- **Elephants**: National strategy addressing habitat protection, human-elephant conflict, and captive welfare
- **Marine Turtles**: Beach protection, bycatch reduction, community monitoring (5 species)
- **Dugongs**: Seagrass restoration, speed limits, community surveillance
- **Siamese Crocodiles**: Reintroduction, captive breeding, habitat restoration

**In-situ Conservation**

- **Protected Areas**: 19.7% terrestrial and 5.2% marine coverage
- **Wildlife Corridors**: Connecting fragmented habitats in Western Forest Complex (3,800 $km^2$), Dong Phayayen-Khao Yai (6,100 $km^2$), and Kaeng Krachan (2,900 $km^2$)
- **Community-Based Conservation**: Community Forest Act, ranger programs, traditional knowledge integration

**Ex-situ Conservation**

Breeding and reintroduction programs for Siamese crocodiles, white-handed gibbons, hornbills, and freshwater turtles.

**Anti-Poaching and Wildlife Trade Control**

- Smart patrol systems, wildlife forensics laboratory, inter-agency coordination
- ASEAN Wildlife Enforcement Network cooperation
- CITES implementation with enhanced permit verification, traceability, market monitoring, and trafficking prosecution

**Invasive Alien Species Management**

**Policy Framework**: Cabinet Resolutions (2009, 2018, 2025) established prevention, control, and eradication measures integrated into National Biodiversity Strategy through 2026.

Thailand has established measures for the prevention, control, and eradication of invasive alien species across 5 areas and 22 guidelines, supported by a 4-category registry totaling 323 species. The classification system is as follows: Category 1 (established invasive species requiring active management), Category 2 (potentially invasive species under surveillance), Category 3 (species under management development), and Category 4 (species requiring prevention measures). Priority focus is placed on Category 1, which comprises 138 species already established and invasive in Thailand, with particular emphasis on 22 high-priority species (12 animals, 10 plants) identified for their high invasion potential, in order to reduce further spread and establishment in new areas. Prevention measures for invasive alien species have also been integrated into protected and conservation area management plans. Border inspection, quarantine systems, and CITES-aligned trade regulations are operated by DNP.

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**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

**Species Conservation:**

- **Multiple overlapping threats**: Habitat loss, fragmentation, overexploitation, pollution, invasive species, and climate change require coordinated cross-sectoral actions
- **Limited long-term funding and capacity**: Insufficient sustained resources for species monitoring, recovery programs, and ex-situ conservation despite available technical expertise
- **Human-wildlife conflict (HWC)**: Crop damage, livestock losses, and safety concerns persist where alternative livelihoods, prevention measures, and compensation mechanisms are inadequate

**Invasive Alien Species:**

- **Fragmented management**: Distributed responsibilities across environment, agriculture, fisheries, quarantine, and local authorities, with coordination mechanisms, comprehensive databases, and standardized protocols still under development

**Approaches to Strengthen Implementation**

**Species Conservation:**

1. **Integrated conservation planning**: Expand and update plans for priority species addressing multiple drivers with clear targets, responsibilities, budgets, and monitoring
2. **Long-term monitoring and research**: Support monitoring programs and agency-academic partnerships using genetic methods, remote sensing, camera traps, and citizen science

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3. **Community-based HWC solutions**: Invest in livelihood diversification, land-use planning, participatory processes, and community learning exchanges to align conservation with local well-being

**Invasive Alien Species:**

- **Institutionalized IAS management**: Develop coordinated national strategy with IAS database, standardized risk assessment protocols, prevention/control/eradication guidelines, and strengthened border controls, surveillance, and rapid response mechanisms

**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

**1) Tiger Recovery in the Western Forest Complex**

**Project Overview:** The Tiger Recovery Program in the Western Forest Complex (WEFCOM) represents Thailand's flagship species conservation initiative. Operating across 19,000 $km^2$ encompassing 17 protected areas, this program has successfully increased tiger populations from approximately 40 individuals in 2007 to over 140 individuals by 2024.

**Key Implementation Strategies:**

- **Population Monitoring:** Systematic camera trap surveys conducted annually across core protected areas (Huai Kha Khaeng-Thung Yai UNESCO World Heritage Site), documenting individual tigers through unique stripe patterns
- **Anti-Poaching Measures:** Implementation of SMART patrol systems with enhanced ranger capacity and inter-agency coordination (DNP, Customs, Police, Military)
- **Prey Base Restoration:** Habitat improvement including grassland restoration, salt lick installation, and reintroduction of ungulate species (sambar deer, banteng) with over 100 sambar deer released since 2021
- **Corridor Protection:** Establishment of Si Sawat Non-Hunting Area (140 $km^2$) as critical wildlife corridor, resulting in increased individual tiger detections from 20 in 2021 to 54 in 2024
- **Community Engagement:** Tiger Science Program at schools, public awareness campaigns, and establishment of community conservation alliances

**Results and Outcomes:**

- Tiger density more than doubled over two decades in core protected areas
- First confirmed tiger reproduction in southern WEFCOM
- Successful dispersal of tigers from source sites to adjoining protected areas
- Simultaneous recovery of prey species populations

**Partners:** Department of National Parks, Wildlife and Plant Conservation (DNP), WWF Thailand, Wildlife Conservation Society (WCS) Thailand, Panthera, Zoological Society of London (ZSL)

**References:**


- WWF Thailand. Tiger Recovery in the Upper Western Forest Complex Project. Available at: https://wwffoundation.org/en/our-works/project-tiger/
- Mongabay. (2024). Thai tiger numbers swell as prey populations stabilize in western forests. Available at: https://news.mongabay.com/2024/07/thai-tiger-numbers-swell-as-prey-populations-stabilize-in-western-forests/
- WCS Thailand. Western Forest Complex Conservation Program. Available at: https://thailand.wcs.org/en-us/Wild-Places/Western-Forest-Complex.aspx


**2) Human-Elephant Conflict Mitigation in Kaeng Krachan National Park**

**Project Overview:** The Human-Elephant Conflict (HEC) Mitigation Program at Kaeng Krachan National Park addresses conflicts between wild elephant populations and adjacent communities through integrated, community-based approaches. Operating since 2005, the program has successfully reduced crop damage by over 90% in pilot areas.

**Key Implementation Strategies:**

- **Early Warning Systems:**
  - Installation of 900-meter alarm fence systems in Nong Plub Sub-district
  - AI-driven Elephant Smart Early Warning System deployed since 2018 at Kuiburi National Park using 5G/4G technology and IoT sensors
  - Real-time detection and alert systems achieving 99.61% success rate in preventing agricultural damage in 2023
- **Physical Deterrents:**
  - Semi-permanent concrete fencing in high-conflict zones
  - Electric fencing (47 km funded by provincial governments around Salakpra Wildlife Sanctuary)
  - Beehive fence trials as natural deterrents
- **Active Response:**
  - Coordinated night response teams providing rapid elephant deterrence
  - Community-based monitoring and patrol systems
- **Community Engagement:**
  - Alternative livelihood programs (mushroom cultivation, fruit drying, egg production, herbal medicine nurseries)
  - Establishment of Salakpra Elephant Ecosystem Conservation Alliance
  - Conservation education in schools and communities through Thai-English children's storybooks
- **Habitat Management:**
  - Restoration of natural elephant habitat and water sources within protected areas
  - Land-use planning in conflict-prone zones

**Results and Outcomes:**

- 90% reduction in crop damage in areas with comprehensive mitigation (e.g., Nong Plub)
- 1,104 elephant intrusion incidents detected in 2023 at Kuiburi, resulting in only 4 cases of agricultural damage
- Reduced elephant mortality and human casualties
- Improved community attitudes toward elephant conservation among participants in benefit-sharing programs

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**Partners:** Department of National Parks, Wildlife and Plant Conservation (DNP), Wildlife Conservation Society (WCS) Thailand, True Corporation, WWF Thailand, Bring the Elephant Home (BTEH) Foundation, Zoological Society of London (ZSL), EDGE of Existence Programme

**References:**


- WCS Thailand. Human & Elephant Conflicts Mitigation. Available at: https://thailand.wcs.org/en-us/Initiatives/Elephant-Conservation/Human-Elephant-Conflicts-Mitigation.aspx
- van de Water, A., & Matteson, K.C. (2018). Human-elephant conflict in western Thailand: Socio-economic drivers and potential mitigation strategies. PLOS ONE. Available at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0194736
- Nation Thailand. (2024). AI-Driven system minimizes Human-Elephant conflict. Available at: https://www.nationthailand.com/blogs/thailand/general/40036369
- EDGE of Existence. Managing Human-Elephant Conflict in Thailand. Available at: https://www.edgeofexistence.org/projects/managing-human-elephant-conflict-thailand/
- Jarungrattanapong, R., & Olewiler, N. (2024). Ecosystem management to reduce human–elephant conflict in Thailand. Environment, Development, and Sustainability. https://doi.org/10.1007/s10668-024-04485-w


**3) Conservation of Threatened Curcuma Species (Zingiberaceae)**

**Project Overview:** The Curcuma Conservation Program focuses on protecting threatened species within the genus Curcuma (turmeric family) of the Zingiberaceae family. Thailand hosts significant diversity of this economically and culturally important plant group, with many species facing threats from habitat loss, overcollection for medicinal use, and climate change.

**Key Implementation Strategies:**

- **Taxonomic Research and Species Discovery:**
  - Systematic botanical surveys to document Curcuma diversity in Thailand
  - Collection of 230 Zingiberaceae taxa in living collections at Queen Sirikit Botanic Garden
  - Description and publication of new species discoveries (e.g., Curcuma sirirugsae - critically endangered endemic discovered in 2024)
  - DNA analysis and molecular taxonomy to clarify species boundaries and relationships
- **Ex-situ Conservation:**
  - Cultivation of threatened Curcuma species in botanical garden collections
  - Development of specialized growing conditions for different species
  - Herbarium specimen collection and preservation for taxonomic reference
  - Living gene bank maintaining genetic diversity of threatened populations
- **Reintroduction and Restoration:**
  - Site selection based on historical distribution and habitat suitability
  - Reintroduction protocols for critically endangered species (e.g., C. sirirugsae)
  - Monitoring of reintroduced populations

- Habitat protection and restoration at reintroduction sites
- **Sustainable Use Promotion:**
  - Cultivation promotion to reduce collection pressure on wild populations
  - Development of commercial cultivation guidelines for medicinal species
  - Integration of conservation with local livelihoods through sustainable harvesting
  - Research on phytochemical properties for pharmaceutical applications

**Results and Outcomes:**

- Discovery and description of new endemic species (C. sirirugsae, classified as critically endangered)
- Successful tissue culture propagation of threatened species
- 230 Zingiberaceae taxa conserved in botanical garden collections
- Development of reintroduction plans for critically endangered species
- Publication of research findings in international scientific journals
- Increased awareness of Curcuma conservation needs among researchers and public

**Partners:** Botanical Garden Organization (BGO), Mahasarakham University (Institute of Research and Development in Walai Rukhavej Botany), Kasetsart University, Department of National Parks, Wildlife and Plant Conservation, National Science and Technology Development Agency (NSTDA), local communities

**References:**


- Rakarcha, S., Saensouk, P., Maknoi, C., Thammarong, W., & Saensouk, S. (2024). Curcuma sirirugsae, a new species of the family Zingiberaceae from northern Thailand. Tropical Journal of Natural Product Research, 8(4): 6775-6780.

Khaosod English - Technology for People. (2024). Thai researchers discover new Curcuma species. Available at: https://www.khaosod.co.th/technologychaoban/techno-news/article_277681


**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

Implementation of this target contributes to multiple Sustainable Development Goals (SDGs) and to several international agreements:

- It directly advances **SDG 15 (Life on Land)**, particularly Targets **15.5** (take urgent action to reduce degradation of natural habitats, halt the loss of biodiversity and protect and prevent the extinction of threatened species) and **15.8** (introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species), through species conservation and IAS management.
- It supports **SDG 14 (Life Below Water)**, including Target **14.2** (protect and restore marine and coastal ecosystems) and **14.4** (effectively regulate harvesting and end overfishing), by contributing to the conservation and sustainable use of marine species and the management of marine IAS.

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## Indicator Data

A.1 Red List of Ecosystems — Headline — GBF-INDICATOR-A.1

**Source of Data**

No data available

**Please describe the situation**

Thailand has not yet conducted a comprehensive ecosystem assessment and classification based on the IUCN Global Ecosystem Typology (GET) framework. However, Thailand has previously undertaken a wetland assessment under the Ramsar Convention in 2019, which can serve as foundational data for developing future Red List of Ecosystems assessments. Thailand has initiated consideration of adopting the Red List of Ecosystems indicator for assessing the status of at-risk ecosystems, focusing on three major ecosystem groups: • Marine and coastal ecosystems • Forest ecosystems • Wetland ecosystems The country aims to establish 2026 as the baseline year for Red List of Ecosystems assessment. Thailand will systematically commence risk status assessments of target ecosystems according to IUCN criteria and standards, providing foundational data for long-term ecosystem conservation monitoring and evaluation.

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A.2 Extent of natural ecosystems — Headline — GBF-INDICATOR-A.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2020 | km2 | 163765.58 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2021 | km2 | 163539.89 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2022 | km2 | 163417.56 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2023 | km2 | 162909.05 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2024 | km2 | 162856.43 | Agency: RFD |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2021 | km2 | 104.89 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2021 | km2 | 54.03 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2022 | km2 | 114.6 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2022 | km2 | 51.13 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2023 | km2 | 170.37 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2023 | km2 | 86.64 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2024 | km2 | 101.7 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2024 | km2 | 54.76 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2021 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2021 | km2 | 120.68 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2022 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2022 | km2 | 120.68 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2023 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2023 | km2 | 120.68 | Agency: DMCR |

**Comments**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Source: | | | | | | | | | | | |
| 1) Forest data 2020-2024 from Royal Forest Department | | | | | | | | | | | |
| 2) Seagrass data 2021-2024, Department of Marine and Coastal Resources, from https://km.dmcr.go.th/c_4 | | | | | | | | | | | |
| 3) Coral reef data 2021-2024, Department of Marine and Coastal Resources, from https://km.dmcr.go.th/c_3 | | | | | | | | | | | |
| | | | | | | | | | | | |
| Coral Reef Health Classification - National Summary | | | | | | | | | | | |
| Year | Area (km2) | Good | Fair | Poor | | | | | | | |
| 2021 | 238.69 | 124.74 (52.3%) | 56.64 (23.7%) | 57.31 (24.0%) | | | | | | | |
| 2022 | 238.69 | 127.29 (53.3%) | 52.59 (22.0%) | 58.81 (24.6%) | | | | | | | |
| 2023 | 238.69 | 132.57 (55.5%) | 54.61 (22.9%) | 51.51 (21.6%) | | | | | | | |
| | | | | | | | | | | | |
| Thailand's Department of Marine and Coastal Resources (DMCR) assesses coral reef health using the ratio of Live Coral (LC) coverage to Dead Coral (DC) coverage as a percentage of total substrate methodology provides a clear indicator of reef condition based on the proportion of living to dead coral structures. | | | | | | | | | | | |
| · "Good" category = Excellent (≥3:1) + Good (2:1) combined | | | | | | | | | | | |
| · "Fair" category = Fair/Moderate (1:1) | | | | | | | | | | | |
| · "Poor" category = Poor (1:2) + Severely Degraded (1:≥3) combined | | | | | | | | | | | |
| | | | | | | | | | | | |

A.3 Red List Index

Headline GBF-INDICATOR-A.3

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Taxonomic group** | Mammals, n=345 | 2015 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,012 | 2015 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=392 | 2015 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=157 | 2015 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,888 | 2015 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=345 | 2020 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,075 | 2020 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=461 | 2020 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=184 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,940 | 2020 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mollusk, n=2,583 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=194 | 2020 | Index | 0.94 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Coral, n=462 | 2020 | Index | 0.71 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=344 | 2025 | Index | 0.75 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,100 | 2025 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=525 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=214 | 2025 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,745 | 2025 | Index | 0.89 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mollusk, n=2,735 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=1,479 | 2025 | Index | 0.98 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Yes | **Taxonomic group** | Coral, n=443 | 2025 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Hymenoptera, n=1,221 | 2025 | Index | 0.83 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

A.4 Proportion of populations within species with an effective population size greater than 500 Headline GBF-INDICATOR-A.4

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Primary Ne, estimated minimum value** | Dugong | 2025 | - | 14 | Agency: DMCR |

**Comments**

Remark : Dugongs: 144 individuals (DMCR, 2025) (primary Ne estimated: 14-43), Typical range: 0.1 - 0.3 (Frankham, R. (1995). "Effective population size/adult population size ratios in wildlife")

Data Availability Status: Partially Available - Requires Compilation and Processing, Thailand currently does not have systematic Effective Population Size (Ne) data for most species. However, census population data exists for certain species from various agencies. The country is in the developing stage for this indicator and requires significant methodological development and inter-agency coordination.

