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Marine and coastal biodiversity

Strategic review and analysis of the programme of work on island biodiversity in the context of the Kunming-Montreal Global Biodiversity Framework**

Note by the Secretariat

1. In its decision 15/24, the Conference of the Parties requested the Executive Secretary to develop strategic reviews and analyses of both the programme of work on marine and coastal biodiversity and the programme of work on island biodiversity, in the context of supporting the implementation of the Framework, and to prepare draft updates to those programmes on that basis.
2. In November 2023, pursuant to recommendation 25/3 of the Subsidiary Body on Scientific, Technical and Technological Advice, the Secretariat issued notification No. 2023-120 to invite Parties, other Governments, indigenous peoples and local communities, women and youth, the secretariats of other multilateral environmental agreements and relevant intergovernmental bodies, organizations and stakeholders to submit: (a) information on existing tools and guidance to enhance those identified under each target; 1 (b) views regarding gaps and redundancies; and (c) views regarding the adjustment of work undertaken under the Convention, including its programmes of work. The Secretariat received 49 responses to the notification, 10 from Parties¹ and 39 from relevant organizations and stakeholders; however, only a small number contained specific views regarding updates to the programmes of work.
3. With the support of expert consultants, the Secretariat has undertaken a strategic review and analysis of the programme of work on island biodiversity, on the basis of responses to the aforementioned notification and additional information available from other sources. The review and analysis covered the programme of work in the context of the targets of the Framework, and was also conducted taking into consideration key priorities identified for marine and coastal and island biodiversity in other global multilateral forums and by other competent intergovernmental organizations. The results of this review and analysis are contained in the present note.

* CBD/SBSTTA/26/1.

** The present document is being issued without formal editing.

¹ Australia, Belarus, Canada, European Union, Finland, Gabon, Japan, State of Palestine, Sweden and United Kingdom of Great Britain and Northern Ireland.

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i. Acronyms

ABS	Areas of Biological Significance
ABS	Access and Benefit Sharing
ADB	Asian Development Bank
BIOFIN	Biodiversity Finance Initiative
CABI	Centre for Agriculture and Bioscience International
CBD	Convention on Biological Diversity
CBF	Caribbean Biodiversity Fund
CCI	Caribbean Challenge Initiative
CI	Conservation International
COP	Conference of the Parties
CTI	Coral Triangle Initiative
DCNA	Dutch Caribbean Nature Alliance
DFAS	Debt for Adaptation Swap
DFNS	Deb for Nature Swap
DRRM	Disaster Risk Reduction and Management
EbA	Ecosystem-based Adaptation
EBSA	Ecologically or Biologically Significant Areas
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
FAO	Food and Agriculture Organization
GBF	Global Biodiversity Framework
GCF	Global Climate Fund
GEF	Global Environment Facility
GISPD	Global Invasive Species Database
IMO	International Maritime Organization
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPLC	Indigenous People and Local Communities
IUCN	International Union for the Conservation of Nature
IUU	Illegal, Unreported, and Unregulated
KEA	Key Ecological Areas
MC	Micronesia Challenge
MCT	Micronesia Conservation Trust
MEA	Multilateral Environmental Agreements
MPA	Marine Protected Area
NAPA	National Adaptation Programmes of Action
NBSAP	National Biodiversity Strategic Action Plans
NF	Nippon Foundation
PA	Protected Area
PAN	Protected Area Network
PES	Payment for Ecosystem Services
PILN	Pacific Invasives Learning Network
PoW	Programme of Work
PoWIB	PoW on Island Biodiversity
SAICM	Strategic Approach to International Chemicals Management
SAMOA	Small Island Developing States Accelerated Modalities of Action
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice
SDG	Sustainable Development Goals

SEA	Strategic Environmental Assessment
SIDS	Small Island Developing States
SLM	Sustainable Land Use Management
SNAPP	Science for Nature and People Partnership
SPREP	Secretariat of the Pacific Regional Environment Programme
TNC	The Nature Conservancy
UN	United Nations
UNCLOS	UN Convention on the Law of the Sea
UNCTAD	UN Conference on Trade and Development
UNDP	UN Development Programme
UNEP	UN Environment Programme
UNFCCC	UN Framework Convention on Climate Change
UNGA	UN General Assembly
WB	World Bank
WCMC	World Conservation Monitoring Centre
WWF	World Wildlife Fund

I. Introduction and background

The Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) has established various Programmes of Work (PoW) corresponding to the major biomes, including island biodiversity, and several cross-cutting issues covering substantive topics.² These PoWs collectively cover a wide range of ecosystems, species, and genetic diversity, aiming to address the complex challenges of biodiversity loss, ecosystem degradation, and climate change.

The programmes of work under the Convention are a valuable tool to support the implementation the Kunming-Montreal Global Biodiversity Framework (GBF), adopted by CBD COP in 2022.³ The adoption of the Kunming-Montreal Global Biodiversity Framework (GBF) during the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) in December 2022 marks a pivotal moment in global biodiversity conservation efforts. With its inclusion in the annex to decision 15/4, this Framework sets a strategic direction for implementing the Convention and its Protocols and guiding the work of its bodies and Secretariat through the decade 2022–2030.

As such, CBD COP decision 15/24 (2022) requested the Executive Secretary to develop a strategic review and analysis of the programme of work (PoW) on island biodiversity in the context of supporting the implementation of the Kunming-Montreal Global Biodiversity Framework (GBF).⁴

Further to this, SBSTTA's recommendation 25/3 (2023) recalled para 8 of CBD decision 15/4 (2022) on alignment between the GBF and the work under the Convention. In the same recommendation, SBSTTA-25 requested the Executive Secretary to build on the initial results of the rapid analysis of the Programmes of Work and related guidance of document CBD/SBSTTA/25/4, by:⁵

- Undertaking a comprehensive review and analysis of existing tools and guidance that can support the implementation of the targets and other elements of the GBF (e.g. IPBES assessments, tools and guidance under other multilateral environmental agreements (MEAs), intergovernmental organisations, UN agencies, including FAO, etc);
- Compiling views and information from Parties, other Governments, IPLCs, women and youth, MEAs secretariats, relevant intergovernmental bodies, organisations, and stakeholders, and others (see www.cbd.int/notifications/2023-120);
- Identifying gaps and redundancies to support the implementation of the goals and targets of the GBF for consideration of SBSTTA-26.

Pursuant to these requests, this document provides a review and gap analysis of the programme of work on island biodiversity vis-à-vis its alignment with the GBF, in particular the 2030 action targets.

II. Summary of Previous Assessments

a. Island Biodiversity: In-depth review of the implementation of the programme of work

At its sixteenth meeting in 2012, the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) considered the results of the Island Biodiversity: In-Depth Review of the Implementation of the Programme of Work. The review found that "...PoWIB has not been comprehensively implemented yet island progress is arguably more advanced in some targets when compared with overall performance reported in the third edition of the Global Biodiversity Outlook

² CBD, Thematic Programmes and Cross-Cutting Issues, online: www.cbd.int/programmes (accessed on 4 Feb 2024).

³ CBD decision 15/4 (2022).

⁴ CBD decision 15/24 (2022), para 4.

⁵ SBSTTA recommendation 25/3 (2023), para 2 (a) to (c).

3.”⁶ The report highlighted that the PoWIB significantly contributed to achieving the goals of the Convention by focusing on island ecosystems since its launch in 2006. This initiative spurred conservation efforts led by national governments and involving multi-country stakeholders, exemplified by initiatives such as the Micronesia Challenge, Caribbean Challenge, and Coral Triangle Initiative.⁷

In its evaluation, the CBD detailed the advancements achieved by island nations and nations possessing islands in their journey toward fulfilling the PoWIB (PoWIB) targets. For a comprehensive understanding of the assessment methodology, further information is available in [UNEP/CBD/SBSTTA/16/4](#).

The review broke down the progress of the PoWIB into four (4) categories:⁸

4	Good progress: significant activity in more than half the groups
3	Moderate progress: significant activity in two or more regions
2	Early progress = promising new initiative in one or more countries or regions
1	Limited to no progress = little or no activity in any region

Three (3) PoWIB targets ranked in category 4 – Good Progress:

- **Target 1:** By 2020, at the latest, all people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.
- **Target 11:** By 2020, at least 17 percent of terrestrial and inland water and 10 percent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, will be conserved through effectively and equitably managed, ecologically representative, and well-connected systems of protected areas and other effective area-based conservation measures, which will be integrated into the wider landscape and seascapes.
- **Target 18:** 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

Eleven (11) PoWIB targets ranked in category 3 – Moderate Progress

- **Target 3:** 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.
- **Target 4:** By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.
- **Target 6:** 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

⁶ The Global Biodiversity Outlook is the CBD’s landmark publication, resulting from the analysis of National Reports submitted by Parties. The third edition was launched, at SBSTTA 14, in 2010. For more details please see www.cbd.int/GB03.

⁷ Table taken from the UNEP/CBD/SBSTTA/16/INF/3, p. 15. www.cbd.int/doc/meetings/sbstta/sbstta-16/official/sbstta-16-04-en.pdf

⁸ UNEP/CBD/SBSTTA/16/INF/3, p. 9-14. www.cbd.int/doc/meetings/sbstta/sbstta-16/official/sbstta-16-04-en.pdf

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.

- **Target 7:** By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.
- **Target 9:** 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.
- **Target 13:** 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.
- **Target 14:** 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.
- **Target 15:** 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.

Three (3) PoWIB targets were listed in category 2 – Early Progress

- **Target 2:** 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.
- **Target 5:** 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.
- **Target 12:** 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.

Three (3) PoWIB targets were listed in category 1 – Limited or No Progress

- **Target 8:** By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.
- **Target 10:** 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.
- **Target 16:** 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.

Parties reported that PoWIB played a pivotal role in enhancing their capacity to secure funding from both international and domestic sources. This was achieved through the creation of various financial instruments such as trust funds, tariffs, licenses, and mechanisms for debt swapping. Additionally, a range of financial support mechanisms became accessible, including the Global Environment Facility-Pacific Alliance for Sustainability (GEF-PAS), European Development Funds (EDF) for Least Developed Countries (LDCs), Global Climate Change Alliance for the Pacific and Caribbean, and the Biodiversity and Ecosystem Services in Territories of the European Union (BEST) initiative.⁹

In the PoWIB review section “*IV. Obstacles and Challenges Encountered*” it highlighted the difficulties in meeting the PoWIB targets.¹⁰ The report highlighted that there was “significant activity on targets

⁹ *Id.*

¹⁰ UNEP/CBD/SBSTTA/16/INF/3, p. 16. www.cbd.int/doc/meetings/sbstta/sbstta-16/official/sbstta-16-04-en.pdf

and actions of the PoWIB” since its inception.¹¹ Yet, despite the progress made by the Parties, protecting island biodiversity “... remain unchanged.”¹² Islands record the highest number of species extinctions and continue to face significant threats from invasive alien species, climate change and its variability, natural and environmental disasters, degradation of land and habitats, and terrestrial sources of marine pollution.¹³

Nearly two decades ago, the Programme of Work on Island Biodiversity (PoWIB) detailed a thorough list of obstacles faced by islands in tackling systemic issues, which persist to this day. These obstacles encompass limited population sizes and economic scales, inadequate institutional capabilities across both governmental and private sectors, remoteness from global markets, a heightened risk to natural disasters and the impacts of climate change (including sea-level rise), ecological fragility of both terrestrial and marine environments (significantly affected by tourism, as well as unsustainable practices in agriculture and forestry), significant transportation expenses, narrow diversification in production and export activities, reliance on global markets, focused export sectors, and vulnerability to fluctuations in income and external economic disturbances.

The PoWIB review listed seven (7) major issues that island governments and their partners had in implementing the PoWIB:¹⁴

1. Inadequate legislation and mandates or good legislation but lack capacity to enforce.
2. Lack of funds
3. Lack of capacity
4. Poor coordination and communication
5. Weak support from local and national institutions
6. Cultural and community barriers (e.g., religion, gender, land tenure, etc.)
7. High cost to implement and small populations

As a result of the in-depth review, the report suggested the following actions:¹⁵

1. Support large scale regional Challenges (e.g., MC, CTI CCI, WIOC)
2. Mainstream and strengthen: planning for NBSAP, sustainable development, climate change.
3. Ratify the Nagoya Protocol in areas related to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization
4. Manage invasive species and climate change
5. Increase cost-effective measures to support local capacity and share lessons learned
6. Cultivate innovative financing mechanisms
7. Increase support for the Global Island Partnership (GLISPA)
8. Have an islands summit for the creation of a political declaration on islands and provide support at UN and SIDS meets, particularly Barbados Programme of Action and its Mauritius Implementation Strategy 2014.

At its eleventh meeting in 2012, the COP, in decision XI/15, urged Parties, and invites other Governments, financial institutions and other relevant organizations to strengthen the implementation of the programme of work on island biodiversity and to build on successful island approaches by:

- (a) Promoting and supporting high-level regional commitments, such as the island challenges referred to above and other large-scale efforts, that have demonstrated success in rapidly

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*, Decision COP VIII/1. para. 9.

¹⁴ UNEP/CBD/SBSTTA/16/INF/3, § IV. p. 16-17. www.cbd.int/doc/meetings/sbstta/sbstta-16/official/sbstta-16-04-en.pdf

¹⁵ ¹⁵ UNEP/CBD/SBSTTA/16/INF/3, § V. p. 16-17. www.cbd.int/doc/meetings/sbstta/sbstta-16/official/sbstta-16-04-en.pdf

increasing protected areas and achieving other Aichi Biodiversity Targets relevant to the programme of work on island biodiversity;

(b) Adapting and expanding proven, cost-effective mechanisms to strengthen local capacity, particularly peer-learning networks, learning exchanges, transfer of technologies, sharing of lessons learned and best practices, communication and information exchange tools, targeted technical assistance, formal training and education;

(c) Considering the development of innovative financial arrangements to mobilize additional resources, in accordance with Articles 20 and 21 of the Convention, through the strategy for resource mobilization, in line with decisions IX/11, X/3 and XI/4, in support of the implementation of the programme of work on island biodiversity, including trust funds, “debt for adaptation to climate change swaps”, payments for ecosystem services, and fees for tourism or natural resource use, dedicated to effective conservation;

(d) Maintaining and supporting key databases and information portals, such as the Global Island Database, the Threatened Island Biodiversity Database, the Database of Island Invasive Species Eradications, the Global Invasive Species Database, the Island Biodiversity and Invasive Species Database and Small Islands Developing States Network (SIDSNet), to enable effective invasive species monitoring and eradication prioritization on islands, as valuable tools in support of the implementation of the programme of work;

(e) Addressing in particular the gaps in implementation identified in the in-depth review that are listed in paragraph 19 of UNEP/CBD/SBSTTA/16/4.

The COP also called on Parties to continue to focus international attention and action on the six priorities included in decision IX/21 as they affect livelihood and island economies: the prevention, eradication and control of invasive alien species; climate-change adaptation and mitigation activities; establishment and management of marine protected areas; capacity-building; access to, and fair and equitable sharing of, the benefits arising out of the utilization of genetic resources, and poverty alleviation (decision XI/15).

b. Progress towards the Aichi Biodiversity Targets

The Global Biodiversity Outlook 5 (GBO-5), published by the CBD Secretariat in 2020, focused on assessing progress towards the Aichi Biodiversity Targets, set for the period 2011-2020. Despite notable efforts and progress in some areas, the report revealed that none of the Aichi Targets were fully met, and only six have been partially achieved. This highlights significant challenges in safeguarding the world’s ecosystems and promoting sustainability.¹⁶ The report also linked unprecedented biodiversity loss to the increased risk of diseases spreading from animals to humans, emphasizing the importance of biodiversity in addressing climate change, ensuring long-term food security, and preventing future pandemics. The COVID-19 pandemic underscored the crucial relationship between people and nature, reminding us of the severe consequences to well-being and survival that can result from continued biodiversity loss and ecosystem degradation.

GBO-5 emphasized the urgent need for a departure from “business as usual” across various human activities. It outlined key transitions necessary to achieve the 2050 Vision for Biodiversity, which aims for a harmonious coexistence between humans and nature. It included transformative actions needed in land and forest use, freshwater management, fisheries, sustainable agriculture, food systems, urban planning, climate action, and adopting a One Health approach. The report suggested that a mix of actions is needed, including significantly increased efforts to conserve and restore biodiversity, addressing climate change to limit global temperature rise without imposing unintended additional pressures on biodiversity, and transforming the way we produce, consume, and trade goods and services, especially food, that rely on and impact biodiversity. A key message from GBO-5 called

¹⁶ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. P. www.cbd.int/gbo5/publication/gbo-5-en.pdf

for increased national ambitions and international cooperation. This involves mobilizing necessary resources and integrating biodiversity considerations across all sectors of decision-making. The aim is to bring biodiversity into the mainstream, ensuring policies across all economic sectors support biodiversity conservation.

To achieve the required transformative changes, the report identifies several essential steps and leverage points. These include better understanding the common factors that influence fundamental changes in institutions, governance, values, and behavior. Biodiversity is foundational to sustainable development, not an obstacle that needs to be balanced with socioeconomic development needs.

III. Gap assessment

The following assessment focuses on providing a review of specific elements of the programme of work on island biodiversity with respect to each target of the Global Biodiversity Framework, with some additional information, where available, regarding the status of implementation of the elements addressed in each target.

But it is also important to note that the Framework is not only composed of its 23 targets, but also a number of other elements that are important to the overall implementation of the Framework.

2050 GBF Vision: *a world of living in harmony with nature where by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people*

2030 GBF Mission: *To take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet by conserving and sustainably using biodiversity and by ensuring the fair and equitable sharing of benefits from the use of genetic resources, while providing the necessary means of implementation*

The PoWIB does not contain a vision or a mission. It nevertheless, contains a purpose, scope and goals (see below), as well as targets around its focal areas and priority actions for each target. In this sense, the PoWIB is quite comprehensive. When analysed as a whole, the PoW is consistent with the GBF Vision and Mission (see further details in the sections below).

GBF Purpose: *to catalyse, enable and galvanize urgent and transformative action by Governments, and subnational and local authorities, with the involvement of all of society, to halt and reverse biodiversity loss, to achieve the outcomes it sets out in its Vision, Mission, Goals and Targets, and thereby contribute to the three objectives of the Convention on Biological Diversity and to those of its Protocols. Its purpose is the full implementation of the three objectives of the Convention in a balanced manner¹⁷*

The overall purpose of the PoWIB is "the significant reduction of island biodiversity loss by 2010 and beyond at global, regional and national levels, through the implementation of the three main objectives of the Convention, for the benefit of all forms of life on islands and, in particular, as a contribution to poverty alleviation and the sustainable development of small island developing States."¹⁸ In general sense, this purpose is aligned with the GBF's purpose, although the GBF's can be interpreted as being more ambitious as it aims at halting and reversing biodiversity loss, including through the achievement of its Vision, Mission Goals and Targets. The island PoW on the other hand is more specific to the island context, but the ambition could be raised to match the GBF. The reference to the three objectives of the Convention is consistent with the GBF's purpose.

2050 GBF Goals:

Goal A: The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050;

¹⁷ CBD decision 15/4 (2022), Annex, paragraph 4.

¹⁸ CBD decision VIII/1 (2006), paragraph 14.

Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels;

The genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential.

Goal B: Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced, with those currently in decline being restored, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.

Goal C: The monetary and non-monetary benefits from the utilization of genetic resources and digital sequence information on genetic resources, and of traditional knowledge associated with genetic resources, as applicable, are shared fairly and equitably, including, as appropriate with indigenous peoples and local communities, and substantially increased by 2050, while ensuring traditional knowledge associated with genetic resources is appropriately protected, thereby contributing to the conservation and sustainable use of biodiversity, in accordance with internationally agreed access and benefit-sharing instruments.

Goal D: Adequate means of implementation, including financial resources, capacity-building, technical and scientific cooperation, and access to and transfer of technology to fully implement the Kunming-Montreal Global Biodiversity Framework are secured and equitably accessible to all Parties, especially developing country Parties, in particular the least developed countries and small island developing States, as well as countries with economies in transition, progressively closing the biodiversity finance gap of \$700 billion per year, and aligning financial flows with the Kunming-Montreal Global Biodiversity Framework and the 2050 Vision for biodiversity.

Goals A-C of the GBF reflect the three objectives of the Convention and further elaborate on such objectives by specifying what type of outcomes need to be achieved by 2050. Goal D focuses on means of implementation/mobilisation of resources with a view to support implementation of the GBF. The PoWIB contains 11 goals specific to island biodiversity contexts, which are organised around Focal Areas that are aligned with the objectives of the CBD and associated provisions of the Convention. The focal areas and goals of the PoWIB are the following (decision VIII/1 (2006), Section E):

Focal Area 1: Protect the components of biodiversity

- ☐ ☐ Goal 1: Promote the conservation of the biological diversity of island ecosystems, habitats and biomes
- ☐ ☐ Goal 2: Promote the conservation of island species diversity
- ☐ ☐ Goal 3: Promote the conservation of island genetic diversity

Focal Area 2: Promote Sustainable Use

- ☐ ☐ Goal 4: Promote sustainable use and consumption

Focal Area 3: Address threats to biodiversity

- ☐ ☐ Goal 5: Pressures from habitat loss, land-use change and degradation, and sustainable water use, reduced on islands
- ☐ ☐ Goal 6: Control threats to island biological diversity from invasive alien species
- ☐ ☐ Goal 7: Address challenges to island biodiversity from climate change, and pollution

Focal Area 4: Maintain goods and services from biodiversity to support human well-being

- ☐ ☐ Goal 8: Maintain capacity of island ecosystems to deliver goods and services and support livelihoods

Focal Area 5: Protect traditional knowledge and practices

- ☐ ☐ Goal 9: Maintain socio-cultural diversity of indigenous and local communities on islands

Focal Area 6: Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources

- ☐ ☐ Goal 10: Ensure the fair and equitable sharing of benefits arising out of island genetic resources

Focal Area 7: Ensure provision of adequate resources

Goal 11: Parties have improved financial, human, scientific, technical and technological capacity to implement the Convention

Although the format and level of detail and specificity of the goals contained in the PoWIB and in the GBF differ from each other, the PoWIB's focal areas and goals are aligned with the GBF's goals and targets (for further details see the tables contained in the analysis of the GBF targets alignment below).

Considerations for the implementation of the GBF

Section C of the GBF list several important cross-cutting elements that need to be taken into consideration in the implementation of the framework, including with respect to: the contribution and rights of indigenous peoples and local communities; different value systems; whole of government and whole of society approach; national circumstances, priorities and capabilities; collective efforts towards the targets; the right to development; human rights-based approach; gender; the fulfilment of the three objectives of the Convention and its Protocols and their balanced implementation; consistency with international agreements or instruments; principles of the Rio Declaration; science and innovation; ecosystem approach; intergenerational equity; formal and informal education; access to financial resources; cooperation and synergies; and biodiversity and health.

The PoWIB does not contain a list of elements in the same manner. However, it reflects a number of these elements in its scope (decision VIII/1 (2006) and in other relevant PoWIB decisions (especially decision XI/15 (2012)). For instance, the scope of the PoW states that the implementation of the PoW should take into consideration the ecosystem approach.¹⁹ Furthermore, decision VIII/1 that adopted the PoW recognises “Parties should implement the programme of work on island biological diversity in the context of nationally determined priorities, capacities and needs”.²⁰ The PoWIB also notes it shall be consistent with rights and obligations under international agreements,²¹ the need for cooperation and partnerships at national, regional and international levels with the participation of all stakeholders, including IPLCs, civil society and the private sector – and thus reflecting the whole of government and whole of society approach. It also notes that “cultural diversity, the traditional knowledge and practices of indigenous and local communities of many small islands, including arctic islands, are unique and have special significance for this communities and need special consideration and integration in this programme of work. All aspects of the programme of work should be read and implemented through integrated national programmes with respect for the rights of indigenous and local communities...”²² Considerations highlighted in Section C of the GBF are also addressed under specific priority actions of the PoWIB. For instance, education programmes to promote the PoWIB is included in priority action 11.3.3 as well as with regards to specific contexts (invasive alien species, etc) in several other suggested priority actions for Parties.²³ While not expressly mentioned, ‘different value systems’ can be interpreted as being an integral part of the PoWIB.

The main missing elements would then be a specific reference to a human rights based approach or to human rights per se, gender, and biodiversity and health. While health is mentioned in several instances, it is not in the specific context of biodiversity and health, and instead it is more associated with health care, and health and poverty nexus.

