Convention on Biological Diversity

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# SIXTH NATIONAL REPORT:
## Technical reporting guidance
## version 14 Feburarv 2018

United Nations Development Programme

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# Introduction

Biodiversity is currently being lost at unprecedented rates due to human activities around the globe. In 2002, to address this problem, the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) adopted a Strategic Plan (Decision VI/26). Through its adoption, CBD Parties committed themselves to the *2010 Biodiversity Commitments*, which emphasize implementation of the CBD's objectives in more effective and coherent way. They aimed to achieve a significant reduction biodiversity loss at the global, regional and national level by the year 2010, as a contribution to poverty alleviation and to the benefit of all life on earth. The targets and indicators associated with the 2010 Biodiversity Commitments elevated our understanding of the linkages between biodiversity, ecosystem services and human well-being and inspired actions around the world. However, the targets were not achieved at a level that addressed the global pressures, resulting in biodiversity loss and declines continued. At their tenth meeting, the COP adopted a Strategic Plan for Biodiversity 2011-2020 (CBD COP decision XI/2). It included 20 Aichi Biodiversity Targets (ABT) to be achieved by 2020 at the global level. The decision also encouraged Parties to establish additional national or regional targets that contribute to these global targets, but more accurately reflect a country's needs and priorities. The Strategic Plan for Biodiversity 2011-2020 has been welcomed and supported by the United Nations General Assembly, the different biodiversity-related Conventions, and other relevant organizations such as the International Union for the Conservation of Nature. National Biodiversity Strategies and Action Plans (NBSAPs) are the key conduit for implementing the Strategic Plan and achieving the ABTs at a national level, and are a central policy-making tool for national biodiversity management. The Convention requires countries to prepare an NBSAP, or equivalent instrument, and to ensure that it, and the principles of conservation, sustainable use, and fair and equitable use, are integrated into the planning and activities of those sectors whose activities can have an impact (positive and negative) on biodiversity. Consequently, post-2010, Parties have developed new national targets, strategies and actions to achieve the Strategic Plan, and have revised their NBSAPS accordingly. The progress that countries are making to implement actions to achieve these targets, and the impact of them, will be assessed during the national reporting process.

Article 26 of the CBD requires Parties to submit periodic national reports to the COP that assess measures taken to implement the CBD and the effectiveness of those actions in meeting the Convention's objectives. At the thirteenth meeting of the Conference of the Parties (COP 13) to the CBD, the Sixth National Report (6NR) guidelines and reporting templates (Decision XIII/27) were adopted. These documents can be accessed here: https://www.cbd.int/nr6/. The 6NR contains seven sections (Table A), and the reporting guidelines requires Parties to assess progress toward national biodiversity targets and ABTs and the effectiveness of measures taken on the implementation of NBSAPs.

| Table A. The Seven Sections of the Sixth National Report |
|---|
| 1. Information on the targets being pursued at the national level |
| 2. Implementation measures taken, assessment of their effectiveness, associated obstacles and scientific and technical needs to achieve national targets |
| 3. Assessment of progress towards each national target |
| 4. Description of the national contribution to the achievement of each global ABT; |
| 5. Description of the national contribution to the achievement of the targets of the Global Strategy for Plant Conservation (this section is optional) |
| 6. Additional information on the contribution of indigenous peoples and local communities to the achievement of the ABT if not captured in the sections above (this section is optional); |
| 7. Updated biodiversity country profiles |

Parties can improve the robustness of national reporting cycles by incorporating data that reports on national and global indicators, and by completing analyses with the support of stakeholders and spatial data analysis tools. A lack of spatial data and root cause analyses, and inconsistent monitoring of changes in the status and trends of biodiversity have resulted in a pervasive lack of evidence-based reporting and decision-making. For example, biodiversity and climate change are closely interconnected. Global climate change is a root cause of biodiversity loss and healthy ecosystems help to mitigate climate change and enhance adaptation capacities. Yet many countries lack the information and infrastructure they need to accurately assess the effectiveness of national strategies and actions to address climate change and protected ecosystem services.

Data and monitoring gaps are limiting the ability of Parties to asses, plan for, and take action to mitigate the current and future impacts of climate change on biodiversity; to fully understand the role of ecosystems in addressing global climate change; to take related actions to protect them; and to include climate change adaptation as a strategy in NBSAPs or as a reported component in National Reports. Additionally, the role of healthy ecosystems in attaining the Sustainable Development Goals has not been widely recognized. For example, the role of forests in providing inexpensive, reliable protection against natural hazards is increasingly recognized. Forests, mangroves and other vegetation help to stabilize slopes, prevent floods and slow or stop soil erosion and desertification. A range of coastal habitats, from corals to mangroves, protects people living near the sea from the worst of storms and tidal waves. Yet there are many information gaps during assessments of the impact and effectiveness of NBSAP actions to conserve these ecosystem services and mitigate climate change impacts, as many NBASP actions are not actionable, measurable or sufficiently detailed to be implemented. Without accurate data, Parties will be challenged to populate the CBD online reporting system and to plan for strategies geared toward disaster risk reduction, and to assess the effectiveness of related actions to address this conservation and sustainable development challenge, such as the designation of new protected areas. The sixth reporting period to the CBD provides an opportunity for Parties to work together to develop dynamic, data driven reporting methodologies and decision support systems that build our global capacity to facilitate dynamic biodiversity monitoring, reporting, and decision making.

This document provides technical guidance to GEF-eligible Parties to the CBD in their work to develop high quality, gender-responsive and data-driven sixth national reports (6NR) using global and national indicators by 31 Dec. 2018. Our goal is to build the capacity of Parties to ensure that this reporting process improves national decision-making processes related to the implementation of NBSAPs, utilizes the best available data to monitor indicators of biodiversity status and trends, and effectively engage stakeholders to develop reports on progress towards achieving each ABT. We also want to ensure that the reporting process informs the fifth Global Biodiversity Outlook and the Global Biodiversity Strategy of 2021 – 2030. The data within each national report will provide the main rational for the follow up work on the Strategic Plan beyond this decade and will help shape the post-2020 global biodiversity agenda. Therefore, the 6NR must provide an accurate and up-to-date reflection of national and global progress in addressing the ABTs.

We encourage Parties to view the 6NR preparation period as an opportunity to review the progress each country is making to advance the implementation of the CBD and its Strategic Plan for 2011-2020 at the national level. The focus of the national reporting effort should be on understanding the scope of biodiversity actions, the effectiveness of biodiversity policies and legislation, and the impacts of both on biodiversity outcomes. A well-prepared national report will contribute to the global assessment of progress in achieving the ABTs, including the Global Biodiversity Outlook 5, and to an understanding of the national contributions made to the Strategic Plan by this progress. The same information is also relevant to assessment of progress in addressing aspects of other

international commitments, including the U.N. Sustainable Development Goals (SDGs) and can be useful for reporting to other biodiversity-related conventions. Second, it provides an important basis for consideration of the post-2020 global biodiversity strategy. The information developed during this project can be used not only to understand current biodiversity status and trends, but also to understand how well a country's actions are contributing to national and global conservation targets.

# 6NR Template

Guidelines for the 6NR were adopted in Decision XIII/27. The 6NR is due on 31 December 2018. The reporting template contains seven sections, which are summarized in Table B.

**Table B. The Seven Sections of the Sixth National Report to the Convention on Biological Diversity**

**Section I. Information on targets being pursued at the national level**

Answer the following questions:

1. Has your country adopted national biodiversity targets or equivalent commitments in line with the Strategic Plan for Biodiversity 2011-2020 and the ABT?
2. Select the ABT to which the national target is wholly or partially related.
3. Select the ABT to which the national target is indirectly related.
4. If you developed one or more national target(s), complete the template for each target. Provide the story behind developing the target(s). Explain why your country chose to set this particular target, the thinking process behind it, and why is it relevant to your country.
5. Indicate to which level of government the target applies.
6. Provide any other relevant information: the process of developing and adopting the national target, the stakeholders involved or the strategies and plans in which this national target has been included, and any relevant websites links and files.

**Section II. Implementation measures taken, assessment of their effectiveness, associated obstacles and scientific and technical needs to achieve national targets**

This template should be replicated for each major measure, or action, the country has taken to implement the NBSAP:

1. Describe a measure taken to contribute to the implementation of your country's NBSAP. Describe the character of a measure (e.g. is it a legal/regulatory/financial/policy measure?).
2. Assessment of the effectiveness of the implementation measure taken in achieving desired outcomes:
   - Measure has been effective
   - Measure has been partially effective
   - Measure has been ineffective
   - Unknown
3. Explain the selection in 2 and indicate the tools or methodology used to assess it. Include relevant websites, web links and files. If it cannot be assessed, explain why.
4. Provide other relevant information to illustrate how the measure has resulted in, or is expected to result in, outcomes that contribute to NBSAP implementation. Include relevant websites, web links and files.
5. Describe the obstacles that have been encountered and any scientific and technical needs for addressing them, including technical and scientific cooperation, capacity development activities or the need for guidance materials. Include relevant websites, web links and files.

**Section III. Assessment of progress towards each national target:**

Assess the level of progress made towards each of your country's national targets or similar commitments. The template should be replicated for each national target. If your country has not set national targets use the ABT.

1. List the ABT.
2. Select the category of progress towards implementation of the target and date of assessment:
   - On track to exceed target
   - On track to achieve target
   - Progress but at an insufficient rate
   - No significant change
   - Moving away from target
   - Unknown
3. Explain the evidence used in this target's assessment, drawing upon the information provided in section II, including obstacles in undertaking the assessment.
4. Describe the indicators used in this assessment, and any other tools and methods.
5. Select your level of confidence of the above assessment and explain verbally:
   - Based on comprehensive evidence
   - Based on partial evidence
   - Based on limited evidence
6. Assess the adequacy of monitoring information to support this assessment:
   - Monitoring related to this target is adequate
   - Monitoring related to this target is partial
   - No monitoring system in place
   - Monitoring is not needed
7. Describe how the target is monitored and indicate whether there is a monitoring system in place. Include relevant websites, web links and files.

## Section IV. Describe the national contribution to the achievement of each global ABT

Describe your country's contribution towards the achievement of each global ABT. This template should be replicated for each ABT. For Parties whose national targets are identical to the ABT, some of this information may be captured in Sections II and III. In these cases, provide additional descriptions of your country's national contribution to the achievement of each global ABT.

1. State the ABT name.
2. Describe how and to what extent your country has contributed to the achievement of this ABT. Summarizes the evidence used to support this description.
3. Describe other activities contributing to the achievement of the ABT at the global level.
4. Based on the description of your country's contributions to the achievement of the ABT, describe how and to what extent these contributions support the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals.

## Section V. Describe the national contribution to the achievement of the targets of the Global Strategy for Plant Conservation (optional)

Describe your country's contribution towards the achievement of the targets of the Global Strategy for Plant Conservation (GSPC). This template should be replicated for each of the 16 targets of the GSPC

1. If your country has national targets related to the GSPC Targets, provide details on each target.
2. Provide information on any active networks for plant conservation present in your country.
3. For each target, assess the category of progress towards the target of the GSPC at the national level:
   - On track to achieve target at national level
   - Progress towards target at national level but at an insufficient rate
   - No significant change at national level
4. Describe how and to what extent your country has contributed to the achievement of this GSPC Target and summarize the evidence used to support this description.

## Section VI. Information on the contribution of indigenous peoples and local communities (optional)

Provide any additional information on the contribution of indigenous peoples and local communities to the achievement of the ABT if not captured in the sections above.

## Section VII. Updated biodiversity country profiles

Biodiversity country profiles provide an overview of information relevant to your country's implementation of the Convention. Review and update your country's biodiversity profile that is currently displayed on the clearing-house mechanism here: https://www.cbd.int/countries.

Update the following information:

Biodiversity Facts

- Status and trends of biodiversity, including benefits from biodiversity and ecosystem services
- Main pressures on and drivers of change to biodiversity (direct, indirect)

Measures to Enhance Implementation of the Convention

- Implementation of the NBSAP
- Actions taken to achieve the 2020 ABT
- Support mechanisms for national implementation, e.g. legislation, funding, capacity-building, coordination, mainstreaming
- Mechanisms for monitoring and reviewing implementation

National Contacts

- CBD
- Cartagena Protocol on Biosafety
- Nagoya Protocol on Access and Benefit-sharing
- Other relevant focal points, e.g. resource mobilization, Programme of Work on Protected Areas
- Main person developing the 6NR

# Technical Guidance on How to Report on the National Contribution of each ABT (or national equivalent) toward the achievement of the Strategic Plan for Biodiversity 2011-2020

The remainder of this document suggests guiding questions and data sources that can be used to assess a country's national contributions to the achievement of each global ABT:

1. Biodiversity awareness
2. Biodiversity mainstreaming
3. Incentives and subsidies
4. Sustainable production and consumption
5. Habitat fragmentation and degradation
6. Sustainable fisheries
7. Sustainable resource management
8. Pollution
9. Invasive alien species
10. Vulnerable ecosystems
11. Protected areas
12. Species and extinctions
13. Genetic diversity
14. Ecosystem services
15. Climate resilience, sequestration and restoration
16. Access and benefit sharing
17. NBSAPs
18. Traditional knowledge
19. Science and research
20. Resource mobilization

The chapters in this document are clustered around the 20 ABTs. Each chapter begins by presenting the key challenges identified in the Fourth Global Biodiversity Outlook for that ABT, and then links the ABT to the UN Sustainable Development Goals (SDGs). Table B lists key questions about the progress a country is making to achieve the ABT, to which Parties are encouraged to respond. These questions are designed to assist countries to develop a comprehensive analysis of their contribution to that ABT. Answering these questions will allow Parties to assess the national context, inform global analysis, such as the 5th Global Biodiversity Outlook, and inform the set of indicators welcomed by CBD COP-13 Decision XIII/28. Each chapter also includes a Table C that lists potential indicators and data sources that can be considered when assessing each country's contribution to that ABT. Each chapter concludes by providing linkages to related national reporting processes from other biodiversity-related Conventions (Table D). Parties are encouraged to take these sources into consideration[1] when developing their 6NR. References to the national biodiversity strategy and measures contained in the action plans are also encouraged.

*Linkages to the U.N. Sustainable Development Goals*

During the 6NR development process, Parties are additionally requested to assess and report on how the measures they are taking to achieve the Strategic Plan for Biodiversity 2020 also address the 17 SDGs. To assist with this process, this document identifies linkages between each ABT and the 17 SDGs. Biodiversity underpins the successful implementation of the 2030 Agenda. Additionally, the conservation, restoration, sustainable use and equitable benefits sharing of biodiversity can strengthen

[1] Main source: FOEN, UNEP-WCMC, NatureConsult (2016). Elements for a modular reporting against the Aichi Biodiversity Targets. UNEP-WCMC, Cambridge.

the achievement of many of SDG goals and targets. This document presents direct linkages between the ABTs and SDGs, and the contribution of each ABT to the SDG targets, and is informed by CBD et al. (2016). In addition, the gaps or weak connectivity between the to ABTs and the SDGs are presented, as informed by Stockholm Resilience Centre (2016).

Additional guidance on reporting on the SDGS can be found here:

- Report on the links between the Aichi Biodiversity Targets and the 2030 Agenda for Sustainable Development (https://www.cbd.int/doc/meetings/sbstta/sbstta-19/information/sbstta-19-inf-09-en.pdf)
- Technical note on Biodiversity and the 2030 Agenda for Sustainable Development (https://www.cbd.int/development/doc/biodiversity-2030-agenda-technical-note-en.pdf)
- Discussion paper on the links between the Aichi Biodiversity Targets and the Sustainable Development Goals prepared by the Stockholm Resilience Centre (http://swed.bio/wp-content/uploads/2016/11/The-2030-Agenda-and-Ecosystems_spread.pdf).

## Aichi Biodiversity Target 1: Awareness of Biodiversity Increased


ABT 1 - biodiversity awareness - focuses on the need for society to be aware of the wide range of values of biodiversity, including social, ecological and economic benefits. ABT 1 states: "By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably. Addressing the direct and underlying drivers of biodiversity loss will ultimately require behavioral changes by individuals, organizations and governments". Public understanding, awareness and appreciation of the diverse values of biodiversity are critical if individuals, organizations and governments are to become willing to make the necessary changes and actions to conserve and sustainably use biodiversity, and if governments are to enact and enforce appropriate policies and legislation. Understanding the values and benefits of biodiversity is a critical first step to integrating these values into economic and development sectors. To achieve ABT 1, countries need to understand the current levels of biodiversity awareness, and develop and implement effective and targeted communication plans that explain the diverse values of nature.

**By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.**

Achieving ABT 1: Key Challenges

The Global Biodiversity Outlook 4 (GBO4) found that public awareness about the importance of biodiversity appears to be increasing in both developed and developing countries, although with considerable variation. However, there is high variation in the awareness of biodiversity and its values among people in different countries and regions. Furthermore, while awareness about the importance of biodiversity for human wellbeing may be increasing, people less often value the protection of biodiversity, see it as a problem of great local concern, or do not understand how their actions have negative impacts on biodiversity.

Analyses of post-2010 NBSAPs and Fifth National Reports (5NR) revealed some key issues in ABT 1 as follows: a) awareness campaigns are often not targeted to drivers of biodiversity loss; b) many awareness campaigns do not lead to strategic actions; c) there is no consistent framework for communicating biodiversity values; d) typical valuation studies do not spatialize ecosystem services, and therefore do not lead to increased awareness and action; and e) many countries still lack basic data on ecosystem services and biodiversity values.

Measures that can accelerate the achievement of ABT 1, including from the Global Biodiversity Outlook 4 (GBO-4) are: a) encourage citizen engagement in biodiversity monitoring and conservation efforts; b) develop and implement targeted, differentiated communications strategies; c) target efforts at drivers of change, such as reducing demand for illegal wildlife trade and increasing demand for sustainable supply chains; d) engage professional marketing and communications specialists in the design and execution of awareness campaigns; e) focus on spatially mapping the results of biodiversity valuation assessments to enable better decision making; f) encourage citizen monitoring as part of awareness campaigns; g) focus on assessing and communicating the value of biodiversity for human

wellbeing; h) use theories related to behavior change and motivation; and i) assess both biodiversity awareness and resulting behavior change.

Linkages Between the UN Sustainable Development Goals and ABT 1

Awareness of the values of biodiversity and action to conserve and use it sustainably is implicit in two of the U.N. Sustainable Development Goals (SDG). The SDGS most related to achievement of ABT 1 are listed in Table 1a.

| Table 1a. Linkages between ABT 1 and the UN SDGs | |
|---|---|
| SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all | • 4.7. By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development |
| SDG 12: Ensure sustainable consumption and production patterns. | • 12.8. By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature |

Assessing National Contributions to Achieving ABT 1

The information presented in the 6NR on ABT 1 should focus on implementation of biodiversity awareness actions taken since the adoption of the Strategic Plan for Biodiversity 2011- 2020, with a particular emphasis on the actions that have been taken, and the changes that have occurred, since the last national report was submitted. The focus should be on highlighting important outcomes, and the effectiveness of actions as they relate to ABT 1. When developing reporting information on measures to achieve ABT 1 or equivalent national targets, we encourage Parties to consider the key questions in Table 1b.

| Table 1b. Key Questions to Consider to Address Progress to Achieve ABT 1 |
|---|
| • What types of awareness-raising activities are being undertaken in your country, for what purpose, and by whom?<br>o How many communications and awareness campaigns has your country completed and on what issues?<br>o What is the estimated total number of people reached through these campaigns? |
| • To what extent are your communication and awareness campaigns targeting:<br>o Specific audiences for specific purposes, with an intended outcome in mind?<br>o Key primary biodiversity-related issues in your country, including on the drivers of biodiversity loss? |
| • To what extent are you conducting awareness-raising activities that are focus on the following outcomes:<br>o People are increasingly aware of the values of biodiversity?<br>o People increasingly know the concrete contributions of biodiversity to their lives?<br>o People increasingly understand the actions that can be taken to conserve and sustainably use |

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| biodiversity? |
| • To what extent is the effectives of your awareness raising activities being tracked:<br>o To which extent are people aware of the values of biodiversity in your country?<br>o Are people aware that biodiversity is important for human wellbeing and do they also view biodiversity as an important contribution to human wellbeing?<br>o Do people view biodiversity as an important national and/or local concern?<br>o Are people aware of the steps they can take to conserve and sustainably use biodiversity?<br>o Are these awareness-raising activities effective in influencing behavior change by individuals, organizations and governments? |
| • Have you disaggregated biodiversity awareness data by gender, age, education level, and/or geographic region? Which groups have the best and least understanding of biodiversity values? |
| • Are you systematically monitoring media coverage of biodiversity and biodiversity-related issues? |
| • Have you completed studies on the values of biodiversity? If so:<br>o How many studies have you completed?<br>o What specific values are they focused on?<br>o How many and what types of people have read these reports?<br>o How are government ministries using these studies to make decisions? |
| • What additional actions have you taken to contribute to this ABT at a global level, such as providing assistance to other countries, territories or originations, or regional or international cooperation, technology transfer and/or information-sharing? |
| • If you determine that insufficient activities have taken place to meet this target, please explain and analyze the reasons why. |

Potential Indicators and Data Sources for Reporting on ABT 1

When assessing the progress that your country is making to achieve ABT 1 and equivalent national targets, it is advantageous to clearly reference the results of analyses regarding the country's current status and trends related to biodiversity awareness. To do so, we recommend working with stakeholders to identify data at the national level to report on ABT 1 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 1 are listed in Table 1c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| **Table 1c. Potential Indicators and Data Sources for Reporting on ABT 1** |
|---|
| • The number of activities that focus on raising awareness about biodiversity values and/or the actions that individuals can take to conserve and sustainably use biodiversity. |
| • The impacts of the actions taken to increase public awareness of biodiversity. |
| • Changes in the stocks and flows of essential ecosystem services are identified, and opportunities for integrating these into national accounting, national plans and national decision- making frameworks. |
| • The extent to which a communication and outreach plan has been developed and implemented to communicate key findings, lessons, results and progress from the NBSAP to a variety of constituencies. |
| • Trends in awareness and attitudes to biodiversity: |

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| ○ Biodiversity Barometer (http://ethicalbiotrade.org/biodiversity-barometer) – UEBT (Union for Ethical BioTrade)<br>○ Biodiversity Indicators Partnership (BIP) (https://www.bipindicators.net/indicators/biodiversity-barometer)<br>○ Google Trends of online interest in biodiversity (https://www.google.ca/trends)<br>○ WAZA global visitor survey – WAZA (World Association of Zoos and Aquariums)<br>○ Percentage of students of a given age (e.g. 15-year olds) enrolled in secondary school demonstrating at least a fixed level of knowledge across a selection of topics in environmental science and geoscience (proposed indicator for SDG target 4.7) |
| • Trends in public engagement with biodiversity:<br>○ Civil membership to biodiversity-relevant NGOs |
| • Trends in inclusion of the perspective of Indigenous Peoples and Local Communities (IPLC) perspectives on biodiversity:<br>○ Number of IPLC cultural events related to their traditional knowledge and integration of biodiversity in cultural values that received direct support and participation of general public and policy makers<br>○ Number of cultural exchange events on IPLC's perspectives on biodiversity<br>○ Number of public awareness materials that include IPLC perspectives on biodiversity |

Multilateral Environmental Agreement Reports that Contain Data on ABT 1

There are also strong linkages between ABT 1 and the national reports of other Multilateral Environmental Agreements (MEAs). These reports may provide key data that you can use to develop the 6NR. We encourage Parties to use information from the recent reports your country provided to different but related biodiversity-related conventions. Table 1d lists the potential data sources for ABT 1 that can be found within other MEA national reports.

**Table 1d. National Reports from Multilateral Environmental Agreements with relevant data for ABT 1**

| MEA | Data Source |
|---|---|
| CITES | Implementation Report Question 3.2.1a: Awareness raising. |
| Convention on Migratory Species | Review Section VIII of the National Report on the global and national Importance of CMS. |
| Ramsar Convention | Review responses to Ramsar COP-12 report questions related to on Target 11 (Functions, services, benefits) and Target 16 on Mainstreaming) of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Reference these sections of the periodic reporting: Section 1, Question 9 on Training and Question 11 on Awareness building; Section 2, Question 4.6 on Awareness building. |
| FAO State of the World's Biodiversity for Food and Agriculture | Refer to national report responses to Question 88 on Education programmes, Question 95 on Stakeholder awareness and Question 96 on Support role of stakeholders, which may be relevant. |

## Aichi Biodiversity Target 2: Biodiversity Values Integrated


ABT 2 - biodiversity mainstreaming – focuses on the need to integrate the values and benefits of biodiversity into societal decision-making. ABT 2 states: "By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems." Although biodiversity and ecosystem services provide enormous societal values, these values and benefits are not widely reflected or accounted for in societal decision making, including in productive sectors, such as agriculture and energy, and in development sectors, such as land-use planning and poverty reduction. As a result, these and other sectors often have major negative impacts on biodiversity, underpinning the very foundation that sustains them. Furthermore, trends in biodiversity loss are often invisible in national accounts. To achieve ABT 2, countries need to assess the values of biodiversity to a variety of sectors, and integrate biodiversity values fully into their national planning processes. Countries should consider developing natural capital accounting systems, and those that recognize social and cultural values.

**By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.**

Achieving ABT 2: Key Challenges

According to GBO-4, Parties are making progress in incorporating biodiversity values into development planning processes and in integrating national capital into national accounting processes. However, the report also states that of 54 poverty reduction strategies examined in a study, only one-third showed a high level of recognition of the importance of biodiversity in development strategies, and only one-half have environmental accounting systems. Analyses of post-2010 NBSAPs and 5NRs identified gaps in actions by Parties to mainstream biodiversity into national development plans, poverty plans, climate plans, disaster plans, water security plans, food security plans, integrated watershed basin plans, integrated coastal zone plans, strategic environmental assessment plans, energy plans and infrastructure), national accounting, transportation and extractive industries. Moreover, spatial data on sectoral and development trends was all but absent across most post-2010 NBSAPs.

Measures that can accelerate the achievement of ABT 2, including those identified in GBO-4 are: a) assess policies and identify opportunities for addressing biodiversity concerns; b) share information on the values of biodiversity to human wellbeing; c) compile environmental statistics and environmental-economic accounts and integrate the results into national finance accounts; d) reflect the values of biodiversity in spatial planning by mapping ecosystem services; e) integrate biodiversity into strategic environmental assessments; f) identify key areas where biodiversity-related actions can alleviate poverty and support livelihoods; and g) identify specific opportunities for integrating biodiversity and associated values into national water security plans, food security plans, integrated watershed basin pans and

coastal zone management plans, national energy plans, infrastructure plans and poverty alleviation plans.