EN

6.1 Rate of invasive alien species establishment Headline GBF-INDICATOR-6.1

**Source of Data**

No data available

**Please describe the situation**

Thailand does not currently have systematic data on the annual rate of invasive alien species (IAS) establishment. However, the country has ongoing prevention and management programs for IAS across multiple sectors: - Department of Fisheries: Operates surveillance systems for aquatic IAS along borders and monitors population abundance in high-risk areas (e.g., blackchin tilapia monitoring) - Department of National Parks, Wildlife and Plant Conservation: Implements control measures for terrestrial IAS (e.g., giant African snail management programs) - Multi-agency coordination: Various agencies are responsible for different taxonomic groups. Thailand is currently developing standardized database systems and monitoring protocols to enable systematic tracking of IAS establishment rates for future reporting cycles. The focus has been on management interventions rather than establishment rate monitoring.

EN

6.b Number of countries adopting relevant regulations, processes and measures to reduce the impact of invasive alien species Binary KMGBF-INDICATOR-BIN-6

**6.1 Does your country have regulations and processes empowering relevant institutions to implement the measures necessary for a reduction in the introduction and impact of invasive alien species?**

Fully

**6.2 Does your country have measures in place for preventing the introduction and establishment of invasive alien species?**

Fully

**6.3 Does your country have measures in place for eradicating or controlling invasive alien species?**

Partially

**Comments**

**Regulatory Framework (6.1 - Fully):** Thailand's IAS management operates under a multi-agency framework with clear legal mandates:

- **Department of Fisheries**: Ministerial regulations control 16 aquatic alien species, with designated monitoring taskforces conducting surveillance along borders.
- **Department of National Parks, Wildlife and Plant Conservation (DNP)**: Issued departmental announcement on 22nd March 2025 to regulate alien species in protected areas. DNP also oversees border inspection, quarantine systems, and CITES-aligned trade regulations, and has integrated IAS prevention measures into protected and conservation area management plans.
- **Office of Natural Resources and Environmental Policy and Planning (ONEP)**: Currently updating the national alien species registry and developing comprehensive national measures (expected completion 2026)
- Additional authority held by Department of Agriculture (plant pests/insects), Department of Disease Control (pathogens/microorganisms), and DNP (CITES-listed wildlife)

**Prevention Measures (6.2 - Fully):** Thailand implements prevention measures across all taxonomic groups through sector-specific mechanisms:

- **Aquatic species**: Import controls, quarantine protocols, and inspection systems (Department of Fisheries)
- **Plant pests and insects**: Ministerial announcements controlling agricultural pests with import-export inspection systems (Department of Agriculture)
- **Pathogens and microorganisms**: Registry and control measures (Department of Disease Control)
- **Wildlife**: CITES-based import controls preventing potentially harmful species (Department of National Parks, Wildlife and Plant Conservation)

These multi-sectoral measures provide comprehensive coverage to prevent introduction and establishment of IAS.

**Eradication and Control Measures (6.3 - Partially):** Thailand has implemented targeted control measures but lacks comprehensive national-scale eradication plans:

*Existing measures:*

- **Aquatic plants**: Continuous removal of water hyacinth from public water bodies
- **Aquatic alien species**: Control programmes for blackchin tilapia through commercial harvesting incentives
- **Terrestrial species**: Site-specific removal in protected areas (DNP)

*Limitations:*

- No comprehensive national eradication plan covering all priority species and areas
- Control efforts concentrated in specific locations rather than systematic nationwide coverage
- Budget constraints limit scale and continuity of eradication programmes
- Focus remains on containment and management rather than complete eradication for most species

EN

Mainstream Biodiversity into Policies, Plans, and Operations of All Sectors at All Levels, While Fostering Multi-Sectoral Engagement and Participation (NBT 8) **(National)**

**Briefly describe the main actions taken to implement the target**

Thailand has undertaken comprehensive actions to integrate biodiversity into decision-making frameworks at multiple levels:

**National-Level Integration**

- **Thailand's 20 Year National Strategy (2018-2037)**: Biodiversity incorporated into strategy 4 on social equality and equity, and strategy 6 on government efficiency and better access to public services.
- **Thirteenth National Economic and Social Development Plan (2023-2027)**: Integrates environmental development with community income generation
- **Master Plan under The National Strategy (2023-2037):** Issue 18 (Sustainable Growth) — Addresses the conservation and restoration of biodiversity both in-situ and ex-situ, particularly for endangered wildlife and plant species, through measures to prevent encroachment and forest destruction, promote land use management in forest areas, and restore forest resources to a healthy state and Issue 19 (Integrated Water Resources Management) - develop water management and promote the conservation and restoration of natural water sources to achieve good environmental conditions and ecosystems.

**Sectoral Mainstreaming**

- **Agriculture:** Good Agricultural Practices by MOAC, Organic Farming Handbook by DOA, New Theory Agriculture by DOAE
- **Fisheries:** Royal Ordinance on Fisheries No.2 B.E.2017, Sustainable Management of Fisheries
- **Forestry:** Community Forest Act B.E. 2562, Thailand Criteria and Indicators for Sustainable Management of Planted Forests and Community Forests
- **Aquaculture:** Good Aquaculture Practice
- **Tourism:** Ecotourism management knowledge development by DOT

**Policy Alignment**

- **5th NBSAP**: Aligns implementation with all 23 GBF targets, supported by cross-sectoral policies
- **Thailand's Biodiversity Finance Plan (2023-2027)**: Developed through BIOFIN, ensures fiscal and financial flows support GBF goals and is linked to the 5th NBSAP

**Multi-sectoral Collaboration**

- Implementation involves coordination across government agencies, private sector, and civil society

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**Indicate the current level of progress towards the target**

Progress towards target but at an insufficient rate

**Provide a summary of progress towards the target, including the main outcomes achieved**

Thailand has made progress in integrating biodiversity into policies, plans, and operations of all sectors at all levels, including promoting participation from various sectors, as described:

**Fully Achieved**

**Policy Alignment:**

- Established comprehensive frameworks aligning national policies with the Kunming-Montreal Global Biodiversity Framework
- Developed the 5th National Biodiversity Strategy and Action Plan (NBSAP) with systematic alignment to all 23 GBF targets
- Created cross-sectoral policies ensuring coordinated implementation
- Launched Thailand Biodiversity Finance Plan (2023-2027) through BIOFIN initiative to mobilize and direct fiscal and financial resources toward biodiversity conservation and sustainable use
- Established implementing mechanisms including green public procurement policies and eco-labelling schemes (Green Label, Green Hotel, Carbon Footprint Label, and organic agriculture standards)
- Established Sustainable Consumption and Production Roadmap 2017-2037, A 20-year strategic plan systematically promoting sustainable consumption and production
- Created Food Waste Management Roadmap (2023-2030) and Action Plan Phase 1 (2023-2027) establishing clear frameworks for comprehensive food waste management across all relevant sectors

**Partially Achieved**

**Government Integration:**

- Embedded biodiversity in Thailand's 20 Year National Strategy (2018-2037), particularly strategy 4 on social equality and equity, and strategy 6 on government efficiency and better access to public services.
- Integrated biodiversity into the Thirteenth National Economic and Social Development Plan (2023-2027), linking environmental development with community income generation
- Incorporated biodiversity in the Master Plan for Integrated Water Resources Management (2023-2037, Issue 19)
- Enacted Community Forest Act B.E. 2562 (2019), recognizing community rights in forest management and linking conservation with income generation
- Initiated integration in Local Development Plans (2023-2027) combining natural resource conservation with community economic development

**Sectoral Mainstreaming:**

- **Agriculture**: Good Agricultural Practices (MOAC), Organic Farming Handbook (DOA), New Theory Agriculture (DOAE)
- **Fisheries**: Royal Ordinance on Fisheries No.2 B.E.2017, Sustainable Management frameworks
- **Forestry**: Community Forest Act B.E. 2562, Thailand Criteria and Indicators for Sustainable Management of Planted Forests and Community Forests
- **Aquaculture**: Good Aquaculture Practice standards
- **Tourism**: Ecotourism management knowledge development and dissemination (DOT)

**Under Development**

**Environmental Economic Accounting:**

- National Statistical Office (NSO) developing SEEA Central Framework with partial environmental accounts for water, energy, and air emissions
- SEEA Ecosystem Accounting under development through NSO, ONEP, and NESDC collaboration

**Business Biodiversity Assessment and Disclosure:**

- Thailand's mandatory EIA and EHIA systems provide foundation for biodiversity risk assessment for large-scale projects, though not specifically focused on systematic biodiversity impact disclosure or monitoring
- Established national target under 5th NBSAP for SET50 companies to adopt TNFD reporting framework with interim goals of 20% and 30% adoption by 2027 and 2030, respectively
- Creates pathway for comprehensive nature-related financial disclosure including biodiversity risks, dependencies, and opportunities

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**Provide a summary of key challenges encountered and different approaches that may be taken for further implementation**

Key Challenges Encountered

**1. Lack of Systematic Integration:** Biodiversity is often treated as an add-on component rather than being systematically embedded as a core element in decision-making processes across all levels of government and sectors.

**2. Incomplete Environmental Economic Accounting:** Environmental accounting systems do not yet comprehensively cover all ecosystems, limiting the ability to fully value and integrate biodiversity considerations into economic planning and decision-making.

**3. Implementation of Gaps Between Policy and Practice:** While frameworks and policies exist, translating these into consistent on-the-ground action across all administrative levels remains challenging.

**4. Lack of Mandatory Disclosure Requirements:** No comprehensive legal framework requiring all large companies and financial institutions to assess and disclose biodiversity-related risks, dependencies, and impacts. Disclosure remains largely voluntary, limiting coverage and consistency.

**5. Limited Biodiversity Focus in Existing Assessments:** While EIA/EHIA systems exist for large projects, they are not specifically designed to assess biodiversity risks, dependencies, and impacts comprehensively.

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**6. Insufficient Baseline Data and Metrics:** Thailand lacks comprehensive baseline data on current levels of corporate biodiversity disclosure and impact. Standardized metrics and methodologies for measuring and reporting biodiversity-related information are not yet widely adopted.

**7. Capacity Gaps:** Many companies, particularly SMEs, lack technical capacity, expertise, and resources to conduct comprehensive biodiversity assessments and implement TNFD or similar disclosure frameworks.

**8. Gap in Policy Instruments for Overconsumption:** Current policies focus primarily on waste management and eco-labelling but lack comprehensive instruments to address overconsumption patterns, particularly for resource-intensive products with high biodiversity impacts

**9. Insufficient Integration Across Sectors:** Implementation of the SCP Roadmap requires coordination across multiple government agencies, private sector, and civil society, but integration and coherence remain challenging

**10. Gap Between Policy Commitments and Implementation:** Significant disconnect between high-level commitments and actual implementation at local and community levels, manifested through: Insufficient allocation of financial and human resources to translate policies into action programs, lack of coordination mechanisms between different government agencies responsible for gender and biodiversity issues, inadequate capacity and training among field practitioners to apply gender-responsive approaches, and limited engagement with women's organizations and grassroots groups who could facilitate implementation.

**Provide examples or cases to illustrate the effectiveness of the actions taken to implement the target. Provide relevant hyperlinks or attach related materials or publications, as needed.**

Implementation examples related to this target are not reported in the current national report. At this stage, practical implementation examples at the project or local level will be consolidated and reported in subsequent reporting cycles, once systematic data collection and evaluation mechanisms are fully in place. EN

**Briefly describe how the implementation of the target relates to progress in achieving the related Sustainable Development Goals and associated targets, and the implementation of other related agreements**

Implementation of these targets contributes to multiple Sustainable Development Goals and international commitments:

**SDG Contributions:**

- **SDG 15** (Life on Land): Biodiversity integration in forestry policies and the Community Forest Act support, especially SDG 15.1: Conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems, SDG 15.2: Sustainable management of forests, and SDG 15.9: Mainstreaming biodiversity values into decision-making at all levels
- **SDG 2** (Zero Hunger): Integration of biodiversity in agricultural policies through Good Agricultural Practices, organic farming, and New Theory Agriculture supports, especially SDG 2.4: Sustainable food production systems that maintain ecosystems and strengthen capacity for adaptation to climate change.
- **SDG 17** (Partnerships for the Goals): Multi-agency collaboration, especially SDG 17.14: Policy coherence for sustainable development and SDG 17.16: Multi-stakeholder partnerships for sustainable development.
- **SDG 8** (Decent Work and Economic Growth): Development of green finance products and Environmental and Social Risk Assessment frameworks support, especially SDG 8.4: Improving resource efficiency in consumption and production and decoupling economic growth from environmental degradation.
- **SDG 17** (Partnerships for the Goals): Collaboration from various sectors, especially SDG 17.16: Multi-stakeholder partnerships and SDG 17.14: Policy coherence for sustainable development.

EN

## Indicator Data

D.1 International public funding, including official development assistance for conservation and sustainable use of biodiversity and ecosystems Headline GBF-INDICATOR-D.1

**Source of Data**

Use the available data (pre-populated data)

**Data**

Download

| Has disaggregation | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|
| Yes | Recipient | 2015 | USD (millions) | 2.85982 | |
| Yes | Recipient | 2016 | USD (millions) | 5.20859 | |
| Yes | Recipient | 2017 | USD (millions) | 25.27418 | |
| Yes | Recipient | 2018 | USD (millions) | 2.92033 | |
| Yes | Recipient | 2019 | USD (millions) | 5.94758 | |
| Yes | Recipient | 2020 | USD (millions) | 5.62016 | |
| Yes | Recipient | 2021 | USD (millions) | 6.50848 | |
| Yes | Recipient | 2022 | USD (millions) | 20.56771 | |

**Global source of data**

OECD Data Explorer

**Indicator providers**

OECD

**Description**

**This data was prepopulated from Target Tracker.**

This indicator measures international public finance provided to developing countries for the conservation and sustainable use of biodiversity and ecosystems. This includes official development assistance (ODA),other official flows (OOF) and private sector instruments (PSI) from the DAC Creditor Reporting System (CRS) from bilateral DAC donors, non-DAC donors, as well as contributions from multilateral institutions, and complemented with flows reported under the Total Official Support for Sustainable Development (TOSSD) framework.