¹⁹ CBD decision VIII/1 (2006), Annex, para 22.

²⁰ Ibid, para 2.

²¹ Ibid, Annex, para 17.

²² Ibid, para 21.

²³ Ibid, Appendix.

Section D of the GBF notes the mutual supportive relationship between the Framework and the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). The PoWIB (decision VIII/1 (2006)) and its latest revision (decision XI/15 (2012)) pre-dates the 2030 Agenda and its SDGs, which were adopted in 2015. The PoW refers to the Millennium Development Goals (MDGs). Given the more comprehensive nature of the SDGs, which superseded the MDGs, reference to the 2030 Agenda/SDGs in the PoWIB would make it more timely.

1. Reducing Threats To Biodiversity

i. Target 1: Plan and Manage all Areas to Reduce Biodiversity Loss

Ensure that all areas are under participatory, integrated, and biodiversity-inclusive spatial planning and/or effective management processes addressing land- and sea-use change to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030 while respecting the rights of indigenous peoples and local communities.

Most relevant Aichi Biodiversity Target—Target 5: Habitat Loss Halved or Reduced

“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.”

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (high confidence)

According to GBO-5, Parties to the Convention took a variety of approaches to address Aichi Target 5, by addressing issues directly related to deforestation, “...while others focused on reforestation, restoration and on combatting desertification. Commonly-reported actions were the establishment of protected areas, the planting of trees and other vegetation, and the identification of priority areas for conservation.”²⁴ Other actions that Parties have taken to address habitat loss were:

- Promoting sustainable resource and habitat management
- Understand land tenure systems and provide incentives to promote sustainability
- Gain better understanding of the value of ecosystems
- Adapting integrated land planning
- Establishing guidelines (i.e., fire management strategies)
- Fostering “agri-environmental” approaches to habitat management
- Taking actions to address fragmentation by creating buffer zones and developing green zones
- Supporting better inter-agency cooperation

The GBO-5 report and FAO’s findings reveal a nearly 5 million hectare per year decrease in deforestation rates from 2015-2020, signaling positive action by Parties. However, this reduction in deforestation does not necessarily result in an increase in forest cover or the emergence of new forests.²⁵ The Global Forest Watch (GFW) initiative highlights a gap between reported data and what satellite imagery shows, indicating inconsistencies in the reported deforestation figures. According to GFW, the global annual loss of tree cover has seen an uptick by 4 million hectares between 2011 and 2019. This difference is thought to stem from the varied methodologies used and the specific aspects of deforestation that are being measured, suggesting that how data is gathered and what is quantified can significantly impact reported outcomes.²⁶ Overall habitat loss is still a concern in areas such as:

- Coastal mangroves

²⁴ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 52.

www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf

²⁵ *Id.*

²⁶ *Id.*

- Wetlands
- Tropical forest fragmentation
- Increased fragmentation of rivers
- Wilderness areas

GBO-5 states, with respect to national-level targets, “The targets that reference specific habitats most commonly refer to forests. Mangroves, coral reefs, rivers, and rangeland and marine environments are also mentioned, but to a lesser extent. Few national targets specify the percentage by which the rate of habitat loss is to be reduced, and few explicitly refer to habitat degradation or fragmentation.”²⁷

However, the Aichi Targets generally did not deal explicitly with overall spatial planning and rather focused on habitat loss. Target 1 of the Framework focuses specifically on the importance of spatial planning and wise allocation of uses, activities and priorities across broad spaces as a key means to reduce habitat loss.

It is important to note that recognizing SIDS’ numerous challenges with respect to freshwater resources, the SAMOA Pathway²⁸ notes the need to enhance institutional and human capacity to effectively and sustainably implement integrated management of water resources and related ecosystems, ensuring women’s involvement. Furthermore, one of the key interventions of the SIDS Nature Climate Action Roadmap²⁹ highlights needed efforts for marine spatial and land-use planning to strengthen the effectiveness of sustainable and climate-resilient marine protected areas (MPAs) while engaging local stakeholders in strengthening integrated local governance from ridge to reef.

Elements of the PoWIB addressing GBF Target 1

Relevant Priority Actions	Relevant Supporting Actions
Goal 1: Promote the conservation of the biological diversity of islands, habitats, and biomes.	
<i>Target 1.1: At least 10% of each of the island ecological regions effectively conserved</i>	
1.1.1. Develop and implement integrated policies and measures to conserve key terrestrial and marine ecosystems, habitats important for island biodiversity, societies and economies, taking into account the close ecological links within and between island marine and terrestrial ecosystems. <i>Rationale: Islands have many endemic species whose habitats are restricted to small areas. Island societies depend very largely on local biodiversity – whether terrestrial, fresh-water or marine.</i>	1.1.1.1. Identify, classify, map, and prioritize island ecosystems and sensitive areas important for biodiversity and/or for the maintenance of ecosystem goods and services, with the full and effective participation of indigenous and local communities, taking into account practical issues of connectivity and implementation of conservation activities. 1.1.1.5. Improve understanding of ecological processes on and around islands, including isolation and fragmentation of habitats such as, seamounts, cold water coral reefs, hydrothermal vents, and cold seeps in conserving biodiversity.

²⁷ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 57.

<https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

²⁸ (2014) SIDS Accelerated Modalities of Action (S.A.M.O.A.) Pathway:

https://www.un.org/ohrrls/sites/www.un.org.ohrrls/files/samoa_pathway.pdf

²⁹ SIDS Coalition for Nature (2023). “SIDS’ Integrated Nature-Climate Action Roadmap in Coastal Areas: Supporting Marine Protected Areas as Nature-based Solutions for Climate Action.”

<https://drive.google.com/file/d/1BKwP-Auc10dEBPPCTuX5bPqjJRQRKgOx/view>

Goal 5: Reduce pressures from habitat loss, land-use change and degradation, and sustainable water use	
<i>Target 5.1: Rate of loss and degradation of natural habitats in islands significantly decreased</i>	
5.1.1. Develop and implement integrated land and water use plans that take into account ecological and physical connectivity and important biodiversity areas. <i>Rationale: Island ecosystems frequently cover small areas and may be highly fragmented, and connectivity of habitats has become increasingly limited under anthropogenic pressure. Distances from the centre of the island to the ocean are often short, and impacts on biodiversity in one area are often rapidly reflected in nearby ecosystems.</i>	5.1.1.1. Establish and promote participatory tools and mechanisms to develop and implement integrated land and water use plans, including community-based resource mapping 5.1.1.2. Develop and implement enabling-policy and legal frameworks for integrated land and water use planning and management, including integrated watershed, marine and coastal area management and prevention of cumulative impacts from incremental development 5.1.1.3. Create mechanisms to ensure coordination of all agencies and sectors responsible for land and water use planning or management 5.1.1.4. Assess and address underlying causes of habitat loss in small islands, in particular in small island developing States 5.1.1.5. Develop alternatives to prevent loss of habitats and overexploitation of existing natural resources (e.g., forests, mangroves, marine resources) driven by mariculture, agriculture or tourism. 5.1.1.6. Reduce the negative impacts on ecosystems and resources of mining and quarrying (including sand exploitation, coral mining and dredging) by developing and implementing: (a) Policy and legal frameworks, including in particular for conservation of important ecosystems and habitats, e.g. mangroves; (b) Technologies that minimize adverse impacts; (c) Environmentally friendly and socially responsible approaches; (d) Methods for minimizing impacts of extraction of mineral resources, such as sand, aggregates, gravel, coral, limestone and mud. 5.1.1.7. Prevent and reduce coastal erosion, siltation and land/soil degradation. 5.1.1.8. Promote and implement “whole island” or “ridge-to-reef” planning and legislation/regulations to anticipate and prevent cumulative impacts from incremental development.
5.1.2. Develop and apply environmental and socio-economic impact assessment methods prior to land-use conversion such as for agriculture, human settlements, mining, logging, infrastructure development, and tourism and military activities. <i>Rationale: Impact assessment is particularly important when large fractions of remaining ecosystems can be affected by infrastructure development or other human activities.</i>	5.1.2.1. Take measures to avoid/prevent or reduce soil erosion caused by, inter alia, deforestation, overgrazing, and fires. 5.1.2.2. Implement strategic environmental assessment, and environmental and socio-economic impact assessment procedures or regulations integrating biodiversity considerations prior to land use conversion.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

Although the Aichi Targets were lacking a focus on integrated land and sea-use planning, the PoWIB actually contains numerous elements that speak directly to this issue. In fact, it goes further by emphasizing the importance integrating planning across terrestrial and aquatic systems. While these issues are missing from many other programmes of work under the Convention, there is no clear gap for this target in the PoWIB.

Indicative gaps in implementation

- Failure to understand barriers to management and conservation³⁰
- Not incorporating adaptive management practices that include sound research and includes monitoring and evaluation protocols³²
- Integration of biodiversity protection into country development goals³³
- Responses to biodiversity loss do not take into account the uniqueness of Islands (e.g., Island Nations, Nations with Islands, etc.) and the types of threats that affect them³⁴
- Need to improve Protected Area Networks³⁵
- Better control of invasive species pathways³⁶
- Better protection of traditional knowledge and ensure fair and equitable sharing of benefits and use of genetic resources.³⁷
- “Recognizing that invasive alien species represent one of the primary threats to biodiversity, especially in geographically and evolutionary isolated ecosystems, such as small island developing States...”³⁸

ii. Target 2: Restore 30% of all degraded ecosystems

Ensure that by 2030, at least 30 percent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration in order to enhance biodiversity and ecosystem functions and services, ecological integrity, and connectivity.

Most relevant Aichi Biodiversity Target—Target 15: Ecosystem Restoration and Resilience

“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 combatting desertification.”

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (medium confidence)

The effort to achieve the goal of restoring 15% of degraded ecosystems by 2020 has seen limited success. However, many regions are initiating or proposing ambitious restoration programs that hold

³⁰ Burt, April & Nuno, Ana & Bunbury, Nancy. (2021). Defining and bridging the barriers to more effective conservation of island ecosystems: A practitioner's perspective. Conservation Science and Practice. 4. 10.1111/csp2.587.

³¹ Xu, H., Cao, Y., Yu, D., Cao, M., He, Y., Gill, M., & Pereira, H. M. (2021). Ensuring effective implementation of the post-2020 global biodiversity targets. Nature Ecology & Evolution, 5(4), 411–418. <https://doi.org/10.1038/s41559-020-01375-y>

³² Lindenmayer, David & Gene, Liken & Lee, Miezi & Haywood, Andrew. (2011). Adaptive monitoring in the real world: Proof of concept. Trends in Ecology & Evolution. 641-646. 10.1016/j.tree.2011.08.002.

³³ UN. A/CONF.207/11 Report of the International Meeting to Review the Implementation of the Programme of Action for Sustainable Development of Small Island Developing States. 2005.p. 19.

<https://documents.un.org/doc/undoc/gen/n05/237/16/pdf/n0523716.pdf?token=QDH20vpYK4YYZIRkNz&fe=true>

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.*

³⁸ Decision COP VI/23 para 1, II. Guiding Principles for the Implementation of Article 8 (h): <https://www.cbd.int/decisions/cop/06/23>

the promise of substantially enhancing ecosystem resilience and preserving carbon stocks. These endeavors represent crucial steps towards reversing ecosystem degradation and contribute to broader environmental conservation and climate mitigation efforts.

The path to effective ecosystem restoration encounters obstacles, notably a substantial shortfall in understanding community ecology necessary for designing site-specific interventions in restoration practices. This deficiency highlights the complexity of ecosystems and the critical interactions among species that must be navigated to achieve successful restoration (Kraft et al. 2015). An enriched comprehension of the dynamics within ecological communities can guide more effective restoration strategies, ensuring interventions are not only suited to the specific ecological context but also promote long-term sustainability and resilience.

Furthermore, the identification of suitable restoration approaches is crucial for tackling the diverse challenges presented by degraded ecosystems. Each landscape offers distinct conditions and demands, necessitating the selection of restoration techniques that match specific ecological requirements. This approach requires a thorough evaluation of landscape-level ecological processes to grasp connectivity and permeability among various habitat types (Metzger et al. 2021). Such considerations ensure that restoration efforts enhance the broader ecological network, improving ecosystem connectivity and biodiversity resilience.

The ability to scale up restoration efforts is contingent on the effective dissemination and exchange of knowledge, coupled with the application of current insights into vital ecological interactions, such as those between plants and animals, and plants and microbes (Perino et al. 2019). These interactions play a crucial role in restoring ecosystem functions and services, emphasizing the necessity of incorporating scientific knowledge into practical restoration endeavors. Encouraging collaboration and the sharing of knowledge among scientists, practitioners, and policymakers can improve the scalability of restoration projects, aligning them with the latest advancements in ecological science to support global conservation objectives.

Furthermore, the Zero Draft Outcome Document³⁹ of the Fourth International Conference on Small Island Developing States (SIDS4) notes restoring biodiversity as one of the key priorities of SIDS. Furthermore, the SIDS Nature Climate Action Roadmap includes restoration, rehabilitation, and protection of coral reefs and blue carbon ecosystems in MPAs, with a particular focus on mangroves, as one of the key interventions of the roadmap, engaging local communities in such activities to ensure sustainability and inclusiveness. The SAMOA Pathway further promotes the importance of appropriate and effective reforestation, restoration and afforestation of forests in SIDS.

Elements of the PoWIB addressing Target 2

Relevant Priority Actions	Relevant Supporting Actions
Goal 1: Promote the conservation of the biological diversity of island ecosystems, habitats, and biomes	
<i>Target 1.1. At least 10% of each of the island ecological regions effectively conserved</i>	
1.1.2. Re-establish components that have been lost from or whose populations have been reduced within natural ecosystems	1.1.2.1. Develop and implement appropriate techniques and guidelines through reviewing and monitoring restoration projects globally. 1.1.2.2. Identify and undertake rehabilitation of natural terrestrial ecosystems from which key components have been lost or significantly reduced, in cooperation with local, traditional, and indigenous experts to identify key vegetation components that have been lost or significantly reduced. 1.1.2.3. Re-establish animal species in terrestrial and freshwater ecosystems from which they have been lost or significantly reduced.

³⁹ (2024) Zero Draft Outcome Document: Fourth International Conference on Small Island Developing States: https://sdgs.un.org/sites/default/files/2024-01/Clean%20version%20SIDS4_Zero_draft_Outcome_Document.pdf

	1.1.2.4. Re-establish depleted species into marine ecosystems (e.g. artificial reefs, coral transplanting and species restocking). 1.1.2.6. Use restoration techniques in order to foster and reinforce natural processes, as appropriate. 1.1.2.7. Recognize, encourage and facilitate restoration initiatives by indigenous and local communities, including through policies, legislation, technical assistance and financial support for community based initiatives. 1.1.2.8. Explore the possibility of documenting traditional knowledge, innovations and practices relevant to local species, taking on board the work of the Ad Hoc Open-Ended Inter Sessional Working Group on Article 8(j) and related provisions while developing technical guidelines for such activities, with the full and effective participation of indigenous and local communities, consistent with Article 8(j).
1.1.3. Undertake measures to restore at least 15% of degraded island ecosystems	1.1.3.1. Develop practical criteria for classifying degraded island ecosystems and selecting priority ecosystems for restoration, based on their conservation and ecosystem service value and impact on other ecosystems or habitats. 1.1.3.2. Systematically compile existing and new data on the status and trend of degraded island ecosystems. Establish a baseline measure of the extent of degraded island ecosystems as a means of determining progress towards restoration targets. 1.1.3.3. Restore selected island ecosystems through control and management or, where feasible, the eradication of invasive alien species. 1.1.3.4. Restore degraded mangrove, seagrass and coral reef ecosystems. 1.1.3.5. Recognize, encourage and facilitate ecosystem restoration initiatives by indigenous and local communities, through effective measures that could include policies, legislation, technical assistance and financial support for community-based initiatives.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

Relevant Priority Action 1.1.3 of the PoWIB is about measures to restore **at least 15%** of degraded island ecosystems⁴⁰. In light of GBF Target 2 (ensure that by 2030, **at least 30%** of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration in order to enhance biodiversity and ecosystem functions and services, ecological integrity, and connectivity), CBD COP may wish to increase the PoWIB percentage. In this context, however, it is important to note that islands under the PoWIB can be either island States (for which the 30% GBF target would apply) or islands within States. Given that Target 2 of the GBF emphasises ecosystems (terrestrial, inland water, and marine and coastal ecosystems) the minimum 30% may not be automatically translated to a minimum of 30% restoration of degraded island ecosystems in cases of islands within States. Therefore, this issue would merit further attention by COP with a view to ensure a better alignment with the GBF.

Furthermore, given the vulnerability of islands to climate change effects,⁴⁰ actions for restoration under the PoWIB could be expanded to include more prominently those related to disaster risk reduction (in alignment with the Sendai Framework for Disaster Risk Reduction 2015-2030), ecosystem-based adaptation.

⁴⁰ CBD decision XI/15 (2012), para 2.

Indicative gaps in implementation

- Lack of understanding of community ecology to support site-specific intervention in restoration practices⁴¹
- Understanding types of restoration approaches to employ.⁴²
- Need to take into account landscape-level ecological processes to assess connectivity and permeability among habitat classes.⁴³
- Capacity to upscale restoration and transfer and sharing of knowledge.⁴⁴
- Operationalizing current understanding of plant-animal and plant-microbe interactions⁴⁵

iii. Target 3: Conserve 30% of Land, Waters, and Seas

Ensure and enable that by 2030 at least 30 percent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.

Most relevant Aichi Biodiversity Target—Aichi Target 11: Protected Areas

“By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent 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 landscape and seascape.”

GBO-5 assessment of level of achievement of the Aichi Target: Target partially achieved (high confidence)

Significant progress was made in area-based conservation. Such progress is vital in the ongoing fight to conserve biodiversity and ensure the sustainability of our planet's ecosystems. The expansion of protected areas is a positive step towards safeguarding the natural world and its invaluable biodiversity against the escalating threats of climate change, habitat loss, and overexploitation.

Despite these advancements in setting aside land and marine areas for protection, challenges remain in ensuring that these protected areas fulfill their intended role effectively. Achieving the goal of protecting areas of significant biodiversity importance has been more challenging. There's a crucial need for these areas not only to cover the most critical habitats but also to be ecologically representative, ensuring a broad range of ecosystems are conserved. Moreover, the connectivity between protected areas and their integration into the broader landscape and seascape are essential for maintaining ecological processes and facilitating species migration and genetic exchange.

⁴¹ Keddy, P. A. (1992). Assembly and response rules: two goals for predictive community ecology. *J. Veg. Sci.* 3, 157–164. doi:10.2307/3235676

⁴² Kiehl, K., Kirmir, A., Donath, T., Rasran, L., and Holzel, N. (2010). Species introduction in restoration projects – evaluation of different techniques for the establishment of semi-natural grasslands in Central and Northwestern Europe. *Basic Appl. Ecol.* 11, 285–299. doi:10.1016/j.baee.2009.12.004

⁴³ Metzger, J.P., Villarreal-Rosas, J., Suarez-Castro, A.F., Lopez-Cubillos, S., Gonzalez-Chaves, A., Runting, R. K. et al. (2021) Considering landscape-level processes in ecosystem service assessment. *Sci. Total Environ.* 796, 149028. Doi:10.1016/j.scitotenv.2021.149028

⁴⁴ Waring, B., Grand Challenges in Ecosystem restoration. *Front. Environ. Sci.*, 04 January 2024.

⁴⁵ Perino, A., Pereira, H. M., Navarro, L. M., Fernández, N., Bullock, J. M., Ceaşu, S., et al. (2019). Rewilding complex ecosystems. *Sci.* (1979) 364, eaav5570. doi:10.1126/science.aav5570

Furthermore, the equitable and effective management of protected areas has not advanced at the desired pace. It is essential for the success of conservation efforts that local communities are involved in the decision-making process and benefit from these protected areas. This includes respecting indigenous rights and incorporating traditional knowledge in conservation strategies. Effective management also means implementing robust measures to prevent illegal activities, such as poaching and logging, and ensuring that conservation goals are met. Addressing these challenges is crucial for the long-term sustainability of protected areas and for achieving the broader goal of halting biodiversity loss.

With respect to SIDS more specifically, the SIDS Nature Climate Action Roadmap focuses on driving action towards ecosystem-based approaches in SIDS' MPAs and the sustainable management of MPAs in order to catalyze climate action and tackle biodiversity loss and climate change synergistically, utilizing whole-of-society and whole-of-government approaches. Notably, the SAMOA Pathway supports the action to conserve marine and coastal areas in SIDS, “especially areas of particular importance for biodiversity and for ecosystem services, through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures in order to reduce the rate of biodiversity loss in the marine environment”,⁴⁶ underlining the linkages with and ambition toward achieving Target 3 in the context of SIDS.

Elements of the PoWIB addressing Target 3

Relevant Priority Actions	Relevant Supporting Actions
Goal 1: Promote the conservation of biological diversity of island ecosystems, habitats, and biomes	
<i>Target 1.1: At least 10% of each of the island ecological regions effectively conserved</i>	
1.1.1. Develop and implement integrated policies and measures to conserve key terrestrial and marine ecosystems, habitats important for island biodiversity, societies and economies, taking into account the close ecological links within and between island marine and terrestrial ecosystems. <i>Rationale: Islands have many endemic species whose habitats are restricted to small areas. Island societies depend very largely on local biodiversity – whether terrestrial, fresh-water or marine.</i>	1.1.1.1. Identify, classify, map, and prioritize island ecosystems and sensitive areas important for biodiversity and/or for the maintenance of ecosystem goods and services, with the full and effective participation of indigenous and local communities, taking into account practical issues of connectivity and implementation of conservation activities. 1.1.1.2. Develop, implement and enforce through a participatory process, legislation and management plans for the conservation of important ecosystems and habitats, engaging all relevant stakeholders. 1.1.1.3. Establish efficient local, national, and regional ecosystem monitoring programmes. 1.1.1.4. Facilitate participatory workshops on conservation legislation for all relevant stakeholders to develop long term local support and commitment to compliance. 1.1.1.5. Improve understanding of ecological processes on and around islands, including isolation and fragmentation of habitats such as, seamounts, cold water coral reefs, hydrothermal vents, and cold seeps in conserving biodiversity.
<i>Target 1.2: Areas of particular importance to island biodiversity are protected through comprehensive, effectively managed and ecologically representative national and regional protected area networks</i>	
1.2.1. Identify and establish, as appropriate, comprehensive,	1.2.1.1. Where national biodiversity strategies and action plans (NBSAPs) do not exist or are not inclusive of protected areas, prepare

⁴⁶ SAMOA Pathway, para 58(o)

representative and effectively managed national and regional systems of protected areas taking into account issues of resilience, ecological and physical connectivity to conserve viable populations of threatened, endemic, and ecologically or culturally important island species. This should be done with the full respect for the rights of indigenous and local communities and relevant stakeholders and their full and effective participation, consistent with national law and applicable international obligations. <i>Rationale: Many species on islands are often either locally endemic, restricted in range, threatened, or all three, and are not likely to survive without legal protection.</i>	and implement management and conservation plans for protected areas and micro-reserves, including community-based management plans. 1.2.1.2. Develop and apply active conservation methods that integrate ex situ, if appropriate, and in situ conservation. 1.2.1.3. Recognize, promote and establish marine, coastal and terrestrial protected areas using a broad set of governance types, including innovative types such as co-managed protected areas and community-based conserved areas and by: (a) Working with traditional, indigenous and local experts to identify and promote effective protected area governance options; (b) Using international legal designations (such as Ramsar and World Heritage) to leverage support for island protected areas; (c) Developing and conducting outreach activities to inform indigenous and local communities and other stakeholders on the benefits and importance of protected areas; (d) Empowering stakeholders in resource management and promoting community-based management; (e) Establishing partnerships with other governments, NGOs, and/or indigenous and local communities to assist governments to build representative and resilient protected area networks. 1.2.1.4. Support integrated management of coastal and marine protected areas, and the enhancement of ecosystem resilience and recovery. 1.2.1.5. Integrate climate change adaptation measures when establishing networks of island protected areas. 1.2.1.6. Identify and protect areas of significance to migratory species 1.2.1.7 Consider ratification or accession to the Convention on Migratory Species and/or its subsidiary agreements. 1.2.1.8. Encourage the establishment of transboundary marine protected areas where appropriate, consistent with the United Nations Convention on the Law of the Sea.
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Identified gaps in the PoWIB and areas of potential need of enhanced attention

Target 1.1 of the PoWIB calls for at least 10% of islands' ecological regions to be conserved. In contrast, GBF Target 3 calls for "... at least 30 percent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved...". As noted above in Target 2, the GBF is more generic in its ecosystems classification (terrestrial, inland waters and marine and coastal). Islands (within States or island States) certainly contain terrestrial and marine and coastal ecosystems, and in several instances also inland water ecosystems. The PoWIB, as a specific instrument tailored to islands' context, would benefit from further attention by CBD COP with a view to better align with GBF Target 3's percentage as well as qualifying elements, including on socio-economics/sustainable use components of the target.