Linkages Between the UN Sustainable Development Goals and ABT 2

The importance of fully integrating biodiversity values and benefits into societal decision making is empathized throughout the SDGs. The linkages between ABT 2 and the SDGs are listed in Table 2a.

| Table 2a. Linkages between ABT 2 and the UN SDGs | |
|---|---|
| SDG 1: End poverty in all its forms everywhere. | • 1.4. By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.1.5. By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate- related extreme events and other economic, social and environmental shocks and disasters. |
| SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. | • 8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programs on sustainable consumption and production, with developed countries taking the lead.<br>• 8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products. |
| SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation | • 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.<br>• 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities. |
| SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable | • 11.3. By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.<br>• 11.7. By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities. |
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.<br>• 14.7 By 2030, increase the economic benefits to small island developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism. |
| SDG 15: Protect, restore and promote sustainable use | • 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and |

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| of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss | accounts. |
| SDG17: Strengthen the means of implementation and revitalize the global partnership for sustainable development | • 17.14 Enhance policy coherence for sustainable development. |

Assessing National Contributions to Achieving ABT 2

The information presented in the 6NR on ABT 2 should focus on specific actions taken on integrating the values of biodiversity since the adoption of the Strategic Plan for Biodiversity 2011- 2020, with a particular emphasis on the actions taken, and outcomes achieved, since the last national report was submitted. The focus should be on highlighting the degree to which biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes. Parties should also report on the degree to which biodiversity values are being incorporated into national accounting and reporting systems. When developing reporting information on measures to achieve ABT 2 or equivalent national targets, Parties may consider the key questions in Table 2b.

| **Table 2b. Key Questions to Consider to Address Progress to Achieve ABT 2** |
|---|
| • Where are opportunities in your country for better managing biodiversity in order to reduce poverty?<br>  ○ Is there recognition among national, regional and local decision makers about the importance of integrating biodiversity values in development strategies?<br>  ○ To what extent has your country integrated biodiversity and ecosystem service values into sectoral and development policies and poverty reduction strategies and planning processes?<br>  ○ Does your country have policy development processes that account for biodiversity in land use and poverty reduction plans?<br>  ○ When national, regional and local decisions are being made on economic development or to reduce poverty, is the contribution of biodiversity a significant consideration? |
| • Do your country's national development plans (including food, water, disaster, climate, disaster, development, poverty) specifically consider the values of conserving biodiversity?<br>  ○ How many sectoral plans have you developed that explicitly include biodiversity considerations?<br>  ○ What sectors do the plans that integrate biodiversity focus on, e.g. agriculture, tourism, energy, extractive sectors, and transportation?<br>  ○ Have you clearly identified the opportunities and timeframes for linking the NBSAP and its components to existing planning processes in the environmental and other sectors, such as poverty reduction, national development, sustainable development, land use, agricultural development, forestry, water, coastal management, climate change, disaster risk reduction?<br>  ○ To what extent is the value of biodiversity and also of natural resources to economies and livelihoods mainstreamed in the processes that drive development planning?<br>• What actions are you taking to further integrate biodiversity values into national and local |

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| development and poverty reduction strategies? |
| • How and to what extent are the values that biodiversity and natural resource bring to economies and livelihoods incorporated or mainstreamed into national accounting and/or financial reporting systems?<br>o Does your country have a system of environmental-economic accounting or a framework for integrating statistics on the environment and its relationship with the economy?<br>o Has your country implemented natural resource accounting within the System of Environmental-Economic Accounting (SEEA)?<br>o Is biodiversity integrated into national SEA frameworks? |
| • Have ecosystem valuation studies been completed, and if so, which ecosystems do they cover?<br>o How are these valuation studies informing decision-making? |
| • To what extent does your country have geospatial data on biodiversity and biodiversity values, and is it relevant to national development plans? |
| • What other actions have you taken to contribute to this ABT at a global level, such as providing assistance to other countries, territories or originations, or regional or international cooperation, technology transfer and/or information-sharing? |

Potential Indicators and Data Sources for Reporting on ABT 2

When assessing the progress your country is making to achieve ABT 2 and equivalent national targets, it is advantageous to clearly reference the results of analyses regarding the country's status and trends towards achieving biodiversity mainstreaming. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 2 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 2 are listed in Table 2c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| **Table 2c. Potential Indicators and Data Sources for Reporting on ABT 2** |
|---|
| • The number of national development plans that your country has developed or revised (including food, water, disaster, climate, disaster, development, poverty) that specifically incorporates the values of biodiversity. |
| • The number of sectoral plans that your country has developed or revised (including tourism, energy, extractive sectors, transportation) that explicitly includes biodiversity considerations. |
| • The degree to which biodiversity values are integrated into:<br>o National and local development and poverty reduction strategies<br>o National and local planning processes<br>o National accounting systems<br>o National reporting systems |
| • The degree to which opportunities and timeframes for linking the NBSAP and its components to existing planning processes in the environmental and other sectors is clearly identified, e.g. poverty reduction, national development, sustainable development, land use, agricultural development, forestry, water, coastal management, climate change, disaster risk reduction. |
| • The extent to which the economic value of key ecosystem services, including their contribution to national sustainable development goals has been assessed. |
| • The degree to which the economic value of key ecosystem services is integrated into national |

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| plans, national accounting, sustainable resource use plans and protection plans. |
| • The effectiveness of NBSAP strategies and actions for integrating the values of biodiversity into national accounting procedures. |
| • The extent of awareness of key constituencies of the multiple values of biodiversity, ecosystems and ecosystem services to local and national economies, to communities and to national sustainable development goals, has been assessed. |
| • The area and distribution within land use plans of areas targeted for intensive economic growth, for sustainable use and for conservation of biodiversity. |
| • The effectiveness of NBSAP strategies and actions for strengthening land use planning and spatial planning to identify specific areas for economic growth, and for sustainable use and conservation of biodiversity, and to account for essential ecosystems. |
| • The degree to which plans are developed and implemented to integrate key strategies into national budgeting, sustainable development, sectoral, land use and other planning and policy frameworks. |
| • The ability of the country to implement natural resource accounts, excluding energy, within the United Nations Statistics Division website on Environmental-Economic Accounting (SEEA) (http://unstats.un.org/unsd/envaccounting/default.asp). |
| • The preliminary guide regarding diverse conceptualization of multiple values of nature and its benefits, that has been developed by the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services can also be used (http://www.ipbes.net/sites/default/files/downloads/IPBES-4-INF-13_EN.pdf). |
| • Natural capital accounts for WAVES (Wealth Accounting and the Valuation of Ecosystem Services) partner countries (*Botswana, Colombia, Costa Rica, Guatemala, Indonesia, Madagascar, Philippines and Rwanda*). |
| • Geospatial analyses including those that overlay of population, poverty and land rights including indigenous peoples, land cover change, habitat intactness, protected areas, and ecosystems. Informative data layers include:<br>°Population density °Poverty °Land rights (including indigenous peoples)<br>°Land cover/land cover change °Habitat intactness<br>°Protected areas °Ecosystem services - livelihoods |

Multilateral Environmental Agreement Reports that Contain Data on ABT 2

There are strong linkages between ABT 2 and the national reports of other MEAs. These documents may provide key data that you can use to develop the 6NR. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. Table 2d lists the potential data sources for ABT 2 that can be found within other MEA national reports.

**Table 2d. National Reports from MEAs with data relevant to ABT 2**

| MEA | Data Source |
|---|---|
| CITES | Refer to Implementation Report Question 3.1.1a on Funding activities; and Question 3.3.2d on Integration into strategies and processes. |

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| Convention on Migratory Species | Review national reports on Target 2 (Integration of values) of the CMS Strategic Plan 2015-2023. |
| International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) | Refer to National Report Question 15: Integration into programs and policies. |
| Ramsar Convention | Review responses to Ramsar COP-12 report questions related to Question on Target 1: Wetland benefits and Target 11: Wetland functions/services disseminated of the Ramsar Strategic Plan 2016-2024. |
| FAO State of the World's Plant Genetic Resources for Food and Agriculture | Refer to information contained in Chapter 4: Institutional capacities. |

## Aichi Biodiversity Target 3: Incentives Reformed


ABT 3 - incentives and subsidies – focuses on the need to change the incentives and subsidies that are harmful to biodiversity and to develop incentives that are positive for biodiversity. ABT 3 states: "By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions." Biodiversity and ecosystems maintain the flow of ecosystem services that are essential for human wellbeing, including economic development. Yet incentives and subsidies often encourage individual and organizational behavior that either fosters biodiversity loss and degradation (often as an unintended consequence of the subsidy), or that promotes the conservation and sustainable use of biodiversity. To achieve ABT 3, countries need to assess the current status of incentives and subsidies; understand the unintended consequences of these to biodiversity; eliminate, phase out or reform incentives and subsidies that are harmful for biodiversity; and, develop and apply incentives and subsidies that safeguard biodiversity.

**By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions.**

### Achieving ABT 3: Key Challenges

GBO-4 states that global information is limited on positive and negative biodiversity incentives and related reforms. Previous national reports focused on positive reforms and lacked data on efforts to eliminate harmful incentives. At that time, many Parties recognized the need to eliminate subsidies that harm biodiversity, but had taken limited action to phase them out. Increased action to create positive incentives, and reduce or eliminate negative ones, was needed to meet the target by 2020.

Analyses of post-2010 NBSAPs and 5NRs identified the following key issues: a) harmful subsidies continue to drive biodiversity loss, including fossil fuels subsidies ($550 billion), agricultural subsidies ($500 billion) and fisheries subsidies ($35 billion); b) a small percentage of commodities are certified as sustainably produced (only 16% of timber is Forest Stewardship Council certified, 7% of fish is Marine Stewardship Council certified, 22% of palm is certified sustainable, and less than 5% of agriculture is certified organic); c) there are gaps in most post-2010 NBSAPs related to the creation of incentive schemes, the expansion of market-based incentives such as certification, and the removal of pervasive harmful subsidies.

Measures that can accelerate achievement of ABT 3, including those identified by GBO-4, are: a) identify incentives for elimination and reform; b) prioritize measures leading to removal or reform and the introduction of positive incentives; c) identify the full economic, social and environmental costs of

subsidies that have perverse impacts and may countermand the SDGs; d) prioritize incentives and subsidies for expansion, reform and removal; e) promote carbon markets consistent with UNFCCC; f) promote market certification for key commodities, including those that face high pressures, such as fish, and those that drive forest loss and habitat conversion, including timber, soy, palm oil, beef; g) make greater use of social incentives and rewards; and h) promote agriculture-environmental schemes toward desired biodiversity outcomes.

Linkages Between the UN Sustainable Development Goals and ABT 3

The SDGs address perverse subsidies linked to specific environment-based economic sectors. However, there is no consideration of other activities which are often government subsidized and can greatly affect ecosystem function, such as large-scale infrastructure developments that lead to pollution or the introduction of invasive alien species. There are also no SDG targets on direct positive incentives for sustainable natural resource management. However, ABT 3 is related to SDG 14 (Table 3a):

**Table 3a. Linkages between ABT 3 and the UN SDGs**

| | |
|---|---|
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.4. By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.<br>• 14.6. By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation. |

Assessing National Contributions to Achieving ABT 3

The information presented in the 6NR on ABT 3 should focus on actions taken on in incentives and subsidies, and the impact of those actions, since the adoption of the Strategic Plan for Biodiversity 2011- 2020, with a particular emphasis on the changes that have occurred since the last national report was submitted. The focus should be on highlighting the degree to which measures have been implemented to reduce, reform or eliminate incentives and subsidies that are harmful to biodiversity. Parties should also report on measures to develop and implement positive incentives for the conservation and sustainable use of biodiversity.

Information on methods for Parties to fully operationalize ABT 3 are contained in Document UNEP/CBD/COP/12/INF/20. Further in decision XII/3, Annex I Parties adopted milestones for the full implementation of ABT 3. In its decision XIII/20, the COP recalled this decision. Parties were then invited to include information on national analytical studies that identify candidates for elimination, phase-out or reform of incentives, including subsidies that are harmful for biodiversity. Parties were also invited to identify opportunities to promote the design and appropriate recognition and support for indigenous peoples and local communities that conserve territories and areas, and

other effective community conservation initiatives; implementation of positive incentive measures, such as appropriate recognition and support for indigenous peoples and local communities that conserve territories and areas, and other effective community conservation initiatives.

When developing reporting information on measures to achieve ABT 3 or equivalent national targets, we encourage you to consider the key questions in Table 3b.

| Table 3b. Key Questions to Consider to Address Progress to Achieve ABT 3 |
|---|
| • Is there a general recognition by government officials and/or industry of the need to remove subsidies that are harmful to biodiversity?<br>o What harmful incentives, including subsidies, are eliminated or being eliminated, or will be phased out or reformed?<br>o How are they being eliminated, phased out or reformed in order to minimize or avoid negative impacts on biodiversity? |
| • Have you quantified the potential impacts of positive and negative incentives across a broad range of sectors on biodiversity and ecosystem services, including mining, energy, forestry, fisheries, and agriculture?<br>o What are the results per sector? |
| • Did you assess impacts on biodiversity of recent incentive reforms have?<br>o Are they focused on the most harmful underlying causes of biodiversity loss? |
| • What positive incentives for biodiversity are being developed and implemented?<br>o What impacts are positive incentives having on biodiversity, such as encouraging better land stewardship or increased inland water and ocean conservation?<br>o What behavior changes are positive incentives designed to catalyze?<br>o Are the desired results being achieved? |
| • What is the scope for increasing market-based incentives, such as certification? |
| • Do you have cases where financial or regulatory incentives developed outside of the environmental ministry (e.g. tourism, agriculture, goods production) benefited biodiversity and helped achieve better implementation of the Convention? |
| • What actions have you taken to contribute to this ABT at a global level, such as providing assistance to other countries, territories or originations, or regional or international cooperation, technology transfer and/or information-sharing? |

Potential Indicators and Data Sources for Reporting on ABT 3

When assessing the progress that your country is making to achieve ABT 3 and equivalent national targets, it is advantageous to clearly reference the results of analyses regarding current status and trends related to the country's status in achieving incentive reforms. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 3 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 3 are listed in Table 3c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| Table 3c. Potential Indicators and Data Sources for Reporting on ABT 3 |
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| • Negative incentives:<br>  o Number of negative incentives that have been removed or reformed and the value of these incentives in USD.<br>  o The extent, to which harmful incentives to biodiversity, including subsidies, are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and the impact of those actions on biodiversity. |
| • Positive incentives:<br>  o Number of positive incentives that have been put in place and the value of these incentives in USD.<br>  o The extent to which positive incentives for conservation and sustainable use of biodiversity are being developed and applied, and the impact of those actions on biodiversity. |
| • The opportunities and timeframes for linking the NBSAP and its components to existing planning processes in the environmental and other sectors (such as poverty reduction, national development, sustainable development, land use, agricultural development, forestry, water, coastal management, climate change, disaster risk reduction) are clearly identified. |
| • The extent to which key drivers of biodiversity change and their underlying causes, including an analysis of the impacts of key sectoral practices and policies on biodiversity and ecosystems, are identified and mapped. |
| • The extent to which key laws, policies, subsidies and incentives that facilitate and/or inhibit sustainable use, conservation and equitable benefits sharing are assessed. |
| • The degree to which national expenditures on biodiversity- related actions, including by public and private actors and environmentally positive and harmful incentives, have been assessed. |
| • The effectiveness of NBSAP strategies and actions at significantly reducing the extent and percentage of unsustainable sectoral practices, including waste management, energy, tourism, mining, transportation, manufacturing. |
| • Spatial data layers that overlay of population, poverty and land rights including indigenous peoples; land cover/land cover change; habitat intactness; protected areas; and ecosystem services – livelihoods. Other informative spatial data layers include:<br>  o Population density<br>  o Poverty<br>  o Land rights (including indigenous peoples)<br>  o Land cover/land cover change<br>  o Habitat intactness<br>  o Protected areas;<br>  o Ecosystem services – livelihoods |
| • Number of countries implementing natural resource accounts, excluding energy, within the United Nations Statistics Division website on Environmental-Economic Accounting (SEEA) (http://unstats.un.org/unsd/envaccounting/default.asp). |
| • The Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services has developed preliminary guide regarding diverse conceptualization of multiple values of nature and its benefits (http://www.ipbes.net/sites/default/files/downloads/IPBES-4-INF-13_EN.pdf). It may contain useful data for your reporting efforts. |
| • Natural capital accounts are available for WAVES (Wealth Accounting and the Valuation of Ecosystem Services) partner countries (*Botswana, Colombia, Costa Rica, Guatemala, Indonesia,* |

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| *Madagascar, Philippines and Rwanda).* |
| • OECD has developed indicators, which are relevant to ABT 3, and has data for several OECD and non-OECD countries. These indicators include:<br>o Trends in the number and value of incentives, including subsidies, harmful to biodiversity, removed, reformed or phased out<br>o Trends in potentially harmful elements of government support to agriculture (produced support estimates) – OECD<br>o Biodiversity Indicators Partnership (https://www.bipindicators.net/indicators/trends-in-potentially-environmentally-harmful-elements-of-government-support-to-agriculture-producer-support-estimate#national_use)<br>o Trends in potentially harmful elements of government support to fisheries - OECD<br>o Agricultural export subsidies (indicator for SDG target 2.b) – OECD<br>o Trends in potentially harmful policies on biodiversity-related IPLC traditional knowledge, traditional occupations and land tenure<br>o Number of non-monetary incentives to promote biodiversity-related IPLC practices (e.g., through protecting and promoting cultural practices, low-impact traditional development models and tenure rights)<br>• Information is also available from the OECD Producer and Consumer Support Estimates database (http://www.oecd.org/tad/agricultural-policies/producerandconsumersupportestimatesdatabase.htm). |

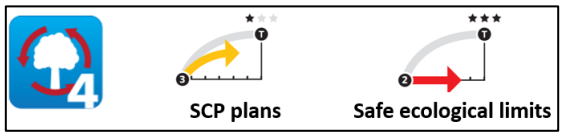
Multilateral Environmental Agreement Reports that contain data on ABT 3

There are strong linkages between ABT 3 and the national reports of other MEAs. These documents may provide key data that you can use to develop the6NR. We encourage Parties to use information from recent reports your country provided to related biodiversity-related conventions. Table 3d lists the potential data sources for ABT 3 that can be found within other MEA national reports.

**Table 3d. National Reports from MEAs with relevant data for ABT 3**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| CITES | Refer to Implementation Report Question 2.2.4a on use of incentives, and Question 2.2.4b on elimination of harmful incentives. |
| Convention on Migratory Species | Review national report related to Target 4 (Incentives) of the CMS Strategic Plan 2015-2023. |
| Ramsar Convention | Review responses to Ramsar COP-12 report questions related to Target 3 - Public and private sector apply guidelines and good practices - of the Ramsar Strategic Plan 2016-2024. |
| FAO State of the World's Plant Genetic Resources for Food and Agriculture | Review report response to question 78 on incentives. |
| FAO State of the World's Aquatic Genetic Resources for Food and Agriculture | Refer to information contained in Chapter 6 of the report (national policies and legislation). |

## Aichi Biodiversity Target 4: Sustainable Production and Consumption




ABT 4 - sustainable production and consumption focuses on the sustainable production and consumption of natural resources. ABT 4 states: "By 2020, at the latest, governments, businesses and stakeholders at all levels have taken steps to achieve, or have implemented, plans for SPC, and have kept the impacts of natural resources use well within safe ecological limits." The unsustainable use of natural resources is one of the main drivers of the loss of biodiversity and the impairment of ecosystems. Current levels of natural resource production and consumption are not sustainable in many countries. Issues include the depletion of forest stocks, the use of water beyond carrying capacity, the degradation of soil fertility, and the collapse of species resulting from overharvesting. To achieve ABT 4, and to manage natural resources within safe ecological limits, countries will need to assess the type and magnitude of pressures facing biodiversity and ecosystems within their own boundaries; understand how consumption patterns affect biodiversity and ecosystems within and beyond their national boundaries; and develop plans for sustainable production and consumption that fall within safe ecological limits.

**By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for SPC and have kept the impacts of use of natural resources well within safe ecological limits.**

Achieving ABT 4: Key Challenges

There are many key challenges to implementing ABT 4. For example, GBO-4 states that increasing natural resource consumption patterns around the globe are negating measures to more efficiently produce goods and services. In addition, consumption patterns are expected to exceed safe ecological limits by 2020, with urban populations accounting for the majority of human consumption activities. By 2030, food demand will increase by 35%, water by 40% and energy by 50%, and infrastructure will triple. The concept of safe ecological limits is absent from many post-2010 NBSAPs. Additionally, important areas for sustainable production are generally not mapped. Strategies for social and cultural agriculture, agroforestry, fisheries, grazing and forestry are also generally absent from NBSAPs.

Measures that can accelerate the achievement of ABT 4, including those in GBO-4, are: a) strengthen partnerships to promote sustainable practices in the private sector; b) develop incentives, regulations and guidelines to encourage sustainable production and consumption; c) increase demand for sustainable products by raising awareness of environmental impacts; d) encourage companies and local authorities to calculate biodiversity-related externalities; e) establish government sustainable procurement policies; f) develop sector-specific plans for sustainable production and consumption; g) gather data and establish indicators to track progress on targets on sustainable production and consumption; h) encourage corporations to develop and communicate sustainability plans; i) promote land use planning that fosters sustainable production; and j) develop geospatial map of areas that are critically important to maintain the safe ecological limits of productive systems, especially in regards to water security, food security and biofuels

Linkages Between the UN Sustainable Development Goals and ABT 4

Sustainable production and consumption is critical to achieving the SDGS and is emphasized in multiple targets. However, the SGDs only implicitly reference the need to keep the impacts of use of natural resources well within safe ecological limits. These linkages are listed in Table 4a.

| Table 4a. Linkages between ABT 4 and the UN SDGs | |
|---|---|
| SDG 2: End hunger, achieve food security and improve nutrition and promote sustainable agriculture | • 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality. |
| SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. | • 8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead.<br>• 8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products. |
| SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation | • 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.<br>• 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities. |
| SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable | • 11.3. By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries. |
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.<br>• 14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.<br>• 14.7 By 2030, increase the economic benefits to small islands developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism. |
| SDG 15: Protect, restore and promote sustainable use | • 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular |

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| of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss | forests, wetlands, mountains and drylands, in line with obligations under international agreements.<br>• 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.<br>• 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts. |

Assessing Your National Contribution to Achieving ABT 4

The information presented in the 6NR on ABT 4 should focus on specific actions to achieve sustainable development and manage ecosystems within safe ecological limits and their outcomes, since the adoption of the Strategic Plan for Biodiversity 2011 – 2020. There should be an emphasis on the changes that have occurred since the last national report was submitted. Highlight measures that your country is taking to address the unsustainable use of biodiversity, to maintain safe ecological limits and reduce the depletion rates of biodiversity and key stocks of natural resources.

Parties are encouraged to include information on the use of rights-based management systems and the transfer of these rights and associated management to indigenous peoples and local communities with regard to sustainable wildlife management. Paragraph 3 of Decision XIII/8 addresses the sustainable use of biodiversity specific to bushmeat and sustainable wildlife management. Parties are also encouraged to analyze the effectiveness of measures to ensure sustainable tourism by compiling data from relevant organizations, as described in paragraph 111 (a) of Decision XIII/3.

When developing reporting information on measures to achieve ABT 4 or equivalent national targets, we encourage you to consider the key questions in Table 4b.

| **Table 4b. Key Questions to Consider to Address Progress to Achieve ABT 4** |
|---|
| • Is your country's demand for natural resources currently sustainable?<br>  o How has the demand for natural resources changed over time? |
| • Do you have spatial data that represent human pressures on national resource use?<br>  o To what extent has the country mapped areas important for sustainable agriculture, forestry and fisheries?<br>  o Where is natural resource management likely to exceed safe ecological limits and where are the areas most important to implement sustainable management? |
| • What actions have been taken to reduce the impact of production sectors on biodiversity?<br>  o What kinds of sustainable production and consumption plans (SPC) are in place?<br>  o To what extent has the country operationalized the concept of safe ecological limits and applied this concept to ensure that sustainable harvest levels are met for forestry, fisheries, agriculture and grazing sectors?<br>  o What percentage of managed forests, managed fisheries, agriculture and grazing lands within the country are under some form of certified sustainable management?<br>  o How many sectors in the country have SPC plans?<br>  o What steps have governments, businesses and stakeholders taken to implement SPC plans at the national, regional and local scale? |

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| ○ Have they kept the impacts of use of natural resources well within safe ecological limits at the national, regional and local scale? |
| • How does the environmental ministry influence the sustainability of other ministries? |
| • To what extent are biodiversity and ecosystem service values incorporated into organizational accounting and reporting in your country? |
| • What percentage of businesses reporting on environmental issues makes specific references to biodiversity, natural capital and/or ecosystem functions and services? |
| • What progress are you making towards the UN 10-Year Framework Programmes on Sustainable Consumption and Production? |
| • To what degree are indigenous peoples and local communities sustainably managing wildlife, most specifically the harvest of bushmeat? |
| • What measures are being taken to ensure the impacts of tourism are sustainable? |

Potential Indicators and Data Sources for Reporting on ABT 4

When assessing the progress that your country is making to achieve ABT 4 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to sustainable production and consumption. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 4 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 4 are listed in Table 4c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| **Table 4c. Potential Indicators and Data Sources for Reporting on ABT 4** |
|---|
| • The extent to which governments, businesses and stakeholders have initiated actions:<br>○ To implement SPC plans at the national, regional and local scale.<br>○ To keep the impacts of natural resource use well within safe ecological limits. |
| • The extent and spatial distribution of:<br>○ Areas under sustainable forestry, fisheries, grazing, agriculture and water management, including information on safe ecological limits of these productive systems.<br>○ Areas where extractive and economic sectors are engaged in sustainable production, processing and manufacturing practices, including waste management, energy, tourism, mining, transportation.<br>○ Key drivers of biodiversity change and their underlying causes, including an analysis of the impacts of key sectoral practices and policies on biodiversity and ecosystems. |
| • The degree to which national consumption of resources, and the production of key commodities, harms biodiversity and falls beyond safe ecological limits is identified. |
| • The opportunities and timeframes for linking the NBSAP and its components to existing planning processes in the environmental and other sectors (such as poverty reduction, national development, sustainable development, land use, agricultural development, forestry, water, coastal management, climate change, disaster risk reduction) are clearly identified. |
| • The extent to which key institutions, institutional structures and institutional capacities that facilitate and/or inhibit sustainable use, conservation and equitable benefits sharing have been identified and assessed. |

- The effectiveness of NBSAP strategies and actions at:
    - Significantly reducing the extent and percentage of unsustainable sectoral practices, including waste, energy, tourism, mining, transportation, and manufacturing.
    - Significantly reducing the consumption of products that are harmful to biodiversity, including through sustainable harvest, production, distribution and consumption.

- The impacts of bush meat management by indigenous peoples and local communities on wildlife populations.

- Spatial data overlays of land use and land use change; ecosystem distribution and intactness; resource productivity and availability; natural resource management intensity; protected areas. Other informative spatial data may include:
    - Natural resource productivity (e.g., soil productivity, water availability, fisheries productivity)
    - Land cover/land cover change (vegetation maps, forest cover)
    - Habitat and habitat intactness – distribution and degree of intactness and degradation of forests; wetlands; grasslands; drylands; coastal habitats (seagrass beds, coral reefs, dunes, mangroves)
    - Human footprint layer (aggregate layer of human impact, habitat conversion, roads, infrastructure)
    - Future footprint (concessions map of mining, forestry, oil exploration; planned road networks, infrastructure, energy and mineral deposits)
    - Natural resource management intensity (e.g., cattle density per hectare, agricultural intensity)
    - Sustainable management (includes agriculture, e.g., map of certified sustainable agriculture operations; forestry, e.g., map of certified sustainable forestry operations; aquaculture, e.g., map of certified fisheries)

- Global data sources with information on SPC include:
    - CITES (https://cites.org/eng)
    - United Nations World Tourism Organization (http://www.unwto.org)
    - IUCN Red List of Threatened Species (http://www.iucnredlist.org)
    - BIP (https://www.bipindicators.net/indicators/red-list-index)
    - Global Footprint Network (http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_for_nations/)
    - Water Footprint Network (http://waterfootprint.org/en/water-footprint/national-water-footprint)
    - TRAFFIC (http://www.traffic.org/)

- Trends in population and extinction risk of utilized species, including species in trade:
    - Red List Index (impacts of utilization) - IUCN, BirdLife International and other Red List Partners (https://www.bipindicators.net/indicators/red-list-index/red-list-index-impacts-of-utilisation)
    - Ratio between detected illegal trafficking and legal trade in wildlife and wildlife products (proposed indicator for SDG target 15.7)
    - Proportion of national exclusive economic zones managed using ecosystem-based approaches - indicator for SDG target 14.2

- Trends in use of natural resources and/or related concepts:
    - Ecological footprint - Global Footprint Network and BIP (https://www.bipindicators.net/indicators/ecological-footprint)

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| ○ Material footprint (MF) and MF per capita, per GDP - indicator for SDG targets 8.4 and 12.2<br>○ Domestic material consumption (DMC) and DMC per capita, per GDP - indicator for SDG targets 8.4 and 12.2<br>○ Number of participatory impact assessments implemented by extractive industries and major developments (e.g., agriculture, forests, dams, wind turbines) with IPLCs, applying Akwe:Kon guidelines or similar policies.<br>○ Number of IPLCs sustainable land and resource use plans promoting their models and visions for sustainable, diverse local economies and number of such plans mainstreamed into relevant national policies.<br>○ Material Footprint (MF) and MF per capita (proposed indicator for SDG target 12.1). |
| • Ecological limits assessed in terms of sustainable production and consumption:<br>○ Human appropriation of net primary productivity - Krausmann et al (2013)<br>○ Human appropriation of fresh water (water footprint) - JRC<br>○ Percentage of change in water use efficiency over time - indicator for SDG target 6.4<br>○ Level of water stress: freshwater withdrawal as a proportion of available freshwater resources - indicator for SDG target 6.4 |
| • Trends in biodiversity of cities:<br>○ Number of cities applying and reporting on the Cities Biodiversity Index - CBD<br>○ Efficient land use (by enhancing inclusive and sustainable urbanization) (ratio of land consumption rate to population growth rate - indicator for SDG target 11.3) |
| • Trends in extent to which biodiversity and ecosystem service values are incorporated into organizational accounting and reporting. |
| • Percentage of businesses reporting on environmental issues making specific references to biodiversity, natural capital and/or ecosystem functions and services. |

Multilateral Environmental Agreement Reports that Contain Data on ABT 4

There are strong linkages between ABT 4 and the national reports of other MEAs. These documents may provide key data that you can use to develop the 6NR. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. Table 4d lists the potential data sources for ABT 4 that can be found within other MEA national reports.