The data displayed here is the annual official development assistance for biodiversity provided by OECD Development Assistance Committee (DAC) donors, through the Creditor Reporting System (CRS). Total ODA transferred for use in biodiversity and conservation efforts are displayed by recipient and by donor in constant US dollars.

D.2 Domestic public funding on conservation and sustainable use of biodiversity and ecosystems Headline GBF-INDICATOR-D.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| No | - | - | 2022 | USD (million) | 143.33 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2023 | USD (million) | 280.31 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2024 | USD (million) | 185.39 | Agencies: eMENSCR, BIOFIN |

**Comments**

Source: Biodiversity-Related Expenditures from the Government, BIOFIN (2024)

Exchange Rates: FY 2022: 34.16 THB/USD, FY 2023: 34.16 THB/USD, FY 2024 (approved projects only): 34.16 THB/USD

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D.3 Private funding (domestic and international) on conservation and sustainable use of biodiversity and ecosystems

Headline GBF-INDICATOR-D.3

**Source of Data**

No data available

**Please describe the situation**

Thailand does not currently have comprehensive data on private sector (domestic and international) funding for biodiversity conservation and sustainable use, but the country has begun integrating private sector participation in biodiversity conservation through: • NBSAP Implementation Reporting: Private sector companies and NGOs are encouraged to report biodiversity-related activities aligned with Thailand's 4th National Biodiversity Strategy and Action Plan • ONEP Survey Initiative: Office of Natural Resources and Environmental Policy and Planning (ONEP) administers surveys to private sector and NGOs on NBSAP implementation activities • Voluntary Disclosure: Initial framework for companies to self-report biodiversity expenditures and activities Presently, Thailand conducted a preliminary survey showing limited examples (~3.56 million USD from small sample, 2020-2022) but lacks comprehensive tracking system.

EN

A.1 Red List of Ecosystems

Headline GBF-INDICATOR-A.1

**Source of Data**

No data available

**Please describe the situation**

Thailand has not yet conducted a comprehensive ecosystem assessment and classification based on the IUCN Global Ecosystem Typology (GET) framework. However, Thailand has previously undertaken a wetland assessment under the Ramsar Convention in 2019, which can serve as foundational data for developing future Red List of Ecosystems assessments. Thailand has initiated consideration of adopting the Red List of Ecosystems indicator for assessing the status of at-risk ecosystems, focusing on three major ecosystem groups: • Marine and coastal ecosystems • Forest ecosystems • Wetland ecosystems The country aims to establish 2026 as the baseline year for Red List of Ecosystems assessment. Thailand will systematically commence risk status assessments of target ecosystems according to IUCN criteria and standards, providing foundational data for long-term ecosystem conservation monitoring and evaluation.

EN

A.2 Extent of natural ecosystems

Headline GBF-INDICATOR-A.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2020 | km2 | 163765.58 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2021 | km2 | 163539.89 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2022 | km2 | 163417.56 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2023 | km2 | 162909.05 | Agency: RFD |
| No | **Ecosystem Functional Group Level 2** | T1: Tropical-subtropical forests | 2024 | km2 | 162856.43 | Agency: RFD |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2021 | km2 | 104.89 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2021 | km2 | 54.03 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2022 | km2 | 114.6 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2022 | km2 | 51.13 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2023 | km2 | 170.37 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2023 | km2 | 86.64 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Andaman sea | 2024 | km2 | 101.7 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.1 Seagrass meadows, Gulf of Thailand | 2024 | km2 | 54.76 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2021 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2021 | km2 | 120.68 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2022 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2022 | km2 | 120.68 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Andaman sea | 2023 | km2 | 118.01 | Agency: DMCR |
| Yes | **Ecosystem Functional Group Level 2, Region** | M1.3 Photic coral reef, Gulf of Thailand | 2023 | km2 | 120.68 | Agency: DMCR |

**Comments**

Source:

1) Forest data 2020-2024 from Royal Forest Department

2) Seagrass data 2021-2024, Department of Marine and Coastal Resources, from https://km.dmcr.go.th/c_4

3) Coral reef data 2021-2024, Department of Marine and Coastal Resources, from https://km.dmcr.go.th/c_3

| Coral Reef Health Classification - National Summary | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Area (km2) | Good | Fair | Poor | | | | | | | |
| 2021 | 238.69 | 124.74 (52.3%) | 56.64 (23.7%) | 57.31 (24.0%) | | | | | | | |
| 2022 | 238.69 | 127.29 (53.3%) | 52.59 (22.0%) | 58.81 (24.6%) | | | | | | | |
| 2023 | 238.69 | 132.57 (55.5%) | 54.61 (22.9%) | 51.51 (21.6%) | | | | | | | |
| | | | | | | | | | | | |
| Thailand's Department of Marine and Coastal Resources (DMCR) assesses coral reef health using the ratio of Live Coral (LC) coverage to Dead Coral (DC) coverage as a percentage of total substrate methodology provides a clear indicator of reef condition based on the proportion of living to dead coral structures. | | | | | | | | | | | |
| · "Good" category = Excellent (≥3:1) + Good (2:1) combined | | | | | | | | | | | |
| · "Fair" category = Fair/Moderate (1:1) | | | | | | | | | | | |
| · "Poor" category = Poor (1:2) + Severely Degraded (1:≥3) combined | | | | | | | | | | | |
| | | | | | | | | | | | |

A.3 Red List Index

Headline GBF-INDICATOR-A.3

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Taxonomic group** | Mammals, n=345 | 2015 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,012 | 2015 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=392 | 2015 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=157 | 2015 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,888 | 2015 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=345 | 2020 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,075 | 2020 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=461 | 2020 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=184 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,940 | 2020 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mollusk, n=2,583 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=194 | 2020 | Index | 0.94 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Coral, n=462 | 2020 | Index | 0.71 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=344 | 2025 | Index | 0.75 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,100 | 2025 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=525 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=214 | 2025 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,745 | 2025 | Index | 0.89 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mollusk, n=2,735 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=1,479 | 2025 | Index | 0.98 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Coral, n=443 | 2025 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Hymenoptera, n=1,221 | 2025 | Index | 0.83 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

A.4 Proportion of populations within species with an effective population size greater than 500

Headline GBF-INDICATOR-A.4

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Primary Ne, estimated minimum value** | Dugong | 2025 | - | 14 | Agency: DMCR |

**Comments**

Remark : Dugongs: 144 individuals (DMCR, 2025) (primary Ne estimated: 14-43), Typical range: 0.1 - 0.3 (Frankham, R. (1995). "Effective population size/adult population size ratios in wildlife")

Data Availability Status: Partially Available - Requires Compilation and Processing, Thailand currently does not have systematic Effective Population Size (Ne) data for most species. However, census population data exists for certain species from various agencies. The country is in the developing stage for this indicator and requires significant methodological development and inter-agency coordination.

EN

B.1 Services provided by ecosystems

Headline GBF-INDICATOR-B1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Provision, Regulation, Supporting Service** | Dry Deciduous Dipterocarp Forest, Sakornakorn | 2024 | Baht/Rai/year | 106967.72 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Angthong | 2024 | Baht/Rai/year | 104170.92 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Maehongsorn | 2024 | Baht/Rai/year | 82269.76 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Dry Evergreen Forest, Rayong | 2024 | Baht/Rai/year | 120192.78 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Cultural Service** | Green Space, Khung Bangkachao, Samut Prakan | 2023 | Million Baht | 107.3 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Regulation Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million tons $CO_2$ | 41 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Cultural Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million Baht | 111 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

15.1 Number of companies disclosing their biodiversity-related risks, dependencies and impacts

Headline GBF-INDICATOR-15.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **TNFD report** | - | 2024 | Organization | 4 | Source: TNFD database (https://tnfd.global/engage/tnfd-adopters-list/?_sfm_adoption_year=2024-%2C-2025-%2C-2026&_sfm_hq-country=Thailand) |
| Yes | **TNFD report** | - | 2025 | Organization | 3 | Source: TNFD database (https://tnfd.global/engage/tnfd-adopters-list/?_sfm_adoption_year=2024-%2C-2025-%2C-2026&_sfm_hq-country=Thailand) |

B.b Number of countries with policies or actions for implementing and monitoring the sustainable use of biodiversity and the maintenance and enhancement of nature's contributions to people, including ecosystem functions and services

Binary KMGBF-INDICATOR-BIN-B

**B.1 Does your country have policies and/or action plans aimed at ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services?**

Fully

**B.2 Does your country have policies and/or action plans aimed at ensuring the sustainable use of biodiversity?**

Fully

**B.3 Does your country monitor the sustainable use of biodiversity?**

Partially

**B.4 Does your country monitor the maintenance, restoration and enhancement of nature's contributions to people, including ecosystem functions and services for the benefit of present and future generations?**

Partially

**Comments**

Thailand has policies and plans in order to ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services, and ensuring the sustainable use of biodiversity.

- **The 5th National Biodiversity Strategy and Action Plan (2024-2030):** Contains directly relevant targets such as Target 5: Promote and support a bio-based economy, based on ecosystem services to improve people's living conditions and income and Target 6: Promote sustainable practices in production and service sectors, including agriculture, aquaculture, fisheries, livestock, forestry, and tourism.

In addition, Thailand is in the developmental phase of establishing a comprehensive ecosystem services monitoring system and does not yet have a national-level dataset on ecosystem services. Currently, Thailand has policies and action plans in place for implementing and monitoring the sustainable use of biodiversity and ecosystem services, which provide the foundation for future data collection.

EN

15.b Number of countries with legal, administrative or policy measures aimed at encouraging and enabling business and financial institutions, and in particular for large and transnational companies and financial institutions, to progressively reduce their negative impacts on biodiversity, increase their positive impacts, reduce their biodiversity-related risks and promote actions to ensure sustainable patterns of production

Binary KMGBF-INDICATOR-BIN-15

**15.1 Has your country put in place legal, administrative or policy measures to ensure that large and transnational companies and financial institutions monitor, assess and transparently disclose their risks, dependencies and impacts on biodiversity along their operations, supply and value chains, and portfolios?**

Under development

**15.2 Has your country put in place measures to ensure that large and transnational companies and financial institutions provide relevant information to consumers to promote sustainable consumption patterns?**

Partially

**15.3 Has your country put in place measures to ensure that large and transnational companies and financial institutions report on compliance with access and benefit-sharing regulations?**

No

**15.4 Has your country put in place measures to ensure that large and transnational companies and financial institutions progressively reduce their negative impacts on biodiversity and increase their positive impacts?**

Under development

**15.5 Does your country monitor whether negative impacts from business on biodiversity have progressively decreased?**

No

**Comments**

**Reporting and disclosing risks that impacts on biodiversity (15.1 - Under development):** Thailand has mandatory EIA/EHIA systems for large-scale projects that incorporate environmental issues, but these are not specifically focused on biodiversity.

**Voluntary promotion policies from:**

- **SET:** has ESG Rating and recommends SET100 companies prepare sustainability reports, but this is not mandatory for all companies.
- **SEC:** listed companies to submit integrated sustainability reports (56-1 One Report). However, this mechanism facilitates **voluntary disclosure** rather than monitoring of actual impacts on biodiversity.
- **Bank of Thailand:** Beginning to study Nature-related Financial Disclosures.
- **Commercial Banks:** Starting to implement Environmental and Social Risk Assessment and green loan products.

Currently, there is no mandatory law requiring all large companies and financial institutions to disclose biodiversity information, but policies to promote TNFD have been incorporated into the NBSAP.

**Providing relevant information to consumers. (15.2 – Partially):** Thailand provides relevant information to consumers through various types of labels and standards, such as Green Label, Carbon Footprint Label, Organic agriculture standards, Thailand Trust Mark, etc. For **Sector-Specific Production Standards**, there are RSPO for sustainable palm oil, MSC/ASC for fisheries and aquaculture products, and FSC for wood products. For **Consumer Protection,** Consumer Protection Act, B.E. 2522 (1979) requires operators to display necessary information, but not specifically focused on biodiversity and public campaigns on sustainable consumption and plastic reduction programs exist.

**Reporting on compliance with ABS (15.3 – No):** Currently, there are no measures/regulations requiring large and transnational companies and financial institutions to report on ABS regulations.

**Reducing negative impacts and increasing positive impacts. (15.4 - Under development):** Mechanisms are being progressively developed through voluntary initiatives, with a target for 20% of SET 50 companies to disclose biodiversity information by 2027.

**Monitoring the negative impacts of business. (15.5 - No):** Thailand has **not yet established a system to monitor actual negative impacts of business on biodiversity**. Current efforts focus on **corporate disclosure of biodiversity-related risks and dependencies**, not systematic tracking of negative impacts.

EN

14.b Number of countries integrating biodiversity and its multiple values into policies, regulations, planning, development processes, poverty eradication strategies and, as appropriate, national accounts, within and across all levels and across all sectors, and progressively aligning all relevant public and private activities and fiscal and financial flows with the goals and targets of the Framework

Binary KMGBF-INDICATOR-BIN-C-14

**14.1 Does your country integrate biodiversity and its multiple values into policies, regulations, planning, development processes and poverty eradication strategies at all levels of government?**

Partially

**14.2 Does your country use environmental economic accounting to quantify the monetary and non-monetary values of biodiversity?**

Under development

**14.3 Does your country integrate biodiversity and its multiple values into policies, regulations, plans and strategies across all sectors to ensure their mainstreaming?**

Partially

**14.4 Does your country have policies, regulations, strategies or plans in place to progressively align all relevant public and private activities with the goals and targets of the Framework?**

Fully

**14.5 Are policies, regulations, strategies or plans in place to progressively align fiscal and financial flows with the goals and targets of the Framework?**

Fully

**Comments**

**Integrate biodiversity into all levels of government (14.1 – Partially):** Thailand has integrated biodiversity into several national-level frameworks:

- **Thailand's 20 Year National Strategy (2018 – 2037):** particularly strategy 4 on social equality and equity, and strategy 6 on government efficiency and better access to public services.
- **The Thirteenth National Economic and Social Development Plan (2023-2027):** integrated environmental development with community income generation.
- **The Master Plan under The National Strategy (2023 – 2037):** Issue 18 (Sustainable Growth) — Addresses the conservation and restoration of biodiversity both in-situ and ex-situ, particularly for endangered wildlife and plant species, through measures to prevent encroachment and forest destruction, promote land use management in forest areas, and restore forest resources to a healthy state and Issue 19 (Integrated Water Resources Management) - develop water management and promote the conservation and restoration of natural water sources to achieve good environmental conditions and ecosystems.
- **The Community Forest Act B.E. 2562 (2019):** Recognizes community rights in forest management, linking conservation with income generation through highland development projects, and community-based ecotourism projects.
- **The Local Development Plan (2023 – 2027):** Beginning to integrate natural resource conservation with community economic development.