Furthermore, given the more recent developments regarding other effective area-based conservation measures (OECMs), the island PoW could also dedicate some attention to this element of Target 3. COP decision 14/8 (2018) is obviously applicable to islands and complement the island biodiversity programme of work in this sense, as well as other protected areas decisions and marine and coastal biodiversity decisions under the Convention and elsewhere.

Indicative gaps in implementation

- Understanding the rate and cause of habitat loss⁴⁷
- Linking habitat fragmentation through man-made activities⁴⁸
- Differentiating causes of ecosystem degradation (e.g., direct human activity or climate-induced)⁴⁹

iv. Target 4: Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts

Ensure urgent management actions to halt human-induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex-situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.

Relevant Aichi Biodiversity Target—Aichi Target 12: Reducing Risk of Extinction

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.

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (high confidence)

Numerous species globally are inching ever closer to extinction, highlighting the ongoing biodiversity crisis. Despite this dire situation, conservation efforts over the past decade have made a significant impact, likely preventing the extinction of birds and mammals by at least two to four times compared to what would have occurred in their absence. This achievement underscores the importance and effectiveness of conservation initiatives in changing the fate of at-risk species. However, the overall picture remains concerning. “Among well-assessed taxonomic groups, nearly one quarter (23.7%) are on the edge of extinction if the current drivers of biodiversity loss are not substantially minimized.”⁵⁰ This leads to an alarming projection of one million species across all groups threatened with extinction, illustrating the vast scope of the biodiversity emergency.

The decrease in species is not just about those on the verge of extinction. Vertebrate species populations have seen dramatic declines, dropping by more than two-thirds since 1970, and by nearly one-third since 2010.⁵¹ These reductions signify a considerable loss in biodiversity and indicate the extensive impact human activities have had on the planet's ecosystems. The sharp decrease in vertebrate populations signals the deteriorating health of ecosystems globally, a consequence of habitat destruction, pollution, overexploitation, climate change, and invasive species.

Relevant Aichi Biodiversity Target—Aichi Target 13: Safeguarding Genetic Diversity

⁴⁷ Wu, J., Landscape sustainability science: ecosystem services and human well-being in changing landscapes. *Landscape Ecol* (2013) 28:999-1023. DOI 10.1007/s10980-013-9894-9

⁴⁸ Nick M. Haddad et al., Habitat fragmentation and its lasting impact on Earth's ecosystems. *Sci. Adv.* 1, e1500052 (2015) DOI: 10.1126/sciadv.1500052

⁴⁹ Wu, J., Landscape sustainability science: ecosystem services and human well-being in changing landscapes. *Landscape Ecol* (2013) 28:999-1023. DOI 10.1007/s10980-013-9894-9

⁵⁰ Secretariat of the Convention on Biological Diversity (2020) *Global Biodiversity Outlook 5*. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 15. www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf

⁵¹ Secretariat of the Convention on Biological Diversity (2020) *Global Biodiversity Outlook 5*. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 86. www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf

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.

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (medium confidence)

The genetic diversity among cultivated plants, farmed and domesticated animals, and their wild counterparts is still diminishing. Critical to future food security, the wild ancestors of essential food crops are inadequately preserved in off-site seed banks, which are vital for their conservation. Meanwhile, the percentage of livestock breeds facing extinction or already extinct is on the rise, albeit at a decelerated pace compared to previous years, indicating a degree of progress in safeguarding traditional breeds. Additionally, the wild relatives of domesticated birds and mammals are increasingly threatened with extinction, further compounding the challenges to biodiversity and food security. This trend not only threatens the ecological balance but also jeopardizes the genetic reservoirs necessary for agricultural resilience and adaptation in the face of changing environmental conditions.

In recognition of the forests' importance to livelihoods and ecosystems, the SAMOA Pathway notes the need for efforts to conserve and safeguard species and genetic diversity in forests, including increasing financing to do so.

Elements of the PoWIB addressing Target 4

Relevant Priority Actions	Relevant Supporting Actions
Goal 1: Promote the conservation of the biological diversity of island ecosystems, habitats, and biomes	
<i>Target 1.1. At least 10% of each of the island ecological regions effectively conserved</i>	
1.1.2. Re-establish components that have been lost from or whose populations have been reduced within natural ecosystems	1.1.2.5. Develop and implement methods to protect endangered species in their island environments and to enhance or re-establish populations that have sustained extensive declines.
Goal 2: Promote the conservation of island species diversity	
<i>Target 2.1: Populations of island species of selected taxonomic groups restored, maintained, or their decline substantially reduced</i>	
2.1.1. Develop and implement conservation measures and policies, including protection, and where needed, recovery of populations of threatened, endemic, or ecologically or culturally important species and recovery plans. <i>Rationale: Key issue for island biodiversity. Continued loss of island biodiversity is of global importance. Many</i>	2.1.1.1. Identify, map, and prioritize areas containing native threatened, / endemic, and/or culturally important species working closely with traditional, indigenous and local experts and communities. 2.1.1.2. Develop and implement habitat protection, management, and if necessary, species reintroduction strategies giving priority to in situ activities. 2.1.1.3. Adopt measures to prevent unsustainable harvesting. 2.1.1.4. Collaborate with local and indigenous and local communities to develop and apply active conservation methods that integrate both ex situ and in situ conservation. 2.1.1.5. Implement inter-island translocation of threatened species, especially within archipelagos, in cases where this will improve chances for survival, and conduct risk assessment about hybridization and out-breeding processes before implementation. 2.1.1.6. Consider, where appropriate, economic and other forms of incentives that encourage the conservation of threatened endemic, or

<i>species have critical ecosystem roles, or are or social or cultural significance to islanders.</i>	ecologically or culturally important species by private sector, NGOs, and indigenous and local communities, giving priority to in situ activities. 2.1.1.7. Maintain as appropriate/necessary threatened island species under ex situ conditions, preferably in the country and/or region of origin. 2.1.1.8. Improve scientific capacity in conservation biology tools for recovery of endangered species, including population genetic studies as part of recovery efforts. 2.1.1.9. Promote the gathering of the maximum genetic diversity in the samples to be stored in ex-situ collections at population and species levels. / 2.1.1.10. Understand delayed response processes of species responding to degradation, loss and fragmentation of insular habitats. 2.1.1.11. Develop and implement recovery plans for selected single, multiple or region-wide island endangered species in collaboration with indigenous and local communities, giving particular priority to species most at risk of extinction, those that are endemic, and species that will provide the broadest range of benefits. 2.1.1.12. Develop protocols for translocation of island endemics threatened by invasive alien species to different islands or new locations within the same island
Target 2.2: Status of threatened island species significantly improved	
2.2.1. Compile detailed inventories of island species, assess their conservation status, including the main threat criteria, and develop the taxonomic expertise necessary to facilitate this. <i>Rationale: Many island species occur in very small populations. The transition from satisfactory conservation status to threatened status can occur with great rapidity.</i>	2.2.1.1. Compile and/or update maps and undertake censuses of all native threatened endemic, and/or culturally important species. 2.2.1.2. Undertake studies and provide baseline data and information on marine species, spawning and breeding sites. 2.2.1.3. Survey and assess known and potential biodiversity hot spots, with rapid assessments of components of island biodiversity. 2.2.1.4. Undertake taxonomic studies or revisions of important island taxa, including marine, freshwater and terrestrial species. 2.2.1.5. List all endangered island species that are stored in ex situ collections. 2.2.1.6. Document traditional use with the full and effective participation and prior informed consent of indigenous and local communities, consistent with Article 8(j). 2.2.1.7. Promote studies on key species life histories with special emphasis on conservation biology tools and approaches to assist active recovery efforts. 2.2.1.8. Understand the dynamics of key island populations and ecological communities, and what constitutes an adequate area of key habitat to ensure viable populations. 2.2.1.9. Assess genetic diversity and differentiation within and among island populations of wild flora and fauna. 2.2.1.10. Improve the infrastructure and resources for data and information collection, management and exchange including: (a) Informatics tools to provide easy access to data, repository collections and identification reference materials; (b) Regional, national and local capacity, where appropriate, to house and maintain repository collections of voucher specimens and other reference specimens with the participation of indigenous and local communities. 2.2.1.11. Provide taxonomic training and prepare guides to enable researchers to identify poorly known biological groups, coral species and other associated island species.

	2.2.1.12. Undertake monitoring of those species at risk, especially, at a minimum, all critically endangered and endangered species.
Goal 3: Promote the conservation of island genetic diversity	
<i>Target 3.1: Genetic diversity of crops, livestock, and other valuable island species conserved, and associated indigenous and local knowledge maintained</i>	
3.1.1. Develop and implement measures to strengthen <i>in situ</i> or on-farm conservation of wild plants and animals and traditional crops and associated knowledge of indigenous and local communities, recognizing the widespread use of land-races of crops and stock strains on islands <i>Rationale: Island communities often have unique human cultures that have considerable knowledge of local biodiversity and have developed a wide range of local crop and domestic stock varieties.</i>	3.1.1.1. Support regional, subregional, national and local efforts to conserve the genetic diversity of crops and livestock on farms and of useful wild species in their natural habitats. 3.1.1.2. Integrate <i>in situ</i> and <i>ex situ</i> strategies for conservation of genetic diversity. 3.1.1.3. Identify and support mechanisms for the restoration of lost germplasm and associated information to communities and countries. 3.1.1.4. Support projects of indigenous and local communities to perpetuate and revitalize customary use of wild species and traditional crops and livestock in accordance with traditional cultural practices that are compatible with <i>in situ</i> conservation and/or sustainable use requirements. 3.1.1.5. Develop, with the full and effective participation of indigenous and local communities, processes and mechanisms to facilitate the return of genetic resources held in <i>ex situ</i> collections to their ecosystems of origin, with the view to assisting <i>in situ</i> conservation initiatives of indigenous and local communities.
3.1.2. Develop national and regional gene-pools and gene-banks for the conservation of genetic material of significance to the islands for food sources and health care enhancement and food security and/or that address threats to the high levels of island endemism <i>Rationale: Endemism and local land races of island species provide a unique and irreplaceable source of genetic resources.</i>	3.1.2.1. Develop capacity to establish and maintain gene banks/genetic resources centres, including for aquatic/marine species, crops, and livestock, subject to Article 8(j). 3.1.2.2. Develop a mechanism that enables and facilitates the development of regional gene banks/genetic resources centres to serve those islands that lack the resources and infrastructure to establish and maintain gene banks. 3.1.2.3. Ensure the placement of gene banks/genetic resources centres in least vulnerable areas and where possible, maintain stocks in duplicate sites.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB is quite comprehensive and addresses most of the elements of GBF Target 4. Although there is a gap in human-wildlife conflict, there may not be a need to include specific actions in this regard as this issue is a cross-cutting issue (but see also the marine and coastal biodiversity programme of work assessment which identified this issue as deserving further attention under the Convention with respect to marine species).

Indicative gaps in implementation

- Human-wildlife interactions and minimizing human-wildlife conflict (SBSTTA 25)
- Low central governance capacity⁵²
- Control of pathways for invasive alien species⁵³
- Genetic diversity “seldom given explicit consideration in conservation prioritization⁵⁴
- Lack economic incentives that promote conservation of threatened endemic, ecologically, or culturally significant species across all sectors.⁵⁵
- Lack of policy and legislative frameworks.⁵⁶
- Inadequate infrastructure for research and monitoring.⁵⁷

v. Target 5: Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species

Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.

Most relevant Aichi Biodiversity Target—Target 6: Sustainable Management of Aquatic Living Resources

“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.”

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (high confidence)

Aichi Biodiversity Target 6 is very comprehensive and summarised major international obligations and commitments with respect to sustainable fisheries and key elements of an ecosystem approach to fisheries.⁵⁸

Furthermore, the SAMOA Pathway outlines the importance of the monitoring, control, and surveillance of fishing vessels to address illegal, unreported and unregulated fishing, highlighting the need for institutional capacity-building in this area. It further calls for the conservation, sustainable use, and management of straddling and highly migratory fish stocks.

⁵² Jupiter, Stacy & Cohen, Philippa & Weeks, Rebecca & Tawake, Alifereti & Govan, Hugh. (2014). Locally-managed marine areas: Multiple objectives and diverse strategies. *Pacific Conservation Biology*. 20. 10.1071/PC140165.

⁵³ Keppel, Gunnar & Mokany, Karel & Wardell-Johnson, Grant & Phillips, Ben & Welbergen, Justin & Reside, April. (2015). The capacity of refugia for conservation planning under climate change. *Frontiers in Ecology and the Environment*. 13. 10.1890/140055.

⁵⁴ Aapo Kahilainen, Mikael Puurtinen, Janne S. Kotiaho, Conservation implications of species–genetic diversity correlations, *Global Ecology and Conservation*, Volume 2, 2014, Pages 315-323, ISSN 2351-9894, <https://doi.org/10.1016/j.gecco.2014.10.013>.

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ See also Garcia, S.M. and Rice, J. 2020. *Assessing Progress towards Aichi Biodiversity Target 6 on Sustainable Marine Fisheries*. Technical Series No. 87. Secretariat of the Convention on Biological Diversity, Montreal, 103 pages.

Elements of the PoWIB addressing Target 5

Relevant Priority Actions	Relevant Supporting Actions
Goal 4: Promote sustainable use and consumption	
<i>Target 4.1: Island biodiversity-based products are derived from sources that are sustainably managed, and production areas managed, consistent with the conservation of biological diversity</i>	
4.1.1. Remove subsidies that encourage unsustainable use of island biodiversity and where livelihoods are resource-based, support the development of sustainable economic activities. <i>Rationale: Subsidies and other economic incentives may have very wide-reaching and rapid detrimental effects on biodiversity in islands. Island species are often restricted to very small populations that are quickly impacted by unsustainable practices.</i>	4.1.1.1. Develop and implement policies and a legal framework to facilitate the removal of subsidies that encourage unsustainable exploitation of island biodiversity, including, inter alia, the following actions: (a) Increase awareness of policy makers, legislators and the private sector on the impacts of subsidies on island biodiversity. (b) adopt/encourage measures to help eradicate over-exploitation of threatened species and other species with an unfavourable conservation status (e.g., seabirds, marine turtles and dugong). (c) Assess the effectiveness of policies designed to make economic activities sustainable on islands, and use socio-economic and scientific knowledge to develop them further. (d) Understand how island-specific economic policies can be incorporated in over-arching trade, tourism and environmental governance. 4.1.1.5. Assess the current and potential contribution of biodiversity to island peoples in terms of sustaining livelihoods, economic activity and cultural value.
<i>Target 4.2: Unsustainable consumption of island biological resources and its impact upon biodiversity is reduced</i>	
4.2.1. Adopt measures to ensure sustainable management of coastal and marine biodiversity, with due regard to the conservation of threatened, endemic, ecologically and/or culturally important island species, to prevent, <i>inter alia</i>, over-exploitation and destructive practices <i>Rationale: Island species are often restricted to very small populations that are quickly impacted by unsustainable practices.</i>	4.2.1.1. Develop and implement participatory standards and protocols in establishing measures for the sustainable utilization of marine-based resources. 4.2.1.2. Establish and ensure compliance with frameworks on unsustainable fishing gears and practices that severely impact vulnerable marine and coastal ecosystems, taking into account sustainable customary resource use of indigenous and local communities. 4.2.1.3. Develop an updated assessment of fishing gears and practices. 4.2.1.4. Assess and promote new techniques to help alleviate fishing pressures on coastal ecosystems. 4.2.1.5. Promote the use of gears and techniques that minimize by-catch of non-target species. 4.2.1.6. Develop and implement fishery management plans to control pressure on resources and habitats, ensure stock replenishment and prevent loss of biodiversity/habitats, taking into account user's rights, zoning (including setting of no take zones), drawing on traditional and science-based knowledge. 4.2.1.8. Promote the establishment of marine no-take zones to enhance replenishment of fishery resources. 4.2.1.10. Establish effective participatory monitoring, control and surveillance systems to ensure compliance with regulations by users of coastal and marine resources, at the local, national and regional levels.

	4.2.1.12. Support integrated and participatory policy development, planning and management (for example IMCAM) of coastal and marine resources with adjacent watersheds, including farming systems. 4.2.1.13. Support and strengthen the capacity of governments, indigenous and local communities and other stakeholders to sustainably manage coastal and marine resources and to document sustainable practices.
4.2.2 Adopt measures to promote the sustainable use of terrestrial and freshwater resources in islands <i>Rationale: Island communities are very largely dependent on local biodiversity.</i>	4.2.2.1. Work with civil society, the private sector, and local leaders to enable indigenous and local communities to develop and/or implement adaptive community-management systems, through participatory processes, to conserve and sustainably use terrestrial and freshwater biological diversity, where appropriate. 4.2.2.2. Support and strengthen the capacity of indigenous and local communities to sustainably manage terrestrial and freshwater resources and to document sustainable practices. 4.2.2.3. Establish effective monitoring, control and surveillance systems to ensure compliance with regulations by users of terrestrial and freshwater resources, at the local, national and regional levels. 4.2.2.5. Develop effective and generally accessible information systems and management strategies for terrestrial and freshwater resources. 4.2.2.6. Promote implementation and monitoring of integrated and sustainable land use and water resources management strategies and practices.
<i>Target 4.3: No species of wild flora and fauna on islands is endangered by international trade</i>	
4.3.1. States not yet parties to accede to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and all States implement that Convention. <i>Rationale: A number of island States are not yet Party to CITES. The economic circumstances of islands, combined with their unique biodiversity, tend to encourage the trade in rare organisms.</i>	4.3.1.1. Adopt regulatory programmes to ensure that harvest for trade in species is sustainable, in accordance with CITES and relevant national regulations.
4.3.2. Develop and enforce measures to stop illegal, unreported and unregulated harvesting and trading of endangered species of wild flora and fauna. <i>Rationale: The high levels of endemism on islands make species more vulnerable to global extinction through illegal activities.</i>	4.3.2.1. Strengthen legislation and enforcement to manage international trade in threatened species, inter alia, by applying appropriate penalties and strengthening the weakest parts of the enforcement system. 4.3.2.2. Empower communities to support enforcement of regulations concerning collection for trade and in monitoring the populations of the species concerned. 4.3.2.3. Consider incentives / to re-invest revenue from trade in conservation and sustainable management of the species concerned.

4.3.3. Manage trade in those species not covered by CITES to ensure that their wild populations are sustained <i>Rationale: Island species are often not listed in CITES.</i>	4.3.3.1. Develop and adopt management plans for key species to ensure that harvest for international trade in them is sustainable
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Identified gaps in the PoWIB and areas of potential need of enhanced attention

Considering existing guidance under the CBD and other relevant instruments applicable to the implementation of Target 5, no major alignment gaps have been identified.

vi. Target 6: Reduce the Introduction of Invasive Alien Species by 50% and Minimize Their Impact

Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands.

Most relevant Aichi Biodiversity Target—Aichi Target 9: Invasive Alien Species Prevented and Controlled

“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.”

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (medium confidence)

Over the last ten years, significant strides have been made in recognizing and prioritizing invasive alien species based on the risks they pose, as well as evaluating the feasibility of managing these threats. Programs aimed at eradicating invasive alien species, particularly invasive mammals on islands, have seen successes that have positively impacted native species. These efforts demonstrate that with targeted action, the biodiversity of affected ecosystems can be preserved and restored. Despite these achievements, they account for only a fraction of all invasive species occurrences, underscoring the vast scope of challenges that still need to be addressed. As noted by Spatz et al (2022), “invasive species are the primary driver of native biodiversity loss on islands, though eradication of invasive species from islands has been effective at halting or reversing these trends.”⁵⁹

However, despite the progress in eradication and management efforts, there is a concerning lack of evidence indicating a decrease in the rate of new introductions of alien species. This continuous influx of invasive species suggests that global biosecurity measures and preventive strategies are not keeping pace with the threats posed by globalization and increased human mobility. The persistent rise in introductions highlights a critical need for more robust policies, improved surveillance, and greater international cooperation to prevent the spread of invasive species.

One significant challenge in biodiversity conservation is the presence of regulatory and enforcement gaps. Many jurisdictions lack comprehensive legal frameworks or the capacity to enforce existing laws effectively. This deficiency hampers efforts to protect ecosystems and species from various threats. Additionally, inadequate biosecurity measures and quarantine procedures often result in the

⁵⁹ Spatz, D. R., Holmes, N. D., Will, D. J., Hein, S., Carter, Z. T., Fewster, R. M., ... Russell, J. C. (2022). The global contribution of invasive vertebrate eradication as a key island restoration tool. *Scientific Reports*, 12(1). <https://doi.org/10.1038/s41598-022-14982-5>. See also Castaño, P.A., Hanson, C.C., Campbell, K.J., Carrión, V., Fisher, P., Ruell, E., Will, D., Siers, S. (2022). [Invasive rodent eradication on islands: assessment and mitigation of human exposure to rodenticides](#). *Biological Invasions*, Volume 25, Pages 653–671.

unintentional introduction of invasive species through international trade. These invasive species can have devastating effects on native biodiversity, leading to the loss of endemic species and the degradation of ecosystems. Moreover, there is often a lack of proper management practices to determine and enforce sustainable harvest levels for wildlife and plant species, which is critical for ensuring their long-term survival and health.

Another major gap lies in the monitoring of biodiversity, where there is a deficiency in data that provides information on the status and trends of wild species populations. This lack of information impedes informed decision-making and the development of effective conservation strategies. Without accurate, up-to-date data, it is challenging to assess the impact of human activities on biodiversity and to adjust policies and practices accordingly. Furthermore, there is a crucial need for proper community engagement in trade practices to ensure that they contribute to local livelihoods without compromising sustainability. Communities that are directly involved in, and benefit from, the sustainable use of biodiversity are more likely to support and participate in conservation efforts.

Lastly, islands that rely heavily on biodiversity-related sectors, such as tourism and fisheries, face challenges in diversifying their economies. This dependency makes them vulnerable to biodiversity loss, which can have far-reaching effects on their economic stability and the well-being of their populations. Diversification strategies that incorporate sustainable practices and reduce reliance on single sectors are essential for building resilience against environmental and economic shocks. Engaging local communities in these efforts can help create more sustainable and diverse economic models that support both conservation and livelihoods. It is also important to highlight that the SAMOA Pathway notes that IAS “pose a threat to sustainable development and undermine the efforts of small island developing States to protect biodiversity and livelihoods, preserve and maintain ocean resources and ecosystem resiliency, enhance food security and adapt to climate change”.⁶⁰ To effectively address the issue of IAS, it calls for increased multisectoral collaboration at all levels, improved eradication and control of IAS, and strengthening SIDS’ capacity to prevent and address IAS as well as public awareness on this issue.

Elements of the PoWIB addressing Target 6

Relevant Priority Actions	Relevant Supporting Actions
Goal 6: Control threats to island biodiversity from invasive species	
<i>Target 6.1: Pathways for major potential alien invasive species are identified and controlled on islands</i>	
6.1.1. Establish effective control systems at national island borders and between and within islands to prevent the movement of invasive alien species	6.1.1.1. Establish an effective quarantine control system at national borders to protect against the introduction of invasive alien species taking into account existing control systems, such as those under the International Plant Protection Convention. 6.1.1.2. Establish and, where appropriate, improve quarantine measures to protect against movement of invasive alien species between islands within nation states (i.e., intra-island in the case of islands that are part of an archipelago or a larger state). 6.1.1.3. Collect baseline data on invasive alien species introductions, and support regional and global databases providing comprehensive information on invasive species. 6.1.1.4. Support efforts to develop scientific, effective and safe biological control of invasive alien species that negatively affect islands. 6.1.1.5. Develop, strengthen and enforce legislative and policy frameworks as a basis for effective prevention measures.