**Table 4d. National Reports from MEAs with relevant data to ABT 4**

| MEA | Data Source |
|---|---|
| CITES | Refer to Implementation Report Question 2.2.4a on use of incentives, and Question 2.2.4b on elimination of harmful incentives. |
| Convention on Migratory Species | Review national report responses related to Target 4 (reinforce the overarching and unifying role of CMS) of the CMS Strategic Plan 2015-2023. |
| Ramsar Convention | Review responses to Ramsar COP-12 report questions related to Target 3 - Public and private sector apply guidelines and good practices – and Target 9 of the |

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| | Ramsar Strategic Plan 2016-2024. |
| UNESCO-WHC | Review Periodic Report Question 4: Protection management and monitoring; Sub-question 4.3.10: Cooperation regarding management. |
| FAO State of the World's Biodiversity for Food and Agriculture | Review responses to: Question 19 on Countermeasures addressing drivers of change; Question 52 on Management practices; Question 54 on Programmes enhancing maintenance and Question 79 on Projects supporting sustainable use. |
| FAO State of the World's Aquatic Genetic Resources for Food and Agriculture | Review information contained in Chapter 4: Stakeholder interests. |
| FAO State of the World's Plant Genetic Resources for Food and Agriculture (3rd) | Review 3rd report. |

## Aichi Biodiversity Target 5: Habitat loss halved or reduced


ABT 5 – habitat fragmentation and degradation – focuses on reducing habitat loss, fragmentation and degradation. ABT 5 states: "By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced." Habitat loss, including degradation and fragmentation, is the most important cause of biodiversity loss globally. Reducing the rate of loss, and eventually halting it, is essential for protecting biodiversity and maintaining the ecosystem services that are vital to human wellbeing. This is particularly important for habitats that have been greatly diminished or degraded by human activities, or that face a critical tipping point or threshold. This target applies to all habitats, including forests, wetlands, grasslands, and coastal systems, among others. To achieve ABT 5, and effectively reduce habitat fragmentation and degradation, countries will need to assess the status, trends and distribution of key natural habitats; understand the drivers of loss and degradation of these habitats; and take a variety of steps to safeguard against further loss and degradation, including through land-use planning, integration of biodiversity into key production and development sectors, and increased land and water protection.

**By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.**

Achieving ABT 5: Key Challenges

GBO-4 state, "The destruction and degradation of natural habitats represents the single most important driver of biodiversity loss." Reducing habitat loss and fragmentation are two of the most critical actions that Parties must take to achieve the Strategic Plan for Biodiversity 2011-2020. Some key challenges revealed by analyses of post-2010 NBSAPs and 5NRs included: a) deforestation continues to be a major driver of loss of biodiversity with profound impacts on other associated benefits, including climate; b) few NBSAPs include actions related to illegal logging; c) forest health underpins multiple SDG targets, but few NBSAPs acknowledge these linkages or integrate forests into national development plans (e.g., water security, energy); d) safeguarding indigenous rights to land is an essential but often overlooked strategy to conserve forests; e) the demand for commodities that drive deforestation is expected to rise (e.g., beef demand is expected to rise by 30%, and demand for timber and paper will significantly increase by 2030); f) few NBSAPs include geospatial maps of the extent of habitat loss, or the drivers of this loss.

Measures that can accelerate the achievement of ABT 5, including those identified by GBO-4, are: a) identify the causes of habitat lost that greatly impact biodiversity; b) develop legal and policy frameworks for land use and spatial planning; c) align incentives to national objectives; d) land use or spatial planning framework to identify areas where the existing agricultural productivity and rangelands can be intensified; e) encourage more moderate meat consumption and reduce food waste; f) support indigenous and local communities and the general public in reducing illegal and unplanned land use change; g) prevent access to illegally produced products; h) effectively manage protected area networks to reduce habitat loss; i) monitor land use and land cover to inform enforcement actions; j) enforce

laws relating to habitat protection and conservation; k) promote national round tables on commodities that drive habitat loss; l) promote corporate commitments and consumer support for deforestation-free commodities; and m) increase sustainable certification of key commodities.

Linkages Between the UN Sustainable Development Goals and ABT 5

The reduction of rates of habitat loss around the world is critical to achieving the SDGs and is empathized in multiple targets. However, the measurable aspect of ABT 5 - halving habitat loss rates - is not explicitly stated in the SDGs. The loss of natural habitats, in particular in the marine environment, is also not well addressed, nor is the need to keep the impacts of natural resource use well within safe ecological limits - this is only implicitly covered by the SDGs. The SDGS most linked to achievement of ABT 5 are listed in Table 5a.

**Table 5a. Linkages between ABT 5 and the UN SDGs**

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| SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all | • 7.1. By 2030, ensure universal access to affordable, reliable and modern energy services. |
| SDG 13: Take urgent action to combat climate change and its impacts | • 13.1. Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. |
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.5 By 2020, conserve at least 10% of coastal and marine areas, consistent with national and international law and based on the best available scientific information. |
| SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss | • 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.<br>• 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.<br>• 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.<br>• 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species. |

Assessing Your National Contribution to Achieving ABT 5

The information presented in the 6NR on ABT 5 should focus on changes to biodiversity and actions taken since the adoption of the Strategic Plan for Biodiversity 2011- 2020, with a particular emphasis on the changes that have occurred since the last national report was submitted. The focus should be on highlighting the degree to which measures have been implemented to reduce habitat loss, fragmentation and degradation. You should also report on the extent, condition and fragmentation of key habitats and ecosystems, as well as the status of populations of the key species that are dependent upon these

habitats and ecosystems. When developing reporting information on measures to achieve ABT 5 or equivalent national targets, we encourage you to consider the key questions in Table 5b.

| Table 5b. Key Questions to Consider to Address Progress to Achieve ABT 5 |
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| • What measures have you taken to halve the rate of forest and habitats loss, and where feasible bring it close to zero? |
| • If forest loss is important in the country, has the country identified the drivers of deforestation, including the specific commodities? |
| • What actions have to be taken to reduce habitat degradation and fragmentation? |
| • If forest loss is important in the country, does the country have a plan for tackling illegal logging and forest encroachment? |
| • Has the country developed plans for deforestation-free commodities and sustainable commodity platforms? |
| • What measures have you taken to halve the rate of all habitats in the country, and where feasible bring it close to zero? |
| • What measures have you taken to significantly reduce habitat degradation, avoid species populations becoming isolated and to enable essential movements across landscapes and aquatic environments? |
| • Where are the highest rates of loss of natural habitats occurring, including forest ecosystems and where are the best opportunities for halving degradation and fragmentation? |
| • How has the rate of loss of major habitats in the country changed? |
| • How has the rate of habitat degradation and fragmentation changed? |
| • What has caused these changes? |
| • What actions have been taken to address the underlying causes of biodiversity loss? |
| • What are the most significant economic, demographic and social pressures that are leading to the conversion of habitats? |

Potential Indicators and Data Sources for Reporting on ABT 5

When assessing the progress that your country is making to achieve ABT 5 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to reductions in habitat loss rates. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 5 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 5 are listed in Table 5c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| Table 5c. Potential Indicators and Data Sources for Reporting on ABT 5 |
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| • The rate of loss of natural habitats, including forests, is identified and spatially mapped. |
| • The rate of loss of forests is at least halved and where feasible brought close to zero. |
| • The rate of loss of all habitats is at least halved and where feasible brought close to zero. |
| • The rate of habitat degradation and fragmentation is significantly reduced. |
| • The area and distribution within land use plans of areas targeted for intensive economic growth, for sustainable use and for conservation of biodiversity, is identified and mapped. |

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| • The source, extent, spatial distribution, severity, impact and trends of key pressures and threats, including invasive species, climate change and pollution, among other pressures, are identified and mapped. |
| • Key species and ecosystems, including changes in spatial distribution, ecological integrity, extinction risks, protection status and key threats are identified and mapped. |
| • Key biodiversity areas (e.g., important bird areas, zero extinction areas), including changes in extent, ecological integrity, protection status and key threats are identified and mapped. |
| • The effectiveness of NBSAP strategies and actions for significantly reducing the rate of loss of all natural habitats, including forests. |
| • The effectiveness of NBSAP strategies and actions for strengthening land use planning and spatial planning to identify specific areas for economic growth, and for sustainable use and conservation of biodiversity, and to account for essential ecosystems. |
| • The effectiveness of NBSAP strategies and actions for restoring and safeguarding key ecosystems that provide key ecosystem services, particularly food security, water security, carbon sequestration, livelihoods and disaster risk reduction. |
| • The effectiveness of NBSAP strategies and actions for restoring and safeguarding key ecosystems that provide key ecosystem services, particularly food security, water security, carbon sequestration, livelihoods and disaster risk reduction. |
| • The rate of loss of natural habitats, including forests, is identified and spatially mapped. |
| • Spatial data overlays of overlay of land cover/land cover change (especially for forests); habitat intactness and degradation; human footprint; future footprint; protected areas. Other informative spatial data may include:<br>o Habitat and habitat intactness – distribution and degree of intactness and degradation of forests; wetlands; grasslands; drylands; coastal habitats (seagrass beds, coral reefs, dunes, mangroves)<br>o Ecoregions<br>o Land cover/land cover change (vegetation maps, forest cover)<br>o Human footprint layer (aggregate layer of human impact, habitat conversion, roads, infrastructure)<br>o Future footprint (concessions map of mining, forestry, oil exploration; planned road networks, infrastructure, energy and mineral deposits)<br>o Natural resource management intensity (e.g., cattle density per hectare, agricultural intensity)<br>o Sustainable management (includes agriculture, e.g., map of certified sustainable agriculture operations; forestry, e.g., map of certified sustainable forestry operations; aquaculture, e.g., map of certified fisheries |
| • Relevant global data sources include:<br>o The CBD Secretariat has prepared data dossiers using information from various sources. These dossiers can be accessed from (https://www.cbd.int/forest)<br>o FAO's Global Forest Resources Assessment (http://www.fao.org/forest-resources-assessment/en)<br>o Global Forest Watch (http://www.wri.org/our-work/project/global-forest-watch/maps_data)<br>o Global Mountain Biodiversity Assessment (http://www.gmba.unibe.ch)<br>o UNCCD (http://www.unccd.int/en/Pages/default.aspx)<br>o Ramsar (http://www.ramsar.org) |

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| • Trends in extent of forest:<br>  o Trends in tree cover - Hansen et al.<br>  o Forest area as a percentage of total land area (indicator for SDG target 15.1) – FAO<br>  o Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type (indicator for SDG target 15.1)<br>  o Progress towards sustainable forest management (indicator for SDG target 15.2)<br>  o BIP (https://www.bipindicators.net/indicators/forest-area-as-a-proportion-of-total-land-area) |
| • Trends in extent of natural habitats other than forest:<br>  o Change in the extent of water-related ecosystems over time (indicator for SDG target 6.6) – UN Water<br>  o Natural habitat extent (land area minus urban and agriculture) - Netherlands Environmental Assessment Agency (PBL)<br>  o Wetland extent – WCMC<br>  o BIP (https://www.bipindicators.net/indicators/wetland-extent-trends-index) |
| • Trends in fragmentation of forest and other natural habitats. |
| • Trends in degradation of forest and other natural habitats:<br>  o Biodiversity Habitat Index- GEO BON – CSIRO<br>  o Local Biodiversity Intactness Index - PREDICTS<br>  o Proportion of land that is degraded over total land area (indicator for SDG target 15.3) – UNCCD |
| • Trends in extinction risk /populations of habitat specialist species in each major habitat type:<br>  o Red List index (forest specialists) - IUCN, BirdLife International, Red List Partners<br>  o Living Planet Index (forest specialists) - WWF/ZSL<br>  o Species Habitat Index - GEO BON-Map of Life |
| • Trends to address underlying causes of habitat loss:<br>  o Number of habitat protection plans that include measures to address drivers of habitat loss.<br>  o Number of IPLC initiatives to protect habitats that are officially recognized/supported and/or integrated into national plans/initiatives<br>  o Number of initiatives to protect IPLCs, environmental and human rights defenders working against habitat destruction from political or physical attack |

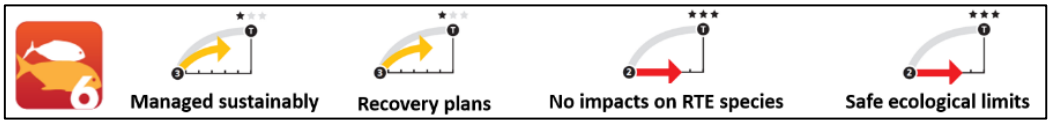
Multilateral Environmental Agreement Reports that Contain Data on ABT 5

There are linkages between ABT 5 and the national reports of other MEAs. These documents may provide key data that you can use to develop the 6NR. We encourage Parties to use information from the recent reports your country provided to different but related biodiversity-related conventions. Table 5d lists the potential data sources for ABT 5 that can be found within other MEA national reports.

| Table 5d. National Reports from MEAs with relevant Data for ABT 5 | |
|---|---|
| MEA | Data Source |
| Convention on Migratory Species (CMS) | Review national report on Target 10 'Area-based conservation measures' - CMS Strategic Plan 2015-2023. |
| Ramsar Convention | Review Ramsar Information Sheets (RIS), Question 3.1: Justification of criteria. Review the Ramsar COP-12 report, including questions related to Target 7:'Sites at risk' of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Periodic report includes information in section 1, Questions 2, 3, and 4 which could be relevant. |
| FAO State of the World's Biodiversity for Food and Agriculture | Report includes a series questions: 19, 52, 54, 55, 56 and 79. |

## Aichi Biodiversity Target 6: Sustainable management of aquatic living resources

ABT 6 – sustainable fisheries – focuses on the sustainable management of the world's fisheries, including of key species and habitats.




ABT 6 states: "By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits." Overexploitation is a severe pressure on marine and riverine ecosystems globally, and has led to dramatic declines in fish stocks. This target applies to all fish, invertebrate stocks and aquatic plants that are affected, either directly or indirectly, through harvesting activities. To achieve ABT 6, sustainable fisheries management, countries will need to assess the state and trends of fisheries and fish habitats. They will need to take a variety of steps, including protecting areas critical for life stages; ensuring appropriate policies and catch levels; developing and implementing recovery plans for depleted species; and enforcing all relevant laws, including illegal fishing practices.

**By 2020, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.**

Achieving ABT 6: Key Challenges

The overexploitation and unsustainable harvest of fish and other marine and inland water organisms puts significant pressure on biodiversity and threatens the industries around the world that rely on associated ecosystem services. Key issues for ABT 6, including those identified by GBO-4, include: a) information on management and harvest rates are generally focused on marine fish species and little data exist for aquatic invertebrates and plants, and inland fisheries; b) 90% of global fish stocks are classified as fully exploited, over-exploited or have collapsed altogether; c) illegal fishing continues to be a major global issue; d) while there is a 400% increase of Marine Stewardship Council (MSC) certified fisheries, this is a fraction of the overall total fisheries in operation; e) few NBSAPs include actions on illegal fishing and/or include actions related to socially inclusive fisheries; and f) some important fisheries habitats are largely unmapped, and there are very few efforts to develop geospatial overlays of fisheries, critical habitat and marine protected areas.

Measures that can accelerate the achievement of ABT 6, including those identified in GBO-4, are: a) promote cooperation and information exchanges between fisheries, conservation groups and corresponding national agencies and associations; b) utilize innovative fisheries management systems; c) eliminate, reform or phase out the subsidies that contribute to overfishing; d) enhance monitoring and enforcement of regulations to prevent illegal, unregulated and unreported fishing by flag-vessels; e)

phase out fishing practices/gear that adversely impacts seafloor and non-target species; f) expand marine protected area and other conserved networks to include critical fisheries habitat; g) utilize new technologies, such as the Global Fishing Watch, to increase transparency, monitoring and action on illegal fishing; h) identify opportunities to scale up locally managed marine areas in order to accelerate socially inclusive fisheries; i) support the supply of, and demand for, MSC-certified fisheries; and j) develop geospatial maps of areas that are critically important to sustain fisheries, including mangrove restoration and, fish aggregation protection sites.

Linkages Between the UN Sustainable Development Goals and ABT 6

The sustainable management of the world's fisheries is critical to achieving the SDGS and is emphasized in multiple targets. However, the SDG Targets only address the unsustainable use of fish populations, whereas ABT 6 also covers the harvesting of marine invertebrates and plants, as well as any other marine life or habitats negatively affected by such harvesting. The SDGS most related to achievement of ABT 6 are listed in Table 6a.

| Table 6a. Linkages between ABT 6 and the UN SDGs | |
|---|---|
| SDG 1: End poverty in all of its forms everywhere | • 1.4. By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.<br>• 1.5. By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate- related extreme events and other economic, social and environmental shocks and disasters. |
| SDG 2: End hunger, achieve food security and improve nutrition and promote sustainable agriculture | • 2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.<br>• 2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons. |
| SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. | • 8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead. |
| SDG 12: Ensure sustainable consumption and production patterns | • 12.2 By 2030, achieve the sustainable management and efficient use of natural resources. |
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.<br>• 14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks |

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| | in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics<br>• 14.7 By 2030, increase the economic benefits to small island developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism. |
| SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss | • 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.<br>• 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally<br>• 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts. |

Assessing National Contributions to Achieving ABT 6

The information presented in the 6NR on ABT 6 should focus on actions that address fisheries, and their outcomes, since the adoption of the Strategic Plan for Biodiversity 2011- 2020, with a particular emphasis on the changes that have occurred since the last national report was submitted. Parties should focus on determining the degree to which fisheries are sustainably managed. The resulting status and trends should be reported, including the area, frequency and/or intensity of fishing practices that are destructive and/or outside safe ecological limits, the fishing catch per unit effort for key species, the populations of key target species including by-catch species, and actions to protect ecologically and biologically significant areas for fisheries. When developing information on measures to achieve ABT 6 or equivalent national targets, we encourage you to consider the key questions in Table 6b.

| **Table 6b. Key Questions to Consider to Address Progress to Achieve ABT 6** |
|---|
| • To what extent are all fish and invertebrate stocks and aquatic plants managed and harvested sustainably and legally regarding ecosystem limits? |
| • To what extent are recovery plans in place for all depleted species? |
| • To what extent does the fisheries industry have adverse impacts on threatened species and vulnerable ecosystems? |
| • To what extent are the impacts of fisheries on stocks, species and ecosystems within safe ecological limits, i.e. overfishing avoided? |
| • What is the status of fish and invertebrate stocks and aquatic plants in the country, and how is that status changing over time? |
| • What measures are resulting from these changes (positive, negative)? |
| • How sustainable are the fishing techniques used in the country? |
| • What fish stocks are depleted? What measures, such as management plans, are in place to recover depleted fish stocks? |
| • Does the country have regulations or policies related to the following, and how effective are they?<br>o Recovery of depleted species? |

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| ○ Minimizing the impacts of fisheries on threatened species?<br>○ Limiting the indirect adverse impacts of fisheries on non-target species?<br>○ Protecting vulnerable marine habitats?<br>○ Limiting threats to ecosystem structure and function?<br>○ Reduce by catch and discards? |
| • To what extent do related actions enable sustainable fisheries?<br>○ How well are critical fisheries habitat spatially mapped?<br>○ To what extent do habitat restoration efforts target critical fisheries habitat?<br>○ To what extent do new marine protected areas and locally managed marine areas target critical fisheries habitat?<br>○ To what extent do coastal and upstream actions influence the health of fisheries (e.g., forestry practices to reduce siltation, reduced agricultural pollution, reduced impacts from coastal development)? |
| • To what extent are there coastal zone management plans in place for the country? |

Potential Indicators and Data Sources for Reporting on ABT 6

When assessing the progress that your country is making to achieve ABT 6 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to achieving sustainable fisheries. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 6 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 6 are listed in Table 6c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| **Table 6c. Potential Indicators and Data Sources for Reporting on ABT 6** |
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| • The extent to which all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem approach. |
| • The extent to which recovery plans are in place for all depleted species. |
| • The extent to which fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems. |
| • The extent to which the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, i.e. overfishing avoided. |
| • The extent and spatial distribution of area under sustainable fisheries, and water management, including information on safe ecological limits of these productive systems, is identified. |
| • The source, extent, spatial distribution, severity, impact and trends of key pressures and threats, including invasive species, climate change and pollution, among other pressures, are identified and mapped. |
| • The distribution, conservation, and sustainable use of genetic diversity, including of cultivated aquatic species is identified and mapped, and opportunities for incorporating these into protected area and sustainable use plans are identified. |
| • The extent to which key institutions, institutional structures and institutional capacities that facilitate and/or inhibit sustainable use, conservation and equitable benefits sharing have been identified and assessed. |
| • The effectiveness of NBSAP strategies and actions for increasing the area and percentage of |

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| agriculture, forestry, grasslands, aquaculture and fisheries under sustainable management and managed within safe ecological limits. |
| • Informative spatial data may include:<br>  ○ Hydrology, water quality and volume (distribution of water quality and volume/availability)<br>  ○ Habitat and habitat intactness – distribution and degree of intactness and wetlands and coastal habitats (seagrass beds, coral reefs, dunes, mangroves)<br>  ○ Water use and demand (distribution of groundwater withdrawal, municipal water use, agricultural water use, industrial water use) |
| • Relevant global data sources include:<br>  ○ FAO's publication on the State of the World's Fisheries and Aquaculture (http://www.fao.org/fishery/sofia/en)<br>  ○ FAO's Fisheries Statistics (http://www.fao.org/fishery/statistics/en)<br>  ○ Marine Stewardship Council website (https://www.msc.org)<br>  ○ IUCN Red List of Threatened Species (http://www.iucnredlist.org)<br>  ○ FishBase website (http://www.fishbase.ca) |
| • Trends in certified and un-certified sustainable fisheries:<br>  ○ MSC certified catch - Marine Stewardship Council<br>  ○ Proportion of fish stocks within biologically sustainable levels (proposed indicator for SDG target 14.4) - FAO<br>  ○ Proportion of fisheries areas and aquatic resources under customary tenure and where sustainable customary access and use are supported<br>  ○ BIP (https://www.bipindicators.net/indicators/msc-certified-catch and https://www.bipindicators.net/indicators/proportion-of-fish-stocks-in-safe-biological-limits) |
| • Trends in proportion of depleted, target and bycatch species with recovery plans:<br>  ○ Proportion of depleted stocks with rebuilding plans in place – FAO<br>  ○ Number of recovery plans that include IPLC traditional knowledge and recognise customary tenure |
| • Trends in population and extinction risk in target and bycatch species:<br>  ○ Red List Index (harvested aquatic species) - IUCN and other Red List Partners<br>  ○ Proportion of fisheries with regular monitoring and reporting of impacts on threatened species – FAO<br>  ○ Proportion of threatened species for which mortality rate due to fisheries is decreasing – FAO<br>  ○ Trends in population of non-target species affected by fisheries – FAO<br>  ○ Red List Index (impacts of fisheries) - IUCN, BirdLife International, Red List Partners<br>  ○ Living Planet Index (trends in target and bycatch species) - WWF/ZSL<br>  ○ BIP (https://www.bipindicators.net/indicators/red-list-index/red-list-index-impacts-of-fisheries) |
| • Trends in destructive fishing practices:<br>  ○ Global effort in bottom trawling - University of British Columbia Institute for the Oceans and Fisheries<br>  ○ Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing (indicator for SDG target 14.6)<br>  ○ Spatial extent, gear type, intensity of fishing effort within vulnerable habitats - FAO<br>  ○ Coverage of fisheries with management measures to effectively manage bycatch and reduce |

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| discards – FAO<br>○ Number and coverage of stocks with adaptive management systems / plans – FAO<br>○ Marine Trophic Index (https://www.bipindicators.net/indicators/marine-trophic-index) |
| • Trends in proportion of fish stocks outside safe biological limits:<br>○ Proportion of fish stocks within biologically sustainable levels (indicator for SDG target 14.4) – FAO |
| • Trends in catch per unit effort:<br>○ Estimated fisheries catch and fishing effort - University of British Columbia Institute for the Oceans and Fisheries<br>○ Progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries and IPLCs (indicator for SDG target 14.b) – FAO<br>○ Percentage of catches that are subject to a catch documentation scheme or similar traceability system as a percentage of the total catches that are less than x tons and traded in major markets (proposed indicator for SDG target 14.b) - FAO |

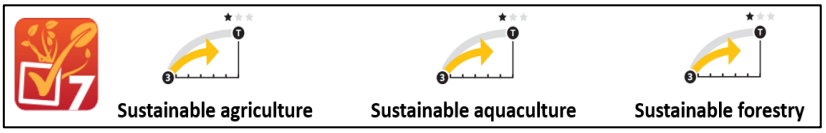
Multilateral Environmental Agreement Reports that Contain Data on ABT 6

There are linkages between ABT 6 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 6d lists data sources for ABT 6 that may be found within other MEA national reports.

**Table 6d. National Reports from MEAs relevant data for ABT 6**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| CITES | Refer to Implementation Report Question 1.5.2a on Standard procedures for making non-detriment findings; Question 1.6.2a on Management plans; and Question 3.5.1a on Actions under other agreements. |
| Convention on Migratory Species | Review national report related to Target 6 (Fisheries and hunting) of the CMS Strategic Plan 2015-2023. |
| Ramsar Convention | Review Ramsar Information Sheets (RIS), Question 3.1: Justification of criteria. Also review responses to Ramsar COP-12 report questions related to Target 5 'Ecological character restored', Target 9 'Wise use strengthened' and Target 13 'Enhanced sustainability' of the Ramsar Strategic Plan 2016-2024. |
| FAO State of the World's Biodiversity for Food and Agriculture | Review responses to questions 19, 52, 54, 55, 56 and 80. |

## Aichi Biodiversity Target 7: Sustainable agriculture, aquaculture and forestry




ABT 7 – sustainable resource management – focuses on sustainable agriculture, aquaculture and forestry. ABT 7 states: "By 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity." Current levels and systems of production and consumption of food, fiber and fuel are unsustainable in many areas, leading to a long-term loss in ecosystem productivity and biodiversity, and the impairment of ecosystem services. Sustainable resource management ensures that the use of biodiversity and ecosystem components does not lead to long-term declines. Sustainable management of agriculture, aquaculture and forestry can minimize biodiversity losses, while providing a range of long-term benefits. These include improving soil fertility, controlling erosion, enhancing pollination, reducing disease and contributing to sustainable livelihoods. To achieve ABT 7, countries need to assess the extent to which existing forests, agricultural and aquaculture operations are under sustainable management; prioritize these areas based on their impacts to biodiversity and ecosystems services; and identify appropriate policies for fostering sustainable management. This includes developing national guidelines for sustainable management, promoting independent certification, and removing subsidies for unsustainable practices.

**By 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.**

### Achieving ABT 7: Key Challenges

Pressures to ecosystems and biodiversity are increasing due to rising demands for food, fiber and fuel. Governments and industries must adopt sustainable production practices that limit the impacts of productive sectors on natural systems, while meeting the resource demands of our growing global population. The GBO-4 states, "While most national biodiversity strategies and action plans examined for GBO-4 included targets or commitments relating to sustainable management of agriculture or forestry, few of these targets were quantitative." While Parties frequently report the commitments of industries such as aquaculture and forestry to improve their sustainability, they frequently do not quantify the impacts of these actions on achieving ABT 7.