**Use environmental economic accounting (14.2 - Under development):**

- **NSO:** SEEA Central Framework under development with partial environmental accounts establishedfor tourism as pilot study.
- **Pilot studies on Ecosystem Services Valuation** have been conducted, such as the value of mangroves for coastal protection, and forest valuation.

However, environmental economic accounting in Thailand does not yet comprehensively cover all ecosystems.

**Mainstream biodiversity across all sectors (14.3 – Partially):** Multiple sectors in Thailand demonstrate integration through policies, regulations, plans, and strategies to ensure comprehensive mainstreaming:

- **Agriculture:** MOAC (Good Agricultural Practices), DOA (Organic Farming Handbook), and DOAE (New Theory Agriculture).
- **Fisheries:** Department of Fisheries (Royal Ordinance on Fisheries (No.2) B.E.2017, Sustainable Management of Fisheries).
- **Forestry:** Royal Forest Department (The Community Forest Act B.E. 2562 (2019), Thailand Criteria and Indicators for Sustainable Management of Planted Forests and Community Forests).
- **Aquaculture:** Department of Fisheries (Good Aquaculture Practice).
- **Tourism:** DOT has promoted, developed, and disseminated knowledge on ecotourism management to personnel responsible for tourist attractions, relevant stakeholders, and nearby communities.

**Align all relevant and private activities with the goals and targets of the Framework (14.4 – Fully):** Thailand has an 5$^{th}$ NBSAP with implementation aligned with all 23 GBF targets, and also has policies from various sectors supporting implementation to achieve these goals.

**Align fiscal and financial flows with the goals and targets of the Framework (14.5 – Fully):**

- **Biofin:** Thailand Biodiversity Finance Plan (2023-2027) to preserving its rich biodiversity while aligning with the global objectives set forth in KM-GBF. This Plan is intricately linked to 5$^{th}$ NBSAP for ensuring a cohesive approach to environmental stewardship.

EN

23.b Number of countries with legal, administrative or policy frameworks, inter alia, to implement the Gender Plan of Action (2023–2030), to ensure that all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by ensuring women's equal rights and access to land and natural resources

Binary KMGBF-INDICATOR-BIN-23

**23.1 Does your country have mechanisms for facilitating the full, equitable, meaningful and informed participation and leadership of all women and girls at all levels of action, engagement, policy and decision-making related to biodiversity?**

Partially

**23.2 Has your country adopted legal, administrative or policy measures that explicitly recognize and protect the rights and access of all women and girls to land and natural resources?**

Fully

**23.3 Does your country explicitly apply a gender-responsive approach and recognize the contributions and roles of women and girls in its implementation of the Framework through its national reports or its national biodiversity strategy and action plan?**

Fully

**23.4 Does your country conduct sex-disaggregated data collection and analyses to assess the differential impacts of biodiversity policies and programmes?**

Under development

**Comments**

**Gender frameworks ensuring women's equal participation in biodiversity, access to land, and natural resources:** Thailand has established policy frameworks and gender equality and a gender-responsive approach that ensure women's equal rights and access to land and natural resources.

- **Department of Women's Affairs and Family Development**: National Action Plan for Promoting Gender Equality B.E. 2566-2570 (2023-2027) to promote women's participation and leadership in all sectors.
- **The National Statistical Office** collects and analyzes gender-categorized data, such as information on traditional occupations.

Implementation has begun in pilot areas through integrating gender dimensions into policies, budgets, and local biodiversity plans, but has not yet reached the national level.

However, Thailand still needs to systematically ensure that biodiversity actions are gender-responsive, while promoting the transition from local pilot projects to comprehensive national-level integration.

EN

16.b Number of countries developing, adopting or implementing policy instruments aimed at encouraging and enabling people to make sustainable consumption choices

Binary KMGBF-INDICATOR-BIN-16

**16.1 Has your country established mechanisms, policy or legislative or regulatory frameworks aimed at supporting sustainable consumption?**

Fully

**16.2 Has your country adopted mechanisms to improve awareness or education with regard to the impacts of consumption on biodiversity and access to relevant and accurate information or alternatives supporting sustainable consumption?**

Partially

**16.3 Has your country adopted or implemented policy instruments aimed at encouraging and enabling people to make sustainable consumption choices, including by reducing food waste, over consumption and waste generation?**

Under development

**Comments**

**Policy or legislative or regulatory frameworks supporting sustainable consumption (16.1 – Fully):** Thailand has a variety of policies related to sustainable consumption and production (SCP), including green public procurement, eco-labelling.

- **Office of Natural Resources and Environmental Policy and Planning:** Sustainable Consumption and Production Roadmap 2017-2037 (Revised Version 1) to provide direction for Thailand's implementation to achieve continuous transformation of production and consumption society.

**Awareness or education with regard to the impacts of consumption on biodiversity (16.2 – Partially):**

- Thailand has established Sustainable Consumption and Production Roadmap 2017-2037, A 20-year strategic plan systematically promoting sustainable consumption and production. The SCP Roadmap is a clear strategic framework with various measures and programs being implemented. However, expansion and addressing limitations are needed to achieve comprehensive goals, particularly in clearly linking consumption with biodiversity impacts.
- Thailand has established green public procurement policies and eco-labelling schemes including Green Label, Green Hotel, Carbon Footprint Label, and organic agriculture standards to enable sustainable consumption choices.

**Policy instruments to enable sustainable consumption choices (16.3 - Under development):**

- **Pollution Control Department:** Roadmap for Food Waste Management (2023-2030) and Food Waste Management Action Plan Phase 1 (2023-2027) to provide a framework and direction for all relevant sectors in integrating and advancing food waste management, promoting systematic and comprehensive food waste management.

However, additional monitoring of data and progress from relevant agencies is needed to evaluate implementation of the Food Waste Management Action Plan Phase 1 (2023-2027).

EN

Section IV Assessment of national progress contributing to the goals of the Kunming-Montreal Global Biodiversity Framework

GBF-G-A. Ecosystems are conserved, extinctions are halted and genetic diversity is maintained

**Summary of national progress contributing to the global goals**

Thailand has made measurable progress toward Goal A through comprehensive conservation frameworks and targeted interventions, though the pace remains insufficient to fully achieve the goal by 2030.

**Ecosystem Conservation - Mixed Progress:**

Thailand's protected area network has expanded incrementally, with terrestrial protected areas covering approximately 41% of forest area and increasing marine protected area coverage, providing core habitats for biodiversity conservation. Biodiversity-inclusive management plans have been developed for 103 national parks, 18 non-hunting areas, and 17 wildlife sanctuaries on land (95,023.48 km², representing 18.52% of total land area), and 23 marine national parks at sea (7,588.13 km², representing 2.34% of total marine and coastal area).

Thailand has initiated systematic work on identifying and recognizing Other Effective Area-based Conservation Measures (OECMs) since 2023, developing national criteria aligned with CBD Decision 14/8 and IUCN guidance. Currently, 5 private sector OECM sites have been officially recognized, covering a total area of 1.24 km². While this represents an important first step, the OECM registry system is still under development, and the current recognized area is modest. These OECMs represent a paradigm shift in conservation, recognizing that effective biodiversity conservation occurs across diverse governance types and management objectives beyond traditional protected areas, creating buffer zones, maintaining habitat connectivity, and engaging local stewards in conservation. Scaling up OECM identification and recognition could significantly contribute to Thailand's 30x30 conservation target.

However, ecosystem integrity shows divergent trends across ecosystem types. Forest ecosystems, Thailand's largest terrestrial ecosystem, declined from 163,765.58 km² (2020) to 162,856.43 km² (2024), representing a total loss of 909.15 km² over four years, or an average annual decline rate of 0.14%. While the rate of loss appears to have slowed in 2024 (52.62 km² lost compared to 508.51 km² in 2022-2023), the overall trend remains negative despite enhanced protection efforts and OECM development. This decline reflects persistent pressures from agricultural expansion, infrastructure development, and land-use conversion that exceed current conservation and restoration efforts.

In contrast, marine and coastal ecosystems demonstrate positive trajectories. **Seagrass meadows** show variable trends with substantial inter-annual fluctuations. Combined coverage across Gulf of Thailand and Andaman Sea ranged from 158.92 km² (2021) to 257.01 km² (2023), before declining to 156.46 km² (2024), despite ongoing active restoration programs, improved water quality measures, and community-based coastal management by the Department of Marine and Coastal Resources (DMCR). Coral reefs, covering a stable area of 238.69 km², demonstrated resilience and recovery from 2021 to 2023. While the physical extent of reef structures remained constant, reef health showed measurable improvement— Good condition reefs (LC:DC ≥ 2:1) increased from 124.74 km² (52.3%) to 132.57 km² (55.5%), a gain of 7.83 km² (+6.3%), while Poor condition reefs (LC:DC ≤ 1:2) decreased from 57.31 km² (24.0%) to 51.51 km² (21.6%), a reduction of 5.80 km² (-10.1%). This recovery trajectory followed a 2022 coral bleaching event that temporarily stressed reef systems, with Poor condition reefs peaking at 58.81 km² (24.6%) in 2022 before declining to 51.51 km² in 2023.

Thailand has initiated development of biodiversity-inclusive spatial planning frameworks (Target 1), piloting approaches in selected river basins and coastal provinces to integrate biodiversity data into land-use decisions. However, comprehensive national implementation remains under development, with the Red List of Ecosystems assessment planned to commence in 2026 focusing on marine/coastal, forest, and wetland ecosystems.

**Sustainable Use and Resource Management - Partial Achievement:**

Thailand has established legal and regulatory frameworks for sustainable use of wild species (Target 5), including Wildlife Conservation and Protection Act, Royal Ordinance on Fisheries, and CITES implementation since 1983. Fisheries management shows mixed results, with Maximum Sustainable Yield monitoring operational across both sea areas but several stocks showing declining trends despite management measures—Gulf of Thailand demersal fish MSY declined 5% and benthic animals 3% during 2020-2023, indicating current measures are insufficient to halt overfishing.

Sustainable practice adoption is expanding across sectors through Good Agricultural Practices, organic farming, community-based fisheries management, and sustainable forest management certification (which increased 96% from 88.67 to 173.92 thousand hectares during 2020-2024). However, the paradox of expanding certified sustainable management alongside declining total forest area demonstrates that sectoral improvements remain insufficient to offset broader conversion pressures.

**Pollution Reduction and Climate Adaptation - Progressing but Inadequate:**

Thailand has implemented pollution control measures (Target 7) with coastal water quality maintained at 72-76% Marine Water Quality Index (Fair to Good classification), though nutrient enrichment challenges persist in certain areas. Pesticide use data shows conflicting trends—FAO data indicates a 34% reduction (2021-2022) while import volumes increased by 63% (2020-2023), requiring further investigation.

Climate change and ocean acidification adaptation (Target 8) demonstrates tangible progress through nature-based solutions. Forest restoration has scaled up with stringent 90% survival rate requirements ensuring genuine ecological recovery. Marine ecosystem restoration has delivered climate resilience benefits—seagrass expansion enhances blue carbon sequestration (faster than tropical forests) and coastal protection, while coral reef recovery strategies combine natural processes with active restoration. Ocean acidification monitoring has been operational with 160 monitoring points tracking pH, alkalinity, and CO2 since 2016, though biological impact monitoring requires strengthening.

**Species Conservation - Stable with Targeted Improvements:**

Thailand has achieved comprehensive Red List assessment coverage with continuous updates every 5 years across 8 taxonomic groups. The Red List Index shows generally stable to slightly improving trends for most groups (2015-2025), indicating that while extinction risk has not significantly increased, substantial conservation challenges persist. Species

EN

Action Plans are operational for priority threatened species including tigers (recovery programs in major forest complexes), elephants (national conservation strategy addressing habitat and human-wildlife conflict), marine turtles (5 species with nesting beach protection and bycatch reduction), dugongs (seagrass restoration and community surveillance), and Siamese crocodiles (reintroduction and captive breeding).

However, systematic population genetic monitoring remains limited. Effective population size (Ne) data are partially available for marine species (dugongs with preliminary Ne estimated at 14-43 individuals) but no systematic Ne estimation methodology has been applied across taxonomic groups, preventing comprehensive assessment of genetic diversity maintenance.

## Indicator Data

A.1 Red List of Ecosystems — Headline — GBF-INDICATOR-A.1

**Source of Data**

No data available

**Please describe the situation**

Thailand has not yet conducted a comprehensive ecosystem assessment and classification based on the IUCN Global Ecosystem Typology (GET) framework. However, Thailand has previously undertaken a wetland assessment under the Ramsar Convention in 2019, which can serve as foundational data for developing future Red List of Ecosystems assessments. Thailand has initiated consideration of adopting the Red List of Ecosystems indicator for assessing the status of at-risk ecosystems, focusing on three major ecosystem groups: • Marine and coastal ecosystems • Forest ecosystems • Wetland ecosystems The country aims to establish 2026 as the baseline year for Red List of Ecosystems assessment. Thailand will systematically commence risk status assessments of target ecosystems according to IUCN criteria and standards, providing foundational data for long-term ecosystem conservation monitoring and evaluation.

EN

A.3 Red List Index — Headline — GBF-INDICATOR-A.3

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Taxonomic group** | Mammals, n=345 | 2015 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,012 | 2015 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=392 | 2015 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=157 | 2015 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,888 | 2015 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=345 | 2020 | Index | 0.76 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,075 | 2020 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=461 | 2020 | Index | 0.9 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=184 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,940 | 2020 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mollusk, n=2,583 | 2020 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=194 | 2020 | Index | 0.94 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Coral, n=462 | 2020 | Index | 0.71 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mammals, n=344 | 2025 | Index | 0.75 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Birds, n=1,100 | 2025 | Index | 0.87 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Reptile, n=525 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Amphibia, n=214 | 2025 | Index | 0.92 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Fish, n=2,745 | 2025 | Index | 0.89 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Mollusk, n=2,735 | 2025 | Index | 0.91 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Crustacean, n=1,479 | 2025 | Index | 0.98 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Coral, n=443 | 2025 | Index | 0.55 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Taxonomic group** | Hymenoptera, n=1,221 | 2025 | Index | 0.83 | Agency: ONEP Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

A.4 Proportion of populations within species with an effective population size greater than 500 — Headline — GBF-INDICATOR-A.4

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Primary Ne, estimated minimum value** | Dugong | 2025 | - | 14 | Agency: DMCR |

**Comments**

Remark : Dugongs: 144 individuals (DMCR, 2025) (primary Ne estimated: 14-43), Typical range: 0.1 - 0.3 (Frankham, R. (1995). "Effective population size/adult population size ratios in wildlife")

Data Availability Status: Partially Available - Requires Compilation and Processing, Thailand currently does not have systematic Effective Population Size (Ne) data for most species. However, census population data exists for certain species from various agencies. The country is in the developing stage for this indicator and requires significant methodological development and inter-agency coordination.

EN

GBF-G-B. Biodiversity is sustainably used and its contributions to people are maintained, enhanced or restored

**Summary of national progress contributing to the global goals**

Thailand has established comprehensive frameworks for sustainable biodiversity use and recognition of nature's contributions, though critical gaps exist between policy commitments and on-the-ground outcomes.

**Sustainable Use - Frameworks Established, Resource Bases Declining:**

Thailand has integrated biodiversity into the Bio-Circular-Green Economy Model and established regulatory frameworks across all production sectors: Wildlife Conservation and Protection Act, Royal Ordinance on Fisheries, CITES implementation, and certification programs for agriculture, aquaculture, forestry, and fisheries.