⁶⁰ SAMOA Pathway, para 95

	6.1.1.6. Integrate, where appropriate, WTO/SPS measures developed or implemented under the WTO work programme on small economies into broader control measures for invasive alien species. 6.1.1.7. Establish linkages to other international instruments and the work of organizations with an interest in invasive alien species (e.g., the IPPC, EPPO, WTO/SPS, OIE, APEC, SPREP and other regional bodies relevant to the Mediterranean, Indian Ocean, and Caribbean).
6.1.2. Collaborate to identify and address pathways for movement of invasive alien species at the island, national, regional and global levels	6.1.2.1. Collaborate to identify and address pathways for movement of invasive alien species at the regional and global level, so that clusters of island States can work together to protect their biodiversity from them. 6.1.2.2. Share national invasive alien species lists and data on invasive alien species intercepted and their pathways at the international level. 6.1.2.3. Solicit assistance from the International Maritime Organization (IMO) in the assessment and compilation of best practices, and in the development and implementation of regulatory measures for the management of ballast water and bio-fouling to prevent the spread of invasive alien species both internationally and intra-nationally. 6.1.2.4. Encourage island governments that have not done so to accede to the International Convention for the Control and Management of Ships' Ballast Water and Sediments (2004), and related agreements relevant to invasive alien species.
6.1.3. Develop and implement measures for the early detection and rapid response to the introduction or establishment of invasive alien species in both terrestrial and marine ecosystems <i>Rationale: This is one of the most important issues for island biodiversity, which needs urgent, concerted and sustained action.</i>	6.1.3.1. Develop contingency plans for the early detection and rapid response to the introduction of invasive alien species that may affect the ecological, social, economic and cultural balance in both terrestrial and marine ecosystems. 6.1.3.2. Implement participatory surveillance programmes (integrating as far as possible, local communities) to detect new introductions and to assess the probability that species already present will become invasive. 6.1.3.3. Share national invasive alien species lists and data on invasive alien species intercepted and their pathways at the national level. 6.1.3.4. Develop or strengthen policy frameworks and develop, strengthen and enforce legislation for effective response systems. 6.1.3.5. Collect baseline data for existing native and endemic species in order to better understand what alien and invasive alien species populations have become established, so as to better assess their impacts. 6.1.3.6. Make available information on population dynamics, habitat (natural and semi-natural), reproductive biology and propagation features of potentially invasive species. 6.1.3.7. Identify and address likely invasion processes in the design of biodiversity conservation strategies. 6.1.3.8. Perform science-based risk assessment for: (a) proposed deliberate introductions of alien species; and (b) importation of goods that may accidentally include invasive alien species (e.g. insects on food shipments). 6.1.3.9. Develop science-based risk assessment methodologies applicable at the local, national and regional levels, including the risk of hybridization with endemic species. 6.1.3.10. Encourage assistance by regional international entities in development of regional science-based risk assessment policies and tools and capacity-building to assist countries in addressing the requirements of IPPC and WTO/SPS for raising quarantine measures to keep invasive alien species out.
<i>Target 6.2: Management plans in place and implemented for major alien species that threaten ecosystems, habitats or species</i>	
6.2.1. Develop and implement prevention,	6.2.1.1. Identify priorities and opportunities for the practical control and eradication of key invasive alien species from islands, working closely with, civil society, business and local stakeholders.

eradication and management plans for long-term management of priority invasive alien species. These plans should include, provisions for the, elimination or control of pathways that lead to the introduction and spread and re-invasion of these species	6.2.1.2. Encourage, develop and support implementation of economically and environmentally sustainable management programmes for control and eradication of priority invasive alien species on islands. 6.2.1.3. Develop an inventory of invasive alien species on islands based on surveys. Link this with inventory of species and ecosystems to identify the pressures, risks and most cost-effective opportunities for preventing the introduction and spread of invasive alien species, thereby supporting the restoration of affected habitats. 6.2.1.4. Develop or strengthen policy frameworks and develop, strengthen and enforce legislation for effective management systems 6.2.1.5. Promote regional mechanisms for supporting communication, rapid response, risk assessment procedures and coordination of regulatory measures to counter the spread of invasive alien species across island chains or groups and among insular regions with similar ecosystems. 6.2.1.6. Facilitate and support the work of cooperative initiatives to eradicate or manage priority invasive alien species on islands (e.g. Cooperative Initiative on Invasive Alien Species). 6.2.1.7. Review and, as necessary, facilitate the revision or development of national and/or local legal instruments, adapted to the situation of each island state or island region, to prevent undesired introductions and to manage or eradicate established invasive alien species. 6.2.1.8. Provide the systemic institutional and individual technical capacities at the national and regional levels to conduct research, public education, and awareness and institute enforcement mechanisms for ongoing prevention and control of invasive species.
6.2.2. Enlist the support and cooperation of all sectors of society for appropriate prevention, eradication and management of alien invasive species <i>Rationale: This is one of the most important issues for island biodiversity, which needs urgent, concerted and sustained action.</i>	6.2.2.1. Develop and conduct public awareness and social marketing activities and programmes for key audiences and key species to increase public will to address invasives and strategic action by target groups, working closely with local governments, civil society, business and local stakeholders. 6.2.2.2. Develop and implement participatory processes for integrated planning for prevention and management of invasive alien species, working with all relevant stakeholders. 6.2.2.3. Create or maintain active multi-sector invasive alien species committees (or equivalent) at the island or national level to: (a) Ensure ongoing coordination by all public and private sector agencies with a role in invasive alien species planning and action; (b) Assist national and local governments, non-governmental organizations, local communities, and the private sector to clearly identify their own responsibilities for the prevention, detection, rapid response, eradication, and long-term management of invasive alien species, including, inter alia, procedures for the regulation of domesticated or captive species that may become invasive; (c) Establish and/or strengthen collaborative working relationships among conservation, agriculture and border control (customs and quarantine) authorities. 6.2.2.4. Develop and implement codes of conduct to regulate intentional introductions and prevent unintentional introductions by the general public and by enterprises that import, export or transport goods.

Furthermore, decision XI/15 urged to strengthen the implementation of the PoWIB by:

- Maintaining and supporting key databases and information portals, such as the Global Island Database, the Threatened Island Biodiversity Database, the Database of Island Invasive Species Eradications, the Global Invasive Species Database, the Island Biodiversity and Invasive Species Database and Small Islands Developing States Network (SIDSNet), to

- enable effective invasive species monitoring and eradication prioritization on islands, as valuable tools in support of the implementation of the programme of work;
- Developing and strengthening international, regional, national and local collaboration to manage invasive alien species within and across jurisdictions, including the diversity of successful approaches to prevention, eradication and control where feasible, and in particular to consider a biosecurity approach that addresses the full range of invasive threats.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB as well as COP decisions address IAS well, however, given the extensive studies and guidance (under the CBD and beyond) developed since its last update,⁶¹ and considering GBF Target 6 focus on priority sites, it would be beneficial to consolidate latest guidance relevant to islands with respect to identifying islands, and areas within islands, as priority sites for invasive species. Although invasives are addressed under a separate stream of work under the Convention, this issue of is special heightened relevance for islands and thus warrants focus under the island stream of work as well.

Indicative gaps in implementation⁶²

- Prevention and Early Detection: limited resources and infrastructure to implement comprehensive biosecurity measures to prevent introduction of alien invasive species.
- Need for improved surveillance, early detection systems, and rapid response capabilities to identify and manage potential invasion before they become established.
- Legal and Policy Frameworks: inadequate policy and legal frameworks hinder effective management of invasive species.
- Comprehensive and enforceable legislation that addresses prevention, introduction, and management of invasive species is needed, along with policies that promote intersectoral collaboration and align with international standards.
- Research and Monitoring: A lack of baseline data and ongoing monitoring makes it difficult to assess the impact of invasive species and the effectiveness of management actions.
- Enhanced research on the ecology of invasive species and their impacts on island ecosystems is needed, along with long-term monitoring programs to track changes in biodiversity and ecosystem health.
- Collaboration and Coordination: Invasive species management often requires coordinated action across different sectors and jurisdictions, which can be difficult to achieve.
- Strengthening regional and international cooperation to share knowledge, resources, and successful strategies is crucial for enhancing island capacities to manage invasive species.
- Regulatory and enforcement gaps – lack comprehensive legal frameworks or capacity to enforce.
- Lack proper biosecurity measures and quarantine procedures that allows for introduction of invasive species through trade.
- Lack of proper management practices to determine and enforce sustainable harvest levels.
- Gap with respect to biodiversity monitoring data that provides information on status and trends of wild species populations to support informed decision making.
- Proper community engagement that ensures trade practices contribute to local livelihoods without compromising sustainability.
- Challenges to diversifying economies in islands that are reliant on biodiversity-related sectors (e.g., tourism, fisheries).

⁶¹ See <https://www.islandconservation.org/publications/>

⁶²Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 74-77.
www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf

vii. **Target 7: Reduce Pollution to Levels That are not Harmful to Biodiversity**

Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a) by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management, based on science, taking into account food security and livelihoods; and (c) by preventing, reducing, and working towards eliminating plastic pollution.

Most relevant Aichi Biodiversity Target—Aichi Target 8: Pollution Reduced

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

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (high confidence)

Pollution, including from overabundance of nutrients, pesticides, plastics, and other forms of waste, continues to play a major role in biodiversity loss. Even with increased efforts to improve fertilizer application, high levels of nutrients are still adversely affecting ecosystems and biodiversity. The accumulation of plastic waste in the oceans is causing significant harm to marine ecosystems and is also found in other habitats, with the comprehensive impacts not yet fully grasped. Although many countries have taken steps to reduce plastic waste, these measures have yet to effectively lessen its accumulation.

With respect to SIDS more specifically, in support of one of the priorities to conserve and sustainably use the ocean and its resources, the Zero Draft Outcome Document of the Fourth International Conference on Small Island Developing States (SIDS4) calls for enhancing partnerships across different scales to control the sources of marine plastic pollution and promote integrated solid waste management systems. Furthermore, the SAMOA Pathway also notes the need to consider the potential impact of munitions dumped at sea on the marine environment and its resources and on human health.

With respect to water security, both the Zero Draft and the SAMOA Pathway highlight the importance of managing water resources sustainably and efficiently as well as the need for an increase in wastewater treatment, recycling and reuse.

To further advance SIDS’s priorities, the Political declaration of the high-level meeting to review progress made in addressing the priorities of SIDS through the implementation of the SAMOA Pathway calls for “addressing through innovative approaches different types of waste, including, inter alia, mismanaged plastic waste, chemical waste and marine litter, including plastic litter and microplastics”.⁶³

The SAMOA Pathway also considers the management of chemicals and waste, including hazardous waste, essential for the health of the environment and people, noting the challenges of waste disposal in the context of smaller land areas and the remoteness of numerous SIDS.

⁶³ A/RES/74/3 (2019): Political declaration of the high-level meeting to review progress made in addressing the priorities of SIDS through the implementation of the SAMOA Pathway, para 30(w), <https://www.undocs.org/Home/Mobile?FinalSymbol=A%2FRES%2F74%2F3&Language=E&DeviceType=Desktop&LangRequested=False>

Elements of the PoWIB addressing Target 7

Relevant Priority Actions	Relevant Supporting Actions
Goal 7: Address challenges to island biodiversity from climate change, and pollution	
<i>Target 7.2: Pollution and its impacts on island biological diversity significantly reduced</i>	
7.2.1. Develop and implement measures to prevent and reduce the impact of pollution and waste, also by developing and implementing pollution and waste management plans, including contingency plans, with special attention to solid and hazardous waste <i>Rationale: Islands are largely coastal communities, where it is particularly difficult to dispose of wastes without impacting biodiversity. The siting of landfills, the disposal of liquid wastes and the uptake of solid wastes and plastics by marine organisms are all of considerable significance to islands.</i>	7.2.1.1. Enforce the environmental, social and cultural impact assessment process for island industries, infrastructure, and urban plans. 7.2.1.2. Integrate pollution and waste management into regional, national and sub-national regulations and plans to prevent ecosystem pollution and degradation. 7.2.1.3. Develop and implement wastewater treatment plants and other appropriate systems for management of human waste. 7.2.1.4. Enhance and promote public awareness projects and actions to minimize, manage and recycle waste, including appropriate facilities. 7.2.1.5. Develop mechanisms to assist islands in the safe disposal of their hazardous wastes. 7.2.1.6. Develop and enforce instruments to control ship-source pollution, and prepare contingency plans for oil spills. 7.2.1.7. Give incentives to industries and local communities to adopt clean energy sources as their main power supply.
7.2.2. Develop and implement watershed integrated management to prevent siltation and run-off impacts on island coastal ecosystems	7.2.2.1. Maintain and, where necessary, restore mangrove and other vegetated ecosystems to help prevent run-off and siltation, working closely with civil society and local stakeholders. 7.2.2.2. Ensure that infrastructure developments include measures to mitigate run-off and siltation. 7.2.2.3. Minimize clearing of native vegetation in coastal areas.
7.2.3. Implement measures to prevent eutrophication of island coastal ecosystems caused by, <i>inter alia</i> , wastewater and agricultural run-off and infiltration	7.2.3.1. Promote appropriate agricultural techniques, including organic and sustainable agriculture, to prevent unnatural run-off and eutrophication impacts.

Furthermore, decision XI/15 called on Parties to enhance regional and international cooperation with a view to addressing transboundary pollution that has significant impacts on island ecosystems, including by reducing discharges from land-based sources, particularly with respect to excess nutrient inputs.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

While the PoWIB addresses pollution, including some of which are particularly relevant in the context of islands, such as excess nutrients, oil, waste, siltation and run-offs, and agricultural run-off, it does not explicitly incorporate the ‘risk of pollution’, plastic pollution, pesticides, nor cumulative impacts. Integrated watershed management, which is recommended in the PoWIB, could contribute to addressing these issues. However, in reference to integrated watershed management, the PoW only refers to the minimisation of siltation and run-off. Further attention to the role of integrated watershed management plans and their implementation to the reduction of pollution risks from all sources and their cumulative impacts could be better emphasised in the PoWIB. Integrated oceans and coastal management would complement this endeavour as well – and this is addressed under the marine and coastal PoW.

Indicative gaps in implementation

- Lack of proper waste management (solid, chemical, and hazardous waste) plans, protocols, and systems.⁶⁴
- Wagoni and Basel Conventions are not fully incorporated into pollution management.⁶⁵
- Limited land resources to properly deal with waste disposal and management.⁶⁶
- Lack infrastructure for effective waste collection, recycling, and disposal.⁶⁷
- Limited spaces for landfills, inadequate recycling facilities, and high cost of transporting waste off-island.^{68,69}
- Large gap in investments in sustainable waste management solutions, including advanced recycling technologies and waste-to-energy plants.⁷⁰
- Plastic pollution – tourism and single use plastics and marine plastics washing on to shores.⁷¹
- Lack comprehensive policies that address single use plastics, improve waste sorting and recycling, and engage in international efforts to tackle marine plastic pollution.⁷²
- Agriculture runoff and chemical pollutions from pesticides and fertilizers.⁷³
- Need for promoting and adopting sustainable agricultural practices, including organic farming and integrated pest management, to reduce chemical runoff.⁷⁴
- Waste water treatment: Inadequate wastewater treatment facilities can lead to the pollution of freshwater and marine environments, impacting public health and coral reefs.⁷⁵
- Need for the development and implementation of advanced, cost-effective wastewater treatment solutions that are suitable for island contexts are necessary.⁷⁶

viii. Target 8: Minimize the Impacts of Climate Change on Biodiversity and Build Resilience

Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including

⁶⁴ Simron J Singh, Allison Elgie, Dominik Noll, Matthew J Eckelman, The challenge of solid waste on Small Islands: proposing a Socio-metabolic Research (SMR) framework, Current Opinion in Environmental Sustainability, Volume 62, 2023, 101274, ISSN 1877-3435

⁶⁵ UN. A/CONF.207/11 Report of the International Meeting to Review the Implementation of the Programme of Action for Sustainable Development of Small Island Developing States. 2005. P. 11

<https://documents.un.org/doc/undoc/gen/n05/237/16/pdf/n0523716.pdf?token=QDH20vpYK4YYZIRkNz&fe=true>

⁶⁶ *Id.*

⁶⁷ Simron J Singh, Allison Elgie, Dominik Noll, Matthew J Eckelman, The challenge of solid waste on Small Islands: proposing a Socio-metabolic Research (SMR) framework, Current Opinion in Environmental Sustainability, Volume 62, 2023, 101274, ISSN 1877-3435

⁶⁸ Simron J Singh, Allison Elgie, Dominik Noll, Matthew J Eckelman, The challenge of solid waste on Small Islands: proposing a Socio-metabolic Research (SMR) framework, Current Opinion in Environmental Sustainability, Volume 62, 2023, 101274, ISSN 1877-3435

⁶⁹ UN. A/CONF.207/11 Report of the International Meeting to Review the Implementation of the Programme of Action for Sustainable Development of Small Island Developing States. 2005. P. 12

<https://documents.un.org/doc/undoc/gen/n05/237/16/pdf/n0523716.pdf?token=QDH20vpYK4YYZIRkNz&fe=true>

⁷⁰ *Id.*

⁷¹ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 74-77.

www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.*

through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.

Most relevant Aichi Biodiversity Target—Aichi Target 10: Ecosystem Vulnerable to Climate Change

“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.”

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (high confidence)

Coral reefs, along with other sensitive ecosystems, continue to face a barrage of threats exacerbated by climate change and ocean acidification. The detrimental impacts of overfishing, nutrient pollution, and coastal development have intensified the phenomenon of coral bleaching, further stressing these vibrant ecosystems. Corals have experienced the sharpest rise in extinction risk among all evaluated groups, highlighting the urgent need for conservation efforts. In some areas, there has been a notable decline in hard coral cover, coupled with a shift towards species of coral that are less capable of sustaining diverse marine habitats. This affects the corals themselves and also the myriad forms of life that depend on coral reefs for shelter and food.

The push for expanded agricultural territories, unsustainable resource exploitation, deforestation, environmental pollution, coastal urbanization, and the spread of alien species are fracturing and eroding natural habitats. Such environmental damage threatens the survival of the distinct and indigenous species that call these islands their home.⁷⁷ The inclusion of climate change and rising sea levels intensifies these threats, amplifying the pressures and difficulties that the region's biodiversity will encounter. This is particularly concerning considering the pace of climate change projected by the most recent report from the IPCC.⁷⁸ “Regions and people with considerable development constraints have high vulnerability to climatic hazards. Increasing weather and climate extreme events have exposed millions of people to acute food insecurity and reduced water security, with the largest adverse impacts observed in many locations and/or communities...”⁷⁹ including LDCs and SIDS.

As global warming progresses, the ability to adapt and the mitigation of climate change and ocean acidification, especially among vulnerable communities, will become progressively more challenging to manage (with high confidence). Beyond a 1.5°C increase in global warming, the availability of freshwater resources could present insurmountable challenges for adaptation in small islands (with medium confidence). Beyond this threshold, critical ecosystems, including certain warm-water coral reefs, coastal wetlands, and rainforests, will face or exceed their limits for adaptation. Consequently, the effectiveness of Ecosystem-based Adaptation strategies in these settings will diminish (with high confidence).⁸⁰

Islands, and particularly small, low-lying reef islands, present a unique set of environmental conditions due to their spatial limitations. These islands are isolated patches of land surrounded by vast expanses of ocean, making their ecosystems distinct and confined. The geographical restrictions

⁷⁷ Taylor s., and Kumar L. “Global Climate Change Impacts on Pacific Island Terrestrial Biodiversity: A Review.” Vol. 9, Issue 1, March 2016. Tropical Conservation Science.

<https://journals.sagepub.com/doi/epub/10.1177/194008291600900111>

⁷⁸ IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001 https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf

⁷⁹ *Id.*

⁸⁰ *Id.*

of these islands mean that the habitats available for species are limited in size and resources, creating a delicate balance between the organisms and their environment. This spatial confinement has profound implications for the biodiversity and ecological dynamics of these islands, setting them apart from larger landmasses.⁸¹

Species inhabiting these small islands face significant challenges in adapting to changing environmental conditions. Due to the limited land area, these species have restricted opportunities to shift their distribution in response to climate change, habitat degradation, or other ecological pressures. In larger ecosystems, species might migrate to more favorable conditions, but on small islands, the boundaries of their world are defined by the shoreline. This limitation not only constrains their adaptive responses but also intensifies the impact of environmental changes, making their survival a precarious endeavor. The inability to migrate or expand their habitat means that island species must either adapt quickly within their confined spaces or face the risk of extinction.⁸²

Consequently, the biota of islands are at a significantly higher risk of extinction, with rates for birds and mammals far exceeding those on continents—by two to three orders of magnitude. This elevated risk is attributed to several factors inherent to island life, including smaller geographic ranges, limited genetic diversity, small initial populations, lower species richness, and inadequate adaptations for predator evasion. Such characteristics render island species particularly vulnerable to the effects of climate change. The comprehensive impact of these changes can swiftly encompass an island's entire habitat, affecting the entire ecosystem in ways that are more immediate and severe than those experienced by continental species. This makes the conservation and study of island ecosystems and their inhabitants not only fascinating but critically important in the context of global biodiversity and climate change.⁸³

In light of this, GBF Target 8 focuses on: minimising the impacts of climate change and ocean acidification on biodiversity; the contribution of biodiversity through the application of nature-based solutions and/or ecosystem based approaches to climate mitigation and adaptation and disaster risk reduction; and the minimisation of the negative while fostering positive impacts of climate action on biodiversity. The Target does not focus on any particular ecosystem, departing the approach applied by Aichi Biodiversity Target 10, and therefore it is important to minimise impacts on all ecosystems that can contribute to climate change mitigation and adaptation, while also minimising the impacts of climate change and ocean acidification on biodiversity.

In relation to SIDS more specifically, the Zero Draft Outcome Document of the Fourth International Conference on Small Island Developing States (SIDS4) includes urgent action on climate change and mainstreaming disaster risk reduction as one of the key priorities. In this context, it notes the significance of forests in mitigating and adapting to climate change including activities related to the conservation and sustainable management of forests and other ecosystems such as mangroves, seagrass, peatlands, old-growth forests, and marshes. It also calls for incorporating local and traditional knowledge and practices in ecosystem-based adaptation and nature-based solutions.

Similarly, one of the key interventions of the SIDS Nature Climate Action Roadmap includes the importance of using local and indigenous knowledge and practices with respect to ecosystem-based adaptation, mitigation, and disaster risk reduction within MPAs in SIDS. The Political declaration recognized the various approaches to address climate change, including ecosystem-based approaches and nature-based solutions, disaster risk reduction, and increasing resilience for SIDS.

The SAMOA Pathway further recognizes the particular vulnerability of SIDS to disasters, noting the need to build resilience, reduce vulnerability, and enhance the capacity to recover from disasters. Moreover, it calls for urgent action to implement integrated management approaches and

⁸¹ Taylor s., and Kumar L. “Global Climate Change Impacts on Pacific Island Terrestrial Biodiversity: A Review.” Vol. 9, Issue 1, March 2016. Tropical Conservation Science.

<https://journals.sagepub.com/doi/epub/10.1177/194008291600900111>

⁸² *Id.*

⁸³ *Id.*

increase resilience for coral reefs and other vulnerable marine ecosystems, in the context of ocean acidification. The need for cooperation to address the causes of ocean acidification and minimize its impacts is also noted.