Key challenges include: a) food demand is expected to grow by 45% by 2030; b) four commodities drive deforestation globally: soy, palm oil, beef and timber/pulp; c) sustainable certification is growing but is mostly limited to developed countries; d) a very large proportion of food produced in many parts of the world is by smallholders on plots less than two hectares, with very limited access to credit and training; e) a limited number of NBSAPs include actions to address illegal logging, or support community forestry or sustainable aquaculture; f) NBSAPs rarely include projections of how climate change will impact agriculture; and g) NBSAP generally do not include geospatial assessments of sustainably managed agriculture, aquaculture or forestry, maps of how productive landscape intersect with critical biodiversity areas.

Measures that can accelerate the achievement of ABT 7, including those identified in GBO-4, are: a) improve the efficiency of agricultural practices; b) reduce waste at all stages of production and consumption; c) promote sustainable food cultures and diets, with appropriate caloric and nutrient intake; d) use existing certification schemes for sustainably produced goods and create new ones to address supply chain gaps; e) support customary sustainable use and delegate governance and responsibility for land management to indigenous and local communities where appropriate; f) enhance local farmer and fisher knowledge about the biodiversity and ecosystems they rely on for food production, and engaging them in conservation planning process; g) promote integrated landscape-level planning that recognizes the role of biodiversity in providing ecosystem services; and h) develop geospatial map areas under sustainable agriculture, aquaculture and forestry, and areas where sustainable management is critical to achieving biodiversity goals.

Linkages Between the UN Sustainable Development Goals and ABT 7

The sustainable management of agriculture, aquaculture and forestry is critical to achieving the SDGs and is emphasized in multiple targets. However, the SDGs lack the explicit qualification that actions related to sustainable agriculture, aquaculture and forestry must ensure the conservation of the biodiversity in these ecosystems, not just achieve sustainability regarding the resource. The SDGS most related to achievement of ABT 7 are listed in Table 7a.

| Table 7a. Linkages between ABT 7 and the UN SDGs | |
|---|---|
| SDG 1: End poverty in all of its forms everywhere | • 1.4. By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.<br>• 1.5. By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate- related extreme events and other economic, social and environmental shocks and disasters. |
| SDG 2: End hunger, achieve food security and improve nutrition and promote sustainable agriculture | • 2.1. By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.<br>• 2.2. By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.<br>• 2.4. By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality. |
| SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all | • 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services. |
| SDG 8: Promote sustained, inclusive and sustainable | • 8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth |

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| economic growth, full and productive employment and decent work for all. | from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead. |
| SDG 12: Ensure sustainable consumption and production patterns | • 12.2 By 2030, achieve the sustainable management and efficient use of natural resources. |
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.<br>• 14.7 By 2030, increase the economic benefits to small island developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism. |
| SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss | • 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.<br>• 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally. |

Assessing Your National Contribution to Achieving ABT 7

The information presented in the 6NR on ABT 7 should focus on progress to implement measures related to sustainable agriculture, aquaculture and forestry, and the outcomes of these actions, since the adoption of the Strategic Plan for Biodiversity 2011- 2020, with a particular emphasis on the changes that have occurred since the last national report was submitted. Each country should determine the degree to which agriculture, aquaculture and forestry are managed sustainably and ensure the conservation of biodiversity. The resulting status and trends should be reported, including the area of forestry, agriculture and aquaculture under sustainable management and the proportions of products derived and marketed from sustainably managed sources.

Parties are encouraged to include information related to paragraph 8 of Decision XIII/15 - Implications of the IPBES assessment on pollinators, pollination and food production for the work of the Convention. This decision encourages Parties to promote the conservation and sustainable use of pollinators and to compile this information for consideration by the Subsidiary Body on Scientific, Technical and Technological Advice at a meeting held prior to the fourteenth meeting of the Conference of the Parties. When developing reporting information on measures to achieve ABT 7 or equivalent national targets, we encourage you to consider the key questions in Table 7b.

| **Table 7b. Key Questions to Consider to Address Progress to Achieve ABT 7** |
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| • To what extent is the area classified as agriculture managed sustainably, ensuring conservation of biodiversity, and do you have spatial data to support this assessment? |
| • To what extent is the area classified as aquaculture managed sustainably, ensuring conservation |

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| of biodiversity, and do you have spatial data to support this assessment? |
| • To what extent is the area classified as forestry managed sustainably, ensuring conservation of biodiversity, and do you have spatial data to support this assessment? |
| • What measures, including changes to land use and resource management policies, are in place to ensure the sustainability of agriculture, aquaculture and forestry? |
| • How effective are these measures? |
| • Where are the most important opportunities for promoting sustainable management of agriculture, forestry and aquaculture? |
| • To what extent are unsustainable practices in agriculture, aquaculture and forestry responsible for substantial environmental degradation, including biodiversity loss? |
| • Do you have information on extinction risk and populations of forest-specialist species in production forest? |

Potential Indicators and Data Sources for Reporting on ABT 7

When assessing the progress that your country is taking to achieve ABT 7 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to achieving sustainable resource management. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 7 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 7 are listed in Table 7c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| **Table 7c. Potential Indicators and Data Sources for Reporting on ABT 7** |
|---|
| • Spatial data overlays of sustainable management maps for agriculture, aquaculture and forestry operations; land use; land cover; habitat intactness; key biodiversity areas. Other informative spatial data may include:<br>o Natural resource productivity<br>o Land cover/land cover change (e.g. vegetation maps, forest cover)<br>o Natural resource management intensity (e.g., cattle density per hectare, agricultural intensity)<br>o Sustainable management (e.g. maps of certified sustainable agricultural, forestry, and aquaculture operations |
| • The extent to which the area classified as agriculture is managed sustainably, ensuring conservation of biodiversity. |
| • The extent to which the area classified as aquaculture is managed sustainably, ensuring conservation of biodiversity. |
| • The extent to which the area classified as forestry is managed sustainably, ensuring conservation of biodiversity. |
| • The extent and spatial distribution of area under sustainable forestry, fisheries, grazing, agriculture and water management, including information on safe ecological limits of these productive systems, is identified. |
| • The distribution, conservation, and sustainable use of genetic diversity, including of cultivated plants, farmed and domesticated animals, and wild crop relatives is identified and mapped, and |

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| opportunities for incorporating these into protected area and sustainable use plans are identified. |
| • The extent to which key laws, policies, subsidies and incentives that facilitate and/or inhibit sustainable use, conservation and equitable benefits sharing are assessed. |
| • The extent to which key institutions, institutional structures and institutional capacities that facilitate and/or inhibit sustainable use, conservation and equitable benefits sharing have been identified and assessed. |
| • The effectiveness of NBSAP strategies and actions for increasing the area and percentage of agriculture, forestry, grasslands, aquaculture and fisheries under sustainable management and managed within safe ecological limits. |
| • The effectiveness of NBSAP strategies and actions for strengthening land use planning and spatial planning to identify specific areas for economic growth, and for sustainable use and conservation of biodiversity, and to account for essential ecosystems. |
| • Relevant global data sources include:<br>o FAOSTAT (http://faostat3.fao.org/home)<br>o Programme for the Endorsement of Forest Certification (PEFC) (http://www.pefc.org)<br>o Forest Stewardship Council (https://ca.fsc.org/en-ca)<br>o LandMark – online, global platform providing information on lands that are collectively held and used by IPLCs (http://www.landmarkmap.org ) |
| • Trends in proportion of area of agriculture under sustainable practices:<br>o Areas of agricultural land under conservation agriculture - FAO<br>o Proportion of agricultural area under productive and sustainable agricultural practices (indicator for SDG target 2.4)- FAO<br>o Areas of agricultural land under organic production – International Foundation for Organic Agriculture<br>o Area of agricultural land under sustainable, customary management of IPLCs<br>o Area of customary agricultural land with recognized tenure rights |
| • Trends in extinction risk and populations of agro-ecosystem associated species:<br>o Wild Bird Index for farmland birds / Living Planet Index (farmland specialists) - BirdLife International /EBCCC/ WWF/ZSL<br>o BIP (https://www.bipindicators.net/indicators/wild-bird-index) |
| • Trends in proportion of production of aquaculture under sustainable practices:<br>o Proportion of aquaculture under certified sustainable production<br>o Productivity of aquaculture in utilizing natural resources (land, water and wild stock) (proposed indicator for SDG target 14.7) |
| • Trends in proportion of area of forest production under sustainable practices:<br>o Area of forest under sustainable management certification - FSC/PEFC<br>o Progress towards sustainable forest management – Sustainable Forest Management Index (indicator for SDG target 15.2) – FAO<br>o Wild Bird Index for specialist forest birds / Living Planet Index (forest specialists) - BirdLife International /EBCCC/ WWF/ZSL<br>o Area of forest under sustainable, customary management of IPLCs<br>o Area of customary forest land with recognized tenure rights<br>o BIP (https://www.bipindicators.net/indicators/area-of-forest-under-sustainable-management-certification) |
| • Trends in extinction risk and populations of forest-specialist species in production forest. |

Multilateral Environmental Agreement Reports that Contain Data on ABT 7

There are linkages between ABT 7 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 7d lists data sources for ABT 7 that can be found within other MEA national reports.

**Table 7d. National Reports from MEAs with relevant data for ABT 7**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| CITES | Refer to Implementation Report Question 1.4.1a 'on reviews undertaken whether species would benefit from CITES listing'; 1.5.2a on 'Standard procedures for making non-detriment findings'; and Question 1.5.3b 'Annual export quotas at levels to ensure sustainable production and consumption'. |
| Convention on Migratory Species | Review national report related to Target 5 (Sustainable production and consumption) of the CMS Strategic Plan 2015-2023. |
| Ramsar Convention | Review the reporting format to the Ramsar COP-12 and responses to questions on Target 2 'Water use', Target 3 'Public and private sector apply guidelines and good practices', Target 7 'Sites at risk', Target 9 'Wise use strengthened and Target 13 'Enhanced sustainability' of the Ramsar Strategic Plan 2016-2024. |
| FAO State of the World's Biodiversity for Food and Agriculture | Review responses to questions 52, 54 and 79. |
| FAO State of the World's Aquatic Genetic Resources for Food and Agriculture | Chapters 2, 3, 4 and 6 are relevant. |
| FAO State of the World's Plant Genetic Resources for Food and Agriculture | Chapters 1 and 2 are relevant. |

## Aichi Biodiversity Target 8: Pollution reduced


ABT 8 – pollution – focuses on the reduction of pollution. ABT 8 states: "By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity." Pollution, especially in the form of excess nitrogen and phosphorus, is a major cause of loss of biodiversity and degradation of ecosystem functioning, especially in wetland, coastal and dryland areas. Excessive nutrients from sewage and agricultural runoff can also cause dead zones, with severe losses of biodiversity and impairment of ecosystem services. Reducing pollution to non-harmful levels is critical to ensuring the long-term maintenance of key ecosystem services. To achieve ABT 8, countries will need to assess the extent, severity and distribution of point and non-point sources of pollution and gauge the impact of this pollution on biodiversity and ecosystem functioning. They will also need to develop appropriate responses, such as strengthening national water quality standards, reducing subsidies on chemical fertilizers and pesticides, increasing riparian and coastal buffer zones, and developing wastewater treatment facilities.

**By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.**

Achieving ABT 8: Key Challenges

GBO-4 states, "Pollution, in particular the accumulation of reactive nitrogen and phosphorus nutrients in the environment, is among the most significant causes of biodiversity loss and of damage to the ecosystems on which we depend." To achieve ABT 8, policymakers must implement measures to protect vulnerable ecosystems to pollution, such as wetland, coastal, marine and dryland areas, with nitrogen and phosphorus posing the highest risks. However, key challenges to achieving ABT 8 include: a) the loading of nitrogen and phosphorous have surpassed planetary boundaries; b) Parties are challenged to reduce excess nutrients to levels that do not harm ecosystems and biodiversity while meeting increasing food demand; c) there are limited data on pollutants other than nitrogen and phosphorus; d) illegal waste is infrequently addressed in post-2010 NBSAPs; and e) marine plastics are a major global concern that is not well addressed by the ABTs or post-2010 NBSAPs,.

Measures that can accelerate the achievement of ABT 8, including from GBO-4, are: a) develop and enforce water and air quality guidelines and pollution concentration thresholds; b) improve nutrient use efficiency to reduce losses to the environment; c) eliminate phosphates from detergents to reduce nutrient loss to water bodies; d) enhance treatment and recycling of sewage and industrial waste water; e) conserve and restore wetlands and other ecosystems that play essential nutrient cycling roles; f) reuse and recycle plastics and use biodegradable alternatives; g) limit or ban single-use plastics; h) minimize waste from concentrated feedlots and other dense nutrient source areas; i) target hotspots for marine plastics; j) develop new protected areas for wetlands and filtering ecosystems to maintain water quality; k) increase efforts to treat sewage and industrial waste; l) develop geospatial maps of pollution hotspots; and m) integrate biodiversity values and concerns into national waste plans.

Linkages Between the UN Sustainable Development Goals and ABT 8

The reduction of pollution is critical to achieving the SDGS and is emphasized in multiple targets. However, pollution has a weak connection to the ecosystem health components of the SDGs. Those most related to achievement of ABT 8 are listed in Table 8a.

| Table 8a. Linkages between ABT 8 and the UN SDGs | |
|---|---|
| SDG 3: Ensure healthy lives and promote well-being for all at all ages | • 3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. |
| SDG 6: Ensure the availability and sustainable management of water and sanitation for all | • 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally. |
| SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation | • 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities. |
| SDG 10: Reduce inequality within and among countries | • 10.1 By 2030, progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average<br>• 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status. |
| SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable | • 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management. |
| SDG 12: Ensure sustainable consumption and production patterns | • 12.2 By 2030, achieve the sustainable management and efficient use of natural resources. |
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. |

Assessing National Contributions to Achieving ABT 8

The information presented in the 6NR on ABT 8 should focus on strategies and actions to reduce pollution, their effectiveness, and the related changes to biodiversity since the adoption of the Strategic Plan for Biodiversity 2011- 2020, with a particular emphasis on the changes that have occurred since the last national report was submitted. Parties should report on the degree to which pollutants of all types have been brought to levels that are not detrimental to ecosystem functions and biodiversity. Parties should also report on the degree to which pollution from excess nutrients is being brought to levels that are not detrimental to ecosystem function and biodiversity. The resulting status and trends should be reported, including pollution emissions, deposition rate, and ozone levels; extents of hypoxic zones and algal blooms; levels of contaminants in wildlife; and water quality in aquatic ecosystems. When developing reporting information on measures to achieve ABT 8 or equivalent national targets, we encourage you to consider the key questions in Table 8b.

| Table 8b. Key Questions to Consider to Address Progress to Achieve ABT 8 |
|---|
| • Where are the important point sources for pollution, including nutrients, and what are the most important opportunities for minimizing their impacts? |
| • To what extent are you bringing all pollutant types to levels that are not detrimental to ecosystem function and biodiversity? What measures are being used to do so? |
| • To what extent is pollution from excess nutrients being brought to levels that is not detrimental to ecosystem function and biodiversity?<br>o What measures are being used to do so? |
| • How are pollutant and nutrient loads in the country's ecosystems changing and why? |
| • Which ecosystems are experiencing significant changes?<br>o What are the drivers of these changes? |
| • Which pollutants are concerns in the country? |
| • What measures are in place to limit point sources of pollution? |
| • What measures are in place to address diffuse sources of pollution? |
| • Which pollutants are being effectively addressed through these actions? |
| • Where is it most important spatially to limit pollutants and waste? |

Potential Indicators and Data Sources for Reporting on ABT 8

When assessing the progress that your country is making to achieve ABT 8 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to achieving sustainable resource management. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 8 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 8 are listed in Table 8c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| Table 8c. Potential Indicators and Data Sources for Reporting on ABT 8 |
|---|
| • Spatial data overlays of pollution point sources; water quality and volume; water use; population maps; population and poverty; water. Other informative spatial data may include:<br>o Pollution point sources<br>o Water quality<br>o Water volume<br>o Water use<br>o Population maps<br>o Population and poverty |
| • Relevant global data sources include:<br>o Basel, Rotterdam and Stockholm Conventions (http://chm.pops.int)<br>o Minamata Convention on Mercury (http://www.mercuryconvention.org)<br>o International Nitrogen Initiative (http://www.initrogen.org)<br>o FAOSTAT (http://faostat3.fao.org/home/E)<br>o Global Environment Monitoring System (GEMS Water) (http://www.unep.org/gemswater) |
| • The extent to which pollutants (of all types) have been brought to levels that are not detrimental to ecosystem function and biodiversity. |

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| • The source, extent, spatial distribution, severity, impact and trends of key pressures and threats, including invasive species, climate change and pollution, among other pressures, are identified and mapped. |
| • The effectiveness of NBSAP strategies and actions for ensuring pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity, especially for coastal and marine ecosystems. |
| • The effectiveness of NBSAP strategies and actions for identifying and prioritizing pathways for invasive alien species, and control, eradicate or prevent their introduction and establishment. |
| • The effectiveness of NBSAP strategies and actions for strengthening land use planning and spatial planning to identify specific areas for economic growth, and for sustainable use and conservation of biodiversity, and to account for essential ecosystems. |
| • Pollution point sources (e.g., landfills, discharge pipes, sewage treatment plants, large farming operations, tanneries, refineries, etc.). |
| • Trends in pollutants:<br>o Trends in emissions, NOX - International Nitrogen Initiative<br>o Trends in emissions, SOX - International Nitrogen Initiative<br>o Trends in emissions, POPs - Stockholm Convention<br>o Trends in mercury emissions - UNEP<br>o Trends in pesticide use – FAO<br>o Trends in CFC emissions (chlorofluorocarbons (CFCs) in ODP – Ozone Secretariat<br>o Index of Coastal Eutrophication (ICEP) and Floating Plastic debris Density (indicator for SDG target 14.1)<br>o Mortality rate and mean level of exposure attributed to household and ambient air pollution (population weighted) (indicator for SDG target 3.9)<br>o Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe WASH services) (indicator for SDG target 3.9)<br>o Number of deaths from air, water and soil pollution and contamination (proposed indicator for SDG target 3.9)<br>o Mortality rate attributed to unintentional poisoning (indicator for SDG target 3.9) |
| • Trends in extinction risk of populations driven by pollution:<br>o Red List Index (impacts of pollution) - IUCN, BirdLife International and other Red List Partners<br>o BIP (https://www.bipindicators.net/indicators/red-list-index/red-list-index-impacts-of-pollution) |
| • Trends in ecosystems affected by pollution:<br>o Water Quality Index for Biodiversity - UNEP GEMS Water<br>o BIP (https://www.bipindicators.net/indicators/water-quality-index-for-biodiversity) |
| • Trends in nutrient levels:<br>o Trends in nitrogen deposition - International Nitrogen Initiative<br>o Trends in loss of reactive nitrogen to the environment - International Nitrogen Initiative<br>o Trends in global surplus of nitrogen - The Netherlands Environmental Assessment Agency (PBL)<br>o Proportion of bodies of water with good ambient water quality (SDG target 6.3)<br>o Percentage of wastewater safely treated (indicator for SDG target 6.3)<br>o Nitrogen use efficiency composite indicator - N input, N output, output/input ratio, and N surplus/deficit (proposed indicator for SDG target 14.1) |

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| ○ Index of Coastal Eutrophication (ICEP) (proposed indicator for SDG target 14.1)<br>○ BIP (https://www.bipindicators.net/indicators/trends-in-nitrogen-deposition) and (https://www.bipindicators.net/indicators/trends-in-loss-of-reactive-nitrogen-to-the-environment) |
| • Trends in measures or controls to limit or reverse pollution:<br>○ Number of pollution monitoring programmes in place<br>○ Number of regulations to limit pollution from point sources (e.g., agricultural land, industrial sites)<br>○ Proportion of land managed under traditional and low-impact (e.g., IPLC customary land, organic, low-input) agricultural that reduce nutrient and chemical pollution<br>○ Number of pollution cleanup initiatives on indigenous territories or IPLC communities |

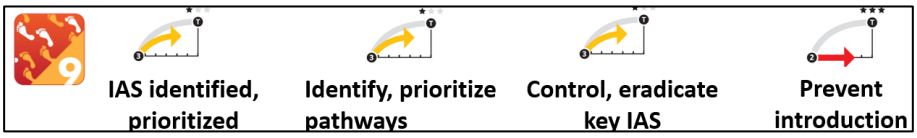
Multilateral Environmental Agreement Reports that Contain Data on ABT 8

There are linkages between ABT 8 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 8d lists the potential data sources for ABT 8 that can be found within other MEA national reports.

**Table 8d. National Reports from MEAs with relevant data for ABT 8**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| Convention on Migratory Species | Review national report related to Target 7 (Anthropogenic pressures) of the CMS Strategic Plan 2015-2023. |
| Ramsar Convention | Review the reporting format to the Ramsar COP-12 and responses to questions on Target 2 'Water use' and Target 3 'Public and private sector apply guidelines and good practices', of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Refer to the Convention's Periodic Report, Section 2, sub question 3-4 on Pollution. |
| FAO State of the World's Biodiversity for Food and Agriculture | Review responses to questions 9, 11, 12, 13 and 19. |

## Aichi Biodiversity Target 9: Invasive alien species prevented and controlled




ABT 9 – invasive alien species – focuses on the reduction of threats to biodiversity and ecosystems from invasive alien species (IAS). ABT 9 states: "By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment." IAS are one of the main drivers of biodiversity loss in many ecosystems, and particularly in island ecosystems. They can prey on native species or outcompete them for resources. IAS also can carry enormous social and economic costs by posing a threat to food security, water supplies, human health and economic development. To reduce the threat from them, Parties need to identify the extent and distribution of prioritized IAS; and gauge their impact on key biodiversity and ecosystems, including economic impacts. They also need to take steps to reduce pressures and future threats, including early detection and prevention of new introductions; controlling or eradicating existing populations; and developing national IAS.

**By 2020, invasive alien species (IAS) and pathways are identified and prioritized, priority species are controlled or eradicated and measures are in place to manage pathways to prevent their introduction and establishment.**

Achieving ABT 9: Key Challenges

One of the greatest threats to biodiversity is the introduction of plants and animals to new habitats around the world. Occurrences of IAS are increasing around the globe. More than half of all Parties have national IAS policies and are improving methods for identifying terrestrial and aquatic IAS pathways. However, challenges include: a) weak border controls often prevent action to reduce IAS; b) additional action is required to reduce IAS introductions; c) IAS continue to rapidly expand globally across terrestrial, marine and freshwater ecosystems, and climate change exacerbates this tread; d) although many Parties include measures related to IAS in their NBSAP, there is a major gap in the development and implementation of NBSAP strategies and actions related to marine and freshwater IAS; e) the mapping of IAS hotpots and vectors is limited; and f) Parties infrequently make the economic case for controlling IAS in their NBSAPs.

Measures that can accelerate the achievement of ABT 9, including from GBO-4, are: a) raise awareness of IAS impacts and the benefits of taking action to prevent their introduction and to mitigate their impacts; b) identify and control the main IAS introduction pathways; c) implement measures to quickly detect and rapidly respond to species invasions; d) identify and prioritize the IAS with the greatest potential to cause negative impacts on biodiversity and develop and implement plans for their eradication or control; e) prioritize protected and high biodiversity value areas for IAS eradication and control; f) develop lists of alien species that are known to be invasive and make them widely available; g) develop geospatial maps of IAS hotspots existing concentrations of IAS species, the areas at risk of expansion, the areas most vulnerable to IAS impacts, and introduction pathways; and h); develop an economic case for controlling and eradicating IAS in key ecosystems.

Linkages Between the UN Sustainable Development Goals and ABT 9

The identification and management of IAS pathways is not specifically mentioned in the SDGs. However, the reduction of threats to biodiversity and ecosystems from invasive alien species is critical to achieving SDG 15. Those most related to achievement of ABT 9 are listed in Table 9a.

| Table 9a. Linkages between ABT 9 and the UN SDGs | |
|---|---|
| SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss | • 15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species. |

Assessing National Contributions to Achieving ABT 9

The information presented in the 6NR on ABT 9 should focus on specific IAS measures, and the outcomes of those measures, since the adoption of the Strategic Plan for Biodiversity 2011- 2020, with a particular emphasis on the changes that have occurred since the last national report was submitted. The section of the report should focus on determining the degree to which IAS and related pathways are identified and prioritized, priority species are controlled or eradicated, and measures are put into place to prevent the introduction and establishment of IAS. The resulting status and trends should be reported, including the distributions of key IAS; the impacts of key IAS on biodiversity and ecosystems; the economic impacts of key IAS; and policy responses, including legislation, management plans, early detection and control efforts. When developing reporting information on measures to achieve ABT 9 or equivalent national targets, we encourage you to consider the key questions in Table 9b.

| Table 9b. Key Questions to Consider to Address Progress to Achieve ABT 9 |
|---|
| • To what extent have you identified, mapped and prioritized IAS and their pathways? |
| • To what extent are priority IAS controlled or eradicated, and if not, what plans exist to do so? |
| • To what extent are you implementing measures to prevent the introduction and establishment of IAS? |
| • How is the number and distribution of IAS in the country changing over time? |
| • What actions are being taken to eradicate or control existing IAS, what species are they directed toward, how effective are they, and who is involved in implementing these? |
| • What border control and quarantine measures are in place to prevent the introduction of new IAS or the spread of existing IAS? |
| • How are existing border control and quarantine measures being strengthened? |
| • Where are the pathways for IAS, and where can management interventions have the biggest impact in controlling, eradicating and preventing invasive species? |
| • Did your country identify and prioritize invasive alien species? |
| • Did your country identify and prioritize invasive alien species pathways? |
| • Did your country analyze/measure impacts of invasive alien species on ecosystems? |

| |
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| • What are the economic impacts of IAS, and what are the economic consequences of not taking action over a period of time? |

Potential Indicators and Data Sources for Reporting on ABT 9

When assessing the progress that your country is making to achieve ABT 9 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to achieving reductions in IAS. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 9 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 9 re listed in Table 9c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| **Table 9c. Potential Indicators and Data Sources for Reporting on ABT 9** |
|---|
| • Spatial data overlay of invasive alien species; transportation; habitat intactness; human footprint; future footprint. Other informative spatial data may include:<br>o Invasive alien species (distribution of density, change over time, key pathways)<br>o Transportation<br>o Habitat intactness<br>o Human footprint<br>o Future footprint |
| • Relevant global data sources include:<br>o GIASI Partnership Gateway (http://giasipartnership.myspecies.info/en) |
| • The extent to which IAS are identified and prioritized. |
| • The extent to which pathways for IAS are identified and prioritized. |
| • The extent to which priority IAS are controlled or eradicated. |
| • The extent to which the introduction and establishment of IAS is prevented. |
| • The source, extent, spatial distribution, severity, impact and trends of key pressures and threats, including IAS, across ecosystems and related services. |
| • Trends in eradication of priority invasive alien species:<br>o Trends in invasive alien species vertebrate eradications - IUCN Invasive Species Specialist Group, Island Conservation<br>o Adoption of national legislation relevant to the prevention or control of invasive alien species (proposed indicator for SDG target 15.8) – IUCN SSC Invasive Species Specialist Group, Monash University, BirdLife International, Concordia University<br>o BIP (https://www.bipindicators.net/indicators/trends-in-invasive-alien-species-vertebrate-eradications) and (https://www.bipindicators.net/indicators/adoption-of-national-legislation-relevant-to-the-prevention-or-control-of-invasive-alien-species) |
| • Trends in extinction risk and populations driven by invasive alien species impacts<br>o Red List Index (impacts of invasive alien species) - IUCN, BirdLife International and other Red List Partners<br>o BIP (https://www.bipindicators.net/indicators/red-list-index/red-list-index-impacts-of-invasive-alien-species) |
| • Trends in the numbers of invasive alien species introduction and establishment events. |

- Trends in the numbers of invasive alien species introduction events – ISSG
- BIP (https://www.bipindicators.net/indicators/trends-in-numbers-of-invasive-alien-species-introduction-events)

Multilateral Environmental Agreement Reports that Contain Data on ABT 9

There are linkages between ABT 9 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 9d lists the data sources for ABT 9 that can be found within other MEA national reports.