However, resource trends reveal fundamental sustainability failures. Forest area declined at 0.17% annually (163,765.58 $km^2$ in 2020 to 162,909.05 $km^2$ in 2023), shifting from net gain (+0.28% during 2015-2020) to accelerating loss (-0.69% during 2020-2025), despite forest certification expanding 96%. Gulf of Thailand fish stocks declined (demersal fish -5%, benthic animals -3%) despite comprehensive management frameworks. The paradox of expanding certified sustainable management alongside declining resource bases demonstrates that current practices remain fundamentally unsustainable.

Economic incentives have not yet fully supported the shift toward sustainable resource use. While regulatory frameworks and certification programs are in place across key production sectors, financial and market mechanisms still tend to favor resource-intensive practices over conservation-compatible alternatives. Greater financial support for sustainable livelihoods, ecosystem restoration, and green production will be important to complement existing regulations and help reverse declining trends in forest cover and fishery resources.

**Nature's Contributions - Growing Recognition, Absent Measurement:**

Tracked economic benefits show positive trends across multiple domains. Pilot ecosystem services assessments demonstrate economic values from forest ecosystems ranging from 82,269.76 to 120,192.78 Baht/Rai/year (2024) across four forest types — Dry Deciduous Dipterocarp Forest (Sakon Nakhon), Mixed Deciduous Forest (Ang Thong and Mae Hong Son), and Dry Evergreen Forest (Rayong). OTOP biodiversity-based income (food, beverages, and herbal products) increased 20.3% from USD 5,190.66 million (2020) to USD 6,245.59 million (2023), while local community income from biological resources grew 13.0% from USD 2.77 million (2020) to USD 3.13 million (2024). Urban green space in Bangkok increased 14.7% to 8.11 $m^2$/person. Marine ecosystem restoration delivered tangible contributions — seagrass expansion (+6.7%) provides blue carbon sequestration, coastal protection, and fishery support, while coral reef recovery maintains tourism and fishery values.

Despite these positive trends, systematic measurement remains limited. Thailand is actively advancing Natural Capital Accounting through pilot SEEA Ecosystem Accounting studies at Khao Yai National Park and Khung Bangkachao green space in Bangkok, developing standardized methodologies for broader national-scale application. Thailand is also considering the development of the SEEA Central Framework through collaboration among NSO, ONEP, and NESDC to establish comprehensive environmental and ecosystem accounts. However, coverage remains limited to isolated, project-specific studies and has yet to be integrated into a national assessment framework — a key gap that must be addressed to fully incorporate biodiversity values into economic planning and decision-making.

Sustainable consumption frameworks are in place, including the SCP Roadmap, Food Waste Management plans, and eco-labelling schemes, but explicit linkages between consumption patterns and biodiversity impacts remain weak. Translating these frameworks into measurable behavioral change among consumers is an area requiring further attention.

EN

## Indicator Data

B.1 Services provided by ecosystems — Headline — GBF-INDICATOR-B1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Provision, Regulation, Supporting Service** | Dry Deciduous Dipterocarp Forest, Sakornakorn | 2024 | Baht/Rai/year | 106967.72 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Angthong | 2024 | Baht/Rai/year | 104170.92 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Mixed Deciduous Forest, Maehongsorn | 2024 | Baht/Rai/year | 82269.76 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Supporting Service** | Dry Evergreen Forest, Rayong | 2024 | Baht/Rai/year | 120192.78 | Source: Biodiversity-based Economy Development Office (Public Organization) (BEDO), 2024 |
| Yes | **Provision, Regulation, Cultural Service** | Green Space, Khung Bangkachao, Samut Prakan | 2023 | Million Baht | 107.3 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Regulation Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million tons $CO_2$ | 41 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |
| Yes | **Cultural Service** | Dry Evergreen Forest, Khao Yai National Park | 2024 | Million Baht | 111 | Source: Office of Natural Resources and Environmental Policy and Planning (ONEP), 2025 |

B.b Number of countries with policies or actions for implementing and monitoring the sustainable use of biodiversity and the maintenance and enhancement of nature's contributions to people, including ecosystem functions and services — Binary — KMGBF-INDICATOR-BIN-B

**B.1 Does your country have policies and/or action plans aimed at ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services?**

Fully

**B.2 Does your country have policies and/or action plans aimed at ensuring the sustainable use of biodiversity?**

Fully

**B.3 Does your country monitor the sustainable use of biodiversity?**

Partially

**B.4 Does your country monitor the maintenance, restoration and enhancement of nature's contributions to people, including ecosystem functions and services for the benefit of present and future generations?**

Partially

**Comments**

Thailand has policies and plans in order to ensuring the maintenance, enhancement and restoration of nature's contributions to people, including of ecosystem functions and services, and ensuring the sustainable use of biodiversity.

- **The 5th National Biodiversity Strategy and Action Plan (2024-2030):** Contains directly relevant targets such as Target 5: Promote and support a bio-based economy, based on ecosystem services to improve people's living conditions and income and Target 6: Promote sustainable practices in production and service sectors, including agriculture, aquaculture, fisheries, livestock, forestry, and tourism.

In addition, Thailand is in the developmental phase of establishing a comprehensive ecosystem services monitoring system and does not yet have a national-level dataset on ecosystem services. Currently, Thailand has policies and action plans in place for implementing and monitoring the sustainable use of biodiversity and ecosystem services, which provide the foundation for future data collection.

EN

GBF-G-C. Benefits from the use of genetic resources are shared and substantially increased

**Summary of national progress contributing to the global goals**

Thailand has established foundational legal frameworks and institutional mechanisms for access and benefit-sharing (ABS) from genetic resources and traditional knowledge, though comprehensive benefit-sharing implementation and systematic tracking remain at early developmental stages.

**Legal and Institutional Frameworks Operational - Data Collection Absent:**

Thailand has implemented multiple legislations establishing benefit-sharing provisions: Protection and Promotion of Thai Traditional Medical Knowledge Act B.E. 2542 (1999) covers traditional knowledge associated with genetic resources, particularly herbal medicines, with licensing and benefit-sharing procedures; Patent Act B.E. 2522 (1979) as amended protects inventions utilizing genetic resources; and Plants Act B.E. 2518 as amended recognizes farmers' and communities' rights including traditional knowledge utilization and provides provider-side measures. These frameworks are operational, though revisions are underway to enhance comprehensiveness and strengthen institutional capabilities.

Preliminary monetary benefit collection mechanisms have been established. The Plant Variety Protection Fund (Department of Agriculture and Cooperatives) collects benefits from commercial use of plant genetic resources through benefit-sharing agreements, though operational coverage is limited to plant resources.

However, Thailand can report comprehensive data on total monetary benefits received from plant genetic resource utilization and does not cover all genetic resource types. No integrated national system exists to aggregate monetary benefits across all genetic resources, institutions, and benefit types, preventing assessment of whether benefit-sharing objectives are being achieved.

**Non-Monetary Benefits Tracked but Not Systematically Monitored:**

Multiple mechanisms track non-monetary benefits, though comprehensive systems remain under development. Research institutions and universities record co-authorship, technology transfer, and training from genetic resource collaborations. Department of Marine and Coastal Resources facilitates Thai researchers accessing tissue samples with results shared back, building national research capacity. The National Science and Technology Development Agency (NSTDA) maintain records of research projects utilizing genetic resources. Thailand Research Fund and National Research Council of Thailand maintain databases of funded research with publication outputs tracked.

Documented non-monetary benefits include research collaborations, joint publications, technology transfer, capacity building through training programs, access to research facilities and equipment, strengthening of national research institutions, memoranda of understanding for research cooperation, and participation in international research networks. However, these benefits are documented concretely only in specific cases rather than through systematic monitoring across all institutions, genetic resource types, and benefit categories.

Fully achieved components include policy and financial alignment. The 5th National Biodiversity Strategy and Action Plan (NBSAP) provide systematic alignment with all 23 GBF targets, supported by cross-sectoral policies ensuring coordinated implementation. The Thailand Biodiversity Finance Plan (2023-2027), developed through BIOFIN, provides strategic approach to mobilizing and directing fiscal and financial resources toward biodiversity conservation and sustainable use, ensuring funding mechanisms support both national and global biodiversity objectives.

EN

## Indicator Data

C.1 Monetary benefits received in accordance with applicable internationally agreed access and benefit-sharing instruments

Headline GBF-INDICATOR-C.1

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| Yes | **Resource type** | Plant | 2023 | USD | 1900 | Value is approximate number Agency: DOA |
| Yes | **Resource type** | Plant | 2024 | USD | 11700 | Value is approximate number Agency: DOA |
| Yes | **Resource type** | Plant | 2025 | USD | 1300 | Value is approximate number Agency: DOA |

**Comments**

Remark: Thailand has established preliminary mechanisms to track and collect monetary benefits from access to genetic resources, primarily through the Plant Variety Protection Fund under the Department of Agriculture (DOA): Collects monetary benefits from commercial use of plant genetic resources and Benefit-sharing agreements with users of protected plant varieties

EN

C.2 Non-monetary benefits arising from applicable international access and benefit-sharing instruments

Headline GBF-INDICATOR-C.2

**Source of Data**

No data available

**Please describe the situation**

| | |
|---|---|
| Thailand tracks non-monetary benefits through multiple mechanisms, though a comprehensive monitoring system specifically for non-monetary ABS benefits is still under development. 1. Research Collaboration and Knowledge Transfer • Department of Marine and Coastal Resources (DMCR): - Thai researchers accessing tissue samples for research - Research results and findings shared back with DMCR - Building national research capacity in marine biodiversity • National Science and Technology Development Agency (NSTDA): - Records of research projects utilizing genetic resources - Data on collaborative research partnerships - Technology transfer arrangements documented • Thailand Research Fund (TRF)/National Research Council of Thailand (NRCT): - Database of funded research projects using genetic resources - Publication and knowledge outputs tracked - Research capacity building initiatives 2. Capacity Building and Technology Transfer • Training programs for Thai researchers • Access to research facilities and equipment • Joint research publications • Strengthening of national research institutions 3. Institutional Collaboration • Memoranda of Understanding for research cooperation • Joint research projects with international partners • Access to scientific databases and information • Participation in international research networks | EN |

13.b Number of countries that have taken effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources

Binary KMGBF-INDICATOR-BIN-C-13

**13.1 Does your country have effective legal, administrative and policy measures to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources?**

Partially

**13.2 Does your country have capacity-building measures to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources?**

Partially

**13.3 Has your country taken administrative, policy or legislative measures pursuant to the operationalization of the multilateral mechanism in decision 16/2?**

No

**13.4 Do the measures mentioned in questions 13.1 and 13.2 include the utilization of traditional knowledge associated with genetic resources?**

Yes

**13.5 Does your country monitor the monetary benefits received from the utilization of genetic resources and/or traditional knowledge associated with genetic resources that were accessed from your country?**

Partially

**13.6 Does your country monitor the non-monetary benefits received from the utilization of genetic resources and/or traditional knowledge associated with genetic resources that were accessed from your country?**

Partially

**13.7 Does your country have measures to ensure the fair and equitable benefit-sharing arising from the utilization of genetic resources and/or traditional knowledge associated with genetic resources that were accessed in another country?**

Partially

**Comments**

| | |
|---|---|
| **Legal, administrative and policy measures to ensure the fair and equitable sharing of benefits (13.1 – Partially):** Thailand has legislations to ensure the fair and equitable sharing of benefits from multi-agency, such as:<br><br>• **The Protection and Promotion of Thai Traditional Medical Knowledge Act, B.E. 2542 (1999 A.D.)** with benefit-sharing provisions an application for and the granting of licence, limitation of right, and consideration shall be in accordance with the rules, procedure, and conditions.<br>• **Patent Act B.E. 2522 (1979) As Amended by the Patent Act (No. 2) B.E 2535 (1992) and the Patent Act (No. 3) B.E. 2542 (1999)** เชคชื่อภาษาอังกฤษ to grant protection for inventions and designs.<br><br>Currently, revisions are underway to enhance the comprehensiveness of genetic resources and strengthen institutional capabilities through a licensing fee system.<br><br>**Measures to ensure fair and equitable sharing of benefits arising from the utilization of genetic resources (13.2 – Partially):** Thailand is in the process of developing a national ABS capacity-building plan. Multiple agencies have already undertaken capacity-building projects, comprehensive coverage across all sectors has not been fully achieved:<br><br>• **ONEP:** Developing a national Capacity Building Plan for ABS, though comprehensive coverage across all sectors has not yet been achieved.<br>• **DIP:** Conducts training programs to officials involved for intellectual property procedures related to ABS.<br>• **RFD:** Provides capacity-building training for officials involved in ABS processes.<br>• **DNP/DOF:** training for officials involved in ABS processes and implementation of resource access royalty fee collection systems.<br><br>**Policies or legislative measures pursuant to the operationalization in decision 16/2 (13.3 – No):** Thailand has participated in negotiations at the CBD COP regarding DSI (2022-2024). Currently, there is no specific legislation or clear national policy on DSI, but internal processes exist of BIOTEC for managing genetic information to protect important sequences that are trade secrets.<br><br>**Measures to include the utilization of traditional knowledge associated with genetic resources (13.4 – Yes):** The measures outlined in questions 13.1 and 13.2 have integrated the utilization of traditional knowledge associated with genetic resources:<br><br>• **Plant Variety Protection Act B.E. 2542 (1999)** recognizes farmers' and communities' rights including traditional knowledge utilization and provides provider-side measures; establishes the Plant Variety Protection Fund for collecting and distributing benefits from commercial use of plant genetic resources through benefit-sharing agreements.<br>• **The Protection and Promotion of Thai Traditional Medical Knowledge Act, B.E. 2542 (1999 A.D.)** covers traditional knowledge associated with herbs/genetic resources.<br><br>**Monitoring the monetary benefits received from the utilization of genetic resources (13.5 – Partially):** Thailand has a Plant Variety Protection Fund that manages monetary benefits from commercial utilization of native plant varieties. Although operational systems exist, systematic monitoring does not yet comprehensively cover all sectors.<br><br>**Monitoring the non-monetary benefits received from the utilization of genetic resources (13.6 – Partially):** Non-monetary benefits are documented and tracked concretely, such as publications, technology transfer, and training.<br><br>• **Research institutions and universities** record non-monetary benefit-sharing, including co-authorship, technology transfer, and training of local researchers. Systems are being developed to track research outputs that may generate future benefits. | EN |

However, tracking of non-monetary benefits does not yet comprehensively cover all institutions and types.

**Measures for fair and equitable benefit-sharing arising from access by other countries (13.7 – Partially):**

- **DOA: Plant variety Protection Act B.E. 2542**
- **DNP:** Requirements exist for foreign researchers accessing Thai resources.
- **DNP/RFD:** have mutual agreements on data sharing (but not for species).

Measures related to Material Transfer Agreements (MTAs) are beginning to be established at the institutional level, and ethical research guidelines are currently being developed and implemented.

GBF-G-D. The biodiversity funding gap of 700 billion USD is progressively closed by ensuring adequate means of implementation are available.

**Summary of national progress contributing to the global goals**

Thailand has established foundational frameworks for biodiversity finance and implementation capacity, though current resource levels and systematic capacity building remain far below what is needed to close the biodiversity funding gap.