Elements of the PoWIB addressing Target 8

Relevant Priority Actions	Relevant Supporting Actions
Goal 7: Address challenges to island biodiversity from climate change, and pollution	
<i>Target 7.1: Resilience of the components of biodiversity to adapt to climate change in islands maintained and enhanced</i>	
7.1.1. Research and implement adaptation and mitigation measures in land-use and coastal zone planning and strategies to strengthen local-level biodiversity resilience to climate change <i>Rationale: Island biodiversity is particularly threatened by climate change, which could have a major impact on island ecosystems.</i>	7.1.1.1. Develop monitoring techniques to identify and monitor the impacts of climate change on key species. 7.1.1.2. Consider afforestation and reforestation projects that enhance island biodiversity, noting that it may be possible for these projects to be eligible to generate certified emission reduction units under the Kyoto Protocol's Clean Development Mechanism. 7.1.1.3. Develop models to understand the vulnerability of island biodiversity to climate change, including: (a) Understand how sea level rise and other aspects of climate change threaten island biodiversity; (b) Develop general circulation models and other scientific tools to help understand and adapt to the impacts of climate change on island biodiversity. 7.1.1.4. Monitor and exchange information on the impacts of global climate change on island biodiversity. 7.1.1.5. Strengthen national capacity to address climate change issues for island biodiversity. 7.1.1.6. Identify species (e.g., corals) that are resilient to climate change in order to use those species for restoration. 7.1.1.7. Reduce chemical and physical degradation of coral reefs to facilitate recovery from climate-induced bleaching.
7.1.2. Create where feasible viable national systems of protected areas that are resilient to climate change	7.1.2.1. Identify and protect sites whose environmental conditions favour the maintenance and recovery of species and ecosystems under changed climate and sea level.
Goal 8: Maintain capacity of island ecosystems to deliver goods and services and support livelihoods	
<i>Target 8.1: Capacity of island ecosystems to deliver goods and services maintained or improved</i>	
8.1.1. Develop policies, programmes and actions to ensure the capacity of island ecosystems to deliver goods and services are maintained	8.1.1.1 Empower or maintain the capacity of indigenous and local communities to address, respond and adapt effectively to natural hazards and their impacts on island biodiversity, taking into account traditional practices. 8.1.1.2. Strengthen efforts to conserve and restore ecosystems that provide protection against tidal and storm surges and damage (e.g. mangroves, coral reefs, and sand dunes).
8.1.2. Understand and promote the role of island ecosystems and habitats in providing ecosystem services that prevent or mitigate the impacts of natural or anthropogenic disasters and extreme events, and protect islands, island biodiversity and island communities	8.1.2.1. Identify and implement effective early-warning systems (forecasting) and strategies that address natural hazards and their impacts on island biodiversity and its recovery capacity, such as tsunamis, hurricanes, storm surges, floods, and tropical storms and longer-term trends such as climate change, sea level rise, El Niño and La Niña phenomena.

<i>Rationale: Disasters tend to affect significant fractions of the area of islands, and integrated management can provide mitigation.</i>	8.1.2.2. Establish and strengthen formal national and local organizations responsible for disaster preparedness, response and mitigation on islands.
8.1.3. Mainstream the management of the risks of natural disasters and extreme events to island biodiversity and communities into the national planning process	8.1.3.1. Integrate education and awareness related to biodiversity's role in natural hazard reduction into ongoing natural disaster programmes on islands. 8.1.3.2. Develop specific participatory plans, including community response and mitigation plans, to address specific disasters such as flooding, storm surges, drought, bush fires and mainstream these into national planning processes, including appropriate traditional practices.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB integrates climate change effects and recommended actions to minimize these. However, it does not refer to ocean acidification, which is highlighted in GBF Target 8. Integrating this element to the PoW would be important, including by understanding the impacts of ocean acidification to island ecosystems (including coral reefs which are referred to in several instances of the PoW), and enhancing the resilience of the ecosystems are more vulnerable to it. Furthermore, the identification and conservation of refugia sites as recommended under the CBD voluntary specific workplan on biodiversity in cold-water areas within the jurisdictional scope of the Convention,⁸⁴ would be recommended as an additional action under the PoWIB.

Furthermore, the PoWIB does not fully integrate nature-based solutions or ecosystem-based adaptation and approaches in relation to minimizing climate change and ocean acidification effects on island ecosystems. This would need to be considered further in relation to island ecosystems and contexts for a full alignment of the PoWIB with the GBF.

Another aspect that would benefit from updating is the reference to the 2015 Paris Agreement, since the Agreement was adopted after the last review of the PoWIB in 2012. The PoWIB refers to the Clean Development Mechanism under the Kyoto Protocol, but in light of the latest developments under the Paris Agreement, which replaced the Kyoto Protocol, it would be advisable to update the PoW accordingly.

Indicative gaps in implementation

- Data and research are needed to inform effective policymaking and adaptation strategies.⁸⁵
- Gap in local technical expertise and capacity to plan, implement, and maintain climate change initiatives, from renewable energy projects to coastal protection measures.⁸⁶
- Existing infrastructure may be inadequate to withstand the impacts of climate change, and building resilient infrastructure requires significant investment.⁸⁷

⁸⁴ CBD decision XIII/11 (2016).

⁸⁵ Mcleod Elizabeth, Bruton-Adams Mae, Förster Johannes, Franco Chiara, Gaines Graham, Gorong Berna, James Robyn, Posing-Kulwaum Gabriel, Tara Magdalene, Terk Elizabeth. "Lessons From the Pacific Islands – Adapting to Climate Change by Supporting Social and Ecological Resilience." *Frontiers in Marine Science*. Vol. 6, 2019. DOI: 10.3389/fmars.2019.00289. ISSN: 2296-7745

⁸⁶ SPREP. Pacific Island Framework for Action on Climate Change 2006-2015.

https://www.sprep.org/climate_change/PYCC/documents/PIFACC.pdf

⁸⁷ OECD. Climate-resilient Infrastructure. Policy Perspectives. OECD Environment Policy Paper No. 14. 2018. ISSN 2309-7841. <https://www.oecd.org/environment/cc/policy-perspectives-climate-resilient-infrastructure.pdf>

- Need for localized climate change research and data to inform effective policymaking and adaptation strategies. This includes understanding the specific impacts of climate change on local ecosystems and communities.⁸⁸
- Developing and enforcing policies that effectively address climate change, while also promoting sustainable development, can be a challenge.⁸⁹
- Effectively engaging local communities in climate change initiatives is crucial but can be hindered by a lack of awareness, resources, or mechanisms for inclusion.⁹⁰

2. Meeting People's Needs Through Sustainable Use and Benefit-Sharing

i. Target 9: Manage Wild Species Sustainably To Benefit People

Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.

The rapid analysis provided to inform the deliberations of the Subsidiary Body at its twenty-fifth meeting highlights a significant gap in sustainable biodiversity-based activities, products, and services. This gap underscores the challenge of balancing economic development with the conservation of biodiversity. Islands and regions with limited natural resources face a heightened risk of overexploitation, making the sustainable management of these resources a crucial priority to prevent their depletion. The establishment and enforcement of comprehensive policies and regulations are vital to support sustainable use and consumption practices. These practices span various sectors, including sustainable fishing, agriculture, and waste management, which are essential for maintaining the ecological balance and ensuring the long-term viability of biodiversity.

Adequate data on resource use, biodiversity, and environmental health play a foundational role in informed decision-making but are frequently absent in island contexts. The scarcity of data exacerbates the difficulty of crafting and implementing effective conservation strategies, as well as of monitoring their success over time. Furthermore, the development of supply chains and market access for sustainably produced goods, both locally and internationally, presents both a challenge and an opportunity. Developing and accessing markets for these goods can significantly contribute to local economies, while also promoting sustainable practices that are crucial for biodiversity conservation.

Addressing the gap in adapting existing technologies and innovating new solutions for sustainable resource management suitable for island conditions is critical. Islands often face unique environmental and economic challenges that require tailored solutions to ensure the sustainable management of their natural resources. Innovations in technology and practices that align with the specific needs and constraints of island ecosystems can significantly enhance their resilience and sustainability. This involves not only the application of technology but also the engagement of local communities and stakeholders in developing solutions that are culturally appropriate and economically viable, ensuring a sustainable future for island environments and their inhabitants.

Furthermore, The SAMOA Pathway notes the importance of sustainable small-scale fisheries and their products, improving their access to markets, enhancing methods for evaluating and managing resources, and developing initiatives that increase the value of their catch. Efforts should also focus

⁸⁸ Keener, V. W., Marra, J. J., Finucane, M. L., Spooner, D., & Smith, M. H. (Eds.). (2012). Climate Change and Pacific Islands: Indicators and Impacts. Report for The 2012 Pacific Islands Regional Climate Assessment. Washington, DC: Island Press. <https://www.reefresilience.org/pdf/NCA-PIRCA-FINAL.pdf>

⁸⁹ *Id.*

⁹⁰ *Id.*

on promoting the conservation, sustainable use and management of straddling and migratory fish stocks.

Elements of the PoWIB addressing Target 9

Relevant Priority Actions	Relevant Supporting Actions
Goal 4: Promote sustainable use and consumption	
<i>Target 4.1: Island biodiversity-based products are derived from sources that are sustainably managed, and production areas managed, consistent with the conservation of biological diversity</i>	
4.1.1. Remove subsidies that encourage unsustainable use of island biodiversity and where livelihoods are resource-based, support the development of sustainable economic activities. <i>Rationale: Subsidies and other economic incentives may have very wide-reaching and rapid detrimental effects on biodiversity in islands. Island species are often restricted to very small populations that are quickly impacted by unsustainable practices.</i>	4.1.1.3. Support indigenous and local communities in developing sustainable resource-based livelihoods and economic activities, including appropriate research and capacity-building. 4.1.1.5. Assess the current and potential contribution of biodiversity to island peoples in terms of sustaining livelihoods, economic activity and cultural value.
<i>Target 4.2: Unsustainable consumption of island biological resources and its impact upon biodiversity is reduced</i>	
4.2.1. Adopt measures to ensure sustainable management of coastal and marine biodiversity, with due regard to the conservation of threatened, endemic, ecologically and/or culturally important island species, to prevent, <i>inter alia</i> , over-exploitation and destructive practices <i>Rationale: Island species are often restricted to very small populations that are quickly impacted by unsustainable practices.</i>	4.2.1.1. Develop and implement participatory standards and protocols in establishing measures for the sustainable utilization of marine-based resources. 4.2.1.2. Establish and ensure compliance with frameworks on unsustainable fishing gears and practices that severely impact vulnerable marine and coastal ecosystems, taking into account sustainable customary resource use of indigenous and local communities. 4.2.1.7. Encourage the development and implementation of environmentally friendly and socially fair and equitable certification of marine biodiversity-based products.
4.2.2 Adopt measures to promote the sustainable use of terrestrial and freshwater resources in islands <i>Rationale: Island communities are very largely dependent on local biodiversity</i>	4.2.2.1. Work with civil society, the private sector, and local leaders to enable indigenous and local communities to develop and/or implement adaptive community-management systems, through participatory processes, to conserve and sustainably use terrestrial and freshwater biological diversity, where appropriate.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB is quite comprehensive and aligned with GBF Target 9, as per the table above. No major gaps have been identified.

Indicative gaps in implementation

- Limited natural resources, making them highly vulnerable to overexploitation. Sustainable management of these resources is critical to prevent depletion.⁹¹
- Comprehensive, enforceable policies and regulations that support sustainable use and consumption practices, including sustainable fishing, agriculture, and waste management.⁹²
- Adequate data on resource use, biodiversity, and environmental health are essential for informed decision-making but are often lacking in island contexts.⁹³
- Supply chain and market access - developing and accessing markets for sustainably produced goods, both locally and internationally.⁹⁴
- Adapting existing technologies and innovating new solutions for sustainable resource management that are suitable for island conditions is a critical gap.⁹⁵

ii. Target 10: Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry

Ensure that areas under agriculture, aquaculture, fisheries, and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity-friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.

Relevant Aichi Biodiversity Target—Aichi Target 6: Sustainable Management of Aquatic Living Resources

“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.”

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (high confidence)

It is estimated that nearly one-third of the world's fish stocks are overfished, despite actions Parties have reportedly taken to manage their fishing industry.⁹⁶ According to the GBO-5, countries have focused their efforts on:⁹⁷

- Assessing fish stocks

⁹¹ CBD. Island biodiversity – What's the Problem? <https://www.cbd.int/island/problem?sec=uses#secuses>

⁹² Muavesi, M-G. and Parkinson, P. and (2022) Advancing environmental law in the Pacific: Towards 2030 and Beyond: Highlights of the Inaugural IUCN Oceania Environmental Law Conference 2021 (Oceania Environmental Law Congress) & the Environmental Law Roundtable Dialogue. https://www.iucn.org/sites/default/files/2022-07/iucn-advancing-environmental-law-in-the-pacific-booklet_30.6.22-comp_0.pdf

⁹³ FAO. FAO's Work with Small Island Developing States. Transforming food systems and sustaining small islands. <https://www.fao.org/3/ca5170en/ca5170en.pdf>

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 58. www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf

⁹⁷ *Id.*

- Creating regulatory measures which include illegal, unreported, and unregulated (IUU) fishing
- Addressing fishing practices, equipment, and methods
- Increased monitoring of fishing vessels and their catch
- Fish size regulations
- Establishing seasonal bans
- Creating protected areas
- Restoring fish habitats

The GBO-5 does provide a hopeful outlook for areas that are scientifically assessed “... fisheries have been increasing in number and now account for about half of the global marine catches. In these fisheries, abundance of fish stocks has been increasing and, on average, exceeds levels of biomass that provides maximum sustainable yields (MSY).”⁹⁸ However, evidence suggests that areas that are not scientifically assessed are doing poorly. Nonetheless, indications point to the underperformance of regions that lack scientific evaluation. Concerning regions associated with rivers, lakes, wetlands, and other freshwater bodies, the GBO-5 notes a scarcity of data to accurately assess the sustainability of inland fisheries.

Of concern, is the risk that unsustainable fishing practices pose to other animals such as marine mammals, sea birds, and amphibians. According the Red List Index (impacts of fisheries) the average extinction risk for species groups affected by fishing activities is on the rise over time. Examination of the factors behind these changes in status reveals that, in general, fishing practices contribute to a net detrimental effect, where the number of species experiencing a decline exceeds those showing improvement.⁹⁹

Efforts are also advancing in protecting vulnerable ecosystems through the identification of certain ocean regions as Vulnerable Marine Ecosystems (VMEs), and the adoption of associated conservation and sustainable management measures.

Many of these issues are also covered under the GBF Target 5. When addressing sustainable fishing in the context of Target 10 and in relation to islands, small-scale fishing considerations are also important. External guidance exists, especially from FAO on, for instance, small scale fishing¹⁰⁰ and the human dimensions of the ecosystem approach.¹⁰¹

Furthermore, The Zero Draft Outcome Document of the Fourth International Conference on Small Island Developing States (SIDS4) highlights the need for enhancing sustainable agriculture and fisheries, with a view to promoting food security, nutrition and incomes in SIDS. It also calls for the sustainable use of marine resources, which includes the sustainable management of fisheries, aquaculture, mariculture, and tourism, in order to enhance economic and environmental benefits for SIDS.

The SIDS Nature Climate Action Roadmap highlights the need for major changes in production and consumption patterns and between various stakeholders, targeting sectors most impactful on biodiversity including extractive industries, forestry, agriculture, fisheries and tourism.

⁹⁸ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 59.

www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf

⁹⁹ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 63.

www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf

¹⁰⁰ FAO, Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (Rome: FAO, 2015).

¹⁰¹ C De Young, A Charles, A Hjort, Human dimensions of the ecosystem approach to fisheries: an overview of context, concepts, tools and methods. *FAO Fisheries Technical Paper*. No. 489. (Rome, FAO, 2008).

Furthermore, the SAMOA Pathway notes that “sustainable fisheries and aquaculture, coastal tourism, the possible use of seabed resources and potential sources of renewable energy are among the main building blocks of a sustainable ocean-based economy”¹⁰² in SIDS. It further calls for promoting sustainable practices in agriculture, crops, livestock, forestry, fisheries and aquaculture, while sustainably managing water resources, in order to enhance food security, and for improving the resilience of agriculture and fisheries in view of climate change impacts, ocean acidification, and natural disasters. Additionally, the need to address and stop deforestation and forest degradation, e.g., via the trade of sustainable and legally harvested forest products, is noted.

Relevant Aichi Biodiversity Target—Aichi Target 7: Sustainable Agriculture, Aquaculture and Forestry

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

GBO-5 Assessment: Target not achieved (high confidence)

Over the past decade, the use of pesticides in agriculture has plateaued, signaling a shift in farming practices and possibly reflecting increased awareness and regulation around the environmental impacts of such chemicals. Despite this stabilization, the demand for agricultural land has continued to grow, with croplands expanding by 5%. This expansion is part of a broader trend where agriculture now occupies nearly 37% of the total land area. However, this growth often comes at the cost of biodiversity, as it frequently involves converting diverse natural ecosystems into unstable monocultures. These systems are less resilient and more susceptible to pests, diseases, and climate fluctuations, leading to increased vulnerability in our food supply. Deforestation and the loss of natural habitats for agricultural purposes are accelerating the decline in biodiversity, contributing significantly to soil degradation and the impoverishment of soil biodiversity. The depletion of soil nutrients not only affects the current capacity for crop production but also undermines the long-term sustainability of agriculture. The 2019 FAO report on the State of the World’s Biodiversity in Food and Agriculture highlights a concerning trend: biodiversity at genetic, species, and ecosystem levels across food and agricultural landscapes is declining worldwide. This loss of biodiversity, largely driven by agricultural intensification, poses a direct threat to food security and the ability to adapt to changing environmental conditions.

Furthermore, aquaculture has emerged as the fastest-growing sector of food production, heralded for its potential to meet global seafood demand. However, its rapid expansion, especially into coastal areas, has resulted in the significant loss and destruction of critical ecosystems, including coastal wetlands and mangroves. This expansion is often accompanied by pollution of soil and water and relies heavily on catching wild fish to feed farmed species, further straining marine resources. Despite its growth, aquaculture is outpacing the development of regulatory infrastructure needed to manage its environmental impacts effectively. The sector's unchecked expansion underscores the urgent need for sustainable practices that protect and preserve the world's remaining natural habitats.

Elements of the PoWIB addressing Target 10

Relevant Priority Actions	Relevant Supporting Actions
Goal 4: Promote sustainable use and consumption	
<i>Target 4.1: Island biodiversity-based products are derived from sources that are sustainably managed, and production areas managed, consistent with the conservation of biological diversity</i>	
4.1.1. Remove subsidies that encourage unsustainable use of island biodiversity and	4.1.1.4. Understand how biodiversity is affected by pressures resulting from economic activities including tourism, agriculture, forestry and fisheries, which are intensified in small island environments.

¹⁰² SAMOA Pathway, para 53

where livelihoods are resource-based, support the development of sustainable economic activities. <i>Rationale: Subsidies and other economic incentives may have very wide-reaching and rapid detrimental effects on biodiversity in islands. Island species are often restricted to very small populations that are quickly impacted by unsustainable practices.</i>	
<i>Target 4.2: Unsustainable consumption of island biological resources and its impact upon biodiversity is reduced</i>	
4.2.1. Adopt measures to ensure sustainable management of coastal and marine biodiversity, with due regard to the conservation of threatened, endemic, ecologically and/or culturally important island species, to prevent, <i>inter alia</i>, over-exploitation and destructive practices <i>Rationale: Island species are often restricted to very small populations that are quickly impacted by unsustainable practices.</i>	4.2.1.2. Establish and ensure compliance with frameworks on unsustainable fishing gears and practices that severely impact vulnerable marine and coastal ecosystems, taking into account sustainable customary resource use of indigenous and local communities. 4.2.1.3. Develop an updated assessment of fishing gears and practices. 4.2.1.4. Assess and promote new techniques to help alleviate fishing pressures on coastal ecosystems. 4.2.1.5. Promote the use of gears and techniques that minimize by-catch of non-target species. 4.2.1.6. Develop and implement fishery management plans to control pressure on resources and habitats, ensure stock replenishment and prevent loss of biodiversity/habitats, taking into account user's rights, zoning (including setting of no take zones), drawing on traditional and science-based knowledge. 4.2.1.8. Promote the establishment of marine no-take zones to enhance replenishment of fishery resources. 4.2.1.9. Address the impacts of unsustainable aquaculture and promote sustainable aquaculture practices ensuring opportunities for the participation of indigenous and local communities. 4.2.1.12. Support integrated and participatory policy development, planning and management (for example IMCAM) of coastal and marine resources with adjacent watersheds, including farming systems.
4.2.2 Adopt measures to promote the sustainable use of terrestrial and freshwater resources in islands <i>Rationale: Island communities are very largely dependent on local biodiversity.</i>	4.2.2.1. Work with civil society, the private sector, and local leaders to enable indigenous and local communities to develop and/or implement adaptive community-management systems, through participatory processes, to conserve and sustainably use terrestrial and freshwater biological diversity, where appropriate. 4.2.2.2. Support and strengthen the capacity of indigenous and local communities to sustainably manage terrestrial and freshwater resources and to document sustainable practices. 4.2.2.3. Establish effective monitoring, control and surveillance systems to ensure compliance with regulations by users of terrestrial and freshwater resources, at the local, national and regional levels.

	4.2.2.4. Provide incentives / to encourage sustainable use of terrestrial and freshwater biodiversity in islands and remove subsidies that encourage unsustainable exploitation or habitat destruction. 4.2.2.5. Develop effective and generally accessible information systems and management strategies for terrestrial and freshwater resources. 4.2.2.6. Promote implementation and monitoring of integrated and sustainable land use and water resources management strategies and practices.
4.2.3. Adopt and apply strategies to sustainably use agroecosystems on islands with biodiversity of importance to the ecological integrity of island societies and economies through efficient and sustainable agricultural production, and ensure food security through diversification of agriculture, alternative use of crops, improved husbandry, integrated crop-pest management, irrigation and water management, and the use of appropriate technologies. <i>Rationale: Island agroecosystems include many unique varieties and land races. Island communities are very largely dependent on local biodiversity.</i>	4.2.3.1. Develop and implement, through a participatory process, a sustainable and integrated agriculture development plan, including: (a) The use of knowledge, practices and innovations of indigenous and local communities; (b) Production and use of traditional crops and livestock, and associated traditional knowledge; (c) Sustainable use of medicinal plants and maintenance of home gardens; (d) Revitalization of sustainable farming systems aiming to prevent land degradation and increase productivity through agroforestry techniques and other soil conservation practices; (e) Application of integrated pest management methodologies and techniques in agricultural production; (f) Protection and enrichment of trees and arboreal biodiversity within agroforestry and cropping systems; (g) Efficient and sustainable agricultural production to ensure food security. 4.2.3.2. Establish strong collaborative partnerships and networks at the local, national, regional and international levels in order to undertake studies and projects advancing sustainable agriculture in islands. 4.2.3.3. Address land tenure issues where relevant to the development of sustainable farming systems. 4.2.3.4. Identify market opportunities at the local, national, and international level to support the revitalization of sustainable agricultural production systems and consistent with international instruments, promote fair and equitable access to these markets for indigenous and local communities. 4.2.3.5. Identify key components of biological diversity in agricultural production systems responsible for maintaining natural processes and cycles; monitor and evaluate the effects of different agricultural practices and technologies on these components and encourage restoration and other practices to attain appropriate levels of biological diversity. 4.2.3.6. Compile, in collaboration with FAO and other relevant bodies and organizations, and disseminate through the clearing-house mechanism and other means: (a) Guidelines/tool kits geared towards the development of sustainable agriculture systems. (b) Case-studies, lessons learned and best-practice guidance on sustainable agriculture systems.
4.2.4. Develop, adopt and apply strategies appropriate to islands to sustainably use managed forest ecosystems with biodiversity of	4.2.4.1. Develop and implement, through a participatory process, a sustainable forestry plan, integrating, where appropriate, the traditional knowledge, innovations and practices of indigenous and local communities, subject to Article 8(j):

importance to the ecological integrity of island societies and economies through improved production and harvesting methods, integrated pest management, water management, fire control, non-timber resources and the use of appropriate technologies. <i>Rationale: Island forests typically contain species and assemblages that are unique, and many of them provide island peoples with food, medicine and fertilizer.</i>	(a) Sustainable forestry systems aiming to prevent land degradation and increase productivity through appropriate techniques and soil conservation practices. (b) Sustainable use of medicinal plants and other non-timber forest resources. (c) Application of integrated pest management methodologies and techniques. (d) Use of fire management and prevention tools and techniques for maintaining and enhancing biological diversity within managed forests. 4.2.4.2. Develop plans for sustainable management of mangrove ecosystems and ensure sustainability of fuelwood harvests. 4.2.4.3. Address land tenure issues relevant to the development of sustainable forestry systems. 4.2.4.4. Establish strong collaborative partnerships and networks at the local, national, regional and international levels in order to undertake studies and projects advancing sustainable forestry in islands. 4.2.4.5. Conduct research and extension activities on the propagation, production and use of native and endemic forest species, and associated traditional knowledge, where applicable, to maintain the diversity of native species. 4.2.4.6. Support community-based reforestation projects using native species that enhance island biodiversity.
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Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB is quite comprehensive in its alignment to Target 10 of the GBF. However, it does not address sustainable intensification, while avoiding negative impacts on island ecosystems. This issue could therefore benefit from further attention.