**Table 9d. National Reports from MEAs and relevant data for ABT 9**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| Convention on Migratory Species | Review national report related to Target 7 (Anthropogenic pressures) of the CMS Strategic Plan 2015-2023. |
| ITPGRFA | Refer to questions 5 and 6 in the national report. |
| Ramsar Convention | Refer to the Ramsar Information Sheets, Question 4.3 on biological components (including invasive alien species). Review the reporting format to the Ramsar COP-12 and responses to questions on Target 4 'Invasive alien species' of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Refer to the World Heritage Convention's Periodic Report, Section 2, sub-question 3.12 on invasive alien species. |
| FAO State of the World's Biodiversity for Food and Agriculture | Review responses to questions 9, 19, 44 and 46. |

## Aichi Biodiversity Target 10: Ecosystems vulnerable to climate change


ABT 10 – vulnerable ecosystems – focuses on reducing pressures on ecosystems that are vulnerable to the impacts of climate change, in order to improve resilience and enable adaptation of these systems. ABT 10 states: "By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification, are minimized, so as to maintain their integrity and functioning." Reducing anthropogenic pressures on vulnerable ecosystems that are disproportionately affected by climate change will strengthen the resilience of these ecosystems, and provide more opportunities for them to adapt to climate-related impacts. Ecosystems vulnerable to climate change impacts include coral reefs, mangroves, wetlands, Mediterranean forests, temperate grasslands, montane grasslands and forests, tropical forests, boreal forests, islands, peatlands and polar ecosystems, among others. To reduce pressures on vulnerable ecosystems, countries need to identify which ecosystems are most vulnerable to climate change impacts and to anthropogenic pressures and identify and reduce the multiple threats that undermine ecological integrity and functioning, including pollution, fragmentation, invasive species and unsustainable harvesting. Parties also need to develop and implement plans for strengthening ecosystem-wide resilience, including increasing the protection of healthy, well-disbursed ecosystem and improving connectivity.

**By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.**

### Achieving ABT 10: Key Challenges

Climate change and ocean acidification pose profound threats to ecosystems and related services. Addressing other pressures to vulnerable ecosystems will help improve resilience in the short-term. Key challenges include: a) coral reefs, mountains and rivers are increasingly affected by multiple pressures, making it challenging to meet ABT 10 - for example, the number of threatened coral reefs is increasing, and in Southeast Asia, nearly 95% are threatened; b) overfishing and destructive fishing practices affect more than half of all coral reefs and compound pressures; c) multiple efforts related to overfishing, marine protection and marine pollution control are required to counteract acidification; and d) NBSAP actions infrequently identify specific vulnerable ecosystems to climate change, and almost none of these ecosystems are geospatially mapped.

Measures that can accelerate the achievement of ABT 10, including those from GBO-4, are: a) promote sustainable fisheries management on coral reefs and closely associated ecosystems; b) integrate coastal zones and inland watershed management to reduce pollution and other activities that threaten coral reefs; c) increase the coverage and effectiveness of marine and coastal protected and managed areas targeted to vulnerable ecosystems; d) manage coastal development to ensure the health and resilience of coral reef ecosystems; e) promote sustainable coral reef tourism and use guidelines for tourists and tour operators; f) maintain sustainable livelihoods and food security in reef-dependent coastal communities and provide viable alternative livelihoods; g) identify other ecosystems that are vulnerable to climate

change and to projected related impacts, implement measures to improve their resilience, and monitor their effectiveness; and h) undertake measures that establish large marine protected areas combined with strictly enforced terrestrial land management plans.

Linkages Between the UN Sustainable Development Goals and ABT 10

Reducing pressures on ecosystems that are vulnerable to the impacts of climate change, in order to improve resilience and enable adaptation of these systems, is critical to achieving the SDGs and is emphasized in multiple targets. However, coral reefs and other vulnerable ecosystems are not specifically mentioned in the SDGs. The SDGs that are most related to the achievement of ABT 10 are listed in Table 10a.

| Table 10a. Linkages between ABT 10 and the UN SDGs | |
|---|---|
| SDG 13: Take urgent action to combat climate change and its impacts | • 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. |
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels. |

Assessing Your National Contribution to Achieving ABT 10

The information presented in the 6NR on ABT 10 should focus on changes to ecosystems that are vulnerable to climate change and actions taken since the Strategic Plan for Biodiversity 2011- 2020 was adopted, with a particular emphasis on the changes that have occurred since the last national report was submitted. This section of the 6NR should focus should be on determining the degree to which multiple anthropogenic pressures on coral reefs are minimized to maintain their integrity and functioning. Where possible, Parties should also evaluate multiple anthropogenic pressures on other vulnerable ecosystems impacted by climate change or ocean acidification. The resulting status and trends should be reported, including the distribution and condition of vulnerable ecosystems and the levels of threat and protection of those ecosystems.

When developing reporting information on measures to achieve ABT 10 or equivalent national targets, we encourage you to consider the key questions in Table 10b.

| Table 10b. Key Questions to Consider to Address Progress to Achieve ABT 10 |
|---|
| • What ecosystems are most vulnerable to climate change in your country? |
| • What actions are being taken to reduce pressures on ecosystems vulnerable to climate change and/or ocean acidification? |
| • What actions are being taken to improve the resilience of vulnerable ecosystems or those that provide key ecosystem services? |
| • How effective are these measures on reducing pressures? Why are they, or are they not, effective? |

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| • Where are the areas of coral reefs and other vulnerable ecosystems that are most vulnerable to climate change or ocean acidification, and where are the opportunities for maintaining integrity and functioning through protection, restoration and sustainable use? |

Potential Indicators and Data Sources for Reporting on ABT 10

When assessing the progress that your country is making to achieve ABT 10 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to reducing the vulnerabilities of ecosystems to climate change and other pressures. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 10 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 10 are listed in Table 10c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| **Table 10c. Potential Indicators and Data Sources for Reporting on ABT 10** |
|---|
| • Spatial data overlay of protected areas; human footprint; habitat intactness – coastal habitats; climate vulnerability. Other informative spatial data may include:<br>o Climate vulnerability (distribution and intensity of vulnerability of ecosystems, species to climate)<br>o Land cover/land cover change (vegetation maps, forest cover)<br>o Habitat and habitat intactness – distribution and degree of intactness and degradation of forests; wetlands; grasslands; drylands; coastal habitats (seagrass beds, coral reefs, dunes, mangroves)<br>o Ecoregion |
| • Relevant global data sources include:<br>o FAO's Vulnerable Marine Ecosystem Database (http://www.fao.org/in-action/vulnerable-marine-ecosystems/en/)<br>o International Coral Reef Initiative website (http://www.icriforum.org/) |
| • To what extent are the multiple anthropogenic pressures on coral reefs minimized, so as to maintain their integrity and functioning? |
| • To what extent are the multiple anthropogenic pressures on other vulnerable ecosystems impacted by climate change or ocean acidification minimized, so as to maintain their integrity and functioning? |
| • The effectiveness of NBSAP strategies and actions for ensuring pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity, especially for coastal and marine ecosystems. |
| • The effectiveness of NBSAP strategies and actions for strengthening the 10, 15 resilience of vulnerable ecosystems to climate change impacts including coral reefs, grasslands, coastal areas, montane areas, among others through restoration and other means. |
| • Trends in extent and condition of coral reefs:<br>o Trends in proportion of live coral cover - Mumby et al. |
| • Trends in extinction risk and populations of coral and coral-reef dependent species:<br>o Red List Index (reef-building coral species) - IUCN and other Red List Partners<br>o BIP - https://www.bipindicators.net/indicators/red-list-index/red-list-index-reef-building-corals |
| • Trends in pressures on coral reefs: |

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| ○ Average marine acidity (pH) measured at agreed suite of representative sampling stations (indicator for SDG target 14.3)<br>○ Loss of marine biodiversity caused by ocean acidification (proposed indicator for SDG target 14.3) |
| • Trends in species extinction risk and populations or condition of other vulnerable ecosystems impacted by climate change or ocean acidification:<br>○ Climatic Impact Index for birds – BirdLife International/EBCC<br>○ Red List Index (impacts of climate change) - IUCN, BirdLife International and other Red List Partners<br>○ BIP (https://www.bipindicators.net/indicators/climatic-impacts-on-european-and-american-birds) |
| • Trends in responses to reduce pressures on other vulnerable ecosystems impacted by climate change or ocean acidification:<br>○ Number of measures to manage climate impacts on vulnerable ecosystems included in climate change management plans<br>○ Number of measures that recognize and support traditional knowledge approaches to reduce impacts on vulnerable ecosystems included in climate change management plans<br>○ Number of partnerships with, and initiatives of, indigenous and local communities to address impacts of climate change |
| • Ocean Health Index (https://www.bipindicators.net/indicators/ocean-health-index) |
| • Cumulative Human Impacts on Marine Ecosystems (https://www.bipindicators.net/indicators/cumulative-human-impacts-on-marine-ecosystems) |

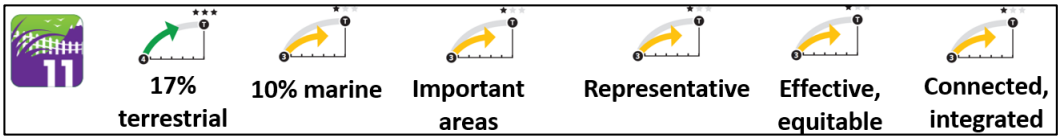
Multilateral Environmental Agreement Reports that Contain Data on ABT 10

There are linkages between ABT 10 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 10d lists the data sources for ABT 10 that can be found within other MEA national reports.

**Table 10d. National Reports from MEAs with relevant data for ABT 10**

| MEA | Data Source |
|---|---|
| Convention on Migratory Species | Review national report related to Target 7 (Anthropogenic pressures) of the CMS Strategic Plan 2015-2023. |
| Ramsar Convention | Refer to responses to questions on Target 6: 'Increased Ramsar site network' of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Refer to the Periodic Report, Section 2, subquestion 3.10: climate changes. |
| FAO State of the World's Biodiversity for Food and Agriculture | The FAO State of the world's biodiversity for food and agriculture report includes a series of questions, which are relevant to Aichi Biodiversity Target 10, in particular questions 10 and 19. |

## Aichi Biodiversity Target 11: Protected areas




ABT 11 – protected areas – focuses on protected areas (PA). ABT 11 states: "By 2020, at least 17% of terrestrial and inland water, and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative, and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes." Protected areas (PAs) are geographically defined areas, designated or regulated, and managed to achieve specific conservation objectives. They include not only strictly PAs under government control, but also a wide range of areas that allow for sustainable use, including areas owned by indigenous and local communities. Comprehensive, effectively managed PA systems are a proven method for safeguarding habitats and species, avoiding extinctions, maintaining important ecosystem services, and achieving development goals. PAs should contain at least 10% of each ecoregion within each country. In order to achieve ABT 11, countries need to assess gaps in their PA network and identify key weaknesses and threats, as well as take steps to improve PA coverage, representativeness, connectivity and management effectiveness.

**By 2020, at least 17% of terrestrial and inland water areas and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.**

Achieving ABT 11: Key Challenges

Conserving biodiversity through networks of protected areas (PA) and other conserved areas is a critical tool to safeguarding species and ecosystems from human impacts. Parties are on track to meet or exceed terrestrial PA targets and are increasing measures to achieve marine PA targets. However, to achieve ABT 11, PA networks must also be ecologically representative, be designed in a way that protects rare, threatened and endangered species, and be effectively managed. Key challenges include: a) nearly ¾ of countries have not met the 17% target; b) marine PAs have mostly grown significantly through the designation of very large marine PAs, and the growth is not widely distributed; c) fewer than half of the 823 terrestrial ecoregions have 17% of their areas in PAs, and 1/3 of the 323 marine ecoregions have 10% of their area in PAs; d) less than 20% of Key Biodiversity Areas are completely protected; e) PAs are not explicitly linked to ecosystem services, avoiding extinctions, poverty reduction, or the SDGs; f) infrastructure expansion is threatening connectivity.

Measures that can accelerate the achievement of ABT 11, including those in GBO-4, are: a) expand networks of PAs and other conserved areas to become more representative of ecoregions, marine and coastal areas, inland waterways and other important biodiversity areas; b) improve and regularly assess PA management effectiveness and governance; c) adequately protect inland water environments

through measures to protect rivers upstream and downstream from terrestrial PAs; d) maintain connectivity to enable migration and species movement; e) cooperate with indigenous and local communities in PA creation, control and management; f) develop geospatial analyses of PAs and SDGs, especially for food security, water security, poverty alleviation, livelihoods, disaster risk reduction, climate mitigation and adaptation, and health; g) proactively predict and address threats to PAs from infrastructure; and h) identify opportunities for alternative governance, such as locally managed marine areas and indigenous and community conserved areas.

Linkages between the UN Sustainable Development Goals and ABT 11

The ability of Parties to meet national and global PA targets is critical to achieving the SDGS and is emphasized in multiple targets. Protection focuses on the sustained provision of ecosystem services, and PAs across all terrestrial biomes are not comprehensively covered. There is an indirect mention of the 17% global terrestrial target in the SDGS, and connectivity and management are not specifically mentioned. The SDGS most related to achievement of ABT 11 are listed in Table 11a.

**Table 11a. Linkages between ABT 11 and the UN SDGs**

| | |
|---|---|
| SDG 6: Ensure the availability and sustainable management of water and sanitation for all | • 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.<br>• 6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.<br>• 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes. |
| SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable | • 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage. |
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.<br>• 14.5 By 2020, conserve at least 10% of coastal and marine areas, consistent with national and international law and based on the best available scientific information. |
| SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss | • 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.<br>• 15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development. |

Assessing National Contributions to Achieving ABT 11

The information presented in the 6NR on ABT 11 should focus on changes in the national PA system,

including expansions, degazettements, and changes in management effectiveness, representatives and governance since the Strategic Plan for Biodiversity 2011- 2020 was adopted, with a particular emphasis on the changes that have occurred since the last national report was submitted. This section of the 6NR should focus on assessing if at least 17% of terrestrial and inland water areas, and at least 10% of coastal and marine areas are conserved. Parties should also determine if areas of particular importance for biodiversity and ecosystem services are conserved to adequate levels, and if PAs are ecologically representative and well connected and integrated into the wider landscape and seascape. Parties should also assess their ability to effectively and equitably managed PAs. The resulting status and trends should be reported, including coverage, representativeness, connectivity and management effectiveness of protected area systems; and the protection for species at risk of extinction, vulnerable ecosystems, and areas providing key ecosystem services.

Parties are additionally encouraged to include information related to the following COP decisions:

- Decision XI/24: Paragraph 1 invites Parties to report on the implementation of national action plans for the Programme of Work on PAs (PoWPA) through its reporting framework, which is integrated into the 5NR and 6NR as called for in paragraphs 33 (a) and (e) of decision X/31, in order to track progress towards achieving ABT 11 and implementing the PoWPA; and
- Decision X/31: Paragraph 33 invites Parties to consider as part of national reporting, a simple and effective reporting process that tracks the overall status of the conservation of biodiversity within PAs, as well as actions and outcomes of the PoWPA. This decision also encourages Parties to ensure that reporting on the PoWPA is clearly integrated with reporting on progress towards the ABTs and associated indicators.

When developing reporting information on measures to achieve ABT 11 or equivalent national targets, we encourage you to consider the key questions in Table 11b.

| **Table 11b. Key Questions to Consider to Address Progress to Achieve ABT 11** |
|---|
| • Is there at least 17% of terrestrial and inland water areas conserved (overall, by ecoregion, by habitat type)? If not, what percentage is protected? Are their plans and resources to achieve the remainder of the target? |
| • What percentage of these areas is protected through legally binding means? |
| • Are there at least 10% of coastal and marine PAs conserved (overall, by ecoregion, by habitat type)? If not, what percentage is protected? Are their plans and resources to achieve the remainder of the target? |
| • Are the locations of terrestrial, inland water, coastal and marine PAs mapped? |
| • Do these figures include areas effectively conserved by indigenous peoples and communities? |
| • To what extent is the country's PA footprint ecologically representative? |
| • To what extent are the country's PAs effectively and equitably managed? |
| • What important areas for biodiversity and ecosystem services are not currently protected? |
| • What important areas are underrepresented? |
| • How has the PAs management effectiveness improved? |
| • What measures are being taken to promote equitable PA management? |
| • Are indigenous peoples and local communities involved in PA management in a systematic way? |
| • What support or processes are established to support indigenous peoples and local communities in documenting, mapping, or registering community conservation areas and/or developing, |

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| implementing or monitoring community conservation plans? |
| • Which other groups or stakeholders are involved in PA management? |
| • What actions are being taken to integrate PAs into the wider landscape and seascape? |
| • Where are most important opportunities to create new PAs and improve existing ones in order to improve representativeness, connectivity and management effectiveness? |
| • What are the most important opportunities to create new protected areas to ensure food security, water security, poverty alleviation, climate mitigation and adaptation, health, disaster risk reduction? To what extent are these areas spatially mapped? |

Potential Indicators and Data Sources for Reporting on ABT 11

When assessing the progress that your country is making to achieve ABT 11 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to achieving PA targets. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 11 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 11 are listed in Table 11c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| **Table 11c. Potential Indicators and Data Sources for Reporting on ABT 11** |
|---|
| • Spatial data overlay of protected areas; habitat intactness, human footprint; key biodiversity areas; future footprint. Other informative spatial data may include:<br>o Land cover/land cover change (vegetation maps, forest cover)<br>o Protected area coverage and management effectiveness<br>o Key biodiversity areas<br>o Habitat and habitat intactness – distribution and degree of intactness and degradation of forests; wetlands; grasslands; drylands; coastal habitats (seagrass beds, coral reefs, dunes, mangroves)<br>o Ecoregion<br>o Human footprint layer (aggregate layer of human impact, habitat conversion, roads, infrastructure)<br>o Climate vulnerability (distribution and intensity of vulnerability of ecosystems, species to climate)<br>o Sustainable management (includes agriculture, e.g., map of certified sustainable agriculture operations; forestry, e.g., map of certified sustainable forestry operations; aquaculture, e.g., map of certified sustainable aquaculture operations)<br>o Land tenure and rights (distribution of land tenure, land use rights, including disputes) |
| • Relevant global data sources include:<br>o LandMark – online, global platform providing information on lands that are collectively held and used by IPLCs (http://www.landmarkmap.org)<br>o CBD Secretariat has prepared data dossiers using information from various sources. Each country data dossier includes information on estimated protected area coverage, terrestrial and marine ecoregions, Important Bird and Biodiversity Areas (IBA), and Alliance for Zero Extinction Sites (AZE), among other things. These dossiers can be accessed from https://www.cbd.int/protected.<br>o Protected Planet (http://www.protectedplanet.net) |

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| ○ Protected area management effectiveness information portal (https://www.protectedplanet.net/c/protected-areas-management-effectiveness-pame)<br>○ ICCA Registry (http://www.iccaregistry.org)<br>○ CSIRO's Protected Area Representativeness and Connectedness Indices and Map of Life' s Species Protection Index (https://mol.org/indicators) |
| • The extent to which at least 17% of terrestrial and inland water areas are conserved. |
| • The extent to which at least 10% of coastal and marine areas are conserved. |
| • The extent to which PAs of particular importance for biodiversity and ecosystem services conserved. |
| • The extent to which terrestrial, marine and inland water protected areas are ecologically representative. |
| • The extent to which protected areas are effectively and equitably managed. |
| • The area and distribution within land use plans of areas targeted for intensive economic growth, for sustainable use and for conservation of biodiversity, is identified and mapped. |
| • Key species and ecosystems, including changes in spatial distribution, ecological integrity, extinction risks, protection status and key threats are identified and mapped. |
| • Changes in the ecological integrity, threats and protection status of key ecosystems vulnerable to climate change impacts, including coral reefs, coastal areas, grasslands, and montane areas, among others are identified and mapped. |
| • Key biodiversity areas (e.g., important bird areas, zero extinction areas), including changes in extent, ecological integrity, protection status and key threats are identified and mapped. |
| • The extent, spatial distribution, governance types and categories, and representativeness of protected areas is identified and mapped, including for terrestrial, freshwater and marine areas, and other conserved areas. |
| • Protected area management effectiveness, including for a range of protected area governance types and categories has been assessed. |
| • Key connectivity areas (including corridors, buffers, stepping stones), and changes in their extent, ecological integrity, protection status and threats are identified and mapped. |
| • Ecosystems providing essential ecosystem services, such as water, food, livelihoods, disaster risk reduction, and the extent of their ecological integrity, threat and protection, are identified and mapped. |
| • The distribution, conservation, and sustainable use of genetic diversity, including of cultivated plants, farmed and domesticated animals, and wild crop relatives is identified and mapped, and opportunities for incorporating these into protected area and sustainable use plans are identified. |
| • The effectiveness of NBSAP strategies and actions for significantly reducing the rate of loss of all natural habitats, including forests. |
| • The effectiveness of NBSAP strategies and actions for increasing the extent and improving the ecological functioning and representativeness of the protected area network, including terrestrial, freshwater and marine protected areas, and other conserved areas. |
| • The effectiveness of NBSAP strategies and actions for strengthening protected area management effectiveness and capacity, including both the ability to manage against multiple threats and to manage for multiple benefits, for all types and categories of protected areas. |
| • The effectiveness of NBSAP strategies and actions for preventing extinctions, and improving the conservation status of key species, including those species vulnerable to climate change impacts. |

- The effectiveness of NBSAP strategies and actions for restoring and safeguarding key ecosystems that provide key ecosystem services, particularly food security, water security, carbon sequestration, livelihoods and disaster risk reduction.

- Trends in area of terrestrial and inland water areas conserved:
  - Percentage of terrestrial and inland water areas covered by protected areas - UNEP-WCMC and IUCN
  - Percentage of terrestrial and inland water areas and or marine and coastal areas covered by other effective area-based conservation measures - ICCA Consortium
  - Number and extent of important sites for biodiversity that are covered by other effective area-based conservation measures - ICCA Consortium
  - Trends in the appropriate recognition of other effective area-based conservation measures areas and appropriate support provided to them - ICCA Consortium
  - BIP (https://www.bipindicators.net/indicators/coverage-of-protected-areas-terrestrial-and-marine)

- Trends in area of coastal and marine areas conserved:
  - Percentage of marine and coastal areas covered by protected areas - UNEP-WCMC and IUCN
  - Coverage of protected areas in relation to marine areas (indicator for SDG target 14.5)- UNEP-WCMC and IUCN
  - BIP (https://www.bipindicators.net/indicators/coverage-of-protected-areas-terrestrial-and-marine)

- Trends in areas of particular importance for biodiversity conserved:
  - Protected area coverage of Key Biodiversity Areas (including Important Bird and Biodiversity Areas, Alliance for Zero Extinction sites) - BirdLife International /IUCN/AZE
  - Protected Area Overlays with Biodiversity (proposed indicator for SDG target 15.1) – WCMC/BirdLife International/IUCN/AZE
  - BIP (https://www.bipindicators.net/indicators/protected-area-coverage-of-key-biodiversity-areas)

- Trends in areas of particular importance for ecosystem services conserved.

- Trends in ecological representativeness of areas conserved:
  - Protected area coverage of terrestrial and marine ecoregions - UNEP-WCMC/ The Joint Research Centre of the European Commission
  - Species Protection Index - GEO BON-Map of Life
  - Protected Area Representativeness Index - GEO BON-CSIRO
  - BIP (https://www.bipindicators.net/indicators/protected-area-coverage-of-ecoregions)

- Trends in effectiveness and/or equitability of management of conserved areas:
  - Protected area management effectiveness- WCMC
  - The Wildlife Picture Index (disaggregated by protected area) - Tropical Ecology Assessment and Monitoring (TEAM) Network
  - Trends in protected area funding – AidData
  - BIP (https://www.bipindicators.net/indicators/protected-area-management-effectiveness)

- Trends in connectivity and integration of conserved areas:
  - Protected Area Connectedness Index - GEO BON-CSIRO

- Trends in policy responses promoting conserved area connectivity:

- Land-/Seascape Connectivity Index

Multilateral Environmental Agreement Reports that Contain Data on ABT 11

There are also linkages between ABT 11 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 11d lists the potential data sources for ABT 11 that can be found within other MEA national reports.

**Table 11d. National Reports from MEAs with relevant data for ABT 11**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| Convention on Migratory Species (CMS) | Review national report related to Target 10 (Area-based conservation measures) and Target 11 (Provision of ecosystem services) of the CMS Strategic Plan 2015-2023. |
| ITPGRFA | Reference National Report Question 9: In-situ conservation in PAs. |
| Ramsar Convention | Ramsar Information Sheets (RIS), Questions 2.2 Site location, 3.1 Criteria and justification, 5.2 Ecological character. Review the reporting format to the Ramsar COP-12 and responses to questions on Target 5: 'Ecological character restored', Target 6: 'Increased Ramsar site network' and Target 7 'Sites at risk' of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Refer to the Periodic Report, Section 1, Questions 2 (Inventories, registers), 3 (Tentative lists), 4 (Nominations) and Section 2, Questions 1 (Property data) and 4 (Protection). |
| FAO State of the World's Aquatic Genetic Resources for Food and Agriculture | Refer to chapter 3 on in-situ conservation is relevant. |

## Aichi Biodiversity Target 12: Reducing risk of extinction


ABT 12 – species and extinctions – focuses on preventing the extinction of species. ABT 12 states: "By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained." Human pressure is causing the current rate of species extinction to be more than 100 times the known background extinction rate. The IUCN Red List of Threatened Species (http://www.iucnredlist.org) contains a list of more than 19,000 species that are threatened globally, including in the categories of vulnerable, endangered, or critically endangered. Of these, more than 3,900 species are critically endangered. Countries may also have their own lists of additional threatened species. Preventing extinctions will require concerted efforts to reduce threats to threatened species, and to ensure adequate habitat protection. For wide-ranging species, preventing extinctions may also require coordination across boundaries with other countries and regions. In order to achieve ABT 12, countries need to identify species at risk of extinction; assess the status and distribution of these species; and, identify key threats and levels of protection for prioritized species. They will also need to undertake key actions, including developing species recovery plans, reducing threats to key species, and improving the protection status of the habitats of key species.

**By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.**

### Achieving ABT 12: Key Challenges

There are many direct and indirect drivers of change in the status of species, and conservation measures should be designed to addressing the root cause of extinction. Current evidence suggests that ABT 12 will not be met by 2020, and that the extinction trends are accelerating for many taxonomic groups. Current challenges include: a) habitat loss, poaching and climate change continue to be main drivers of extinction risks, and these are difficult each in their own right, but compound to create even more complex challenges; b) extinction rates appears to be accelerating, making urgent action a top priority; c) most NBSAPs focus on undertaking studies instead of direct actions to tackle the drivers of biodiversity loss and extinctions; d) there are very few actions within the post-2010 NBSAPs on illegal wildlife trade, connectivity or ex-situ efforts; e) while the extent of PAs dedicated to the survival of threatened species is increasing, the coverage and distribution remains inadequate to safeguard biodiversity; and f) post-2010 NBSAPs infrequently include geospatial maps of areas critical for avoiding extinctions, including key biodiversity areas.

Measures that can accelerate the achievement of ABT 12, including from GBO-4, are: a) use species conservation status assessments to identify and prioritize conservation activities; b) complete gaps in existing national, regional and global species conservation status assessments; c) develop and implement species action plans that address the root causes of threats; d) develop more representative PA systems; e) prioritize biologically important PA sites, and those that contain threatened species; f) reduce habitat loss, degradation and fragmentation, and restore degraded habitats; g) promote fishing practices that limit impacts on marine ecosystems and non-targeted species; h) control or eradicate IAS and pathogens to avoid species extinctions; i) implement sustainable land use practices to reduce pressures

on species habitats; j) ensure no species is unsustainability exploited for domestic or international trade; k) take actions under the Convention on International Trade in Endangered Species of Wild Fauna and Flora to prevent and deter illegal killing and trade; l) reduce the demand for products derived from illegally traded wildlife; and m) develop spatial maps of key biodiversity areas important for avoiding extinctions, and integrate these areas into national sectoral plans.