**Integration of Biodiversity Values into Decision-Making - Partial Achievement:**

Thailand has made progress in integrating biodiversity into decision-making frameworks (Target 14), though significant gaps remain. Biodiversity considerations have been embedded in key national frameworks including the 20 Year National Strategy, Thirteenth National Economic and Social Development Plan, and Master Plan for Integrated Water Resources Management. The Community Forest Act B.E. 2562 (2019) represents significant achievement in recognizing community rights in forest management and linking conservation with income generation. Sectoral mainstreaming is evident through Good Agricultural Practices, sustainable fisheries management, forest sustainability criteria, and ecotourism development.

**Resource Mobilization - Massive Gap Between Current Levels and Needs:**

Thailand has begun tracking biodiversity finance from some sources, revealing substantial gaps. Domestic public funding ranges from 143-280 million USD annually (FY 2022-2024) through BIOFIN/eMENSCR tracking, though this may not capture all biodiversity-relevant spending. International public funding shows Thailand's role as a recipient country receiving international public funding for biodiversity conservation and ecosystems. During 2020-2024, Thailand received highly variable funding levels, demonstrating significant year-to-year fluctuations: USD 215.30 million (2020), declining to USD 154.16 million (2021), then surging to a peak of USD 557.88 million (2022), before declining sharply to USD 87.12 million (2023) and USD 4.94 million (2024).

Private sector funding represents critical failure. Preliminary BIOFIN survey (2020-2022) showed only 3.56 million USD total over three years from small sample (energy sector 94.3%), with no comprehensive tracking systems or mandatory reporting mechanisms established.

**Harmful Subsidies Identified but Completely Unreformed:**

BIOFIN study (July 2024) identified 6.28 billion USD in harmful subsidies (FY 2021-2023)—rigid infrastructure impacting ecosystems, coastal structures disrupting natural processes, nominally beneficial projects causing ecological damage. However, this represents baseline identification only with zero concrete reduction actions implemented. No ongoing monitoring systems or sector-disaggregated databases are established.

EN

**Business Engagement - Early Stages Without Systemic Integration:**

Thailand has established a target for SET50 companies (50 largest listed companies) to adopt TNFD (Taskforce on Nature-related Financial Disclosures) reporting by 2027, with a 20% interim adoption goal. Preliminary assessment shows 40-50 SET100 companies currently include some biodiversity content in their sustainability reports (2023), though depth and quality vary significantly. However, **no comprehensive legal framework requires large companies and financial institutions to assess and disclose biodiversity risks**—current disclosure remains **largely voluntary**, driven by general sustainability reporting expectations (56-1 One Report), ESG commitments, and investor expectations.

**Information and Knowledge - System Under Development, Not Connected Globally:**

Thailand is developing the TH-BIF national biodiversity information system incorporating Red List data, alongside an NBSAP monitoring platform to track progress on national biodiversity targets. However, comprehensive data gaps persist across all dimensions: no systematic genetic diversity monitoring, limited species population abundance programs, insufficient species occurrence records, incomplete ecosystem monitoring, and absent national-scale ecosystem services accounting. Data quality issues remain significant, including inconsistent formats, inadequate metadata, and fragmented data ownership across agencies without effective integration mechanisms. Expanding biodiversity and ecosystem services valuation to the national level and integrating it with economic and social data systems remains a priority to fully reflect the value of nature within national development planning.

**Participation, Rights, and Gender - Legal Frameworks, Implementation Absent:**

Constitutional provisions and Community Forest Act provide legal participation pathways, but Thailand lacks comprehensive data monitoring inclusive participation across stakeholder groups. Formal recognition of customary land tenure remains limited—many communities lack secure land rights, limiting meaningful participation.

Gender equality legal frameworks exist (Constitution, National Action Plan 2023-2027, Gender Equality Act 2015), but significant gap between policy and implementation with insufficient resources, weak coordination, inadequate capacity, and no systematic gender-disaggregated data collection in biodiversity programs.

## Indicator Data

D.1 International public funding, including official development assistance for conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.1

**Source of Data**

Use the available data (pre-populated data)

**Data**

Download

| Has disaggregation | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|
| Yes | Recipient | 2015 | USD (millions) | 2.85982 | |
| Yes | Recipient | 2016 | USD (millions) | 5.20859 | |
| Yes | Recipient | 2017 | USD (millions) | 25.27418 | |
| Yes | Recipient | 2018 | USD (millions) | 2.92033 | |
| Yes | Recipient | 2019 | USD (millions) | 5.94758 | |
| Yes | Recipient | 2020 | USD (millions) | 5.62016 | |
| Yes | Recipient | 2021 | USD (millions) | 6.50848 | |
| Yes | Recipient | 2022 | USD (millions) | 20.56771 | |

**Global source of data**

OECD Data Explorer

**Indicator providers**

OECD

**Description**

**This data was prepopulated from Target Tracker.**

This indicator measures international public finance provided to developing countries for the conservation and sustainable use of biodiversity and ecosystems. This includes official development assistance (ODA),other official flows (OOF) and private sector instruments (PSI) from the DAC Creditor Reporting System (CRS) from bilateral DAC donors, non-DAC donors, as well as contributions from multilateral institutions, and complemented with flows reported under the Total Official Support for Sustainable Development (TOSSD) framework.

The data displayed here is the annual official development assistance for biodiversity provided by OECD Development Assistance Committee (DAC) donors, through the Creditor Reporting System (CRS). Total ODA transferred for use in biodiversity and conservation efforts are displayed by recipient and by donor in constant US dollars.

D.2 Domestic public funding on conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.2

**Source of Data**

Use national data set

**Data**

Download

| Has disaggregation | Disaggregation type | Disaggregation | Year | Unit | Value | Footnote |
|---|---|---|---|---|---|---|
| No | - | - | 2022 | USD (million) | 143.33 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2023 | USD (million) | 280.31 | Agencies: eMENSCR, BIOFIN |
| No | - | - | 2024 | USD (million) | 185.39 | Agencies: eMENSCR, BIOFIN |

**Comments**

Source: Biodiversity-Related Expenditures from the Government, BIOFIN (2024)

Exchange Rates: FY 2022: 34.16 THB/USD, FY 2023: 34.16 THB/USD, FY 2024 (approved projects only): 34.16 THB/USD — EN

D.3 Private funding (domestic and international) on conservation and sustainable use of biodiversity and ecosystems — Headline — GBF-INDICATOR-D.3

**Source of Data**

No data available

**Please describe the situation**

Thailand does not currently have comprehensive data on private sector (domestic and international) funding for biodiversity conservation and sustainable use, but the country has begun integrating private sector participation in biodiversity conservation through: • NBSAP Implementation Reporting: Private sector companies and NGOs are encouraged to report biodiversity-related activities aligned with Thailand's 4th National Biodiversity Strategy and Action Plan • ONEP Survey Initiative: Office of Natural Resources and Environmental Policy and Planning (ONEP) administers surveys to private sector and NGOs on NBSAP implementation activities • Voluntary Disclosure: Initial framework for companies to self-report biodiversity expenditures and activities Presently, Thailand conducted a preliminary survey showing limited examples (~3.56 million USD from small sample, 2020-2022) but lacks comprehensive tracking system. — EN

Section V Conclusions on the national implementation of the Convention on Biological Diversity and the Kunming-Montreal Global Biodiversity Framework

**Provide a summary assessment of the implementation of the Convention and the Framework, including all its sections, and the main achievements and the major challenges encountered and, where applicable, resolved, in particular those related to capacity, technical, technological, institutional and financial gaps and constraints, and support provided for implementation.**

## Section 5 Conclusion the national implementation of the Convention on Biological Diversity and the Kunming-Montreal Global Biodiversity Framework

Since acceding to the Convention on Biological Diversity (CBD), Thailand has progressively strengthened its national biodiversity governance, moving from project-based conservation initiatives towards a more integrated, strategic, and results-oriented framework. The adoption of the 5th National Biodiversity Strategy and Action Plan (5$^{th}$ NBSAP, 2023–2027) as the central instrument for national implementation, and its subsequent alignment with the Kunming-Montreal Global Biodiversity Framework (KM-GBF), marks an important milestone in this trajectory. The preparation of the 7$^{th}$ National Report has further consolidated this shift by systematically assessing progress towards priority national biodiversity targets and their contributions to the 23 GBF targets and four 2050 goals.

This concluding section synthesizes the core messages of the 7th National Report by bringing together: (i) progress and lessons learned from national implementation under Thailand's 5th National Biodiversity Strategy and Action Plan (NBSAP) 2023–2027; (ii) progress toward the Kunming–Montreal Global Biodiversity Framework (KM-GBF), including monitoring and indicator readiness considerations; and (iii) a forward-looking set of priorities to accelerate implementation and strengthen future reporting. The section moves beyond a general summary to present a more specific and policy-relevant narrative, including a structured package of national support needs intended for national decision-makers and international development partners.

# 5.1 Overall conclusions on national implementation and progress toward the KM-GBF

Overall, Thailand has built a strong enabling foundation for biodiversity conservation and sustainable use. This foundation includes a long-established protected area system, an expanding national knowledge base and technical community, and policy instruments that increasingly recognize biodiversity values and their contribution to sustainable development. These strengths provide a credible platform for accelerated action. Nevertheless, the report also confirms that progress remains uneven across thematic areas, and that the pace of implementation is not yet sufficient in several domains that will be decisive for achieving the KM-GBF mission and Thailand's long-term biodiversity vision.

## 5.1.1 Progress by national targets and GBF alignment)

- **On track to achieve target:** National Target 2 (specifically for GBF 3 on protected areas coverage) and elements of National Target 4 (specifically for GBF 8 on climate change impacts, GBF 12 on green space and urban planning) and National Target 10 (specifically for GBF 21 on available knowledge for biodiversity action)
- **Progress made but at an insufficient rate**: All other national targets (NBTs 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12), indicating that enabling measures exist and activities are underway, but outcomes are constrained by scale, enforcement, sustained financing, incomplete monitoring systems, and/or insufficient institutional coordination.

## 5.1.2 Progress by KM-GBF Goals and Targets

- **Goal A (Protect and Restore):** Strongest contributions arise from protected areas, restoration and connectivity (GBF 2–3), but sustained gains depend on improved spatial planning and reduced conversion (GBF 1), stronger management effectiveness, and more coordinated action on threatened species and invasive alien species (GBF 4–6).
- **Goal B (Prosper with Nature):** Policies and pilots on pollution reduction and climate resilience via NbS/EbA are expanding (GBF 7–8), alongside work on sustainable use and urban nature (GBF 10–12). However, outcome measurement and integration into sector systems remain insufficient, particularly for ecosystem services valuation and benefit tracking.

- **Goal C (Share Benefits Fairly):** Enabling measures for ABS are advancing (GBF 13), but operationalization—procedures, institutional roles, and data systems—remains the priority, alongside coherence with biosafety where relevant (GBF 17).
- **Goal D (Invest and Collaborate):** Mainstreaming foundations exist (GBF 14–15), knowledge systems show strong progress (GBF 20–22), while **finance and incentives** (GBF 18–19) remain the most decisive constraint and require urgent strengthening. Participation and inclusion (GBF 23) need more explicit institutionalization in implementation and monitoring.

The following Table 5-1 summarizes Thailand's progress across all 12 National Biodiversity Targets (NBTs) and their alignment with the 23 Global Biodiversity Framework (GBF) targets, followed by detailed analysis by national targets and by KM-GBF Goals. The implementation results indicates that Thailand achieves on-track progress only where durable institutional infrastructure meets sustained technical capacity (GBF 3 and 8 on protected area coverage and climate policy frameworks). Across most other areas—including protected area management, restoration, species conservation, sustainable use, ABS, mainstreaming, and finance—progress remains insufficient despite existing foundations. Accelerated implementation requires:

i. comprehensive ecosystem service valuation for biodiversity integration in economic decisions;
ii. systematic data collection aligned with GBF/SDG methodologies;
iii. strengthened cross-agency coordination and enforcement;
iv. urgent finance reform including expenditure tracking, harmful subsidy elimination, and private sector mobilization; and
v. sustained resourcing for integrated monitoring infrastructure.

**Table 5-1 Summary of progress and main gaps by National Target, with GBF linkages**

| National Target (NBT) | Primary GBF targets supported | Key progress (summary) | Key remaining gaps summary) |
|---|---|---|---|
| NBT 1 Reduce the loss of important biodiversity areas both in landscape and seascape through effective spatial planning | GBF 1 Plan and Manage all Areas To Reduce Biodiversity Loss | Biodiversity considerations are increasingly incorporated into Thailand's spatial planning and Strategic Environmental Assessment (SEA) processes across terrestrial, freshwater, and marine domains. Key progress includes the development of biodiversity-inclusive management plans by DNP covering 103 national parks, 18 non-hunting areas, and 17 wildlife sanctuaries on land (95,023.48 $km^2$) and 23 marine national parks at sea (7,588.13 $km^2$), alongside pilot ecological zoning in nine northern provinces by ONEP. Continuous monitoring of key ecosystems—forests, seagrass beds, and coral reefs—is maintained with data progressively integrated into EIA and SEA procedures, though comprehensive nationwide integration across broader land-use, river basin, and coastal planning frameworks remains under development. | A comprehensive Red List of Ecosystems assessment following IUCN criteria is lacking. Biodiversity data coverage remains incomplete and inconsistent across regions, particularly for grasslands, certain wetland areas, ecological corridors, and agricultural systems. National-level ecosystem services data is absent, and institutional frameworks remain fragmented with insufficient coordination mechanisms. |
| NBT 2 Conserve, restore, and expand protected areas, increase other effective area-based conservation measures (OECMs) to enhance ecosystem integrity and connectivity. | GBF 2 Restore 30% of all Degraded Ecosystems | Protected area expansion and restoration efforts continue, with connectivity and OECM approaches being implemented. Thailand has undertaken ecosystem restoration projects across various types including forests, mangroves, coral reefs, seagrass meadows, and important wetlands, with clear spatial targets, restoration guidelines, and community participation in multiple areas. Natural forest restoration has increased significantly. | A unified national database consolidating all ecosystem restoration areas is absent. Management effectiveness requires strengthening, particularly marine compliance and enforcement mechanisms. |
| | GBF 3 Conserve 30% of Land, Waters and Seas | Thailand maintains a well-defined protected area registry covering terrestrial and marine zones, with regular reporting to the World Database on Protected Areas (WDPA). Progress includes identification of Key Biodiversity Areas (KBAs) and establishment of OECM frameworks and criteria. | Protected areas and OECMs need expansion to meet targets, with OECM recognition requiring acceleration. Priority should be given to under-protected ecosystems and critical corridors, alongside systematic development and implementation of management effectiveness assessment tools. |
| NBT 3 Conserve and protect threatened and wild species, reduce human-wildlife conflict, and increase the efficiency of invasive alien species management. | GBF 4 Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts) | Species programs and human-wildlife conflict (HWC) measures are established with active monitoring frameworks. Thailand has expanded Red List assessments and developed species-specific action plans for endangered species (tigers, elephants, sea turtles, dugongs, freshwater crocodiles), including ex-situ conservation and reintroduction programs. | While species data has advanced, plant groups remain inadequately covered. Systematic monitoring of Effective Population Size (Ne) for most species is lacking. Comprehensive and systematic human-wildlife conflict data is absent, with limited long-term budgets and personnel for species monitoring and recovery. |
| | GBF 6 Reduce the Introduction of Invasive Alien Species by 50% and Minimize Their Impact | Thailand has established systematic prevention, control, and eradication measures for invasive alien species, comprising 5 measure categories, 22 guidelines, and 4 registries totaling 323 species. Priority focus is placed on Category 1 — 138 species already established and invasive in Thailand — with particular emphasis on 22 high-priority species (12 animals, 10 plants) identified for their high invasion potential, in order to reduce further spread and new establishment. IAS prevention measures have also been integrated into protected and conservation area management plans. | Systematic data on establishment rates of invasive alien species is lacking. IAS management responsibilities are distributed across multiple agencies (environment, agriculture, fisheries, quarantine, local government) without effective coordination mechanisms. |
| NBT 4 Reduce threats to biodiversity arising from climate change and pollution, including increasing urban green spaces, to restore and maintain ecosystem services. | GBF 7 Reduce Pollution to Levels That Are Not Harmful to Biodiversity | Policies and Nature-based Solutions (NbS)/Ecosystem-based Adaptation (EbA) pilots are advancing with expanding urban greening initiatives. Thailand operates an extensive water quality monitoring network and has developed the Marine Water Quality Index (MWQI) as an alternative indicator, alongside pollution control measures from multiple sources. | Biodiversity-specific metrics and integrated monitoring systems are still developing. ICEP methodology development and studies are lacking. Nutrient flux monitoring systems at major river mouths flowing into coastal areas are absent, as are pesticide risk assessment systems based on toxic weight (targeting ATAT indicators). Biological monitoring indicating sensitivity to nutrient and chemical pollution is inadequate, with poor coordination of pesticide usage, import, and environmental concentration data. |