Indicative gaps in implementation

- Limited arable land and freshwater resources.¹⁰³
- Dependence on imported food and agricultural inputs increases vulnerability to global market fluctuations and supply chain disruptions.¹⁰⁴
- Climate change impacts exacerbate water scarcity, pest outbreaks, and soil degradation.¹⁰⁵
- Access to technology and practices that optimize land use while conserving biodiversity.¹⁰⁶
- Limited investment in research and development tailored to island-specific agriculture.¹⁰⁷
- Understanding the potential negative impacts on wild fish populations and marine ecosystems through habitat alteration, pollution, and spread of diseases.¹⁰⁸
- Overreliance on specific species for aquaculture can lead to genetic homogenization and reduce biodiversity.^{109,110}

¹⁰³ FAO. FAO's Work with Small Island Developing States. Transforming food systems and sustaining small islands. <https://www.fao.org/3/ca5170en/ca5170en.pdf>

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ Garcia, S.M.; Zerbi, A.; Aliaume, C.; Do Chi, T.; Lasserre, G. "The ecosystem approach to fisheries. Issues, terminology, principles, institutional foundations, implementation and outlook." *FAO Fisheries Technical Paper*. No. 443. Rome, FAO. 2003.

¹⁰⁹ Cai, Junning & Chan, Hing Ling & Leung, PingSun & Yan, Xue. (2022). Species diversification in aquaculture: an in-depth global assessment.

¹¹⁰ James S. Diana, Aquaculture Production and Biodiversity Conservation, *BioScience*, Volume 59, Issue 1, January 2009, Pages 27–38, <https://doi.org/10.1525/bio.2009.59.1.7>

- Climate change and ocean acidification and warming disrupting aquaculture productivity and sustainability.¹¹¹
- Lack of frameworks for integrating aquaculture into coastal zone management plans that consider ecosystem health and biodiversity.^{112,113}
- Insufficient adoption of sustainable aquaculture practices, such as polyculture and integrated multi-trophic aquaculture (IMTA).¹¹⁴
- Limited access to markets for sustainably produced aquaculture products.¹¹⁵
- Overfishing and destructive fishing practices threaten marine biodiversity and the sustainability of fish stocks.¹¹⁶
- illegal, unreported, and unregulated (IUU) fishing exacerbates the depletion of fish populations and marine resources.¹¹⁷
- Climate change impacts, such as shifts in fish distribution and productivity, challenge traditional fisheries management and livelihoods.¹¹⁸
- Inadequate capacity for monitoring, control, and surveillance of fishing activities.¹¹⁹
- Lack of community involvement in fisheries management, which is crucial for sustainable practices and conservation.¹²⁰
- Insufficient data and research on fish populations and ecosystem health to inform adaptive management strategies.¹²¹
- Deforestation and forest degradation, driven by agricultural expansion, logging, and development projects, reduce biodiversity and ecosystem services.¹²²

¹¹¹ Maulu Sahya, Hasimuna Oliver J., Haambiya Lloyd H., Monde Concillia, Musuka Confred G., Makorwa Timothy H., Munganga Brian P., Phiri Kanyembo J., Nsekanabo Jean DaMascene. “Climate Change Effects on Aquaculture Production: Sustainability Implications, Mitigation, and Adaptations” *Frontiers in Sustainable Food Systems*. Vol. 5. 2021. DOI 10.3389/fsufs.2021.609097. ISSN 2571-581X <https://www.frontiersin.org/articles/10.3389/fsufs.2021.609097>

¹¹² Lester, S.E., Stevens, J.M., Gentry, R.R. *et al.* Marine spatial planning makes room for offshore aquaculture in crowded coastal waters. *Nat Commun* 9, 945 (2018). <https://doi.org/10.1038/s41467-018-03249-1>

¹¹³ Wei Yuan and Yen-Chiang Chang, “Land and Sea Coordination: Revisiting Integrated Coastal Management in the Context of Community Interests.” School of Law, Dalian Maritime University, Dalian, China. 2021. DOI 10.3990/su12158183

¹¹⁴ Hossain, A., Senff, P. and Glaser, M. “Lessons for Coastal Applications of IMTA as a Way towards Sustainable Development: A Review.” *Appl. Sci.* 2022, 12(23), 11920. DOI 10.3390/app122311920

¹¹⁵ <https://www.fao.org/3/cc0461en/online/sofia/2022/expanding-sustainable-aquaculture-production.html>

¹¹⁶ FAO. FAO’s Work with Small Island Developing States. Transforming food systems and sustaining small islands. <https://www.fao.org/3/ca5170en/ca5170en.pdf>

¹¹⁷ *Id.*

¹¹⁸ Muhala Valdemiro, Chicombo Tomé Francisco, Macate Isadola Eusebio, Guimarães-Costa Auryceia, Gundana Horácio, Malichocho Celina, Hasimuna Oliver Jolezya, Remédio António, Maulu Sahya, Cuamba Lucinda, Bessa-Silva Adam Rick, Sampaio Iracilda. “Climate Change in Fisheries and Aquaculture: Analysis of the Impact Caused by Idai and Kenneth Cyclones in Mozambique.” *Frontiers in Sustainable Food Systems*. Vol. 5. (2021) DOI 10.3389/fsufs.2021.714187. ISSN 2571-581X <https://www.frontiersin.org/articles/10.3389/fsufs.2021.714187>

¹¹⁹ Bhavnah Komul Kalidin, Carlo Mattone, Marcus Sheaves, “Barriers to effective monitoring and evaluation of small-scale fisheries in small island developing states: An example from Mauritius.” *Marine Policy*. Vol. 118, (2020) 103845, ISSN 0308-597X, <https://doi.org/10.1016/j.marpol.2020.103845>

¹²⁰ FAO. FAO’s Work with Small Island Developing States. Transforming food systems and sustaining small islands. <https://www.fao.org/3/ca5170en/ca5170en.pdf>

¹²¹ Blasco Gordon D., Ferraro Danielle M., Cottrell Richard S., Halpern Benjamin S., Froehlich Halley E. “Substantial Gaps in the Current Fisheries Data Landscape.” *Frontiers in Marine Science*. Vol. 7. (2020) DOI 10.3389/fmars.2020.612831. ISSN=2296-7745 <https://www.frontiersin.org/articles/10.3389/fmars.2020.612831>

¹²² Andoh Jewel, Oduro Kwame Antwi, Park Joowon, Lee Yohan. “Towards REDD+ implementation: Deforestation and forest degradation drivers, REDD+ financing, and readiness activities in participant countries.” *Frontiers in Forests and Global Change*. Vol. 5. (2022) DOI 10.3389/ffgc.2022.957550. ISSN=2624-893 <https://www.frontiersin.org/articles/10.3389/ffgc.2022.957550>

- Invasive species can outcompete native forest species, altering forest structure and function.¹²³
- Limited implementation of sustainable forest management practices that balance timber production with conservation.¹²⁴
- Poor enforcement of laws and regulations to protect forests and biodiversity.¹²⁵
- Lack of economic incentives for conservation and sustainable use of forest resources.¹²⁶

iii. Target 11: Restore, Maintain, and Enhance Nature’s Contributions to People

Restore, maintain and enhance nature’s contributions to people, including ecosystem functions and services, such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.

Aichi Target 14:Ecosystem Services

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.

GBO-5 Assessment: Target not achieved (medium confidence)

Ecosystems' ability to deliver vital services critical for societal wellbeing is on a downward trend, leading to a decline in most ecosystem services (benefits provided by nature to humans). Generally, this decline disproportionately impacts poor and vulnerable communities, including women, the most. Species of mammals and birds that play crucial roles in pollination are, on average, edging nearer to extinction, similar to species that are sources of food and medicinal products.

In their national reports concerning this objective, various Parties highlight the integration of gender considerations within the framework of developing biodiversity policies, as referenced in Aichi Target 17. Additionally, there's an emphasized importance on raising awareness about ecosystem services, aligning with the goals of Aichi Target 1. The reports further detail support for research endeavors, focusing on aspects such as the economic valuation of biodiversity, which ties back to Aichi Target 2. This also extends to the organization of workshops designed to build and enhance capacity in these critical areas.

Identified challenges in reaching this target include a noticeable lack of funding dedicated to research, specific programs, and the development of green infrastructure projects.¹²⁷ Furthermore, several reports from Parties point out a significant gap in knowledge or data concerning the incorporation of women's needs into ecosystem management. This highlights a broader issue of ensuring that biodiversity and ecosystem management practices are inclusive and consider the diverse needs and perspectives of all community members.

With respect to SIDS, the Zero Draft Outcome Document of the Fourth International Conference on Small Island Developing States (SIDS4) underscores that “SIDS have extraordinary marine and terrestrial biodiversity that, in many cases, is fundamental to their livelihoods, culture and identity,

¹²³ <https://www.fao.org/forestry/aliens/en/>

¹²⁴ Mantilla Contreras Jasmin, Schübler Dominik, Zerbe Stefan. “Editorial: Current challenges in forest restoration and sustainable forest management.” *Frontiers in Forests and Global Change*. Vol. 6. (2023) DOI 10.3389/ffgc.2023.1172760 ISSN 2624-893X. <https://www.frontiersin.org/articles/10.3389/ffgc.2023.1172760>

¹²⁵ FAO. <https://www.fao.org/forestry/law/en/>

¹²⁶ Repetto, R. (1987). Creating Incentives for Sustainable Forest Development. *Ambio*, 16(2/3), 94–99. <http://www.jstor.org/stable/4313333>

¹²⁷ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 63. <https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

but SIDS' vulnerabilities are drastically limiting the resources and means by which they can protect their ecosystems and the natural environment. The ocean and its resources are under considerable stress from anthropogenic sources, impacting SIDS which are especially dependent on their maritime resources for their food security and livelihoods".¹²⁸

Elements of the PoWIB addressing Target 11

Relevant Priority Actions	Relevant Supporting Actions
Goal 8: Maintain capacity of island ecosystems to deliver goods and services and support livelihoods	
<i>Target 8.1: Capacity of island ecosystems to deliver goods and services maintained or improved</i>	
8.1.1. Develop policies, programmes and actions to ensure the capacity of island ecosystems to deliver goods and services are maintained	8.1.1.1 Empower or maintain the capacity of indigenous and local communities to address, respond and adapt effectively to natural hazards and their impacts on island biodiversity, taking into account traditional practices. 8.1.1.2. Strengthen efforts to conserve and restore ecosystems that provide protection against tidal and storm surges and damage (e.g. mangroves, coral reefs, and sand dunes).
8.1.2. Understand and promote the role of island ecosystems and habitats in providing ecosystem services that prevent or mitigate the impacts of natural or anthropogenic disasters and extreme events, and protect islands, island biodiversity and island communities <i>Rationale: Disasters tend to affect significant fractions of the area of islands, and integrated management can provide mitigation.</i>	8.1.2.1. Identify and implement effective early-warning systems (forecasting) and strategies that address natural hazards and their impacts on island biodiversity and its recovery capacity, such as tsunamis, hurricanes, storm surges, floods, and tropical storms and longer-term trends such as climate change, sea level rise, El Niño and La Niña phenomena. 8.1.2.2. Establish and strengthen formal national and local organizations responsible for disaster preparedness, response and mitigation on islands.
8.1.3. Mainstream the management of the risks of natural disasters and extreme events to island biodiversity and communities into the national planning process	8.1.3.1. Integrate education and awareness related to biodiversity's role in natural hazard reduction into ongoing natural disaster programmes on islands. 8.1.3.2. Develop specific participatory plans, including community response and mitigation plans, to address specific disasters such as flooding, storm surges, drought, bush fires and mainstream these into national planning processes, including appropriate traditional practices.
<i>Target 8.2: Biological resources that support sustainable livelihoods, local food security and health care, especially of poor people living on islands, maintained</i>	
8.2.1. Develop policies, programmes and actions to ensure the capacity of island ecosystems to deliver goods and services and biological resources that support sustainable livelihoods, local food security and health care, especially of poor people <i>Rationale: Island communities are largely dependent on local biodiversity for food and livelihoods</i>	8.2.1.1. Identify settled areas at risk from mudslides, landslides and storm surge, and implement vegetation stabilization and other mitigation measures.

¹²⁸ Zero Draft Outcome Document, para 32

Identified gaps in the PoWIB and areas of potential need of enhanced attention

The existing PoWIB comprehensively addresses the elements of GBF Target 11, and therefore, no major gaps have been identified. However, the synergies and trade-offs between ecosystem services bundles could be further explored in the PoW with respect to islands' contexts since this aspect has not been integrated yet.

Indicative gaps in implementation¹²⁹

- Finite land areas that limit the availability of natural resources and space for restoration and conservation efforts.
- Economic dependency on natural resources for livelihoods (e.g., tourism, fisheries, agriculture) results in overexploitation and unsustainable practices.
- Effective governance and policy frameworks are lacking.
- Need for integration of traditional knowledge and cultural values into conservation and restoration efforts.
- Comprehensive data on biodiversity, ecosystem services, and impacts on human activities are lacking, thereby making it difficult to ascertain status of ecosystems and priority actions.

iv. Target 12: Enhance Green Spaces and Urban Planning for Human Well-being and Biodiversity

Significantly increase the area and quality, and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably, by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature, and contributing to inclusive and sustainable urbanization and to the provision of ecosystem functions and services.

****PoWIB Goal:** No specific goals were identified in the PoWIB.

****Island-Specific Actions** (decision VIII/I Annex §E.) No specific actions were set in the PoWIB.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB does not address this issue, therefore, it would be beneficial to consolidate existing guidance on green and blue spaces tailored to island contexts.

Indicative gaps in implementation

- Weak zoning laws¹³⁰
- Urban planning does not take into consideration biodiversity losses or disruption to ecosystem services.¹³¹¹³²

¹²⁹ Gaps identified were gleaned from the GBO-5 on Target 11: Protected Area. Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 82-85. <https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

¹³⁰ Nel, V. Spluma (2016) Zoning and Effective Land Use Management in South Africa. Urban Forum 27, 79–92. <https://doi.org/10.1007/s12132-015-9265-5>

¹³¹ Janet Marinelli. "Urban Refuge: How Cities Can Help Solve the Biodiversity Crisis." Yale Environment 360. July 2021. <https://e360.yale.edu/features/urban-refuge-how-cities-can-help-solve-the-biodiversity-crisis>

¹³² Charles H. Nilon, Myla F. J. Aronson, Sarel S. Cilliers, Cynnamon Dobbs, Lauren J. Frazee, Mark A. Goddard, Karen M. O'Neill, Debra Roberts, Emilie K. Stander, Peter Werner, Marten Winter, Ken P. Yocom, Planning for the Future of Urban Biodiversity: A Global Review of City-Scale Initiatives, *BioScience*, Volume 67, Issue 4, April 2017, Pages 332–342, <https://doi.org/10.1093/biosci/bix012>

v. Target 13: Increase the Sharing of Benefits From Genetic Resources, Digital Sequence Information, and Traditional Knowledge

Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.

Most relevant Aichi Biodiversity Target—Aichi Target 16: Access to and Sharing Benefits from Genetic Resources

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.

GBO-5 assessment of level of achievement of the Aichi Target: Target partially achieved (high confidence)

The GBO-5 report states that the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization became effective in 2014. By the year 2020, the Protocol had been ratified by 126 parties, and 87 countries had developed their own access and benefit-sharing (ABS) protocols.

Furthermore, the Zero Draft Outcome Document highlights the need for capacity-building for SIDS in implementing the BBNJ Agreement, in particular with respect to the fair and equitable sharing of benefits arising out of utilizing genetic resources. Similarly, stressing the significance of marine and terrestrial biodiversity to SIDS' livelihoods and identity, the SAMOA Pathway notes the importance of fair and equitable sharing of the benefits arising out of the utilization of genetic resources, acknowledging that access to and sharing the benefits of genetic resources can further contribute to poverty eradication and sustainable development, in addition to the conservation and sustainable use of biodiversity.

Elements of the PoWIB addressing Target 13

Relevant Priority Actions	Relevant Supporting Actions
Goal 9: Maintain sociocultural diversity of indigenous and local communities on islands	
<i>Target 9.1: Measures to protect traditional knowledge, innovations and practices associated with island biological diversity implemented, and the participation of indigenous and local communities in activities aimed at this promoted and facilitated</i>	
9.1.1. Recognize and protect island traditional knowledge, innovations and practices which improve the understanding, conservation and sustainable use of biodiversity	9.1.1.1. Initiate programmes, where appropriate, to record and study traditional knowledge and practices, in particular those that support the sustainable use of island biodiversity with the full and effective participation of indigenous and local communities and their prior informed consent, in accordance with national legislation and international obligations. 9.1.1.2. Respect, preserve and maintain indigenous and local communities' linguistic diversity that maintains biodiversity-related knowledge. 9.1.1.3. Establish and implement mechanisms to respect traditional knowledge, innovations and practices on lands and waters traditionally occupied and/or used by indigenous and local communities. 9.1.1.4. Compile information on the methods of protection and maintenance of traditional knowledge and practices on islands.

9.1.2. Develop and implement measures and legislation, where appropriate and in keeping with national laws and relevant international obligations, for the respect and protection of indigenous and local communities rights over their traditional knowledge innovations and practices	9.1.2.2. Develop local capacities for protecting and facilitating the use of island traditional knowledge and practices, including, where appropriate, processes to ensure prior informed consent. 9.1.2.5. Develop and implement effective systems to respect, preserve and maintain traditional knowledge, innovations and practices, where appropriate, for sustainable use of island resources. 9.1.2.6. Document traditional knowledge, innovations and practices relevant to local species or the sustainable use of island biodiversity, with the full and effective participation and prior informed consent of indigenous and local communities consistent with Article 8(j).
<i>Target 9.2: Traditional knowledge, innovations and practices regarding island biodiversity respected, preserved and maintained, the wider application of such knowledge, innovations and practices promoted with the prior informed consent and involvement of the indigenous and local communities providing such traditional knowledge, innovations and practices, and the benefits arising from such knowledge, innovations and practices equitably shared</i>	
9.2.1. Develop and implement ways and means to share in a fair and equitable way with indigenous and local communities the benefits arising from use of their traditional knowledge, innovations and practices <i>Rationale: Island communities have extensive knowledge of local biodiversity and traditional practices related to its conservation and use, but both knowledge and practices are vulnerable to social change misuse and misappropriation.</i>	9.2.1.1. Encourage, support and develop, in cooperation with the Working Group on Article 8(j) and related provisions, mechanisms and methods to ensure the preservation of the traditional knowledge, innovations and practices of indigenous and local communities associated with island genetic resources. 9.2.1.2. Establish, with full and effective participation of indigenous and local communities, a process and set of requirements, consistent with Article 8(j), to ensure the equitable sharing of benefits arising from use of their traditional knowledge, innovations and practices associated with island genetic resources subject to national legislation and international obligations.
Goal 10: Ensure the fair and equitable sharing of benefits arising out of island genetic resources	
<i>Target 10.1: All access to genetic resources from islands is in line with the Convention on Biological Diversity and its relevant provisions and, as appropriate and wherever possible, with the International Treaty on Plant Genetic Resources for Food and Agriculture and other applicable agreements*</i>	
10.1.1. Improve the knowledge base of genetic resources <i>Rationale: Island biodiversity is unique – and the same remark holds for the genetic resources, but in general, very little is known of the genetic diversity of island organisms.</i>	10.1.1.1. Investigate and document, subject to Article 8(j), island genetic resources and associated knowledge, and their existing and potential uses, including status, trends, and threats. 10.1.1.2. Identify and assess systems of information delivery, and update them to improve the recording and cataloguing of island genetic resources and, where appropriate, to implement alternative systems.
<i>Target 10.2: Benefits arising from the commercial and other utilization of island biodiversity genetic resources shared in a fair and equitable way with the island countries providing such resources in line with the CBD and its relevant provisions</i>	
10.2.1. Establish administrative, legislative and/or regulatory measures and systems in line with the Convention to ensure access to genetic resources, in particular those endemic to islands, and	10.2.1.1. Investigate and document the potential for research, including bioprospecting, into island genetic resources. 10.2.1.2. Develop national guidelines on bio-prospecting, taking into account the Bonn Guidelines.

ensure that benefits arising from their utilization are fairly and equitably shared <i>Rationale: Island biodiversity is unique – and the same remark holds for the genetic resources, but in general, very little is known of the genetic diversity of island organisms.</i>	10.2.1.3. Establish and harmonize access and benefit-sharing processes, mechanisms and measures to protect island genetic resources and for bio-prospecting. 10.2.1.4. Develop and implement a national access and benefit-sharing strategy, and national access and benefit-sharing measures, including legislative, administrative and policy measures with particular reference to endemic island species, taking into account the Bonn Guidelines. 10.2.1.5. Establish mechanisms that respect the use of endemic species and locally generated races and cultivars.
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Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB is quite comprehensive in addressing elements contained in the GBF Target. Therefore, no major gaps have been identified.

Indicative gaps in implementation

- Limited institutional and legal capacities to implement ABS mechanisms effectively.¹³³
- The rapid advancement and accessibility of digital sequencing technologies outpace the development of international norms and national regulations for DSI, making it hard for islands to keep up.¹³⁴
- Complexities of navigating complex legal, ethical, and practical considerations to protect traditional knowledge in the context of ABS and DSI.¹³⁵
- Protecting endemic biodiversity and traditional knowledge.¹³⁶
- Limited resources – capacity, expertise, diplomatic presence – to effectively participate in negotiations related to ABS and DSI.
- Limited resources, high dependency on natural resources, and balancing economic development.
- Impacts of climate change to island biodiversity adding a layer of complexity to managing and conserving genetic resources and traditional knowledge.

3. Tools and Solutions For Implementation and Mainstreaming

i. Target 14: Integrate Biodiversity in Decision-making at Every Level

Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environment assessments, environmental impact assessments, and, as appropriate, national accounting within and across all levels of government and across all sectors, in particular those with significant impacts on

¹³³ Hanson, J. O., Rhodes, J. R., Butchart, S. H. M., Buchanan, G. M., Rondinini, C., Ficetola, G. F., & Fuller, R. A. (2020). Global conservation of species' niches. *Nature*, 580(7802), 232–234. <https://doi.org/10.1038/s41586-020-2138-7>

¹³⁴ CBD. Digital Sequence Information on Genetic Resources: Submission of Views and Information on Terminology, Scope, and Domestic Measures on Access and Benefit Sharing Submitted by the African Group of Negotiators on Biodiversity-Ad Hoc Group on Digital Sequence Information. May 2019. <https://www.cbd.int/abs/DSI-views/2019/AfricanGroup-DSI.pdf>

¹³⁵ DSI Scientific Network. "Submission of views on issues for further consideration for digital sequence information on genetic resources. In response to notification SCBD/NPU/DC/KG/CGA/9078 DSI contribution to selected topics contained in the Annex to the decision 15/9.

¹³⁶ Hossain, Kamrul & Ballardini, Rosa. (2021). Protecting Indigenous Traditional Knowledge Through a Holistic Principle-Based Approach. *Nordic Journal of Human Rights*. 39. 51-72. 10.1080/18918131.2021.1947449.

biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.

Most relevant Aichi Biodiversity Target—Aichi Target 2: Biodiversity Values Integrated

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.

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (medium confidence)

“Many countries report examples of incorporating biodiversity into various planning and development processes. There has been a steady upward trend of countries incorporating biodiversity values into national accounting and reporting systems.”¹³⁷ In spite of the reports there is little to support to substantiate where or not biodiversity integration in development processes has measurably alleviated poverty.

Countries reported that biodiversity considerations have been integrated and adopted into legislation and regulations, and understanding the intrinsic value of biodiversity applied across sectors (e.g., fisheries, agriculture, forestry, etc.). Other countries stated that analyses were conducted on the state of biodiversity health to support decision-making and improve enforcement. Regardless, countries reported challenges in meeting the goals. They attributed it to:

- Implementation of regulatory framework
- Translating the regulations into regional and “local-level” actions
- Inability to mainstream biodiversity
- Struggled to include valued cost of biodiversity loss and impacts of environmental decline into financial plans in other sectors

Initiatives to support the incorporation of biodiversity values into “national accounting and reporting systems” are steadily increasing. The System of Environmental-Economic Accounting (SEEA) establishes a universal standard for including the environmental economics into national plans.¹³⁸

The evaluation of 144 National Biodiversity Strategies and Action Plans (NBSAPs) highlights an increasing recognition of biodiversity's essential role in key economic sectors such as agriculture, forestry, and fisheries. This analysis points to a broader understanding of how biodiversity supports these critical sectors, underlining its importance for economic sustainability and environmental health (Whitehorn, et al).¹³⁹

The Global Biodiversity Outlook 5 (GBO-5) indicates that countries are unlikely to achieve Target 2, even among those that have made significant progress, being more than 50 percent of the way there.¹⁴⁰ This shortfall is attributed to the countries' focus on integrating biodiversity into legislation

¹³⁷ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 40.