Linkages between the UN Sustainable Development Goals and ABT 12

The ability of Parties to reduce extinction risks is emphasized in SDG 14 and 15. However, non-economic marine species are not considered in the SDGS. The linkages between ABT 12 and the SDGS are listed in Table 12a.

| Table 12a. Linkages between ABT 12 and the UN SDGs | |
|---|---|
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics. |
| SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss | • 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species. |

Assessing National Contributions to Achieving ABT 12

The information presented in the 6NR on ABT 12 should focus actions on the actions taken to prevent extinctions and the changes in species status since the Strategic Plan for Biodiversity 2011- 2020 was adopted, with a particular emphasis on the changes that have occurred since the last national report was submitted. This section of the 6NR should focus on assessing if the extinction of known threatened species has been prevented, and if the conservation status of those species most in decline has been improved and sustained. The resulting status and trends should be reported, including the abundance, distribution and extinction risk of species threatened with extinction; and the protection status of species threatened with extinction. When developing reporting information on measures to achieve ABT 12 or equivalent national targets, we encourage you to consider the key questions in Table 12b.

| Table 12b. Key Questions to Consider to Address Progress to Achieve ABT 12 |
|---|
| • To what extent is the extinction of known threatened species being prevented, including success stories of projects and measures? |
| • To what extent is the conservation status of those species most in decline improving or being sustained? |
| • Have any known species gone extinct or have been extirpated from their range in your country since you adopted the Strategic Plan for Biodiversity 2011-2020? |
| • How is the conservation status of species changing? Do you have information on mean species |

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| abundance? |
| • What percentage of species is threatened in your country? |
| • How many of these species are endemic? What actions are being taken to address these trends? |
| • How have the main threats to species changed since your country adopted the Strategic Plan for Biodiversity 2011-2020? |
| • What are the main threats to the threatened species in your country? What is the spatial distribution and intensity of these threats? |
| • What measures are being taken to address these threats? |
| • Where are the most important opportunities to protect, restore and sustainably manage ecosystems in order to decrease the decline of species populations and to avoid extinctions? |

Potential Indicators and Data Sources for Reporting on ABT 12

When assessing the progress that your country is making to achieve ABT 12 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to achieving measures that prevent the extinction of species. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 12 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 12 are listed in Table 12c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| **Table 12c. Potential Indicators and Data Sources for Reporting on ABT 12** |
|---|
| • Spatial data overlay of key biodiversity areas; human footprint; future footprint; protected areas; habitat intactness. Other informative spatial data may include:<br>o Species distribution<br>o Key biodiversity area<br>o Protected and other conserved areas<br>o Human Footprint<br>o Land cover/land use change |
| • Relevant global data sources include:<br>o IUCN Red List of Threatened Species (http://www.iucnredlist.org)<br>o Living Planet Index (http://www.livingplanetindex.org/home/index)<br>o Tropical, Ecology Assessment and Monitoring Network (http://www.teamnetwork.org)<br>o Botanic Gardens Conservation International's ThreatSearch (http://www.bgci.org/threat_search.php) and Species+ (https://www.speciesplus.net) databases<br>o PREDICTS Local Biodiversity Intactness Index (http://www.predicts.org.uk/<br>o Map of Life's Species Habitat Indices (https://mol.org/indicators) |
| • The extent to which the extinction of known threatened species being prevented. |
| • The extent to which the conservation status of those species most in decline is improving or being sustained. |
| • Key species and ecosystems, including changes in spatial distribution, ecological integrity, extinction risks, protection status and key threats are identified and mapped. |
| • Changes in the ecological integrity, threats and protection status of key ecosystems vulnerable to |

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| climate change impacts, including coral reefs, coastal areas, grasslands, and montane areas, among others are identified and mapped. |
| • Key biodiversity areas (e.g., important bird areas, zero extinction areas), including changes in extent, ecological integrity, protection status and key threats are identified and mapped. |
| • The effectiveness of NBSAP strategies and actions for preventing extinctions, and improving the conservation status of key species, including those species vulnerable to climate change impacts. |
| • Trends in number of extinctions:<br>o Number of species extinctions - IUCN, BirdLife International and other Red List Partners |
| • Trends in extinctions prevented - IUCN, BirdLife International and other Red List Partners:<br>o Number of extinctions prevented by conservation action - - IUCN/BirdLife International |
| • Trends in extinction risk and populations of species - IUCN, BirdLife International and other Red List Partners:<br>o Red List Index (proposed indicator for SDG target 15.5) - IUCN, BirdLife International<br>o Living Planet Index - WWF/ZSL<br>o Species Habitat Index - GEOBON<br>o Species Protection Index for species in decline - GEO BON-Map of Life<br>o Local Biodiversity Intactness Index - GEO BON-Predicts<br>o Funds towards species protection - AidData<br>o Wild Bird Index – BirdLife International/EBCC<br>o Wildlife Picture Index - Tropical Ecology Assessment and Monitoring (TEAM) Network<br>o BIP (https://www.bipindicators.net/indicators/red-list-index) and (https://www.bipindicators.net/indicators/living-planet-index) and (https://www.bipindicators.net/indicators/wildlife-picture-index) |

Multilateral Environmental Agreement Reports that Contain Data on ABT 12

There are linkages between ABT 12 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 12d lists the potential data sources for ABT 12 that can be found within other MEA national reports.

**Table 12d. National Reports from MEAs with relevant data for ABT 12**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| CITES | Refer to Implementation Report Questions 1.1.1a (CITES listing), 1.5.2a (Procedure for findings), 1.5.3b (Export quotas), 1.6.1a (Species management), 1.6.2a (Population management), 3.1.2a (Assistance), 3.4.1a (Conservation status) and 3.5.1a (Actions). |
| CITES | Annual Trade Reports include lists of import and export statistics of wildlife trade. Annual Illegal Trade Reports include descriptions of seizures in illegal wildlife trade. |

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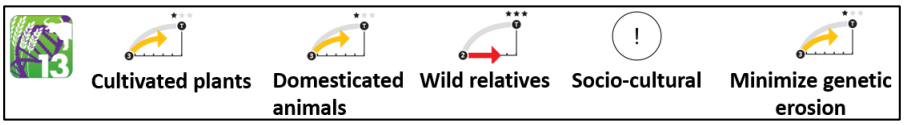
|---|---|
| Convention on Migratory Species | Review national report related to Target 8 (Conservation status) of the CMS Strategic Plan 2015-2023. |
| ITPGRFA | Reference National Report Questions 5 (PGRFA inventory) and 6 (Threats to PGRFA). |
| Ramsar Convention | Ramsar Information Sheets (RIS), Questions 3.1 (Criteria and justification), 3.2 (Plant species), 3.3 (Animal species). Review the reporting format to the Ramsar COP-12 and responses to questions on Target 5: 'Ecological character restored', Target 7 'Sites at risk' and Target 8 'Wetlands inventories' of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Refer to the Periodic Report, Section 2, Questions 3 (Factors affecting property) and 3.5 (Biological resource use and modification). |
| FAO State of the World's Biodiversity for Food and Agriculture | Refer to Questions 28, 29, 30, 31, 35, 36 and 37. |
| FAO State of the World's Animal Genetic Resources for Food and Agriculture (2nd) | Refer to Part 3, which might be relevant. |
| FAO State of the World's Aquatic Genetic Resources for Food and Agriculture | Refer to Chapter 1, 2, 3 and 4, which might be relevant. |
| The FAO State of the World's Plant Genetic Resources for Food and Agriculture (3rd) | Refer to Chapter 1, 2, 3 and 4, which might be relevant. |

## Aichi Biodiversity Target 13: Safeguarding genetic diversity




ABT 13 – genetic diversity – focuses on the maintenance of genetic diversity of plants and animals important for maintaining national and global food security. ABT 13 states: "By 2020, the genetic diversity of cultivated plants, farmed and domesticated animals and wild relatives, including other socio-economically and culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity." The genetic diversity of cultivated plants and domesticated animals, and of their wild relatives, is in decline globally. Genetic diversity is critical to maintaining global food security, and to ensuring a robust, resilient agricultural system that can adapt to the impacts of climate change, including genetic stocks that are resistant to drought, disease, floods and temperature fluctuations. In order to achieve this goal, Parties need to identify the status of genetic diversity of cultivated plants, domesticated animals and their wild relatives; assess the distribution, condition and current threat and protection status of wild crop and domesticated animal relatives. They also need to take actions, such as develop seed banks, increase protection and decrease threats to wild crop relatives; promote diversified agriculture; and implement legislation, policies and plans that safeguard genetic diversity and avoid genetic erosion.

**By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.**

### Achieving ABT 13: Key Challenges

Actions to safeguard genetic diversity are critical to building resilient agricultural systems that can adapt to a changing climate. GBO-4 states "Maintaining genetic diversity requires conservation of the many varieties of cultivated plants and breeds of domesticated livestock bred by farmers over thousands of years and of the wild relatives of crops whose traits may be essential for future plant breeding and thereby underpin food security." While a number of Parties are increasing actions to curate *ex situ* genetic resource collections, with a primary focus on cultivated plants, many more efforts are required. Key challenges for achieving ABT 13 include: a) there is a trend toward genetic reduction and simplification of genetic diversity of food stocks – just 3 species (wheat, rice and maize) provide 50% of global caloric intake, and the genetic diversity of these staples has been greatly reduced; b) post-2010 NBSAP actions infrequently focus on cultivating genetic diversity for climate resilience; c) wild crop relatives are increasingly threatened, generally not geospatially mapped, and few NBSAPs include actions to target their protection; and d) ex-situ actions for genetic diversity are limited, as are actions to strengthen in-situ diverse farming practices to foster genetic diversity.

Measures that can accelerate the achievement of ABT 13, including those stated in GBO-4, are: a) promote policies and incentives that maintain local crop varieties and indigenous breeds; b) recognize the role of indigenous and local communities and farmers in maintaining genetic diversity; c) use and maintain genetic diversity in plant and animal breeding programs; d) raise awareness about the

contribution of genetic diversity to food security; e) ensure PA management plans include provisions for conserving wild relatives of domestic crops and livestock, and consider this information when developing PA expansion plans; f) increase support for national and international ex situ conservation; g) promote incentives to maintain varieties of crops, indigenous breeds, socio-cultural farming practices and systems; and h) develop geospatial maps of areas important for conserving genetic diversity.

Linkages between the UN Sustainable Development Goals and ABT 13

The ability of Parties to maintain the genetic diversity of plans and animals is emphasized in SDG 2 and 3. The linkages between ABT 13 and the SDGS are listed in Table 13a.

**Table 13a. Linkages between ABT 13 and the UN SDGs**

| | |
|---|---|
| SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture | • 2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.<br>• 2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.<br>• 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed. |
| SDG 3: Ensure healthy lives and promote well-being for all at all ages | • 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. |

Assessing National Contributions to Achieving ABT 13

The information presented in the 6NR on ABT 13 should focus on changes to genetic diversity and associated actions and outcomes since the Strategic Plan for Biodiversity 2011- 2020 was adopted, with a particular emphasis on the changes that have occurred since the last national report was submitted. This section of the 6NR should focus on assessing if the genetic diversity of cultivated plants, of farmed and domesticated animals, and of wild relatives is being maintained. Parties should also consider if they are maintaining the genetic diversity of socio-economic and culturally valuable species, and if measures are being developed and implemented to minimize genetic erosion and safeguarding genetic diversity. The resulting status and trends should be reported, including the genetic diversity of cultivated plants, farmed and domesticated animals and their wild relatives; the threats and protection levels of these species; and the policies that safeguard genetic diversity and reduce genetic erosion. Parties are encouraged to refer to the FAO Global Plans of Action for plant and animal genetic resources, which includes guidance for developing strategies and actions related to ABT 13.
When developing reporting information on measures to achieve ABT 13 or equivalent national targets, we encourage you to consider the key questions in Table 13b.

| Table 13b. Key Questions to Consider to Address Progress to Achieve ABT 13. |
|---|
| • To what extent is the genetic diversity of cultivated plants being maintained, how and for which species? |
| • To what extent is the genetic diversity of farmed and domesticated animals being maintained, how and for which species? |
| • To what extent is the genetic diversity of wild relatives being maintained, how and for which species? |
| • To what extent is the genetic diversity of socio-economically as well as culturally valuable species being maintained, how and for which species? |
| • What strategies have you developed and/or implemented for minimizing genetic erosion and safeguarding genetic diversity? |
| • What actions are being taken to safeguard the genetic diversity of species of cultivated plants and farmed and domesticated animals, their wild relatives and socio-economically or culturally valuable species? |
| • Are species being maintained in situ or ex situ, and which ones? |
| • Have plans to safeguard genetic diversity been developed and which groups are involved? |
| • What species management plans or strategies are in place to maintain genetic diversity in situ and ex situ? |

Potential Indicators and Data Sources for Reporting on ABT 13

When assessing the progress that your country is making to achieve ABT 13 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to achieving targets related to the maintenance of genetic diversity. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 13 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 13 are listed in Table 13c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| Table 13c. Potential Indicators and Data Sources for Reporting on ABT 13 |
|---|
| • Spatial data overlay /Other informative spatial data may include:<br>o Maps of protected areas, maps of distributions of crop wild relatives, maps of areas important for socio-cultural farming practices that maintain crop and livestock genetic diversity |
| • Relevant global data sources include:<br>o FAO's Global Databank for Animal Genetic Resources, the Domestic Animal Diversity Information System (DAD-IS) (http://dad.fao.org)<br>o FAO's State of the World's Forest Genetic Resources (http://www.fao.org/forestry/fgr/64582/en) |
| • The extent to which the genetic diversity of cultivated plants is being maintained. |
| • The extent to which the genetic diversity of farmed and domesticated animals is being maintained. |
| • The extent to which the genetic diversity of wild relatives is being maintained. |
| • The extent to which the genetic diversity of socio-economically as well as culturally valuable |

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| species is being maintained. |
| • The extent to which strategies have been developed and implemented for minimizing genetic erosion and safeguarding genetic diversity. |
| • The distribution, conservation, and sustainable use of genetic diversity, including of cultivated plants, farmed and domesticated animals, and wild crop relatives is identified and mapped, and opportunities for incorporating these into protected area and sustainable use plans are identified. |
| • The effectiveness of NBSAP strategies and actions for ensuring fair and equitable sharing of benefits arising from the utilization of biodiversity, including genetic resources. |
| • Trends in genetic diversity of cultivated plants:<br>o Ex-situ crop collections enrichment index (proposed indicator for SDG target 2.5) - FAO<br>o Number of plant and animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities (indicator for SDG target 2.5) – FAO<br>o Number of plant genetic resource for food and agriculture surveyed/inventoried – FAO<br>o Percentage of plant genetic resources for food and agriculture threatened out of those surveyed/inventoried – FAO<br>o Number of Standard Material Transfer Agreements, as communicated to the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture – FAO |
| • Trends in genetic diversity of farmed and domesticated animals (SDG 2.5):<br>o Proportion of local breeds, classified as being at risk, not-at-risk or unknown level of risk of extinction (indicator for SDG target 2.5) – FAO<br>o BIP (https://www.bipindicators.net/indicators/proportion-of-local-breeds) |
| • Trends in extinction risk and populations of wild relatives:<br>o Red List Index (wild relatives) - IUCN, BirdLife International and other Red List Partners<br>o Species Habitat Index (wild relatives) - GEO BON-Map of Life |
| • Trends in protected area coverage of wild relatives:<br>o Species Protection Index (wild relatives) - GEO BON-Map of Life |
| • Trends in genetic diversity of socio-economically as well as culturally valuable species. |
| • Trends in development and implementation of strategies for minimizing genetic erosion and safeguarding genetic diversity:<br>o Level of implementation of global plan of actions on genetic resources for food and agriculture - Commission on Genetic Resources for Food and Agriculture (FAO)<br>o Number of measures to support the contribution of traditional knowledge and practices to safeguarding agricultural diversity, including the contribution of women to agricultural systems<br>o Number of food security and agricultural plans that include provisions to enhance genetic diversity, traditional knowledge and women's contributions<br>o Trends in safeguarding ecosystems that provide essential services<br>o Wetland extent – WCMC<br>o BIP (https://www.bipindicators.net/indicators/wetland-extent-trends-index) |

Multilateral Environmental Agreement Reports that Contain Data on ABT 13

There are linkages between ABT 13 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 13d lists the potential data sources for ABT 13 that can be found within other MEA national reports.

**Table 13d. National Reports from MEAs with relevant data for ABT 13**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| Convention on Migratory Species | Review national report related to Target 12 (Genetic diversity of wild populations) of the CMS Strategic Plan 2015-2023. |
| ITPGRFA | Review national report of the ITPGRFA, namely Questions 5 (PGRFA inventory),6 (Threats to PGRFA), 7 (Collection), 9 (in-situ conservation), 11 (ex-situ conservation), 22 (Access to PGRFA) and 23. |
| Ramsar Convention | Ramsar Information Sheets (RIS), Question 3.2 (Plant species). Review the reporting format to the Ramsar COP-12 and responses to questions on Target 11 (Wetland functions, services and benefits) of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Periodic Report, Section 2, Questions 3 (Factors affecting property) and 3.5 (Biological resource use/modification). |
| FAO State of the World's Biodiversity for Food and Agriculture | Refer to Questions 11 and 19. |
| FAO State of the World's Animal Genetic Resources for Food and Agriculture (2nd) | Several parts of this document might be relevant, in particular Questions 3 and 3.5 under Section 2. |
| FAO State of the World's Aquatic Genetic Resources for Food and Agriculture | Refer to Chapter 1, 2, 3, 4, and 6, which might be relevant. |
| The FAO State of the World's Plant Genetic Resources for Food and Agriculture (3rd) | Refer to Chapter 1, 2, 3 and 4, which might be relevant. |

## Aichi Biodiversity Target 14: Ecosystem services


ABT 14 – ecosystem services – focuses on restoring and safeguarding critical ecosystem services. ABT 14 states: "By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable." Ecosystems provide a wide range of goods and services that are essential to humans. These include food, fiber, medicines, fresh water, crop pollination, pollution control, sustainable livelihoods and natural disaster prevention, among many others. Ecosystem services are particularly important for vulnerable sectors of society, who depend disproportionately on them for their wellbeing. However, many ecosystems around the world have become degraded, and are in urgent need of threat mitigation, protection and/or restoration. In order to achieve ABT 14, countries need to identify the distribution and condition of critical ecosystems and assess the current levels of threat and protection of these ecosystems. They also need to develop and implement key actions, including reducing key threats, increasing protection, changing management practices, and restoring degraded ecosystems.

**By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities and the poor and vulnerable.**

### Achieving ABT 14: Key Challenges

Nature provides critical services that directly improve human well-being. For example, oceans provide food, recreation opportunities, protect coastlines and human settlements, and store carbon. The ability of natural habitats to provide these key ecosystem services is continuing to decline, due to their loss and degradation, and compounded by stresses from climate change. Current challenges include: a) few Parties are setting explicit national targets to achieve ABT 14; b) in their national reports and NBSAPS, Parties do not commonly focus on the needs and contributions of women, indigenous and local communities and the poor and vulnerable; c) the loss of ecosystems that provide critical services is increasing, e.g. we have lost 30% of mangroves globally; d) Parties infrequently include post-2010 NBSAP actions that focus on safeguarding the ecosystems that provide water security, fisheries habitat, livelihoods, pollination, carbon sequestration, pollution abatement, tourism revenue, and disaster risk reduction; e) ecosystems services are generally not geospatially mapped, nor are their values; and f) there are very few financial mechanisms or other incentives in place to promote the long-term security of essential ecosystems.

Measures that can accelerate the achievement of ABT 14, including those from GBO-4, are: a) identify the ecosystems that provide the country's most important ecosystem service using integrated assessment approaches and participatory appraisal methods; b) protect ecosystems that vulnerable groups depend on for their health, nutrition, well-being and livelihoods; c) protect ecosystems that reduce risks from disasters; d) monitor the status of ecosystems that provide important ecosystem services; e) remove perverse infrastructure subsidies that destroy, fragment or degrade ecosystems; f) prioritize the protection and restoration of ecosystems; g) prioritize the sustainable use and mainstreaming of ecosystems that provide essential services; h) utilize the traditional knowledge held by

indigenous and local communities about ecosystems, processes and uses; i) promote the customary sustainable use of ecosystems by indigenous and local communities; j) develop geospatial maps and analyses of essential ecosystem services and their economic and social values; k) emphasize a stronger integration of ecosystem services into national development plans; l) promote new markets for financial mechanisms for ecosystem services, such as insurance schemes and green bonds; and m) link ecosystem services to SDG implementation and reporting.

Linkages Between the UN Sustainable Development Goals and ABT 14

The ability of Parties to restore and safeguard critical ecosystem services underpins the success of several SDGS and is emphasized in multiple targets. However, SDG references to the considerations of indigenous peoples and local communities focus on their economic livelihood and receiving education and only tangentially cover the economic contributions of ecosystem function to their well-being. The SDGS most related to achievement of ABT 14 are listed in Table 14a.

**Table 14a. Linkages between ABT 14 and the UN SDGs**

| | |
|---|---|
| SDG 1: End poverty in all of its forms everywhere | • 1.5. By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate- related extreme events and other economic, social and environmental shocks and disasters. |
| SDG 3: Ensure healthy lives and promote well-being for all at all ages | • 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. |
| SDG 5: Achieve gender equality and empower all women and girls | • 5.1 End all forms of discrimination against all women and girls everywhere<br>• 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life. |
| SDG 6: Ensure the availability and sustainable management of water and sanitation for all | • 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.<br>• 6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.<br>• 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes. |
| SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all | • 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services.<br>• 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.7.1 By 2030, ensure universal access to affordable, reliable and modern energy services. |
| SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. | • 8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead.<br>• 8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products. |
| SDG 9: Build resilient | • 9.1 Develop quality, reliable, sustainable and resilient infrastructure, |

| | |
|---|---|
| infrastructure, promote inclusive and sustainable industrialization and foster innovation | including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.<br>• 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities. |
| SDG 13: Take urgent action to combat climate change and its impacts | • 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. |
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.7 By 2030, increase the economic benefits to small island developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism. |
| SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss | • 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts. |

Assessing National Contributions to Achieving ABT 14

The information presented in the 6NR on ABT 14 should focus on actions and outcomes on essential ecosystem services since the Strategic Plan for Biodiversity 2011- 2020 was adopted, with a particular emphasis on the changes that have occurred since the last national report was submitted. This section of the 6NR should focus on assessing if ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, while taking into account the needs of women, indigenous and local communities, and the poor and vulnerable. The resulting status and trends should be reported, including the condition and protection status of key ecosystems, and the flows of ecosystems services from key ecosystems.

Parties are additionally encouraged to consider Decision XII/5 (Biodiversity for poverty eradication and sustainable development). Paragraph 3 encourages Parties to integrate biodiversity and nature's benefits to people, including ecosystem services and functions, into poverty eradication and development strategies, initiatives and processes at all levels, and vice versa, to integrate poverty eradication and development concerns and priorities into NBSAPs and other appropriate plans, policies and programmes for the implementation of the Strategic Plan for Biodiversity 2011-2020 and the achievement of the ABTs. It also encourages Parties to monitor, evaluate and report on these integration efforts, through appropriate indicators and tools, and include this information in NRs

When developing reporting information on measures to achieve ABT 14 or equivalent national targets, we encourage you to consider the key questions in Table 14b.

| Table 14b. Key Questions to Consider to Address Progress to Achieve ABT 14 |
|---|
| • What are the ecosystem types in your country and have you mapped them? |
| • How do ecosystems contribute to human wellbeing in your country and have you mapped those values? |
| • To what extent are ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well being, wellbeing restored and safeguarded? |
| • To what extent to do measures to protect and restore ecosystems account for the needs of women, indigenous and local communities, and the poor and vulnerable? |
| • What is the condition of important ecosystems in your country? What data did you use for this assessment? |
| • What percentage of each ecosystem is conserved through PAs or other effective means? |
| • Which ecosystems are degrading the fastest? |
| • Which ecosystems are improving? |
| • How is the condition of the ecosystems that provide important ecosystems services changing? |
| • How are the pressures on ecosystems that provide important ecosystem services changing? |
| • Which ecosystems are at risk of passing tipping points if they are further degraded? What measures are in place to address these risks? |
| • Which ecosystems need restoration and are these locations mapped? What measures are in place to address these needs? |
| • Which ecosystems need safeguarding and are these locations mapped? What measures are in place to address these needs? |
| • What are the main pressures on the ecosystems that provide services essential for human wellbeing? |
| • Which ecosystems are particularly important for the wellbeing of women, indigenous peoples and local communities, and the poor and vulnerable? |
| • How are the needs, of women, indigenous people and local communities and the poor and vulnerable being taken into account in ecosystem management? |
| • Where are the most important opportunities to protect and restore ecosystems in order to sustain essential ecosystem services, including water, health, livelihoods and well-being, especially for women, indigenous and local communities, and the poor and vulnerable? |
| • What financial mechanisms are in place to maintain essential ecosystem services? |

Potential Indicators and Data Sources for Reporting on ABT 14

When assessing the progress that your country is making to achieve ABT 14 and equivalent national targets, clearly reference the results of analyses regarding the effectiveness of measures to restore and safeguard essential ecosystem services. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 14 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 4 are listed in Table 14c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| Table 14c. Potential Indicators and Data Sources for Reporting on ABT 14 |
|---|
| • Spatial data overlay of protected areas; key biodiversity areas; human footprint; habitat intactness; population and poverty; and essential ecosystem services data layers. Other informative spatial data may include:<br>  o Protected and other conserved areas<br>  o Key biodiversity areas<br>  o Habitat intactness<br>  o Population and poverty<br>  o Essential ecosystem services |
| • Relevant global data sources include:<br>  o Ocean Health Index (http://www.oceanhealthindex.org)<br>  o World Resources Institute's Aqueduct Projected Water Stress data and rankings (http://www.wri.org/resources/data-sets/aqueduct-projected-water-stress-country-rankings) |
| • The extent to which ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded. |
| • The extent to which the protection and restoration of ecosystems takes into account the needs of women, indigenous and local communities, and the poor and vulnerable. |
| • Ecosystems providing essential ecosystem services, such as water, food, livelihoods, disaster risk reduction, and the extent of their ecological integrity, threat and protection, are identified and mapped. |
| • Changes in the stocks and flows of essential ecosystem services are identified, and opportunities for integrating these into national accounting, national plans and national decision- making frameworks. |
| • The effectiveness of NBSAP strategies and actions for strengthening land use planning and spatial planning to identify specific areas for economic growth, and for sustainable use and conservation of biodiversity, and to account for essential ecosystems. |
| • The effectiveness of NBSAP strategies and actions for restoring and safeguarding key ecosystems that provide key ecosystem services, particularly food security, water security, carbon sequestration, livelihoods and disaster risk reduction. |
| • The effectiveness of NBSAP strategies and actions for strengthening PA management effectiveness and capacity, including both the ability to manage against multiple threats to ecosystem services, as well as a multiple benefits, for all PA types. |
| • Trends in safeguarded ecosystems that provide essential services:<br>  o Wetland extent – WCMC<br>  o BIP (https://www.bipindicators.net/indicators/wetland-extent-trends-index) |
| • Trends in extinction risk and populations of species that provide essential services:<br>  o Red List Index (species used for food and medicine; pollinating species) - IUCN/ BirdLife International<br>  o Living Planet Index (utilized species) - WWF/ZSL<br>  o Species Habitat Index (species that provide essential services) - GEO BON-Map of Life<br>  o BIP (https://www.bipindicators.net/indicators/red-list-index/red-list-index-rli-for-pollinator-species) and (https://www.bipindicators.net/indicators/red-list-index/red-list-index-species-used-for-food-and-medicine) |
| • Trends in benefits from ecosystem services: |

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| ○ Wellbeing indicator for the environment - OECD<br>○ Better Life Index – OECD<br>○ Mountain Green Cover Index (indicator for SDG target 15.4) – FAO<br>○ Coverage by PAs of important sites for mountain biodiversity (indicator for SDG target 15.4)<br>○ Ocean Health Index (http://www.oceanhealthindex.org)<br>○ Percentage of change in wetlands extent over time<br>○ Percentage of water bodies with good ambient water quality<br>○ Percentage of people with ownership or secure rights over agricultural land (out of total agricultural population), by sex and by identity as indigenous peoples or local communities<br>○ Share of women among owners or rights-bearers of agricultural land", by type of tenure<br>○ BIP (https://www.bipindicators.net/indicators/ocean-health-index) |
| • Trends in restoration of ecosystems that provide essential services. |
| • Trends in the degree to which ecosystem services provides for the needs of women, indigenous and local communities, and the poor and vulnerable:<br>○ Inadequate access to food - prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES) – FAO<br>○ Percentage of population using safely managed drinking water services (indicator for SDG target 6.1) – WHO/UNICEF<br>○ Number of land use/ecosystem management plans that include consideration of customary tenure rights, traditional knowledge and/or inclusion of women |

Multilateral Environmental Agreement Reports that Contain Data on ABT 14

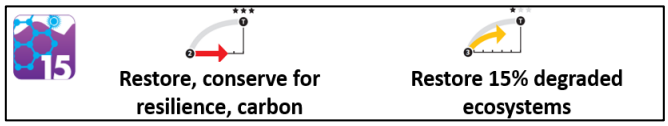
There are linkages between ABT 14 and the national reports of other MEAs. We encourage you to make use of information from reports that your country provided to different biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 14d lists the potential data sources for ABT 14 that can be found within other MEA national reports.