**Table 5-1 Summary of progress and main gaps by National Target, with GBF linkages**

| National Target (NBT) | Primary GBF targets supported | Key progress (summary) | Key remaining gaps summary) |
|---|---|---|---|
| | GBF 8 Minimize the Impacts of Climate Change on Biodiversity and Build Resilience | Thailand has established policy frameworks integrating climate and biodiversity (Master Plan for Climate Change Management, Adaptation Plan, NBSAP) and implements forest and marine-coastal ecosystem restoration for climate adaptation. Ocean acidification monitoring has been conducted since 2016, though comprehensive climate impact monitoring on biodiversity requires development, including biological impact monitoring (coral calcification rates, mollusk populations, fish behavior, ecosystem shifts). | Comprehensive monitoring systems for climate impacts on biodiversity are absent (species distribution changes, seasonal shifts, ecosystem transformations) that integrate existing biodiversity surveys and protected area monitoring. Significant scaling of NbS (ecosystem restoration, protected area expansion, agroforestry, urban green infrastructure, watershed management) aligned with climate and biodiversity goals is needed. Monitoring expansion beyond chemical parameters to include biological responses to ocean acidification is required. |
| | GBF 12 Enhance Green Spaces and Urban Planning for Human Well-Being and Biodiversity | Thailand has adopted sustainable green space management guidelines (2018-2037) and implements urban planning incorporating urban biodiversity in major cities (Bangkok, Pattaya, Chiang Mai), integrating green and blue space management. | Urban biodiversity planning must expand beyond three major cities to all municipalities with context-specific approaches. Systematic frameworks are needed to fully integrate ecosystem services and nature's contributions into urban development decisions, explicitly linking urban planning with climate adaptation, disaster risk reduction, and public health through nature-based solutions. |
| NBT 5 Promote and support a bio-based economy, based on ecosystem services to improve people’s living conditions and income. | GBF 9 Manage Wild Species Sustainably To Benefit People | Thailand has integrated biodiversity into the BCG Economy model and supports community enterprises producing bio-based products, with OTOP revenue from biodiversity-based food, beverages, and herbal products increasing by 20.3% and community income from biological resources rising by 13.0%. Under the 2nd National Herbal Action Plan (2023–2027), the Department of Thai Traditional and Alternative Medicine has designated 15 Herbal Champion species and strengthened herbal market linkages, contributing to Thailand's herbal product market ranking first in ASEAN, fourth in Asia, and eighth globally. | Ecosystem service valuation and benefit tracking remain partial and project-based.<br><br>It is necessary to accelerate the expansion of ecosystem services valuation to the national level, using completed pilot projects as models for scaling up to other ecosystems across the country, while establishing a national database capable of tracking changes in ecosystem services values compared to baseline years. |
| | GBF 11 Restore, Maintain and Enhance Nature’s Contributions to People | Thailand has made progress in assessing and tracking the economic value of ecosystem services, with government agencies conducting pilot valuations across provision, regulation, and cultural service dimensions at multiple sites:<br><br>-Dry Deciduous Dipterocarp Forest, Sakon Nakhon: 106,967.72 Baht/Rai/year<br>-Mixed Deciduous Forest, Ang Thong: 104,170.92 Baht/Rai/year<br>-Mixed Deciduous Forest, Mae Hong Son: 82,269.76 Baht/Rai/year<br>-Dry Evergreen Forest, Rayong: 120,192.78 Baht/Rai/year<br>-Green Space, Khung Bangkachao, Samut Prakan: 107.30 Million Baht<br>-Dry Evergreen Forest, Khao Yai National Park: carbon sequestration of 41 million tons $CO_2$, valued at 111 Million Baht<br><br>Expanding biodiversity and ecosystem services valuation to the national level and integrating it with economic and social data systems remains a priority, in order to reflect the full value of ecosystems within national development planning and support community livelihoods across all sectors. | |
| NBT 6 Promote sustainable practices in production and service sectors, including agriculture, aquaculture, fisheries, livestock, forestry, and tourism. | GBF 5 Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species | Thailand has comprehensive legal frameworks covering all wild species trade and has implemented fisheries reforms to combat IUU fishing with comprehensive traceability and control systems. | Biodiversity criteria and indicators, along with Sustainable Consumption and Production (SCP) integration, are not yet systematic. Unified national indicators reflecting "safe use for biodiversity" are absent. Data on utilization from forestry, fisheries, and species trade sectors remain incompletely linked. |
| | GBF 10 Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry | Thailand has established criteria and implemented measures promoting sustainable agriculture through various standards and significantly expanded | Comprehensive and consistent data collection systems aligned with GBF/SDG indicator methodologies require establishment, or systematic data |

EN

**Table 5-1 Summary of progress and main gaps by National Target, with GBF linkages**

| National Target (NBT) | Primary GBF targets supported | Key progress (summary) | Key remaining gaps summary) |
|---|---|---|---|
| | | sustainable forestry certification. Comprehensive legal frameworks govern all wild species trade with sustainable fisheries management frameworks. | collection guidelines appropriate for Thailand need definition. |
| NBT 7 Establish comprehensive mechanisms and measures to ensure equitable access and benefit-sharing and consideration of biosafety for the utilization of genetic resources. | GBF 13 Increase the Sharing of Benefits From Genetic Resources, Digital Sequence Information and Traditional Knowledge | Thailand has established legal frameworks and foundational institutions for Access and Benefit-Sharing (ABS) from genetic resources and traditional knowledge, including capacity-building plans for ABS. | ABS is not yet fully operational at scale; institutional procedures and data systems need strengthening. Platforms for data sharing, joint planning, and consolidated reporting are lacking, along with systems to monitor implementation of all benefit-sharing agreements. |
| | GBF 17 Strengthen Biosafety and Distribute the Benefits of Biotechnology | Thailand has foundational biosafety frameworks and operational mechanisms through multiple existing laws covering plant quarantine, animal pathogens and toxins, and biotechnology guidelines, with biosafety committees and technical advisory bodies. The Thailand Biosafety Clearing House provides general LMO information. | Comprehensive data on all LMO activities, risk assessments, decisions, and monitoring outcomes are lacking. Rapid advances in genetic technologies (gene editing, synthetic biology) are outpacing existing regulatory frameworks, creating challenges for appropriate risk assessment, governance, and public communication. |
| NBT 8 Mainstream biodiversity into policies, plans, and operations of all sectors at all levels, while fostering multi-sectoral engagement and participation. | GBF 14 Integrate Biodiversity in Decision-Making at Every Level | Biodiversity is reflected in strategies and some sectoral/local plans with existing coordination mechanisms. Thailand has integrated biodiversity into the 20-Year National Strategy, the 13th National Economic and Social Development Plan, and the Biodiversity Finance Plan, with the 5th NBSAP aligned with all 23 GBF targets. | Integration into budgets, KPIs, and private-sector risk management remains limited. Comprehensive environmental-economic accounting, covering all ecosystems is absent, resulting in limited biodiversity integration and consideration in economic planning and decision-making. |
| | GBF 15 Businesses Assess, Disclose and Reduce Biodiversity-Related Risks and Negative Impacts | Thailand has set national targets for SET50 companies to voluntarily disclose biodiversity-related business operations using the TNFD reporting framework, with mid-term targets of 20% by 2027 and 30% by 2030. Mandatory EIA/EHIA systems exist for large-scale projects. | Comprehensive baseline data on current corporate biodiversity disclosure and impacts is lacking. Many companies, especially SMEs, lack technical capacity, expertise, and resources to conduct comprehensive biodiversity assessments and implement disclosure frameworks like TNFD. |
| | GBF 16 Enable Sustainable Consumption Choices To Reduce Waste and Overconsumption | Thailand has foundational policy frameworks for sustainable consumption and waste reduction, including the SCP Roadmap 2017-2037 and Food Waste Management Roadmap 2023-2030, with environmental labeling systems and green procurement. Current policies focus on waste management and environmental labeling, with existing programs emphasizing broad environmental sustainability rather than consumption patterns affecting biodiversity loss, ecosystem degradation, and species conservation. | Comprehensive tools to address overconsumption patterns, particularly for resource-intensive products with high biodiversity impacts, are lacking. Consumer acceptance remains limited due to price differentials and insufficient incentives for sustainable consumption choices. Critical gaps exist in linking consumption choices to biodiversity impacts. |
| | GBF 23 Ensure Gender Equality and a Gender-Responsive Approach for Biodiversity Action | Thailand has clear national legal frameworks and plans for gender equality, including the Gender Equality Act 2015 and National Action Plan for Gender Equality 2023-2027. Implementation is underway, though challenges persist in systematically collecting, monitoring, and evaluating gender-related data in biodiversity projects. | Most projects lack practices for collecting sex-disaggregated data. Absence of baseline data on women's participation rates, traditional knowledge, natural resource access, and benefits from biodiversity projects prevents accurate and comprehensive gender equality progress assessment. |
| NBT 9 Expand channels and funding support from various sectors, as well as promote financial mechanisms, economic instruments, and incentive measures to support biodiversity conservation and sustainable use. | GBF 18 Reduce Harmful Incentives by at Least $500 Billion per Year, and Scale Up Positive Incentives for Biodiversity | Thailand enacted land tax reductions for mangrove areas in 2025 as positive tax incentives for biodiversity. UNDP Thailand's BIOFIN initiative revealed that USD 6.28 billion in subsidies were allocated during fiscal years 2021–2023 to programs with negative impacts on ecosystems, including river and coastal infrastructure projects, coastal protection structures (seawalls, shark fin dikes, and sand dikes) that disrupt natural processes, and projects justified under agricultural irrigation or local tourism promotion that nonetheless cause ecological harm. Monitoring systems and databases remain fragmented | Systematic finance tracking and harmful incentive reform remain at early stages. Monitoring systems and databases are discontinuous and fragmented, preventing concrete implementation of impact reduction measures. |

**Table 5-1 Summary of progress and main gaps by National Target, with GBF linkages**

| National Target (NBT) | Primary GBF targets supported | Key progress (summary) | Key remaining gaps summary) |
|---|---|---|---|
| | | and discontinuous, preventing concrete progress on reducing harmful subsidies. | |
| | GBF 19 Mobilize $200 Billion per Year for Biodiversity From all Sources, Including $30 Billion Through International Finance | Thailand has established mechanisms to track domestic public expenditure for biodiversity conservation through BIOFIN and the eMENSCR system, developing the Biodiversity Finance Plan 2023-2027 through UNDP-BIOFIN | Biodiversity expenditure tracking across government agencies, projects, and budget lines remains incomplete and may miss biodiversity-related spending. Private sector engagement is limited, with no mandatory disclosure mechanisms and minimal participation compared to requirements. |
| NBT 10 Develop a biodiversity data system and knowledge connected with all sectors, to support decision-making and operation in biodiversity management, and raise public awareness regarding biodiversity and ecosystem | GBF 21 Ensure That Knowledge Is Available and Accessible To Guide Biodiversity Action | Thailand has strong research foundations and is developing biodiversity monitoring platforms to track NBSAP 2023-2027 targets and GBF indicators. The publicly accessible Thailand Biodiversity Information Facility (TH-BIF) compiles threatened species data from Red List assessments and spatial data, supporting conservation planning at site, policy, and national levels. | Interoperability, regular updates, and nationwide coverage require sustained resourcing |
| | GBF 22 Ensure Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for all | Thailand has laws and policies guaranteeing local community rights to manage natural resources and protecting and promoting ethnic group livelihoods, with ongoing projects promoting community participation in protected areas and utilization zones. | Comprehensive disaggregated data to monitor inclusive participation in biodiversity decision-making processes and access to justice is lacking, including quantitative and qualitative data on participation rates and quality across different stakeholder groups. |
| NBT 11 Strengthen and develop capabilities and partnerships, including technology transfer in research, science, and innovation for biodiversity. | GBF 20 Strengthen Capacity-Building, Technology Transfer, and Scientific and Technical Cooperation for Biodiversity | Thailand has implemented multi-level biodiversity capacity-building through training, research, and partnerships with international organizations like BIOFIN, with growing tool adoption and community participation. However, systematic coordination gaps persist. | Capacity building is largely project-based, lacking retention, institutionalization, and long-term planning. Cross-level and cross-sectoral linkages are weak, with poor integration between projects and national plans. International cooperation emphasizes financial support over technology transfer and local capacity development. |
| NBT 12 Develop and improve existing legal tools and regulations to effectively support the achievement of national biodiversity targets. | GBF 14 Integrate Biodiversity in Decision-Making at Every Level | Legal review and draft Biodiversity Act advancing; sectoral laws being updated | Enforcement capacity and explicit equity provisions (e.g., IPLCs/gender) are still developing |

### 5.1.3 Indicator readiness and reporting implications

Thailand's monitoring and data landscape is improving, but indicator readiness remains uneven. Progress is strongest where established datasets and research programs exist; however, several outcome-oriented indicator areas require further development and institutionalization—particularly those related to ecosystem services valuation and benefit tracking, biodiversity-specific climate and pollution metrics, sustainable production and consumption performance, incentives and finance flows, and equity/inclusion. Strengthening interoperability, update cycles, and agreed reporting responsibilities across agencies is necessary for credible national monitoring and future reporting cycles.

The report further confirms that Thailand's monitoring and data landscape is improving, but indicator readiness remains uneven. Progress is strongest where established datasets and long-running research and technical programs exist. However, several outcome-oriented domains require further development and institutionalization, including ecosystem service valuation and benefit tracking, biodiversity-specific climate and pollution metrics, sustainable production and consumption performance indicators, incentives and finance-flow reporting, and metrics related to participation, equity and inclusion. Strengthening data interoperability, agreed update cycles, and clear reporting responsibilities across agencies will be essential to ensure credible national monitoring and to enhance the robustness of future reporting cycles.