<https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

¹³⁸ UNCEEEA. Global Assessment of Environmental-Economic Accounting and Supporting Statistics 2017.

<https://unstats.un.org/unsd/statcom/49th-session/documents/BG-item3h-2017-Global-Assessment-of-Environmental-Economic-Accounting-E.pdf>

¹³⁹ Whitehorn, P.R., Navarro, L.M., Schröter, M., Fernandez, M., Rotllan-Puig, X., & Marques, A. (2019) Mainstreaming biodiversity: A review of national strategies. Biological Conservation, 235, 157-163.

<https://doi.org/10.1016/j.biocon.2019.04.016>

¹⁴⁰ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 43.

<https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

and regulations without sufficiently incorporating biodiversity values or environmental economics into development strategies aimed at poverty alleviation.

Furthermore, the Call for Action of the SIDS Coalition for Nature¹⁴¹ considers one of the priorities to accelerate biodiversity mainstreaming across sectors, particularly through awareness raising and providing easily digestible information on the key importance of biodiversity and ecosystems for socio-economic development, and on best practices in conservation in SIDS, and to increase synergies between biodiversity-related Conventions as well as between Rio Conventions.

The SIDS Nature Climate Action Roadmap (with its focus on SIDS' MPAs) outlines the provision of incentives for sustainable use of natural resources in MPAs as one of the key interventions of the roadmap. This may include assessment and valuation of marine and coastal ecosystem services, environmental impact assessments and strategic environmental assessments, or assisting financial institutions and businesses in evaluating the financial risks associated with biodiversity loss. The roadmap puts an emphasis on accelerating biodiversity mainstreaming across various sectors.

Elements of the PoWIB addressing Target 14

Relevant Priority Actions	Relevant Supporting Actions
Goal 4: Promote sustainable use and consumption	
<i>Target 4.2: Unsustainable consumption of island biological resources and its impact upon biodiversity is reduced</i>	
4.2.5. Promote implementation of sustainable tourism best practices appropriate to islands. <i>Rationale: Many island economies are based on tourism.</i>	4.2.5.1. Mainstream biodiversity into the integrated planning, strategies, policies and implementation for all tourism and tourism-related projects. Include community-based initiatives, wherever appropriate.
Goal 5: Pressures from habitat loss, land-use change and degradation, and sustainable water use, reduced on islands	
<i>Target 5.1: Rate of loss and degradation of natural habitats in islands significantly decreased</i>	
5.1.2. Develop and apply environmental and socio-economic impact assessment methods prior to land-use conversion such as for agriculture, human settlements, mining, logging, infrastructure development, and tourism and military activities. <i>Rationale: Impact assessment is particularly important when large fractions of remaining ecosystems can be affected by infrastructure</i>	5.1.2.2. Implement strategic environmental assessment, and environmental and socio-economic impact assessment procedures or regulations integrating biodiversity considerations prior to land use conversion.

¹⁴¹ SIDS Coalition for Nature (2022). "Call for Action: Achieving our Ambition for Nature."
https://s3.amazonaws.com/mongo.document.attachments/inde-side-events/63373480a23edb0001f0d2cf/Call_for_Action_SIDS_Coalition_for_Nature-15-December-2022.pdf

<i>development or other human activities.</i>	
Goal 8: Maintain capacity of island ecosystems to deliver goods and services and support livelihoods	
<i>Target 8.1: Capacity of island ecosystems to deliver goods and services maintained or improved</i>	
8.1.3. Mainstream the management of the risks of natural disasters and extreme events to island biodiversity and communities into the national planning process	8.1.3.1. Integrate education and awareness related to biodiversity's role in natural hazard reduction into ongoing natural disaster programmes on islands. 8.1.3.2. Develop specific participatory plans, including community response and mitigation plans, to address specific disasters such as flooding, storm surges, drought, bush fires and mainstream these into national planning processes, including appropriate traditional practices.
Goal 11: Parties have improved financial, human, scientific, technical and technological capacity to implement the Convention	
<i>Target 11.3: Capacity of islands to implement this programme of work on island biological diversity and all its priority activities is significantly strengthened</i>	
11.3.4. Adopt an integrated, inter-disciplinary and participatory approach at all levels of planning, management, inventory, monitoring, and governance involving all stakeholders related to the understanding, conservation and sustainable use of island biodiversity	11.3.4.1. Use, whenever possible, the island as the unit for spatial planning, with due consideration to biodiversity requirements. 11.3.4.3. Mainstream biodiversity into integrated planning, including strategies, policies and implementation plans for all development projects. 11.3.4.4. Integrate national biodiversity strategies and action plans into national sustainable development plans and national and island planning processes. 11.3.4.5. Develop mechanisms to allow for the integration of appropriate traditional conservation management systems and practices into national policies and management and development plans, with full involvement of relevant stakeholders. 11.3.4.6. Develop the capacity and enhance opportunities for community-based research and monitoring to conserve island biodiversity and provide greater benefits to island communities. 11.3.4.7. Integrate consideration of the programme of work on island biodiversity in the national capacity self-assessment and in the development of ongoing action plans. 11.3.4.8. Establish, as appropriate, a coordination process/mechanism for the implementation of all relevant multilateral environmental agreements at the national level. 11.3.4.9. Coordinate and harmonize the implementation of different ongoing programmes under the Convention on Biological Diversity with cross-cutting activities and other biodiversity-related conventions. 11.3.4.3. Mainstream biodiversity into integrated planning, including strategies, policies and implementation plans for all development projects. 11.3.4.4. Integrate national biodiversity strategies and action plans into national sustainable development plans and national and island planning processes. 11.3.4.5. Develop mechanisms to allow for the integration of appropriate traditional conservation management systems and practices into national policies and management and development plans, with full involvement of relevant stakeholders. 11.3.4.6. Develop the capacity and enhance opportunities for community-based research and monitoring to conserve island biodiversity and provide greater benefits to island communities.

	11.3.4.7. Integrate consideration of the programme of work on island biodiversity in the national capacity self-assessment and in the development of ongoing action plans. 11.3.4.8. Establish, as appropriate, a coordination process/mechanism for the implementation of all relevant multilateral environmental agreements at the national level.
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Furthermore, decision XI/15 encouraged to enter into partnerships across sectors to use the opportunity of revising national biodiversity strategies and action plans to further mainstream biodiversity conservation with other key sectors (e.g. mining, agriculture, fisheries, health, energy, tourism, integrated marine/coastal management, education and development) and to determine specific, measurable, ambitious, realistic and time-bound national targets, and related indicators, in line with the Aichi Biodiversity Targets, at island level and within the context of domestic priorities. It also called on Parties to mainstream ecosystem-based adaptation to climate change, ecosystem restoration and invasive species management for human health and well-being into all island development and conservation plans and projects and build capacity in their application.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

Mainstreaming biodiversity into and across economic sectors is not explicitly addressed under the PoWIB. Although this is a cross-cutting issue – some economic activities may affect island ecosystems disproportionately. Therefore, specific consideration of this CBD obligation under Article 6 (b) of the Convention, supplemented by Target 14 of the GBF, would be beneficial.

Indicative gaps in implementation¹⁴²

- Biodiversity considerations are not factored into planning and decision-making processes across sectors.
- Balancing economic development with conservation needs.
- Data on the status of biodiversity status, trends, and ecosystem services are lacking or outdated thus making it difficult to fully integrated biodiversity into decision-making.
- Fragmented or poorly enforced legal and policy frameworks that hinder mainstreaming biodiversity into all levels of decision-making.
- Understanding spatial and ecological connectivity.
- Incorporating biodiversity values and environmental economics into policies and sustainable planning.

ii. Target 15: Businesses Assess, Disclose, and Reduce Biodiversity-related Risks and Navigate Impacts

Take legal, administrative, or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions:

(a) Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains, and portfolios;

(b) Provide information needed to consumers to promote sustainable consumption patterns;

(c) Report on compliance with access and benefit-sharing regulations and measures, as applicable;

¹⁴² Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 40-43.
<https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.

In order to advance a sustainable ocean-based economy, the Zero Draft Outcome Document of the Fourth International Conference on Small Island Developing States (SIDS4) highlights the need to explore opportunities in fisheries, aquaculture, marine tourism, environmentally friendly maritime transport, high-integrity blue carbon markets, and ocean conservation credits. It also calls for creating an enabling policy environment whereby investments, skills, and experience are maximized for the purpose of driving innovation, economic development, and diversification, and the need to transition to environmentally sustainable practices and technologies. Furthermore, it puts an emphasis on the need for resilient and sustainable tourism across various sectors, aiming to reduce pollution and waste, decrease investment risks, and mitigate negative impacts on local populations.

The SAMOA Pathway considers the importance of diversifying sustainable tourism through products and services, ensuring positive economic, social and environmental impacts and the development of ecotourism and agritourism.

Elements of the PoWIB addressing Target 15

Relevant Priority Actions	Relevant Supporting Actions
Goal 4: Promote sustainable use and consumption	
<i>Target 4.1: Island biodiversity-based products are derived from sources that are sustainably managed, and production areas managed, consistent with the conservation of biological diversity</i>	
4.1.1. Remove subsidies that encourage unsustainable use of island biodiversity and where livelihoods are resource-based, support the development of sustainable economic activities. <i>Rationale: Subsidies and other economic incentives may have very wide-reaching and rapid detrimental effects on biodiversity in islands. Island species are often restricted to very small populations that are quickly impacted by unsustainable practices.</i>	4.1.1.2. Adopt, promote and enforce the use of environmentally friendly technologies in all production processes. 4.1.1.4. Understand how biodiversity is affected by pressures resulting from economic activities including tourism, agriculture, forestry and fisheries, which are intensified in small island environments.
<i>Target 4.2: Unsustainable consumption of island biological resources and its impact upon biodiversity is reduced</i>	
4.2.5. Promote implementation of sustainable tourism best practices appropriate to islands. <i>Rationale: Many island economies are based on tourism.</i>	4.2.5.2. Develop and promote specific guidelines and responsible codes for all tourism activities, including socio-cultural and environmental impact assessments, sustainable water use, energy management, waste generation and disposal, and construction in order to have a real benefit for biodiversity conservation, taking into account: the CBD Guidelines on Biodiversity and Tourism Development, the Akwé: Kon Voluntary Guidelines on Cultural, Environmental and Social Impact Assessment, and guidelines for integrating biodiversity considerations in environmental impact assessment and strategic environmental assessment.

	5.2.5.3. Promote networks of island destinations respectful of biological diversity and develop an island forum on innovation supporting biodiversity and responsible tourism. 5.2.5.4. Promote and facilitate partnerships between tourism stakeholders, operators, and indigenous and local communities to promote sustainable tourism. 4.2.5.5. Support pilot tourism projects in island tourist destinations that favour conservation of local biodiversity. 4.2.5.6. Disseminate information on specific island biological and cultural diversity issues and value to improve knowledge and increase awareness of responsibilities among all relevant tourism actors (including tour operators, tourists, indigenous and local communities, authorities, etc.). 4.2.5.7. Enhance local benefits from tourism on islands (e.g., keeping tourism receipts within local economies) and strengthen local capacity for sustainable tourism management. 4.2.5.8. Develop regional partnership to help enforcement of regulations against illegal practices connected to biodiversity and tourism.
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Identified gaps in the PoWIB and areas of potential need of enhanced attention

Although elements of the PoWIB relate to sustainable production and consumption, most of these are related to tourism. Given the more ample scope of GBF Target 15, more work could be done with respect to value-chain issues, but this seems to be more appropriate to address in other streams of work under the Convention.

iii. Target 16: Enable Sustainable Consumption Choices To Reduce Waste and Overconsumption

Ensure that people are encouraged and enabled to make sustainable consumption choices, including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.

Most relevant Aichi Biodiversity Target—Aichi Target 3: Sustainable Production and Consumption

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

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (high confidence)

Humanity's consumption of the earth's biological resources far exceeds nature's capacity for regeneration, with the ratio of consumption having leveled out within the last decade. According to a 2020 study by the Global Footprint Network (GFN), before 2010, the ecological footprint was on a consistent rise since it entered a 'deficit' phase at the end of the 1960s. From 2011 to 2016, the ecological footprint has held steady at about 1.7 times the Earth's biocapacity, effectively

meaning humanity requires the equivalent of '1.7 Earths' to replenish the biological resources it consumes.¹⁴³ Frequently cited obstacles cited in the GBO-5.¹⁴⁴

- Lacking funding
- Lack of capacity
- Low participation from businesses
- Non-environmental agencies not including biodiversity into their plans.

The Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES) stated that 55% of Parties have legislation related to or specifically targeting the traded of endangered species.¹⁴⁵ While the data appears encouraging, it also reveals that nearly half of the entities involved are not meeting the expected standards. However, there are sources of optimism, as the global Partnership for Business and Biodiversity is witnessing an uptrend in businesses incorporating biodiversity factors into their supply chains.¹⁴⁶ On the other hand, the IUCN Red List Index shows that the human exploitation of wildlife is on the increase, pushing species closer to extinction.¹⁴⁷

Furthermore, the Zero Draft Outcome Document of the Fourth International Conference on Small Island Developing States (SIDS4) puts an emphasis on the need for resilient and sustainable tourism across various sectors, aiming to reduce pollution and waste, decrease investment risks, and mitigate negative impacts on local populations. In addition, the SAMOA Pathway calls for enhancing sustainable consumption and production, in particular targeting micro, small and medium-sized enterprises, sustainable tourism across various sectors, waste management, food and nutrition practices, and fostering linkages in the supply chain to advance rural development. Diversifying sustainable tourism through products and services is important, avoiding negative economic, social and environmental impacts.

Elements of the PoWIB addressing Target 16

Relevant Priority Actions	Relevant Supporting Actions
Goal 4: Promote sustainable use and consumption	
<i>Target 4.2: Unsustainable consumption of island biological resources and its impact upon biodiversity is reduced</i>	
4.2.5. Promote implementation of sustainable tourism best practices appropriate to islands. <i>Rationale: Many island economies</i>	4.2.5.2. Develop and promote specific guidelines and responsible codes for all tourism activities, including socio-cultural and environmental impact assessments, sustainable water use, energy management, waste generation and disposal, and construction in order to have a real benefit for biodiversity conservation, taking into account: the CBD Guidelines on Biodiversity and Tourism Development, the Akwé: Kon Voluntary Guidelines on Cultural, Environmental and Social Impact Assessment, and guidelines for integrating

¹⁴³ Global Footprint Network (2020). Calculating Earth Overshoot Day 2020: Estimates Point to August 22nd. <https://www.overshootday.org/content/uploads/2020/06/Earth-Overshoot-Day-2020-Calculation-Research-Report.pdf>

¹⁴⁴ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 48. <https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

¹⁴⁵ Convention on International Trade in Endangered Species of Wild Fauna and Flora – National Laws for Implementing the Convention. <https://cites.org/eng/disc/text.php>

¹⁴⁶ Secretariat of the Convention on Biological Diversity (2020). The Global Partnership for Business and Biodiversity. <https://www.cbd.int/business/gp.shtml>

¹⁴⁷ IUCN Red List Index. <https://www.bipindicators.net/indicators/red-list-index/red-list-indexinternationally-traded-species>

are based on tourism.	biodiversity considerations in environmental impact assessment and strategic environmental assessment. 4.2.5.3. Promote networks of island destinations respectful of biological diversity and develop an island forum on innovation supporting biodiversity and responsible tourism. 4.2.5.4. Promote and facilitate partnerships between tourism stakeholders, operators, and indigenous and local communities to promote sustainable tourism. 4.2.5.5. Support pilot tourism projects in island tourist destinations that favour conservation of local biodiversity. 4.2.5.6. Disseminate information on specific island biological and cultural diversity issues and value to improve knowledge and increase awareness of responsibilities among all relevant tourism actors (including tour operators, tourists, indigenous and local communities, authorities, etc.). 4.2.5.7. Enhance local benefits from tourism on islands (e.g., keeping tourism receipts within local economies) and strengthen local capacity for sustainable tourism management. 4.2.5.8. Develop regional partnership to help enforcement of regulations against illegal practices connected to biodiversity and tourism.
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Identified gaps in the PoWIB and areas of potential need of enhanced attention

As noted above, the PoWIB addresses some aspects of sustainable production and consumption especially with regards to tourism. GBF Targets 15 and 16 are broader in scope. However, the issues dealt with under these targets are cross-cutting and actions to implement these targets will be beneficial to islands overall.

iv. Target 17: Strengthen Biosafety and Distribute the Benefits of Biotechnology

Establish, strengthen capacity for, and implement in all countries, biosafety measures as set out in Article 8(g) of the Convention on Biological Diversity and measures for the handling of biotechnology and distribution of its benefits as set out in Article 19 of the Convention.

****PoWIB Goal:** No specific goals were identified in the PoWIB.

****Island-Specific Actions** (decision VIII/I Annex §E.) No specific actions were set in the PoWIB

Identified gaps in the PoWIB and areas of potential need of enhanced attention

In the introduction of the PoWIB notes that “although it was considered that potential threats from genetically modified organisms to island biodiversity were extremely important for islands and island States, no reference has been made to these within the programme of work, as these issues would be most appropriately addressed under the Cartagena Protocol on Biosafety”.¹⁴⁸ COP may wish to reconsider this deliberation in light of GBF Target 17 by, for instance, integrating/cross-referencing applicable recommendations under the Cartagena Protocol and other relevant instruments into the PoWIB.

Indicative gaps in implementation

- Insufficient quarantine and inspection services; deficiencies introduce invasive species and pathogens entering through trade, tourism, fisheries, military movement, and other means.¹⁴⁹

¹⁴⁸ CBD decision VIII/1 (2006), Annex, para 13.

¹⁴⁹ Regional Biosecurity Plan for Micronesia and Hawaii. Vol 1. Prepared by: University of Guam and the Secretariat of the Pacific Community 2014. This plan was prepared in conjunction with representatives from various countries at various levels, including federal/national, state/territory/commonwealth, industry, and non-governmental organizations and was generously funded and supported by the Commander, Navy Installations Command (CNC) and Headquarters, Marine Corps.

- Limited surveillance and monitoring systems which limit early detection.¹⁵⁰
- Inadequate infrastructure for disease control.¹⁵¹
- Weak regulatory framework.¹⁵²
- Limited public awareness.¹⁵³
- Challenges in international cooperation, especially in regions with multiple islands or where islands are close to continental landmasses.¹⁵⁴

v. Target 18: Reduce Harmful Incentives by at Least \$500 Billion per Year and Scale Up Positive Incentives for Biodiversity

Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least \$500 billion per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.

Most relevant Aichi Biodiversity Target—Aichi Target 3: Incentives Reformed

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.

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (medium confidence)

Since the establishment of the Aichi Targets, efforts to tackle incentives detrimental to biodiversity have seen little advancement. The Global Biodiversity Outlook 5 (GBO-5) points out that in regions where data was available, subsidies harmful to biodiversity significantly exceeded the funds allocated for conservation and the sustainable management of natural resources.

Governments that reported on their efforts to meet Target 3 shared that they were revising policies related to subsidies in sectors such as hunting, fishing, pesticide usage, and fossil fuel consumption. However, fewer than 20% have actually reported taking steps to eliminate these detrimental subsidies. This reveals a notable discrepancy between the initiation of policy reforms and the

https://www.doi.gov/sites/doi.gov/files/uploads/pac_regional_biosecurity_plan_for_micronesia_and_hawaii_volume_i.pdf

¹⁵⁰ SPREP. Pacific Invasive Species Battler Series. Protect Our Islnds with Biosecurity. Apia, Samoa. SPREP (2020). ISBN: 978-982-04-0826

¹⁵¹ Taylor S. The Vulnerability of Health Infrastructure to the Impacts of Climate Change and Sea Level Rise in Small Island Countries in the South Pacific. Health Serv Insights. 2021 May 31;14:11786329211020857. doi: 10.1177/11786329211020857. PMID: 34158800; PMCID: PMC8186115.

¹⁵² Susana Carvalho, Hailey Shchepanik, Eva Aylagas, Michael L Berumen, Filipe O Costa, Mark John Costello, Sofia Duarte, Jasmine Ferrario, Oliver Floerl, Moritz Heinle, Stelios Katsanevakis, Agnese Marchini, Sergej Olenin, John K Pearman, Raquel S Peixoto, Lotfi J Rabaoui, Greg Ruiz, Greta Srèbalienè, Thomas W Therriault, Pedro E Vieira, Anastasija Zaiko, Hurdles and opportunities in implementing marine biosecurity systems in data-poor regions, *BioScience*, Volume 73, Issue 7, July 2023, Pages 494–512, <https://doi.org/10.1093/biosci/biad056>

¹⁵³ SPREP. Pacific Invasive Species Battler Series. Protect Our Islnds with Biosecurity. Apia, Samoa. SPREP (2020). ISBN: 978-982-04-0826

¹⁵⁴ Heckert, Robert & Reed, Craig & Gmuender, Felix & Ellis, Maureen. (2011). International Biosafety and Biosecurity Challenges: Suggestions for Developing Sustainable Capacity in Low-resource Countries. *Applied Biosafety*. 16. 223-230. 10.1177/153567601101600404.

concrete actions taken to remove environmentally harmful subsidies.¹⁵⁵ Governments reported challenges stating that:

- Limited capacity
- Lack of funding
- Limited legislative action
- Entrenched interests in perserving the existing system
- Difficulties in expanding pilot initiatives

The 2020 report from the OECD highlights that annual funding for conservation efforts amounts to approximately \$80-\$90 billion. This figure is significantly overshadowed by the \$500 billion per year allocated to government subsidies that potentially have adverse effects on biodiversity, showcasing a stark contrast in financial priorities that could impact conservation outcomes.¹⁵⁶

The OECD reported a notable reduction in agricultural subsidies during the 1990s. However, in the past decade, progress in further reducing these subsidies has stagnated, with levels remaining above \$1 billion.¹⁵⁷ In a study conducted by the World Bank (WB) stated that Efforts to reduce global fisheries subsidies over the past decade have seen minimal progress. While the growth in total subsidies observed in earlier decades has not continued since 2009, the proportion of subsidies that are harmful—meaning they contribute to overfishing by expanding fishing fleet capacities—actually saw an increase from 2009 to 2018. In 2018, over \$35 billion was provided in fishing subsidies, but only about \$10 billion of that amount supported sustainable fishing practices. Conversely, approximately \$22 billion was allocated to subsidies that encourage overfishing. Additionally, the World Bank identified that mismanagement of fisheries led to an estimated loss of \$83 billion in revenue in 2012.¹⁵⁸

Furthermore, The SAMOA Pathway notes the need to address subsidies in the fisheries sector, including removing subsidies leading to over-capacity and overfishing.

Elements of the PoWIB addressing Target 18

Relevant Priority Actions	Relevant Supporting Actions
Goal 2: Promote the conservation of island species diversity	
<i>Target 2.1: Populations of island species of selected taxonomic groups restored, maintained, or their decline substantially reduced</i>	
2.1.1. Develop and implement conservation measures and policies, including protection, and where needed, recovery of populations of threatened, endemic, or ecologically or culturally important species and recovery plans.	2.1.1.6. Consider, where appropriate, economic and other forms of incentives that encourage the conservation of threatened endemic, or ecologically or culturally important species by private sector, NGOs, and indigenous and local communities, giving priority to in situ activities.

¹⁵⁵ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. p. 44.

<https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

¹⁵⁶ OECD (2020) A Comprehensive Overview of Global Biodiversity Finance.

<https://www.oecd.org/environment/resources/biodiversity/report-a-comprehensive-overview-of-global-biodiversity-finance.pdf>

¹⁵⁷ OECD (2019) “Producer and Consumer Support Estimates” OECD Agriculture Statistics. (database),

<http://dx.doi.org/10.1787/agr-pcse-data-en>

¹⁵⁸ World Bank. 2017. The Sunken Billions Revisited: Progress and Challenges in global Marine Fisheries.