**Table 14d. National Reports from MEAs with relevant data for ABT 14**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| CITES | Review implementation report, specifically Question 1.5.3b (Export quotas). |
| Convention on Migratory Species | Review national report related to Target 11 (Provision of ecosystem services) of the CMS Strategic Plan 2015-2023. |
| ITPGRFA | Review national report of the ITPGRFA, namely Questions 19 (Farmers rights). |

| | |
|---|---|
| Ramsar Convention | Ramsar Information Sheets (RIS), Questions 2.2.5 (Biogeography), 3.1 (Criteria and justification), 4.5 (Ecosystem services) and 5.2 (Ecological character)<br>Review the reporting format to the Ramsar COP-12 and responses to questions on Target 8 'Wetlands inventories', Target 11 (Wetlands functions, services and benefits) and Target 12 (Restoration) of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Review the Periodic Report, Section 2, Questions 3 (Factors affecting property), 3.5 (Biological resource use/modification), 3.8 (Social/cultural use of heritage) and 4.4.5 (Economic benefits). |
| FAO State of the World's Biodiversity for Food and Agriculture | Refer to Questions 16, 17, 18, 19, 52, 54, 80 and 97. |
| FAO State of the World's Animal Genetic Resources for Food and Agriculture (2nd) | Refer to Part 3, which might be relevant. |
| FAO State of the World's Aquatic Genetic Resources for Food and Agriculture | Refer to Chapter 1, 2, 3, and 4, which might be relevant. |
| The FAO State of the World's Plant Genetic Resources for Food and Agriculture (3rd) | Refer to Chapter 1, 2, 3 and 4, which might be relevant. |

## Aichi Biodiversity Target 15: Climate resilience




ABT 15 – climate resilience – focuses on strengthening climate resilience and carbon sequestration through ecosystem restoration. ABT 15 states: "By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least fifteen percent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation, and to combating desertification." Deforestation, wetland drainage, mangrove removal, seagrass bed damage, overgrazing of grasslands and other types of habitat degradation lead to increased emissions of carbon dioxide, methane and other greenhouse gases, and to increased vulnerability to the impacts of climate change. Restoring degraded ecosystems can simultaneously increase carbon sequestration, improve climate resilience, and restore essential ecosystem services and safeguard biodiversity. In order to achieve ABT 15, Parties need to assess the distribution and status of key degraded ecosystems; understand the role of these ecosystems in enhancing climate resilience and sequestering carbon and identify and prioritize key areas for restoration. They also need to undertake key restoration actions, including restoring natural disturbance regimes, controlling harmful invasive species, managing over-abundant species, recreating native communities, reintroducing species and improving the abiotic environment, among others.

**By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.**

Achieving ABT 15: Key Challenges

Ecosystem restoration is one of the most effective measures that Parties can take to reverse habitat loss, fragmentation and degradation, and improve climate resilience. To improve resilience, many Parties have set national targets focused on the restoration of degraded lands and are undertaking efforts to restore wetlands, forests and abandoned farmlands. Trends suggest this target may be met by 2020, but that there is still a net loss of forests, a major global carbon stock. Major challenges include: a) only two percent of climate finance is targeted at nature-based climate solutions; b) only eight percent of Nationally Determined Commitments have measurable nature-based actions; c) post-2010 NBSAP generally do not include actions to identify areas and opportunities for restoration, either in narrative format or spatially referenced maps; d) NBSAPs and national reports rarely make reference to or map carbon stocks; e) NBSAPs generally do not identify areas important for climate-related drought prevention, flood prevention, fire prevention or species adaptation to climate.

Measures that can accelerate the achievement of ABT 15, including from GBO-4, are: a) implement land use mapping and planning approaches that result in the protection and restoration of native vegetation on vulnerable sites, increase ecological connectivity, and designate areas for native vegetation; b) identify restoration opportunities and priorities for highly degraded ecosystems, areas that provide essential ecosystem services, that are critical to ecological connectivity, and areas abandoned by agricultural or other human-dominated use; c) maintain sustainable land uses by indigenous and local communities; d) implement environmental permitting procedures and market

instruments that restore ecosystems; e) implement state or private sponsored passive and active afforestation programmes to increase biodiversity contribution to carbon sequestration; f) combine income generation and restoration activities to make restoration an economically viable activity; g) develop integrated landscape management approaches with stakeholders that promote large-scale restoration while also meeting the socioeconomic needs of local communities; h) use existing commitments to related initiatives to push for action on commitments; i) accelerate comprehensive land use planning; j) identify and geospatially map opportunities for restoration; k) identify investments and insurance opportunities for restoration; and l) emphasize restoration efforts in tropical forests that are becoming carbon sources.

Linkages Between the UN Sustainable Development Goals and ABT 15

Meeting national and global resilience targets also contributes to the achievement of several SDGS. Yet, the role of ecosystems as carbon sinks is absent in the SDGs, as is the 15% target on restoring degraded ecosystems. The SDGS most related to achievement of ABT 15 are listed in Table 15a.

| Table 15a. Linkages between ABT 15 and the UN SDGs | |
|---|---|
| SDG 6: Ensure the availability and sustainable management of water and sanitation for all | • 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.<br>• 6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.<br>• 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes. |
| SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation | • 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.<br>• 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities. |
| SDG 10: Reduce inequality within and among countries | • 10.1 By 2030, progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average.<br>• 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status. |
| SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable | • 11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations. |
| SDG 13: Take urgent action to combat climate change and its impacts | • 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.<br>• 13.2 Integrate climate change measures into national policies, strategies and planning. |

| | |
|---|---|
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans. |
| SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss | • 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.<br>• 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.<br>• 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.<br>• 15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development. |

Assessing National Contributions to Achieving ABT 15

The information presented in the 6NR on ABT 15 should focus on changes in the status of actions and outcomes on ecosystem resilience and restoration since the Strategic Plan for Biodiversity 2011- 2020 was adopted, with a particular emphasis on the changes that have occurred since the last national report was submitted. This section of the 6NR should focus on assessing ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced through conservation and restoration. Parties should also determine if they can meet the target of restoring at least 15% of degraded ecosystems. The resulting status and trends should be reported, including the conditions of key degraded ecosystems, and trends in the scope and extent of restoration efforts.

Parties are additionally encouraged to include information related to the following COP decisions:

- Decision XIII/5 (Ecosystem restoration: short-term action plan). Paragraph 6 invites Parties to provide, on a voluntary basis, information on their activities and results from the implementation of the action plan, and requests the Executive Secretary to compile the submissions and make them available through the clearing-house mechanism.
- Decision XI/19 (Biodiversity and climate change related issues). Provides advice on the application of relevant biodiversity safeguards with regard to policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.
- Decision XI/19. Paragraph 11 invites Parties, other Governments, and relevant organizations to consider the information in the annex to this decision when preparing national reports and other submissions on progress towards the ABT of the Strategic Plan for Biodiversity 2011–2020, and, where applicable, for other relevant submissions under other processes;

When developing reporting information on measures to achieve ABT 15 or equivalent national targets, we encourage you to consider the key questions in Table 15b.

| Table 15b. Key Questions to Consider to Address Progress to Achieve ABT 15 |
|---|
| • To what extent are ecosystem resilience and the contribution of biodiversity to carbon stocks being enhanced through conservation and restoration? |
| • To what extent are at least 15% of degraded ecosystems restored, contributing to climate change mitigation and adaptation, and to combating desertification? |
| • How is the extent of degraded habitat changed since the country adopted the Strategic Plan for Biodiversity 2011-2020? |
| • What areas and/or how much habitat have been restored per ecosystem type, and are these areas mapped? |
| • Are any of the restored areas important for carbon sequestration? To what extent have these been mapped spatially? |
| • What types of restoration activities are being used and how effective are they? |
| • How are the social, economic and environmental objectives and the engagement of all relevant actors, including indigenous peoples and local communities, and women, being accounted for? |
| • How are restoration activities affecting ecosystem resilience? |

Potential Indicators and Data Sources for Reporting on ABT 15

When assessing the progress that your country is making to achieve ABT 3 and equivalent national targets, Parties should clearly reference the results of analyses regarding current status and trends related to achieving targets for climate resilience. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 15 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 15 are listed in Table 15c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| Table 15c. Potential Indicators and Data Sources for Reporting on ABT 15 |
|---|
| • Informative spatial data may include:<br>o Protected and other conserved areas<br>o Key biodiversity areas<br>o Habitat intactness<br>o Population and poverty<br>o Essential ecosystem services |
| • Relevant global data sources include:<br>o CBD Secretariat has prepared data dossiers using information from various sources. These dossiers can be accessed from https://www.cbd.int/restoration)<br>o Bonn Challenge website (http://www.bonnchallenge.org)<br>o World Resources Institute's Atlas of Forest and Landscape Restoration Opportunities (https://goo.gl/sPdeu5) |
| • The extent to which ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced through conservation and restoration. |
| • The extent to which At least 15 per cent of degraded ecosystems are restored, contributing to climate change mitigation and adaptation, and to combating desertification. |

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|---|
| • Ecosystems providing essential ecosystem services, such as water, food, livelihoods, disaster risk reduction, and the extent of their ecological integrity, threat and protection, are identified and mapped. |
| • The effectiveness of NBSAP strategies and actions for preventing extinctions, and improving the conservation status of key species, including those species vulnerable to climate change impacts. |
| • The effectiveness of NBSAP strategies and actions for strengthening the resilience of vulnerable ecosystems to climate change impacts, including coral reefs, grasslands, coastal areas, montane areas, among others through restoration and other means. |
| • The effectiveness of NBSAP strategies and actions for restoring and safeguarding key ecosystems that provide key ecosystem services, particularly food security, water security, carbon sequestration, livelihoods and disaster risk reduction. |
| • Trends in ecosystem resilience. |
| • Trends in carbon stocks within ecosystems:<br>o Trends in forest carbon stocks – FAO/GFW<br>o Trends in carbon sequestration rate or avoided emissions<br>o Carbon sequestration/avoided emissions plans include measures for customary tenure rights and social safeguards, including the right to free, prior and informed consent |
| • Trends in proportion of degraded ecosystems restored:<br>o Trends in land degradation (proposed indicator for SDG target 15.3) - UNCCD<br>o Global Ecosystem Restoration Index - GEO BON-iDiv<br>o Ecosystem restoration plans that include measures for customary tenure rights and the integration of traditional knowledge |

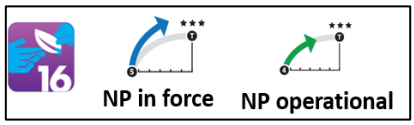
Multilateral Environmental Agreement Reports that Contain Data on ABT 15

There are linkages between ABT 15 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 15d lists the potential data sources for ABT 15 that can be found within other MEA national reports.

**Table 15d. National Reports from MEAs with relevant datafor ABT 15**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| CITES | Review implementation report, in particular Question 1.6.2a (Population management) and 3.1.2a (Assistance). |
| Convention on Migratory Species (CMS) | Review national report related to Target 11 (Provision of ecosystem services) of the CMS Strategic Plan 2015-2023. |
| Ramsar Convention | Review the reporting format to the Ramsar COP-12 and responses to questions on Target 12 (Restoration) of the Ramsar Strategic Plan 2016-2024. |
| FAO State of the World's Biodiversity for Food and Agriculture | Refer to Questions 52, 54, 58 and 59. |

## Aichi Biodiversity Target 16: Nagoya Protocol on Access and Benefit-sharing




ABT 16 – Access and Benefits Sharing – focuses on the Nagoya Protocol and equitable sharing of the benefits of biodiversity. ABT 16 states: "By 2015, the "Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization" (the Nagoya Protocol) is in force and operational, consistent with national legislation. The fair and equitable sharing of the benefits, arising out of the utilization of genetic resources of biodiversity, is one of the three objectives of the Convention on Biological Diversity. The COP to the CBD adopted the Nagoya Protocol at its tenth meeting in Nagoya, Japan. The Nagoya Protocol provides a transparent legal framework for the effective implementation of fair and equitable benefits sharing of genetic resources. In order to achieve this target, countries need to assess the opportunities and constraints involved in ratifying the Nagoya Protocol; understand the legislative, administrative and policy measures that will need to be in place to meet the obligations of the Nagoya Protocol, and implement these measures.

**By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.**

### Achieving ABT 16: Key Challenges

When GBO-4 was published, 51 Parties had ratified the Nagoya Protocol and many were taking early action to achieve its principles. However, few NBSAP actions focused on access, bioprospecting and genetic resources.

Measures that can accelerate the achievement of ABT 16, including those identified in GBO-4, are: a) deposit national instruments of ratification, acceptance, approval or accession to the Nagoya Protocol to ensure full participation in the Protocol; b) implement the Nagoya Protocol by enacting legislative, administrative or policy measures and institutional structures; c) use the ABS Clearing-House to make national information available; and d) implement awareness raising and capacity building activities and ensure they engage indigenous and local communities and the private sector.

### Linkages Between the UN Sustainable Development Goals and ABT 16

The ability of Parties to meet national and global targets related to the fair and equitable sharing of the benefits arising out of the utilization of genetic resources related to SDG 3, 8 and 15. These SDGS are described in Table 16a.

| Table 16a. Linkages between ABT 16 and the UN SDGs | |
|---|---|
| SDG 3: Ensure healthy lives and promote well-being for all at all ages | • 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. |
| SDG 8: Promote sustained, inclusive and sustainable economic growth, full and | • 8.4 Improve, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of |

| | |
|---|---|
| productive employment and decent work for all | programmes on sustainable consumption and production, with developed countries taking the lead. |
| SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss | • 15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed. |

Assessing Your National Contribution to Achieving ABT 16

The information presented in the 6NR on ABT 16 should focus on action related to the Nagoya Protocol taken since the Strategic Plan for Biodiversity 2011- 2020 was adopted, with a particular emphasis on the changes that have occurred since the last national report was submitted. This section of the 6NR should focus on the Nagoya Protocol being in force and operation, consistent with national legislation. The resulting status and trends should be reported, including the number of Parties to the CBD that have ratified the Nagoya Protocol. Parties should also report the steps they have taken to implement the Nagoya Protocol, including efforts to define mutually agreed terms, identify benefit sharing agreements, establish a prior informed consent process for sharing traditional knowledge, and assess the current status of key species involved in any ABS agreements.

When developing reporting information on measures to achieve ABT 16 or equivalent national targets, we encourage you to consider the key questions in Table 16b.

| **Table 16b. Key Questions to Consider to Address Progress to Achieve ABT 16** |
|---|
| • If your country has ratified or acceded to the Protocol, to what extent is it in force, and what is being done to make it operational nationally? |
| • If your country has not ratified or acceded to the Protocol, what actions are being taken to do so? |
| • To what extent is the Nagoya Protocol operational, consistent with national legislation? |
| • Has your country put institutional structures in place to implement the Protocol (national focal point, competent national authority(ies) and checkpoint(s))? |
| • Has your country put in place the ABS legislative, administrative or policy measures required to meet the obligations set out under the Protocol? |
| • If not, is your country currently reviewing or developing ABS measures or planning to do so with a view to implementing the Protocol? |

Potential Indicators and Data Sources for Reporting on ABT 16

When assessing the progress that your country is making to achieve ABT 16 and equivalent national targets, Parties should clearly reference the results of analyses regarding current status and trends related to achieving this target. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 16 in your country. Based on the guidance in COP

Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 16 are listed in Table 16c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

Parties are additionally encouraged to include information related to the following COP decisions:

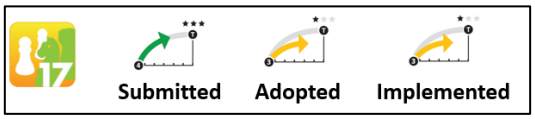
- In decision NP-1/3, paragraph 4, Parties to the Nagoya Protocol are requested to submit an interim national report on the implementation of their obligations under the Nagoya Protocol 12 months prior to the third meeting of the COP-MOP (November 2017). In the same decision, COP-MOP also welcomed submissions of relevant information by non-Parties.
- Information that your country has published in the Access and Benefit-sharing Clearing-House, including the interim national report. Assess it here: https://absch.cbd.int/countries.
- If your country has completed its interim national report, include a link to it. There is no need to repeat information in the 6NR that is included in the interim national report on the implementation of obligations under the Nagoya Protocol.
- If your country has not (yet) completed an interim national report on the implementation of its obligations under the Nagoya Protocol, consider doing so during this reporting period.

| **Table 16c. Potential Indicators and Data Sources for Reporting on ABT 16** |
|---|
| • Relevant global data sources include:<br>  o If your country published relevant information in the Access and Benefit-sharing Clearing-House, including the interim national report, is accessible (https://absch.cbd.int/countries) |
| • The extent to which the Nagoya Protocol is in force. |
| • The extent to which the Nagoya Protocol is operational, consistent with national legislation. |
| • The extent to which key laws, policies, subsidies and incentives that facilitate and/or inhibit sustainable use, conservation and equitable benefits sharing are assessed. |
| • The extent to which key institutions, institutional structures and institutional capacities that facilitate and/or inhibit sustainable use, conservation and equitable benefits sharing have been identified and assessed. |
| • The effectiveness of NBSAP strategies and actions for ensuring fair and equitable sharing of benefits arising from the utilization of biodiversity, including genetic resources. |
| • The extent to which the Nagoya Protocol is in force. |
| • Trends in the implementation of the Nagoya Protocol:<br>  o Number of consultations with IPLCs towards the implementation of the Nagoya Protocol<br>  o Number of policies, measures and/or initiatives to promote free, prior and informed consent and benefit sharing with indigenous and local communities<br>  o Numbers of Parties to the Convention on Biological Diversity (CBD) that have deposited the instrument of ratification, acceptance, approval or accession of the Nagoya Protocol (https://www.bipindicators.net/indicators/number-of-parties-to-the-cbd-that-have-deposited-the-instrument-of-ratification-acceptance-approval-or-accession-of-the-nagoya-protocol) |

Multilateral Environmental Agreement Reports that Contain Data on ABT 16

There are linkages between ABT 16 and the national reports of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRA) and interim report submitted to the Nagoya Protocol. We encourage you to check and make use of information of a recent report that your country might have provided.

## Aichi Biodiversity Target 17: National biodiversity strategies and action plans




Aichi Biodiversity Target 17 – NBSAPs – focuses on the development and implementation of National Biodiversity Strategies and Action Plans (NBSAPs). ABT 17 states: "By 2015, each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan." NBSAPs are the key instrument for translating the Convention on Biological Diversity into national action. Article 6 of the Convention requires countries to prepare a national biodiversity strategy that reflects how a country intends to fulfill the objectives of the Convention. Although most countries have developed an NBSAP, many of these are outdated, and few fully address the Aichi Biodiversity Targets. The process of revising an NBSAP should involve all relevant stakeholders, should be a dynamic process that allows countries to identify priorities and establish plans that are consistent with their broader national goals, and should be fully incorporated into national sectoral and development plans and strategies. In order to achieve this target, countries need to assess how well their existing NBSAP addresses existing conditions, trends and the ABTS; identify key constraints and opportunities in sustainable use, conservation and benefits sharing of biodiversity; develop specific strategies and action plans; develop a prioritized work plan; adopt the NBSAP as a national instrument; and begin implementation.

**By 2015, each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.**

Achieving ABT 17: Key Challenges

Achieving ABT 17 will facilitate the achievement of all of the ABTSs. Prior to COP 13, Parties submitted revised ABT-aligned NSBAPs to the CBD. However, measures by Parties to implement the strategies and actions includes in these national planning documents varies and likely will not be achieved by 2020. Key challenges include: a) an implementation gap within the post-2010 NBSAPs, in that many actions focus on undertaking assessments and developing additional plans, rather than on taking specific action; and b) some of the actions included in NBSAPs are not specific enough to take direct action, and do not include timelines or responsible parties.

Measures that can accelerate the achievement of ABT 17, including those identified in GBO-4, are: a) adopt the NBSAP as a policy instrument that is recognized by the national government; b) set national targets with corresponding measurable indicators and monitoring mechanisms; c) review progress to implement the NBSAP and the effectiveness of measures with stakeholders; d) put the required institutional structures in place to implement the NBSAP, including a mechanism for inter-ministerial and inter-sectoral coordination; e) secure the human and financial resources that are required to implement the NBSAP; and f) integrate NBSAP actions into existing national plans, including poverty reduction, Nationally Determined Commitments, food security, water security and disaster risk reduction plans, among others.

Linkages Between the UN Sustainable Development Goals and ABT 17

The ability of Parties to implement NBSAPS and effectively achieve the targets within them is critical to achieving the SDGS and is emphasized in multiple targets. While there are SDG targets related to improving policies for sustainable development, there is no mention of appropriate biodiversity planning at the national level. The most relevant SDGS to ABT 17 are listed in Table 17a.

| Table 17a. Linkages between ABT 14 and the UN SDGs | |
|---|---|
| SDG 5: Achieve gender equality and empower all women and girls | • 5.1 End all forms of discrimination against all women and girls everywhere.<br>• 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life. |
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.7 By 2030, increase the economic benefits to small island developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism. |
| SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive intuitions at all levels | • 16.4 By 2030 significantly reduce illicit financial and arms flows, strengthen recovery and return of stolen assets, and combat all forms of organized crime.<br>• 16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels. |
| SDG 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development | • 17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation.<br>• 17.14 Enhance policy coherence for sustainable development. |

Assessing National Contributions to Achieving ABT 17

The information presented in the 6NR on ABT 17 should focus on actions on developing and operationalizing the NBSAP taken since the Strategic Plan for Biodiversity 2011- 2020 was adopted, with a particular emphasis on the changes that have occurred since the last national report was submitted. This section of the 6NR should focus on assessing if revised NBSAPs are submitted to the CBD Secretariat, if they are adopted as a policy instrument, and if they are being implemented. The resulting status and trends should be reported, including the development of NBSAPs that fully incorporate the ABTs, and trends in national NBSAP adoption and implementation.

When developing reporting information on measures to achieve ABT 17 or equivalent national targets, we encourage you to consider the key questions in Table 17b.

| Table 17b. Key Questions to Consider to Address Progress to Achieve ABT 17 |
|---|
| • Has the NBSAP been submitted to the CBD Secretariat? |
| • Did you take strategies, goals and objectives of biodiversity-related Conventions other than the CBD into account when developing or revising your NBSAP? |
| • To what extent does the NBSAP includes a set of SMART national targets and indicators, clearly linked to ABTs and to NBSAP strategies and actions? |
| • To what extent has the country adopted the NBSAP as an effective policy instrument? |
| • To what extent is the country implementing the NBSAP? What actions is it taking to do so? |
| • To what extent are the actions included in the action plan 'actionable' – or ready to be implemented? |
| • If your country has not prepared an NBSAP or revised/updated its NBSAP since the adoption of the Strategic Plan for Biodiversity 2011-2020, what actions are being taken to do so? |
| • If there are no plans to do so, are there any other national policies, plans, programmes or strategies that address the Strategic Plan for Biodiversity 2011-2020 and the ABT? |
| • Does your country have any regional or subnational biodiversity strategies? If not, are there plans to develop these? |
| • What level and which body (for example Ministry of Environment, Cabinet of Ministers, Parliament, etc.) adopted the NBSAP? What types of implications does this have? |
| • How will the NBASP assist with mainstreaming biodiversity concerns into sectoral and cross-sectoral plans and policies that impact biodiversity? |
| • Which actors and stakeholders were involved in NBSAP preparation or revision/updating and what was their role during NBSAP implementation and national reporting? |
| • What measures are in place to evaluate the NBSAP's effectiveness? |
| • Does the NBSAP have indicators and/or a monitoring mechanism to evaluate the effectiveness of its implementation? How are they being tracked? |

Potential Indicators and Data Sources for Reporting on ABT 17

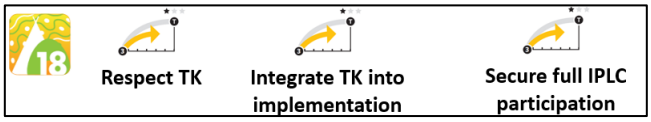
When assessing the progress that your country is making to achieve ABT 17 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to achieving this target. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 17 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 17 are listed in Table 17c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| Table 17c. Potential Indicators and Data Sources for Reporting on ABT 17 |
|---|
| • The submission of the NBSAP to the CBD Secretariat. |
| • The extent to which the NBSAP includes a set of SMART national targets and indicators, clearly linked to ABTs and to NBSAP strategies and actions. |
| • The extent to which the country adopted the NBSAP as an effective policy instrument. |
| • The extent to which the country is implementing the NBSAP. |
| • Trends in development, adoption and implementation of NBSAPs as policy instruments |

including development, comprehensiveness, adoption and implementation:

- Number of stakeholders involved in NBSAP and level of participation of IPLCs and women
- Number of measures in NBSAP to support the integration of traditional knowledge
- Number of countries with developed of revised NBSAPs
- BIP (https://www.bipindicators.net/indicators/number-of-parties-to-the-cbd-that-have-deposited-the-instrument-of-ratification-acceptance-approval-or-accession-of-the-nagoya-protocol)

## Aichi Biodiversity Target 18: Traditional knowledge




ABT 18 – traditional knowledge – focuses on respecting the traditional knowledge (TK) of indigenous and local communities. ABT 18 states: "By 2020, the TK, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels." TK includes the body of knowledge built by indigenous and local communities over generations. TK can contribute to both the conservation and the sustainable use of biodiversity. TK is especially important in ensuring the diversity of biodiversity and natural resource management practices required to enable adaptation to climate change impacts. To achieve ABT 18, countries must assess how well TK has been integrated and reflected in different phases of the implementation of the Convention; assess the degree of participation of indigenous and local communities; and identify mechanisms for improving the integration of indigenous and local communities.

**By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.**

Achieving ABT 18: Key Challenges

We can achieve multiple ABTs by respecting, protecting and encouraging traditional knowledge (TK) holders and their customary sustainable uses. Many Parties are working to increase the capacity of indigenous and local communities to participate in land management planning and policy. Although interest in TK is increasing in some places, and more local communities are becoming involved in the management of PA and other conserved areas, trends suggest ABT 18 may not be met by 2020. Challenges include: a) traditional knowledge continues to decline, with large-scale displacement of indigenous and local communities; b) a limited number of post-2010 NBSAPs include actions related to TK, with the majority focused on developing plans; and c) measures related to TK are often not targeted (e.g., crop genetic diversity for climate resilience).

Measures that can accelerate the achievement of ABT 18, including those identified by GBO-4, are: a) develop national guidelines or action plans that recognize and safeguard the TK rights of indigenous and local communities; b) encourage initiatives that support traditional and local biodiversity knowledge and promote customary sustainable use; c) strengthen opportunities to learn, speak and maintain indigenous languages; d) strengthen opportunities to conduct research and collect data on TK; e) involve indigenous and local communities in PA creation, control, governance and management; f) raise awareness of the importance of TK to biodiversity conservation and sustainable use; g) organize capacity-building activities for indigenous and local communities on relevant CBD issues; h) promote

the effective participation of indigenous and local communities in biodiversity issues related to and of interest to them; i) target efforts on traditional knowledge that enables more effective strategies, particularly for climate adaptation, crop genetic diversity; and j) mobilize communication and learning networks of indigenous peoples and local communities.