**Taken together, the evidence suggests that accelerating Thailand's progress depends on more than expanding activities. It depends on strengthening the enabling conditions that translate policies and initiatives into measurable outcomes**: effective cross-sector governance, enforceable and adequately resourced implementation mechanisms, finance and incentive reform, and a monitoring system that is sufficiently mature to demonstrate trends and results.

## 5.2 Key achievements and strengths

Within this overall picture, the report identifies several achievements and strengths that can serve as anchors for acceleration. Thailand continues to advance the delivery foundations for **conservation and restoration**, supported by an established protected area system and ongoing efforts to expand and restore ecosystems, with emerging attention to ecological connectivity and other effective area-based conservation measures. Thailand also benefits from a strong research and technical community, which provides foundational capacity for knowledge generation and biodiversity information system development. Building on this foundation, continued investment is needed to achieve comprehensive, interoperable, and regularly updated systems with nationwide coverage. In addition, policy recognition of biodiversity has expanded, with biodiversity increasingly reflected in national strategies and in selected sector and local plans, supported by coordination mechanisms that can be leveraged to move toward whole-of-government implementation.

The report also identifies enabling opportunities for nature-positive development. The Bio-Circular-Green (BCG) agenda and community-based bio-product initiatives provide pathways to strengthen nature-positive value chains and benefit-sharing in practice, if complemented by systematic valuation approaches, monitoring of benefits, and safeguards. Finally, Thailand's partnership landscape remains a key strength. Collaboration among government agencies, academia, communities, and emerging engagement with the private sector is expanding, accompanied by increasing uptake of tools such as remote sensing, decision support, and nature-based solutions approaches.

## 5.3 Achievements, challenges, gaps, and underlying drivers of insufficient pace

The report's assessment also makes clear that persistent cross-cutting constraints continue to limit the pace of progress across multiple targets.

### 5.3.1 Key Achievements and Strengths

Across national implementation and GBF alignment, the principal achievements and strengths include:

1. **Protected areas and restoration momentum:** Continued expansion and restoration actions, with emerging attention to connectivity and OECMs.
2. **Knowledge, data, and awareness systems:** Strong research capacity; development of national biodiversity information systems; continued public awareness programmes.
3. **Policy alignment and coordination mechanisms:** Biodiversity is increasingly reflected in national policy frameworks and selected sector/local plans, supported by coordination mechanisms that can be leveraged for whole-of-government delivery.
4. **Nature-positive livelihood and bioeconomy opportunities:** The Bio-Circular-Green (BCG) agenda and community-based bio-products provide pathways to strengthen nature-positive value chains and benefit-sharing in practice.
5. **Active partnerships and capacity initiatives:** Partnerships across agencies, academia, and communities are ongoing, with increasing uptake of tools such as remote sensing, decision support, and nature-based solutions.

These strengths provide a credible platform for acceleration, provided that systemic constraints—especially finance, incentives, enforcement, and monitoring—are addressed.

### 5.3.2 Gaps and Constraints

A first constraint relates to **implementation effectiveness and enforcement**. While coverage and policy frameworks are expanding, management effectiveness and compliance remain uneven, and enforcement capacity—particularly in marine and coastal contexts—requires strengthening. A second constraint arises from **fragmented thematic systems and long-term monitoring gaps**, especially for threatened species recovery, invasive alien species management, and human–wildlife conflict. Fragmented databases, inconsistent protocols, and limited long-term financing reduce the effectiveness of monitoring, prevention, response, and sustained recovery efforts.

A third constraint is that **outcome-oriented indicators and integrated monitoring systems are not yet complete**. Several thematic areas still lack institutionalized biodiversity-specific metrics and routine national reporting practices, particularly for climate-biodiversity outcomes, pollution-biodiversity linkages, ecosystem services valuation and benefit tracking, sustainable production performance, incentives and finance flows, and equity and inclusion. A fourth constraint concerns the limited translation of policy recognition into **budgeting and performance systems**. Biodiversity is not yet consistently embedded within sector budgets, KPIs, procurement and supply-chain practices, or private-sector risk management and disclosure processes.

The report further identifies that weak progress in **biodiversity finance and incentive reform** is the binding constraint that limits the scaling of action across targets. Without systematic tracking and mobilization of resources—public and private—and without concrete steps to reform harmful incentives, many interventions remain confined to pilots or short-term projects. In parallel, while legal reform efforts and ABS-related development continue, the report underscores the need to complete operational procedures, institutional arrangements, and implementation capacity to move from policy development to delivery at scale, supported by explicit attention to equity, participation, and inclusion. Finally, capacity building remains partly project-driven; sustained capacity planning, staff retention, and fit-for-purpose technology transfer require strengthening to secure long-term implementation outcomes.

## 5.4 Priority Support Needs for Thailand

Thailand requires a coordinated package of national supports and targeted investments to (i) **accelerate delivery in targets where progress is insufficient**, (ii) **consolidate gains where progress is on track**, and (iii) **close monitoring and indicator readiness gaps** that limit the ability to demonstrate outcomes. The support package below is structured in six pillars, while explicitly linking each pillar to **KM-GBF Goals A–D** and the **KM-GBF Targets (1–23)**. Collectively, these supports are designed to address the most persistent constraints identified across the report—particularly **finance and incentive reform, enforceable implementation mechanisms, and outcome-oriented monitoring systems**.

### 5.4.1 Policy and legal enablement

Finalizing and operationalizing the Biodiversity Act and associated regulations, with clear mandates and enforceable compliance mechanisms, will strengthen national coherence and implementation readiness. This pillar primarily enables delivery under **Goal D** (Invest and Collaborate), while providing the legal basis for **Goal A** (Protect and Restore), **Goal B** (Prosper with Nature), and **Goal C** (Share Benefits Fairly).

Target-responsive priorities include:

- **Spatial planning and habitat conversion control (GBF 1, 2, 3):** establish enforceable legal hooks for biodiversity-inclusive land/sea use planning (including formal requirements for biodiversity layers, ecological connectivity, and mitigation hierarchy in planning decisions).
- **Protected areas, OECMs, and management effectiveness (GBF 2, 3):** clarify legal recognition, governance standards, and reporting requirements for OECMs; strengthen legal tools for protected area management effectiveness, compliance, and marine enforcement where relevant.
- **Species conservation, sustainable use and trade, and IAS (GBF 4, 5, 6):** strengthen enabling regulations and enforcement provisions for threatened species recovery, sustainable use and trade controls, and a coherent national invasive alien species framework (including prevention, early detection/rapid response, and liability provisions where appropriate).
- **Pollution, climate, and urban nature (GBF 7, 8, 12):** reinforce legal mechanisms that link pollution and climate policies to measurable biodiversity outcomes, including requirements for biodiversity-relevant monitoring and reporting, and planning rules that protect/expand urban nature.
- **ABS and biosafety coherence (GBF 13, 17):** strengthen the operational framework for access and benefit-sharing—including procedures, institutional roles, benefit-sharing modalities, grievance pathways, and supporting data systems—while ensuring coherence with biosafety mechanisms where relevant.
- **Mainstreaming and equity safeguards (GBF 14, 15, 16, 22, 23):** embed explicit provisions and safeguards for participation, equity and inclusion (including IPLCs and gender responsiveness) within legal instruments and implementing regulations so that these are operational, not aspirational.

## 5.4.2 Whole-of-government and whole-of-society coordination

Cross-ministerial governance arrangements should be strengthened with clear sector accountabilities and delivery mechanisms, including structured roles for local governments, indigenous peoples and local communities, academia, and the private sector. This pillar is essential for **Goal D** implementation and is the primary enabler for mainstreaming and scaling delivery across Goals A–C.

Target-responsive priorities include:

- **National delivery architecture for NBT 1–12 and GBF 1–23:** establish an "implementation chain" that assigns lead/co-lead responsibility, budget owners, and reporting owners per target cluster (e.g., land/sea planning; PA/OECM; species/IAS; pollution/climate; sustainable production/SCP; ABS; finance; monitoring).
- **Subnational delivery mechanisms (GBF 1, 2, 3, 10, 14):** resource provincial/local implementation platforms that align local planning and budgeting with national targets, including guidance for integrating biodiversity into development planning and public investment processes.
- **Whole-of-society participation and accountability (GBF 21–23):** formalize mechanisms for stakeholder participation, knowledge co-production, and grievance/feedback loops, ensuring that participation is linked to decisions, implementation, and monitoring responsibilities.
- **Private-sector coordination pathways (GBF 15):** establish structured public-private coordination (sector dialogues, guidance, and data-sharing protocols) to move from ad hoc engagement to systematic adoption of biodiversity risk management and reporting.

## 5.4.3 Financing, incentives, and economic instruments

Establishing a national biodiversity finance tracking system covering public, international, and private flows is necessary to strengthen transparency, targeting, and effectiveness of resource mobilization aligned with **GBF 19**. Thailand should also develop and pilot positive incentives—such as payments for ecosystem services, fiscal transfers linked to conservation outcomes, and nature-positive value chains—while implementing a roadmap to identify and reform harmful incentives consistent with **GBF 18**. This pillar is the **binding accelerator** for multiple targets across Goals A–C because insufficient finance and incentive reform constrains scale, enforcement, and long-term continuity.

Target-responsive priorities include:

- **GBF 19 (resource mobilization):** implement a biodiversity finance "tagging and tracking" system across government budgets, external assistance, and private flows; define financing baselines and annual targets; and publish periodic finance accounts linked to national targets and KM-GBF.
- **GBF 18 (harmful incentives):** conduct a structured identification and prioritization of harmful incentives, establish a reform roadmap with timelines and responsible agencies, and develop transition measures for affected groups where required.
- **GBF 2, 3, 11 (area protection/restoration/services):** scale financing mechanisms that reward measurable ecological outcomes (e.g., fiscal transfers to local governments based on conservation outcomes; PES schemes; performance-based restoration funding).
- **GBF 15 (business):** expand structured pathways for private-sector engagement and investment, supported by credible metrics and safeguards, and align these with corporate risk management, disclosure, and supply chain practices.
- **GBF 10 and 16 (sustainable production and consumption):** create targeted incentive packages for nature-positive practices in agriculture, fisheries, forestry, and tourism, and for sustainable consumption/production interventions (including waste and supply chain improvements).
- **GBF 4–8 (species/IAS/pollution/climate):** ensure stable, multi-year budget lines for long-term monitoring and response capacity, including IAS early detection/rapid response and species recovery programs.

## 5.4.4 Monitoring, indicators, and data interoperability

Completing and institutionalizing the national monitoring and evaluation framework for the 5th NBSAP (and future NBSAPs), aligned with KM-GBF headline and binary indicators and national datasets, will improve national accountability and future reporting. Interoperability and sustained operation of biodiversity information systems should be strengthened through agreed data standards, data-sharing protocols, update schedules, and stable resourcing. This pillar directly supports **Goal D**, and it is the mechanism by which progress for Goals A–C can be credibly demonstrated.

Target-responsive priorities include:

- **A national M&E architecture mapped to GBF 1–23:** assign for each GBF target the (i) national indicator set (headline/binary and nationally appropriate indicators), (ii) data source/owner, (iii) baseline and update frequency, and (iv) reporting workflow.
- **Outcome-oriented indicator development where gaps are most persistent:** prioritize indicators for (i) ecosystem services valuation and benefit tracking (GBF 11, 19), (ii) biodiversity-specific climate and resilience outcomes (GBF 8), (iii) pollution-biodiversity linkages (GBF 7), (iv) sustainable production and SCP performance (GBF 10, 16), (v) finance flows and incentive reform (GBF 18, 19), and (vi) participation/equity and inclusion (GBF 22, 23).
- **Interoperability and data governance:** establish national data standards and data governance rules so that datasets from multiple agencies can be integrated (including geospatial layers for GBF 1–3; species and trade for GBF 4–6; pollution and climate for GBF 7–8; production system metrics for GBF 10 and 16).
- **Sustained resourcing:** secure stable operational funding for national biodiversity information systems, routine updates, and quality assurance, so that indicator readiness improves over time rather than remaining project based.

## 5.4.5 Capacity, technology transfer, and implementation readiness

Thailand will benefit from shifting from project-based training to programmatic capacity development, including institutionalized curricula, mentoring systems, retention strategies, and regular competency assessment for key agencies and local governments. Fit-for-purpose technology transfer—covering monitoring tools, remote sensing, decision support, and other appropriate methods—should be paired with sustained technical assistance and learning-by-doing platforms. This pillar underpins **Goal D**, and it is a precondition for scaling delivery under Goals A–C.

Target-responsive priorities include:

- **Protected area/OECM management effectiveness and marine enforcement (GBF 2, 3):** specialized capacity programs for field enforcement, compliance systems, and management effectiveness assessment and improvement.
- **Species, IAS, and HWC (GBF 4, 6, and related):** technical training and operational toolkits for long-term monitoring, rapid response, data management, and cross-agency operational coordination.
- **Pollution, climate, NbS/EbA, and urban nature (GBF 7, 8, 12):** capacity to design and monitor biodiversity-relevant outcomes and integrate them into sector programs.
- **Mainstreaming and private-sector engagement (GBF 14, 15, 16):** capacity support for ministries and industry groups to embed biodiversity in KPIs, procurement, supply chains, and disclosure/risk management approaches.
- **ABS operational readiness (GBF 13):** institutional strengthening (procedures, negotiation/contracting capacity, benefit-sharing mechanisms, grievance handling, and data systems), including training for relevant agencies and stakeholder groups.

## 5.4.6 Targeted thematic packages required to address persistent gaps

Beyond cross-cutting supports, Thailand also requires thematic packages that directly address areas where the report identifies persistent implementation gaps or where outcomes depend on multi-component delivery.

Target-responsive thematic packages include:

- **Marine/coastal compliance and PA effectiveness package (GBF 2, 3, 11):** strengthen enforcement and compliance systems, expand effectiveness monitoring, and link financing to measurable ecological outcomes.
- **Restoration and connectivity scale-up package (GBF 2):** move from project-level restoration to programmatic restoration with nationally coherent priorities, targets, and monitoring of ecological recovery.
- **National IAS program package (GBF 6):** early detection/rapid response, unified databases, stable budget lines, and clear operational roles across agencies and entry points (trade, transport, border controls, protected areas).
- **Sustainable production and SCP package (GBF 10 and 16):** sector-specific biodiversity criteria and indicators, compliance mechanisms, and interventions on food loss/waste, procurement, and supply-chain practices.
- **Ecosystem services and benefit tracking package (GBF 11):** practical valuation approaches linked to planning and budgeting, benefit-tracking systems (including nature-positive livelihoods), and integration with incentive mechanisms.
- **Participation, IPLCs, and equity package (GBF 22, 23):** operational mechanisms and monitoring tools to ensure participation affects decisions and benefits are tracked fairly, aligned to national safeguards and implementation systems.

**Together, these pillars and thematic packages provide a target-responsive pathway to accelerate national implementation while strengthening indicator readiness and the credibility of Thailand's future reporting. They are designed to help Thailand consolidate gains where progress is strong, and to address the specific constraints that continue to limit progress where it remains insufficient—most notably finance and incentive reform, enforceable delivery mechanisms, and outcome-oriented monitoring systems.**

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Section other information: Information as requested in related decisions adopted by the Conference of the Parties at its fifteenth meeting.

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