Linkages Between the UN Sustainable Development Goals and ABT 18

The ability of Parties to meet national and global targets related to TK is linked to the achievement of SDG 2, 3, 5, and 10. However, the SDGs do not consider the use of traditional knowledge and practices for broader conservation and sustainable use objectives. The SDGS most related to achievement of ABT 18 are listed in Table 18a.

| Table 18a. Linkages between ABT 11 and the UN SDGs | |
|---|---|
| SDG 2: End hunger, achieve food security and improve nutrition and promote sustainable agriculture | • 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed. |
| SDG 3: Ensure healthy lives and promote well-being for all at all ages | • 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. |
| SDG 5: Achieve gender quality and empower all women and girls | • 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life. |
| SDG 10: Reduce inequality within and among countries | • 10.1 By 2030, progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average.<br>• 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status. |

Assessing Your National Contribution to Achieving ABT 18

The information presented in the 6NR on ABT 18 should focus on actions on TK taken since the Strategic Plan for Biodiversity 2011- 2020 was adopted, with a particular emphasis on the changes that have occurred since the last national report was submitted. This section of the 6NR should focus on assessing the degree to which the TK, innovations and practices of indigenous and local communities are respected. Parties should also determine if TK, innovations and practices are fully integrated and reflected in implementation of the Convention with the full and effective participation of indigenous and local communities.

Parties are additionally encouraged to include information related to the following COP decisions:

- Decision XII/12 (Article 8(j) and related provisions), paragraph A: Encourages Parties and indigenous and local communities to consider how indigenous and local communities might effectively participate in the development, collection and analysis of data, including through

Community-Based Monitoring, and further explore how indigenous and local communities' Community-Based Monitoring and Information Systems can contribute to monitoring of ABT indicators, and how a Multiple Evidence Base approach be applied for validation of such data generated from diverse knowledge systems on equal terms. These efforts might contribute to future national reports and the review of the implementation of the Strategic Plan for Biodiversity 2011 2020 and the achievement of the ABT, in particular Target 18.

- Also from decision XII/12 (In-depth dialogue on thematic areas and other cross-cutting issues), paragraph 14: Encourages Parties, other Governments, relevant international organizations, indigenous and local communities and interested stakeholders, and requests the Executive Secretary to consider the advice and recommendations of the in-depth dialogue on: "Connecting TK systems and science, such as under IPBES, including gender dimensions" when implementing the relevant areas of work of the Convention; and further encourages Parties to consider reporting on progress in future national reports.
- Also from decision XII/12 B, paragraph 2: Invites Parties, other Governments, relevant organizations, indigenous and local communities and stakeholders to implement the plan of action on customary sustainable use of biological diversity, taking into account diverse national circumstances including legal and policy regimes, and to report on progress to the Executive Secretary as well as through the national reporting process.
- Also from decision XII/12 E, paragraph 6: Urges Parties and other Governments to recognize, support and encourage the development of local sui generis systems by indigenous and local communities, including through the development of community protocols, as part of national action plans for the protection, preservation and promotion of TK, innovations and practices within NBSAPs, and invites Parties and other Governments to report on these initiatives through the national reporting process, the Working Group on Article 8(j) and Related Provisions, and through the TK Information Portal of the Convention.
- Decision XIII/18 (Article 8(j) and related provisions Mo'otz Kuxtal1 Voluntary Guidelines), paragraph 5: Invites Parties to report on experiences gained by using the Voluntary Guidelines through the national reports.

When developing reporting information on measures to achieve ABT 18 or equivalent national targets, we encourage you to consider the key questions in Table 18b.

| **Table 18b. Key Questions to Consider to Address Progress to Achieve ABT 18** |
|---|
| • To what extent are the TK, innovations and practices of indigenous and local communities respected? How is this measured? |
| • To what extent are TK,, innovations and practices fully integrated and reflected in implementation of the Convention? How is this measured? |
| • To what extent are indigenous and local communities fully and effectively participating in the implementation of the Convention? How is this measured? |
| • What steps are being taken since the adoption of the Strategic Plan for Biodiversity 2011-2020 to respect the knowledge, innovations, practices and customary use of biological resources by indigenous peoples and local communities? |
| • What processes or mechanisms are in place to promote this? |
| • How is TK being integrated and reflected in the Convention's implementation at the national level? |
| • Is a national focal point for Article 8(j) and related provisions appointed? |

| |
|---|
| • Is there a national action plan to protect, preserve and promote the knowledge, innovations and practices of indigenous and local communities and encourage sustainable use of biodiversity, or is one being developed? |
| • Do community action plans for TK exist? |
| • Do indigenous peoples and/or local communities fully and effectively participate in the implementation of the Convention and is their knowledge integrated into implementation? |
| • Have action plans or other national arrangements for the protection, preservation and promotion of indigenous and local community knowledge, innovations and practices been developed? |
| • Are systems in place for granting prior informed consent from indigenous and local communities regarding access to their knowledge, innovations and practices? |
| • Are measures in place at the national level that recognize and encourage the rights to customary sustainable use of biodiversity? |
| • What progress has been made in implementing:<br>o The Plan of Action on Customary Sustainable Use of Biological Diversity<br>o The Tkarihwaié:ri Code of Ethical Conduct to Ensure Respect for the Cultural and Intellectual Heritage of Indigenous and Local Communities<br>o The Akwé: Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment regarding Developments Proposed to Take Place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities<br>o The Mo'otz Kuxtal1 Voluntary Guidelines for the development of mechanisms, legislation or other appropriate initiatives to ensure the "prior and informed consent", "free, prior and informed consent" or "approval and involvement", depending on national circumstances, of indigenous peoples and local communities for accessing their knowledge, innovations and practices, for fair and equitable sharing of benefits arising from the use of their knowledge, innovations and practices relevant for the conservation and sustainable use of biological diversity, and for reporting and preventing unlawful appropriation of TK? |

Potential Indicators and Data Sources for Reporting on ABT 18

When assessing the progress that your country is making to achieve ABT 18 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to safeguarding TK. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 18 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 18 are listed in Table 18c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| **Table 18c. Potential Indicators and Data Sources for Reporting on ABT 18** |
|---|
| • Informative spatial data may include:<br>o Protected and other conserved areas<br>o Population, poverty and land rights (distribution of population densities; types of population groups, including indigenous peoples and local communities; and distribution of poverty levels) |

| |
|---|
| ○ Land tenure, use and rights (distribution of land tenure, land use rights, including disputes) |
| • Relevant global data sources include:<br>○ LandMark – online, global platform providing information on lands that are collectively held and used by IPLCs (http://www.landmarkmap.org)<br>○ Status and Trends in Traditional Occupations: Outcomes of a Rapid Assessment (http://www.forestpeoples.org/topics/convention-biological-diversity-cbd/publication/2016/status-and-trends-traditional-occupation)<br>○ Consult with indigenous peoples and local communities<br>○ Make use of Terralingua's Index of Linguistic Diversity (http://terralingua.org/our-work/linguistic-diversity) |
| • The extent to which TK, innovations and practices of indigenous and local communities are respected. |
| • The extent to which TK, innovations and practices are fully integrated and reflected in implementation of the Convention. |
| • The extent to which indigenous and local communities fully and effectively participate in the implementation of the Convention. |
| • The effectiveness of NBSAP strategies and actions for integrating TK, innovations and practices of indigenous and local communities into implementation of the NBSAP and ensuring effective participation. |
| • Trends in land-use change and land tenure in the traditional territories of indigenous and local communities (decision X/43):<br>○ (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, disaggregated by sex and whether from indigenous and/or local communities; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure (indicator for SDG target 5.a)<br>○ Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, disaggregated by sex, whether from indigenous and/or local communities and by type of tenure (indicator for SDG target 1.4)<br>○ Percentage of women, men indigenous peoples and local communities with secure rights to land property and natural resources measured by:<br>○ Percentage with legally documented or recognized evidence of tenure<br>○ Percentage who perceive their rights recognized and protected (proposed indicator for SDG target 1.4) |
| • Trends in the practice of traditional occupations (decision X/43):<br>○ Number of policies, measures and/or initiatives to support traditional livelihoods promoting diversity of plants and animals<br>○ Data from national surveys or censuses that include questions about traditional occupations should be reflected here |
| • Trends in which TK and practices are respected through their full integration, safeguards and the full and effective participation of indigenous and local communities in the national implementation of the Strategic Plan:<br>○ Number of local community-based monitoring on TK, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity - Satoyama Initiative |

| |
|---|
| ○ Number of indigenous and local community representatives participating in official meetings for the design, implementation, monitoring and reporting of the Strategic Plan<br>○ Number of partnerships with and initiatives of IPLCs in implementation of the Strategic Plan<br>○ Number of measures to implement the ABT targets that integrate TK<br>○ Number of policies and measures that recognize customary law, institutions and/or practices |
| • Trends of linguistic diversity and numbers of speakers of indigenous languages (decision VII/30 and VIII/15):<br>○ Global Index of Linguistic Diversity and language threat level - Terralingua legally recognizing customary law, institutions and practices<br>○ BIP (https://www.bipindicators.net/indicators/index-of-linguistic-diversity) |

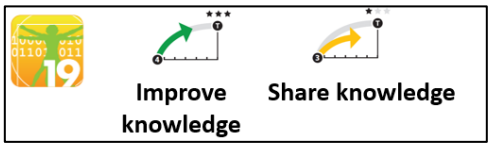
Multilateral Environmental Agreement Reports that Contain Data on ABT 18

There are linkages between ABT 18 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 18d lists the potential data sources for ABT 18 that can be found within other MEA national reports.

**Table 18d. National Reports from MEAs with relevant data for ABT 18**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| CITES | Reference the implementation report, in particular Question 1.5.1a (Surveys/studies). |
| Convention on Migratory Species (CMS) | Review national report related to Target 14 (TK) of the CMS Strategic Plan 2015-2023. |
| ITPGRFA | Reference national report of the ITPGRFA, questions 8 (Efforts of local communities promoted) and question 19 (Promotion of farmer's rights). |
| Ramsar Convention | Review the reporting format to the Ramsar COP-12 and responses to questions on Target 8 (national wetland inventories) and Target 10 (TK, innovations and practices) of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Periodic Report, Section 2, Questions 3.8, 4.3.8 and 4.3.9. |
| FAO State of the World's Biodiversity for Food and Agriculture | Refer to Questions 16, 17, 18, 32 and 38. |

## Aichi Biodiversity Target 19: Sharing information and knowledge




ABT 19 – science and research – focuses on improving, sharing and applying scientific knowledge and research. The full text for ABT 19 states: "By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied." All countries require scientifically sound data in order to develop and implement their NBSAPs. They also require an understanding of the ecological, social and economic consequences of the loss of biodiversity and the impairment of ecosystems. This requires not only sound data, but also effective systems that help policy makers translate data into information for better decision-making. In order to achieve ABT 19, countries need to assess the status and trends of biodiversity and ecosystems, assess the social, economic and ecological consequences of biodiversity loss and ecosystem impairment, and take steps to strengthen both the underlying data as well as data management systems for decision making.

**By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.**

Achieving ABT 19: Key Challenges

Many initiatives are underway around the world to increase the amount of biodiversity information that is available. However, challenges remain, including: a) the capacity of Parties to access and utilize these data is sometimes limited, and coordinated monitoring is needed to ensure the ABTs are achieved and that these data are used to make conservation and development decision; b) there are urgent gaps in monitoring biodiversity and geospatial data is infrequently reported; and c) monitoring data are not often linked to data for nature-based SDGs, such as the value of forests in securing water.

Measures that can accelerate the achievement of ABT 19, including those identified by GBO-4, are: a) develop inventories of existing biodiversity information; b) identify knowledge gaps, define research priorities and use of existing national and international research networks to help address them; c) strengthen and promote access to data by using common informatics standards and protocols, promoting a culture data sharing; d) invest in digitizing natural history collections and promoting citizen scientists' contributions; e) provide decision makers with biodiversity data and teach them how to use it; f) establish or strengthen programs to monitor land-use change and provide real-time information to decision makers; g) engage indigenous and local communities in data collection and use and support for community-based monitoring and information systems; h) strengthen collaboration among national institutions, national and regional centers of biodiversity expertise, communities of practice and stakeholder; i) make biodiversity information easily accessible and spatially explicit; j) improve national, regional and international clearing-house mechanisms; k) strengthen thematic information-based services; and l) contribute to the development of regional and global biodiversity knowledge networks.

Linkages Between the UN Sustainable Development Goals and ABT 19

The ability of Parties to improve, share and apply scientific knowledge and research plays an important role in measuring progress towards achieving the SDGS. Yet, there is no mention of information sharing on broader-level biodiversity status and trends, or of sustainable management planning. The SDGS most related to achievement of ABT 19 are listed in Table 19a.

| Table 19a. Linkages between ABT 19 and the UN SDGs | |
|---|---|
| SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all | • 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development. |
| SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all | • 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services.<br>• 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.7.1 By 2030, ensure universal access to affordable, reliable and modern energy services. |
| SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation | • 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities. |
| SDG 12: Ensure sustainable consumption and production patters | • 12.2 By 2030, achieve the sustainable management and efficient use of natural resources.<br>• 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature. |
| SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development | • 14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics. |
| SDG 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development | • 17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism when agreed upon.<br>• 17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favorable terms, including on concessional and preferential terms, as mutually agreed.<br>• 17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing states, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts. |

Assessing Your National Contribution to Achieving ABT 19

The information presented in the 6NR on ABT 19 should focus on actions taken on scientific knowledge taken since the Strategic Plan for Biodiversity 2011- 2020 was adopted, with a particular emphasis on the changes that have occurred since the last national report was submitted. This section of the 6NR should focus on assessing if knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improving. The report should also evaluate if biodiversity knowledge, the science base and technologies are widely shared and transferred and applied. The resulting status and trends should be reported, including the distribution and condition of key biodiversity, ecosystems and ecosystem services; and levels of threats, sustainable use, protection and restoration of key biodiversity and ecosystems.

Parties are additionally encouraged to include information related to the following COP decisions:

- Decision X/23 (Multi-Year Plan of Action for South-South Cooperation on Biodiversity for Development), paragraph 6: Invites Parties to include in their future national reports information on how they have implemented or supported South-South cooperation;
- Decision XI/29 (Global Taxonomy Initiative), paragraph 9: Requests Parties to report on the effectiveness of their capacity-building efforts to support the implementation of the Global Taxonomy Initiative through their 5NR and 6NR under the Convention and requests the Executive Secretary to report on progress in implementing the Global Taxonomy Initiative, based on national reports submitted by Parties to the corresponding meetings of the COP;
- Decision XIII/23 (Capacity-building, technical and scientific cooperation, technology transfer and the clearing-house mechanism), paragraph 5: Also invites Parties, other Governments and relevant organizations to consider taking the following complementary measures to enhance the implementation of Article 12 of the Convention;
- Decision XIII/23 (k): Invites Parties to share relevant information and lessons learned through the clearing- house mechanism, national reports and other relevant means and mechanisms; and
- Decision XIII/23, paragraph 6: Invites Parties to contribute to technical and scientific cooperation by, inter alia, providing information on priority needs, offering examples of effective practices/bright spots for replication, identifying synergies with their plans, programmes and activities on science, technology, and technical and scientific cooperation, and facilitating the linking of the needs of Parties with available support for technical and scientific cooperation and share this information through the central clearing-house mechanism, and through national clearing-house mechanisms, as appropriate, and national reports.

When developing reporting information on measures to achieve ABT 19 or equivalent national targets, we encourage you to consider the key questions in Table 19b.

| **Table 19b. Key Questions to Consider to Address Progress to Achieve ABT 19** |
|---|
| • To what extent are the knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss improving? |
| • To what extent is the biodiversity knowledge, the science base and technologies widely shared and transferred and applied? |
| • How have the availability and accessibility of biodiversity information in the country changed since the Strategic Plan for Biodiversity 2011-2020 was adopted? |

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| • What actions are being taken to improve the availability, accessibility and quality of biodiversity information? |
| • What mechanisms are in place or being developed to share biodiversity information and technologies? |
| • How is biodiversity information being used to support policy development and decision-making in the country? |

Potential Indicators and Data Sources for Reporting on ABT 19

When assessing the progress that your country is making to achieve ABT 19 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to achieving this target. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 19 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 19 are listed in Table 19c. We encourage you to report on relevant indicators from this list, as well as other national level indicators that you may be tracking.

| **Table 19c. Potential Indicators and Data Sources for Reporting on ABT 19** |
|---|
| • Relevant global data sources include:<br>  o Global Biodiversity Information Facility (GBIF) ( http://www.gbif.org)<br>  o Group on Earth Observations Biodiversity Observation Network (http://geobon.org)<br>  o Map of Life's Species Status Information Index (https://mol.org)<br>  o Botanic Gardens Conservation International's ThreatSearch database (http://www.bgci.org/threat_search.php) |
| • The extent to which knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improving. |
| • The extent to which biodiversity knowledge, the science base and technologies are widely shared and transferred and applied. |
| • The extent to which the economic value of key ecosystem services, including their contribution to national sustainable development goals has been assessed, and opportunities for integrating these into national plans, national accounting, sustainable resource use plans and protection plans. |
| • The extent to which key institutions, institutional structures and institutional capacities that facilitate and/or inhibit sustainable use, conservation and equitable benefits sharing have been identified and assessed. |
| • The extent of awareness of key constituencies of the multiple values of biodiversity, ecosystems and ecosystem services to local and national economies, to communities and to national sustainable development goals, has been assessed. |
| • The effectiveness of NBSAP strategies and actions for communicating the values, functioning, status and trends of biodiversity and the consequences of its loss. |
| • Number of maintained species inventories being used to implement the Convention<br>  o Species represented in the barcode of life data system - Barcode of Life Data Systems<br>  o Growth in species occurrence records accessible through GBIF - GBIF<br>  o Species Status Information Index - GEO BON-Map of Life |

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|---|
| ○ Proportion of known species assessed through the IUCN Red List – IUCN<br>○ BIP (https://www.bipindicators.net/indicators/growth-in-species-occurrence-records-accessible-through-gbif) |
| • Trends in coverage of comprehensive policy-relevant subglobal assessments including related capacity-building and knowledge transfer, plus trends in uptake into policy:<br>○ Growth in ocean science capacity, technology and knowledge, as well as cooperation between countries and regions (proposed indicator for SDG target 14.a)<br>○ Growth in scientific ocean acidification cooperation (proposed indicator for SDG target 14.3)<br>○ Number of initiatives facilitating training, exchanges and transfer of knowledge and technologies among indigenous and local communities using appropriate local languages.<br>○ Number of initiatives to support and promote community-based monitoring and information systems and to integrate information from these into mainstream information management systems |

Multilateral Environmental Agreement Reports that Contain Data on ABT 19

There are linkages between ABT 19 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 19d lists the potential data sources for ABT 19 that can be found within other MEA national reports.

**Table 19d. National Reports from MEAs with relevant data for ABT 19**

| Multilateral Environmental Agreement | Data Source |
|---|---|
| CITES | Review implementation report, in particular Questions 1.4.1a (CITES listing), 1.5.1a (Population surveys), 1.5.1d (Published non-detriment findings), 3.3.2a (Contributions towards international projects). |
| Convention on Migratory Species (CMS) | Review national report related to Target 15 (Science base, information, training, awareness, understanding and technologies) of the CMS Strategic Plan 2015-2023. |
| ITPGRFA | Reference national report of the ITPGRFA, namely Questions 5,6,7,10,11,12,17/18,22,28,29/32,33, and 34. |
| Ramsar Convention | Ramsar Information Sheets (RIS), Question 5.2.7 on Monitoring.<br>Review the reporting format to the Ramsar COP-12 and responses to questions on Targets 8 (national wetland inventories) and Target 14 (Scientific and technical guidance) of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Periodic Report, Section 1 Questions 7 and 7.1 and in Section 2 questions 3.8, 4.3.8 and 4.3.9 with relevance to Aichi Biodiversity Target 19. |

| | |
|---|---|
| FAO State of the World's Biodiversity for Food and Agriculture | Refer to Questions 57, 74, 75 and 76. |
| FAO State of the World's Animal Genetic Resources for Food and Agriculture (2nd) | Refer to Parts 3 and 4. |
| FAO State of the World's Aquatic Genetic Resources for Food and Agriculture | Refer to Chapters 1 and 7. |
| FAO State of the World's Plant Genetic Resources for Food and Agriculture | Refer to Chapters 1, 3 and 4. |

## Aichi Biodiversity Target 20: Mobilizing resources from all sources


ABT 20 – Resource Mobilization – focuses on mobilizing the financial resources required to implement a country's National Biodiversity Strategies and Action Plan (NBSAP). ABT 20 states: "By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels." This target will be subject to changes that are contingent with the resource needs assessments to be developed and reported by Parties. The cost of implementing the CBD Strategic Plan and achieving the Aichi Biodiversity Targets is enormous. Yet, bilateral and multilateral financial assistance accounts for just a tiny portion of total biodiversity expenditures. In order to be able to implement NBSAPs around the world, and to achieve the CBD Strategic Plan, there must be a transformation in the way that resources are mobilized for biodiversity. This includes a transformation in subsidies that harm biodiversity, and a transformation in implementing innovative finance mechanisms. In order to achieve ABT 20, countries will need to understand the current national biodiversity expenditures, including expenditures that harm biodiversity and identify the full cost of implementing each of the NBSAP strategies and actions. They will also need to develop a detailed resource mobilization plan that identifies a wide range of finance actors, mechanisms and opportunities for mobilizing biodiversity resources.

**By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011–2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resources needs assessments to be developed and reported by Parties.**

### Achieving ABT 20: Key Challenges

Sufficient resources underpin the ability of Parties to achieve the other 19 ABTs, and their implementation will cost approximately $150 - $440 billion annually. There is a significant gap in the costs of achieving the Strategic Plan for Biodiversity 2011-2020 and the current funding available to implement strategies and actions to achieve it. Financial investments in biodiversity are stable or moderately increasing and are estimated to be $20 billion globally per year, but much more effort is required to assess existing biodiversity expenditures, and to identify and implement finance solutions.

Measures that can accelerate the achievement of ABT 20, including those identified by GBO-4, are: a) assess the financial co-benefits of biodiversity and of the long-term costs of inaction; b) articulate the value of biodiversity to the economy and society to decision makers; c) include national financial plans for biodiversity within NBSAPs; d) align biodiversity financial plans with annual and multi-year financial planning cycles; e) clearly identify funding needs, gaps and priorities; f) integrate biodiversity costs and benefits into national development plans; g) broaden biodiversity funding sources to better meet biodiversity planning needs; h) implement innovative financial mechanisms, including subsidy reform and ecosystem services payments; i) explore the potential of creating impact investment-ready

projects, and bring impact investors to a common investment platform; j) bring insurance markets to the nature-based disaster market; and k) access climate finance through nature-based NDCs.

Linkages Between the UN Sustainable Development Goals and ABT 20

The ability of Parties to meet national and global targets related to resource mobilization is liked to SDG 10 and 17. These SDGS are described in Table 20a.

| Table 20a. Linkages between ABT 20 and the UN SDGs | |
|---|---|
| SDG 10: Reduce inequality within and among countries | • 10.1 By 2030, progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average.<br>• 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status. |
| SDG 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development | • 17.3 Mobilize additional financial resources for developing countries from multiple sources. |

Assessing Your National Contribution to Achieving ABT 20

The information presented in the 6NR on ABT 20 should focus on resource mobilization actions taken since the Strategic Plan for Biodiversity 2011- 2020 was adopted, with a particular emphasis on the changes that have occurred since the last national report was submitted. This section of the 6NR should focus on assessing if the mobilization of financial resources for implementing the Strategic Plan for Biodiversity from all sources has increased substantially from 2010 levels. The resulting status and trends should be reported, including the level to which Parties are developing biodiversity expenditure reviews; and a comprehensive, prioritized costing for key strategies and actions within the NBSAP. Parties should also report on the volume and sustainability of finances mobilized for biodiversity.

Parties are additionally encouraged to include information related to the following COP decisions:

- In decision XII/3, the COP adopted a financial reporting framework to provide information related to the global financial targets under ABT 20. The COP invited Parties to report, using the online financial reporting framework, on their further contribution to the collective efforts to reach the global targets for resource mobilization, against the established baseline, in conjunction with their 6NR.
- Information that your country has entered in the online financial reporting framework is accessible (https://chm.cbd.int/search/reporting-map?filter=resourceMobilisation).
- Parties that have not yet completed the financial reporting framework may consider doing so.

When developing reporting information on measures to achieve ABT 20 or equivalent national targets, we encourage you to consider the key questions in Table 20b.

| Table 20b. Key Questions to Consider to Address Progress to Achieve ABT 20 |
|---|
| • To what extent is the mobilization of financial resources to implement the Strategic Plan for Biodiversity 2011-2020 from all sources is increasing substantially? |

Potential Indicators and Data Sources for Reporting on ABT 20

When assessing your progress to achieve ABT 20 and equivalent national targets, clearly reference the results of analyses regarding current status and trends related to achieving this target. To do so, we recommend working with stakeholders to identify data at the global and national level to report on ABT 20 in your country. Based on the guidance in COP Decision VIII/28 and other global reference material, the potential indicators we recommend for ABT 20 are listed in Table 20c. We encourage you to report on relevant indicators from this list, as well as other indicators that you may be tracking.

| Table 20c. Potential Indicators and Data Sources for Reporting on ABT 20 |
|---|
| • Relevant global data sources include:<br>  o Include the link to your country's online reporting framework (https://chm.cbd.int/search/reporting-map?filter=resourceMobilisation), along with any additional relevant information. There is no need to repeat information in the 6NR that has already been included in the financial reporting framework. |
| • The extent to which the mobilization of financial resources to implement the Strategic Plan for Biodiversity from all sources is increasing substantially. |
| • The degree to which national expenditures on biodiversity- related actions, including by public and private actors and environmentally positive and harmful incentives, have been assessed. |
| • There is a comprehensive, well-organized implementation plan that identifies priorities, actors, responsibilities and timelines for each strategy; and support for both national and local actions. |
| • There is a plan for strengthening the capacities required to implement the NBSAP. |
| • There is a clear, realistic costing associated with each strategy within the NBSAP, including key assumptions, unit costs, and estimated cost ranges. |
| • Trends in the mobilization of financial resources:<br>  o Information provided through the financial reporting framework, adopted by decision XII/3 (https://chm.cbd.int/search/financial-reporting) - SCBD<br>  o Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems (indicator for SDG target 15.a and 15.b)<br>  o BIP (https://www.bipindicators.net/indicators/official-development-assistance-provided-in-support-of-the-convention) |

Multilateral Environmental Agreement Reports that Contain Data on ABT 20

There are linkages between ABT 20 and the national reports of other MEAs. We encourage Parties to use information from the recent reports your country provided to related biodiversity-related conventions. These documents may provide key data that you can use to develop the 6NR. Table 20d lists the potential data sources for ABT 20 that can be found within other MEA national reports.

| Table 20d. National Reports from MEAs with relevant data for ABT 20 | |
|---|---|
| Multilateral Environmental Agreement | Data Source |
| CITES | Refer to the implementation report, in particular Questions 2.2.3d (User fees), 3.1.1a (Funding of activities), 3.1.1b (Trend of funding), 3.1.2a (Financial assistance) and 3.4.2b (Funds from GEF). |
| Convention on Migratory Species (CMS) National Report | Review national report related to Target 16 (Mobilization of resources) of the CMS Strategic Plan 2015-2023. |
| ITPGRFA | Reference national report of the ITPGRFA, namely Questions 35 (Financial resources received/provided) and 36 (Financial resources for national activities). |
| Ramsar Convention | Review the reporting format to the Ramsar COP-12 and responses to questions on Targets 8 (national wetland inventories) and Target 14 (Scientific and technical guidance) of the Ramsar Strategic Plan 2016-2024. |
| World Heritage Convention | Periodic Report, Section 1 questions 8 and in Section 2 questions 4.4, 4.7 and 4.7.6 with relevance to Aichi Biodiversity Target 20. |