Washington, DC: World Bank. Environment and Sustainable Development Series. Doi:10.1596/978-1-4648.0919-4. <https://www.worldbank.org/content/dam/Worldbank/Topics/Environment/Sunken%20Billions%20Revisited-web-2.pdf>

<i>Rationale: Key issue for island biodiversity. Continued loss of island biodiversity is of global importance. Many species have critical ecosystem roles, or are of social or cultural significance to islanders.</i>	
Goal 4: Promote sustainable use and consumption	
<i>Target 4.1: Island biodiversity-based products are derived from sources that are sustainably managed, and production areas managed, consistent with the conservation of biological diversity</i>	
4.1.1. Remove subsidies that encourage unsustainable use of island biodiversity and where livelihoods are resource-based, support the development of sustainable economic activities. <i>Rationale: Subsidies and other economic incentives may have very wide-reaching and rapid detrimental effects on biodiversity in islands. Island species are often restricted to very small populations that are quickly impacted by unsustainable practices.</i>	4.1.1.1. Develop and implement policies and a legal framework to facilitate the removal of subsidies that encourage unsustainable exploitation of island biodiversity, including, inter alia, the following actions: (a) Increase awareness of policy makers, legislators and the private sector on the impacts of subsidies on island biodiversity. (b) adopt/encourage measures to help eradicate over-exploitation of threatened species and other species with an unfavourable conservation status (e.g., seabirds, marine turtles and dugong). (c) Assess the effectiveness of policies designed to make economic activities sustainable on islands, and use socio-economic and scientific knowledge to develop them further. (d) Understand how island-specific economic policies can be incorporated in over-arching trade, tourism and environmental governance.
<i>Target 4.2: Unsustainable consumption of island biological resources and its impact upon biodiversity is reduced</i>	
4.2.1. Adopt measures to ensure sustainable management of coastal and marine biodiversity, with due regard to the conservation of threatened, endemic, ecologically and/or culturally important island species, to prevent, <i>inter alia</i>, over-exploitation and destructive practices <i>Rationale: Island species are often restricted to very small populations that are quickly impacted by unsustainable practices.</i>	4.2.1.11. Remove harmful subsidies that encourage unsustainable exploitation of marine and coastal biodiversity, or irreversible loss of critical habitats.
4.2.2 Adopt measures to promote the sustainable use of terrestrial and freshwater resources in islands <i>Rationale: Island communities are very largely dependent on local biodiversity.</i>	4.2.2.4. Provide incentives / to encourage sustainable use of terrestrial and freshwater biodiversity in islands and remove subsidies that encourage unsustainable exploitation or habitat destruction.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB contain recommendations on harmful subsidies and no gaps have been found in relation to GBF Target 18.

Indicative gaps in implementation

- Government subsidies in fisheries sector: "...subsidies amount to some US\$30 billion worldwide, of which 60 per cent (US\$18 billion) are estimated to contribute to fishing overcapacity and overfishing..."¹⁵⁹
- "Government support distorts prices and resource allocation decisions, altering the pattern of production and consumption in an economy. As a result, government support, including subsidies, can have negative effects on the environment that are unforeseen, undervalued or ignored in the policy process" (Matthews et.al).¹⁶⁰
- Private sector understanding their impact to biodiversity.¹⁶¹

vi. Target 19: Mobilize \$200 Billion per Year for Biodiversity From all Sources Including \$30 Billion Through International Finance

Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at least \$200 billion per year by 2030, including by:

(a) *Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least \$20 billion per year by 2025, and to at least \$30 billion per year by 2030;*

(b) *Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances;*

(c) *Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments;*

(d) *Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms, with environmental and social safeguards;*

(e) *Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises;*

¹⁵⁹ UNCTAD. Parmentier. R. "Tackling Harmful Incentives and Unstable Fisheries Practices." Global Ocean Commission. p. 78. https://unctad.org/system/files/official-document/ditcted2016d3_part3_en.pdf

¹⁶⁰ Matthews, A. and K. Karousakis (2022), "Identifying and assessing subsidies and other incentives harmful to biodiversity: A comparative review of existing national-level assessments and insights for good practice", *OECD Environment Working Papers*, No. 206, OECD Publishing, Paris, <https://doi.org/10.1787/3e9118d3-en>.

¹⁶¹ Tineke Lambooy t.lambooy@nyenrode.nl t.e.lambooy@uu.nl & Yulia Levashova (2011) Opportunities and challenges for private sector entrepreneurship and investment in biodiversity, ecosystem services and nature conservation, *International Journal of Biodiversity Science, Ecosystem Services & Management*, 7:4, 301-318, DOI: [10.1080/21513732.2011.629632](https://doi.org/10.1080/21513732.2011.629632)

(f) *Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions¹⁶² and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity;*

(g) *Enhancing the effectiveness, efficiency and transparency of resource provision and use;*

Most relevant Aichi Biodiversity Target—Aichi Target 20: Mobilizing Resources from All Sources

“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.”

GBO-5 assessment of level of achievement of the Aichi Target: Target partially achieved (high confidence)

In some nations, there has been a rise in domestic funding allocated to biodiversity, while in others, the funding levels have remained relatively stable over the last decade. The financial support for biodiversity from international sources, including official development assistance, has seen an approximate doubling. Nonetheless, when considering all funding sources for biodiversity, the overall increase does not seem adequate to meet the existing needs. Furthermore, these financial contributions are significantly overshadowed by funding directed towards activities that negatively impact biodiversity, as highlighted in Aichi Target 3. Efforts to pinpoint funding requirements, gaps, and priorities, as well as to develop national financial strategies and assess biodiversity values, have been limited to a small number of countries, as indicated by Aichi Target 2.

Furthermore, the Zero Draft Outcome Document of the Fourth International Conference on Small Island Developing States (SIDS4) highlights access to finance as one of the key priorities for SIDS, emphasizing that “high debt levels, limited fiscal space and challenges accessing finance are major constraints to sustainable development and growth in SIDS access to affordable borrowing to refinance outstanding debt obligations, pay for imports, recover from disasters and invest in sustainable development is a critical component in SIDS achieving resilient prosperity”.¹⁶³ The document notes the need for public-private sector partnerships and technical assistance for sustainable ocean-based economy projects in SIDS. It also calls for financial and technical resources for SIDS to address issues such as biodiversity loss, waste, unsustainable production and consumption, overfishing, coral bleaching, ocean acidification, eutrophication, coastal erosion, and disaster risk reduction.

The political declaration further calls for the need of disaster-related funding for SIDS, and support for SIDS in accessing climate and disaster relief finance, promoting innovative and sustainable private sources of financing.

One of the priorities of the Call for Action of the SIDS Coalition for Nature includes increasing access of SIDS to concessional finance and encouraging private investment and financing solutions for biodiversity conservation. This includes activities such as enhancing national capacities to identify funding sources, develop funding proposals, and manage funds effectively, incorporating

¹⁶² Mother Earth Centric Actions: Ecocentric and rights-based approach enabling the implementation of actions towards harmonic and complementary relationships between peoples and nature, promoting the continuity of all living beings and their communities and ensuring the non-commodification of environmental functions of Mother Earth.

¹⁶³ Zero Draft Outcome Document, para 17

nature-related financial risks and opportunities into business plans, and supporting blended and innovative finance mechanisms.

One of the key interventions of the SIDS Nature Climate Action Roadmap (with its focus on SIDS' MPAs) includes creating sustainable financial mechanisms to encourage stakeholders to shift away from harmful practices that impact ecosystem-based adaptation and mitigation services provided by MPAs. This may include blue bonds and blended finance options, debt swaps for nature/ocean, blue carbon credit schemes, and reallocating subsidies that hinder conservation efforts.

Elements of the PoWIB addressing Target 19

Relevant Priority Actions	Relevant Supporting Actions
Goal 11: Parties have improved financial, human, scientific, technical, and technological capacity to implement the Convention	
<i>Target 11.1: New and additional financial resources are allocated to all islands, in particular small islands developing States and for developing country Parties, to facilitate the effective implementation of this programme of work and, in general, their commitments under the Convention in accordance with Article 20</i>	
11.1.1. Develop and strengthen partnership at all levels and across sectors to finance the implementation of national biodiversity strategies and action plans and the programme of work	11.1.1.1. Identify constraints and difficulties at the national level for the establishment of partnerships, including use conflicts and management responsibilities. 11.1.1.2. Develop active partnerships focused on specific island biodiversity issues across the full range of stakeholders at the local, national, regional and/or international levels. 11.1.1.3. Establish partnerships in different sectors, such as tourism, fisheries and natural disaster management. 11.1.1.4. Encourage and support partnerships with non-governmental organizations, as well as local partnerships. 11.1.1.5. Secure the engagement of the private sector, including financial, technical and political support, at the local, national, regional and international levels.
11.1.2. Provision of additional financial resources from the financial mechanism of the Convention for developing country Parties in accordance with Article 20	11.1.2.1. Develop collaborative projects and enabling activities for the implementation of the programme of work.
11.1.3. Assess, develop and implement a range of conservation finance mechanisms at the local, national and international levels	11.1.3.1. Assess and establish conservation trust funds (including national biodiversity trust funds), debt-for-nature swaps, user fees, payments for ecosystem services, and other instruments, including national funding of biodiversity conservation and sustainable use. 11.1.3.2. Secure increased bilateral and multilateral grants and loans to support activities related to this programme of work in the context of implementation of National Biodiversity Strategies and Action Plans. 11.1.3.3. Assist countries and communities to identify practical mechanisms to increase local financial support of conservation action.

Furthermore, decision XI/15 urged to strengthen the implementation of the PoWIB also by considering the development of innovative financial arrangements to mobilize additional resources, in accordance with Articles 20 and 21 of the Convention, through the strategy for resource mobilization, in line with decisions IX/11, X/3 and XI/4, in support of the implementation of the

programme of work on island biodiversity, including trust funds, “debt for adaptation to climate change swaps”, payments for ecosystem services, and fees for tourism or natural resource use, dedicated to effective conservation.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB and relevant subsequent decisions cover financial resource allocation to islands. No major gaps have been identified, apart from the identification of synergies and co-benefits, and therefore potential trade-offs in finance priorities.

Indicative gaps in implementation

- Limited access to international funding¹⁶⁴
- High dependence on external funds¹⁶⁵
- Inadequate domestic financial mechanisms¹⁶⁶
- Limited private-sector engagement¹⁶⁷
- Small administrations with limited human and technical resources.¹⁶⁸
- Lack of integrated planning that combines biodiversity conservation with economic development.¹⁶⁹
- Economic vulnerabilities of islands, including susceptibility to natural disasters and climate change impacts, can divert financial resources away from conservation efforts to immediate recovery and reconstruction needs.
- Insufficient valuation of ecosystem services.
- Limited investment opportunities
- Weak governance and legal frameworks
- High transaction costs
- Lack of information regarding potential opportunities for investment.

vii. Target 20: Strengthen Capacity-building, Technology Transfer, and Scientific and Technical Cooperation for Biodiversity

Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the Framework.

¹⁶⁴ Asian Development Fund (ADF). ADF 13 Replenishment Meeting. November 2019. “A Framework for Addressing the Financing Needs of Small Island Developing States.

<https://www.adb.org/sites/default/files/page/561776/framework-financing-needs-sids-discussion-paper.pdf>

¹⁶⁵ Asian Development Fund (ADF). ADF 13 Replenishment Meeting. November 2019. “A Framework for Addressing the Financing Needs of Small Island Developing States.

<https://www.adb.org/sites/default/files/page/561776/framework-financing-needs-sids-discussion-paper.pdf>

¹⁶⁶ Fouad, M., Novta, N., Preston, G., Schneider, T., & Weerathunga, S. (2021). Unlocking Access to Climate Finance for Pacific Island Countries. *Departmental Papers, 2021(020)*, A001. Retrieved Mar 19, 2024, from <https://doi.org/10.5089/9781513594224.087.A001>

¹⁶⁷ Lu, X., “Accelerating Private Sector Engagement in Adaptation in Asia and the Pacific.” © 2022 Asian Development Bank. ISSN 2789-0619. DOI: <http://dx.doi.org/10.22617/WPS220513-2>

¹⁶⁸ Everest-Phillips, M., “Small, So Simple? Complexity in Small Island Developing States” UNDP Global Centre for Public Service Excellence.

https://www.undp.org/sites/g/files/zskgke326/files/publications/GPCSE_Complexity%20in%20Small%20Island.pdf

¹⁶⁹ Jupiter, Stacy & Jenkins, Aaron & Long, Warren & Maxwell, Sean & Carruthers, Tim & Hodge, Kate & Tاملندر, Jerker & Govan, Hugh & Watson, James. (2014). Principles for integrated island management in the tropical Pacific. *Pacific Conservation Biology*. 10.1071/PC140193.

Most relevant Aichi Biodiversity Target—Aichi Target 19: Sharing Information and Knowledge 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.

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (low confidence)

Since 2010, there has been noteworthy advancement in the creation, distribution, and evaluation of biodiversity knowledge and data, facilitated by the aggregation of big data, enhancements in modeling, and the application of artificial intelligence. These developments have paved the way for a deeper comprehension of the biosphere. Despite these strides, significant disparities persist in the geographical and taxonomic emphasis of research and monitoring efforts. Additionally, there are still considerable voids in the understanding of how biodiversity loss affects human populations, and the utilization of biodiversity insights in policymaking processes remains constrained.

Furthermore, science, technology, innovation, and digitalization, as well as partnerships, are among the key priorities for transformative changes for SIDS outlined in the Zero Draft Outcome Document of the Fourth International Conference on Small Island Developing States (SIDS4). It notably calls for updating the programme of work on island biodiversity in the context of the Kunming-Montreal Global Biodiversity Framework and developing an island biodiversity capacity-building and development action plan. It further notes the need to support SIDS in identifying capacity gaps to meet biodiversity objectives, enhancing capacity-building of SIDS with respect to the BBNJ Agreement, and establishing partnerships with the private sector. Capacity-building for community-based disaster risk management approaches and strengthening early warning systems is also noted.

One of the key priorities of the Call for Action of the SIDS Coalition for Nature includes supporting technical cooperation, transfer of technology, and data management in SIDS. This includes activities with respect to improving national capacities in environmental accounting, valuation of ecosystem services, and using existing data repositories, as well as in research and development. It further calls for enhancing cooperation among SIDS both within and across regions and peer learning on conservation and nature-based solutions.

Similarly, the SIDS Nature Climate Action Roadmap (with its focus on SIDS' MPAs) outlines peer learning and cooperation among SIDS as one of the main components of the roadmap. Key interventions include match-making platforms for SIDS-SIDS cooperation to facilitate the transfer of skills, technical exchanges, site visits, and demonstrations related to MPAs. This includes sharing best practices and tools and establishing demonstration sites within SIDS to serve as hubs for innovation and knowledge transfer with respect to MPAs as nature-based solutions.

Capacity-building and technology are some of the key means of implementation outlined in the SAMOA Pathway. It notes the importance of building SIDS' capacity in the fisheries sector, in particular sustainable use of resources, and calls for increased international cooperation including North-South, South-South, and triangular cooperation, and SIDS-SIDS cooperation.

The Political declaration further highlighted the importance of technology transfer regarding sustainable forest management in the context of addressing desertification, land degradation, and drought in SIDS.

Elements of the PoWIB addressing Target 20

Relevant Priority Actions	Relevant Supporting Actions
Goal 11: Parties have improved financial, human, scientific, technical, and technological capacity to implement the Convention	

<i>Target 11.2: Technologies are transferred to developing country Parties, in particular small island developing States, to allow for the effective implementation of this programme of work and, in general, their commitments under the Convention, in accordance with Article 20, paragraph 4</i>	
11.2.1. Identify and develop or transfer knowledge, science and technology appropriate to islands for the conservation and sustainable use of island biodiversity	11.2.1.1. Assess and identify suitable technology for conserving island biodiversity, at all scales. 11.2.1.2. Determine the most effective means to facilitate effective transfer of knowledge and technology to maximize their use at the local level. 11.2.1.3. Share information on appropriate technologies on a regional and subregional basis. 11.2.1.4. Establish protocols for access to and transfer of technology of benefit to island biodiversity. 11.2.1.5. Respect and facilitate the exchange of knowledge on indigenous island technologies among indigenous and local communities, consistent with article 8(j). 11.2.1.6. Increase national and regional information networking capacity to facilitate broader access to and transfer of technology of benefit to island biodiversity, including through national CHMs, by, as appropriate: (a) Establishing or strengthening national centres on island biodiversity that centralize or coordinate knowledge and capacities for inventorying, evaluating and assisting other agencies on biodiversity issues. Such centres should have legal capacity for identifying biodiversity elements (species, genes) and their particular condition (endemism, etc) and should include the complementary elements of modern and traditional knowledge; (b) Establishing national information system and clearing-house mechanisms for island biodiversity in small island developing States; (c) Developing a regional and/or subregional umbrella structure/mechanism to coordinate national centres; (d) Developing a roster of regional experts on island biodiversity.
11.2.2. Develop island-based technology to support conservation and sustainable use of biodiversity	11.2.2.1. Identify existing island-based technology that supports the implementation of the programme of work on island biodiversity. 11.2.2.2. Facilitate the development of new island-based technology, where needed, including through the provision of funding. 11.2.2.3. Provide protection to the technologies developed, including through intellectual property rights according to existing national laws.
<i>Target 11.3: Capacity of islands to implement this programme of work on island biological diversity and all its priority activities is significantly strengthened</i>	
11.3.1. Where appropriate, strengthen the capacity to develop and implement legal and other mechanisms that support this programme of work	11.3.1.1. Strengthen national capacity to develop island-appropriate policies, and to enact and fully enforce legislation and regulations. This would include technical assistance, training and/or other support to legislatures, regulatory and enforcement agencies, and the courts. 11.3.1.2. Promote collaboration among agencies involved in environmental protection enforcement, including land use planning authorities, to prevent adverse impacts on island biodiversity. 11.3.1.3. Strengthen legislation and enforcement to address domestic trade and commercial use of threatened species. 11.3.1.4. Promote compliance with legislation and regulations related to island biological diversity through awareness raising and training. 11.3.1.5. Increase, if needed, the ability of indigenous and local communities to apply existing customary laws consistent with national legislation. 11.3.1.6. Take measures that will enable mitigation of detrimental actions and facilitate participatory approaches in the conservation, management and sustainable use of biodiversity.

	11.3.1.7. Ratify relevant multilateral environmental agreements and integrate them into national law, through enabling legislation, as appropriate.
11.3.2. Promote the sharing of best practices within and among islands, and enhance learning opportunities for all relevant groups, including governments, non-governmental organizations and indigenous and local communities, to accelerate effective implementation of this programme of work	11.3.2.1. Promote cooperation between small island developing States on the conservation of biodiversity resources, shared ecosystem management and exchange of experiences. 11.3.2.2. Implement peer learning opportunities and networks to ensure rapid dissemination of best practices and lessons learned, to accelerate successful implementation of national biodiversity strategies and action plans and the programme of work on island biodiversity. 11.3.2.3. Explore ways and means on how the clearing-house mechanism can be more effectively and efficiently utilized for the sharing of information on best practices and technologies that promote sustainable use, particularly on islands with limited information technological capacity. 11.3.2.4. Develop and implement training programmes to enhance science and technology capabilities relevant to the programme of work. 11.3.2.5. Provide training on the understanding of multilateral environmental agreements to enhance capacity to implement the programme of work on island biodiversity.
11.3.5. Develop the capacity for a national and regional biodiversity monitoring programme	11.3.5.1. Establish monitoring systems to assess the implementation and long-term impact of national biodiversity strategies and action plans and the programme of work. 11.3.5.2. Develop and adopt methods, standards, criteria and indicators addressing ecological, social, cultural and economic aspects for evaluating progress in implementing the programme of work. 11.3.5.3. Build on existing indicators to develop biodiversity monitoring indicators adapted to small islands. 11.3.5.4. Continue work on a vulnerability index and other indicators that reflect the status of small islands, and integrate ecological fragility, socio-economic and cultural vulnerabilities. 11.3.5.5. Develop appropriate techniques for monitoring island biodiversity in order to assess and report on long-term regional and global trends and on the drivers of biodiversity loss, including global change, and their impacts on biodiversity. 11.3.5.6. Establish baseline knowledge and information systems for the conservation of island biodiversity, including: (a) Inventories of components of island biodiversity; (b) Data sharing protocols for all stakeholders; (c) Improved infrastructure and capacity for data collection, management and exchange. 11.3.5.7. Develop appropriate arrangements and explore innovative means to report on the Convention while minimizing the reporting burden for island nations with limited capacity.
11.3.6. Strengthen regional cooperation particularly between small island developing States and	11.3.6.1. Establish national, regional and international island partnerships that bring Governments, communities and civil-society organizations together to increase political, financial and technical support for this programme of work 11.3.6.2. Promote regional cooperation on the conservation and sustainable use of biodiversity resources, shared ecosystem management and exchange of experiences

developed countries in the same region	11.3.6.3. Promote island networks and exchanges that will accelerate implementation of this programme of work at the national, regional and international levels.
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Decision XI/15 urged to strengthen the implementation of the PoWIB also by adapting and expanding proven, cost-effective mechanisms to strengthen local capacity, particularly peer-learning networks, learning exchanges, transfer of technologies, sharing of lessons learned and best practices, communication and information exchange tools, targeted technical assistance, formal training and education.

Furthermore, decision 15/8 requested the Executive Secretary to facilitate the development of an island biodiversity capacity-building and development action plan, on the basis of the review of the capacity and technology absorption and sustaining abilities of small island developing States, and in line with the programme of work on island biodiversity.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB has comprehensively addressed capacity building and technology transfer, and therefore, no major gaps have been identified vis-à-vis GBF Target 20.

Indicative gaps in implementation

- Lack of evidence-based decision making (Rose et al, 2018)
- Lack of active management that incorporates research (Faley et al., 2005) and inclusion of monitoring, evaluation, and adaptive management (Lindenmayer & Linkens 2009)

viii. Target 21: Ensure That Knowledge Is Available and Accessible To Guide Biodiversity Action

Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent,¹⁷⁰ in accordance with national legislation.

Most relevant Aichi Biodiversity Target—Aichi Target 1: Awareness of Biodiversity Increased

“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.”

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (low confidence)

According to the GBO-5, common action that were taken to increase public awareness were “workshops, stakeholder meetings, organizing biodiversity exhibitions, organizing field trips and site visits...”¹⁷¹ Some countries indicated that biodiversity topics have been integrated into educational curricula across all levels of schooling, including primary, secondary, and tertiary education. Despite the awareness activities, the GBO-5 indicated that importance of biodiversity and awareness of its significance remained low. The challenges listed by the reports included:

¹⁷⁰ Free, prior and informed consent refers to the tripartite terminology of “prior and informed consent” or “free, prior and informed consent” or “approval and involvement.”

¹⁷¹ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. P. 36.
<https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

- Ability to reach people in remote locations.
- Lack of understanding the connection between biodiversity and socioeconomic health
- Not knowing how to conserve biodiversity.
- Lack of knowledge on the links between biodiversity health and climate change impacts.

According to the GBO-5 there is a lack of globally consistent data that could illustrate trends in public awareness and willingness to take action regarding biodiversity conservation. This absence of uniform information makes it challenging to assess global progress in enhancing understanding and engagement with biodiversity issues.¹⁷²

Furthermore, Strengthening data collection is considered one of the key priorities of the Zero Draft Outcome Document of the Fourth International Conference on Small Island Developing States (SIDS4) in order to deliver transformative change for SIDS. For example, it highlights the need to develop and apply environmental statistics frameworks in SIDS statistical systems, including the valuation of ecosystem services. Similarly, the SAMOA Pathway highlights the importance of improved data and statistics as part of the means for implementation.

Elements of the PoWIB addressing Target 21

Relevant Priority Actions	Relevant Supporting Actions
Goal 11: Parties have improved financial, human, scientific, technical, and technological capacity to implement the Convention	
<i>Target 11.3: Capacity of islands to implement this programme of work on island biological diversity and all its priority activities is significantly strengthened</i>	
11.3.2. Promote the sharing of best practices within and among islands, and enhance learning opportunities for all relevant groups, including governments, non-governmental organizations and indigenous and local communities, to accelerate effective implementation of this programme of work	11.3.2.2. Implement peer learning opportunities and networks to ensure rapid dissemination of best practices and lessons learned, to accelerate successful implementation of national biodiversity strategies and action plans and the programme of work on island biodiversity. 11.3.2.3. Explore ways and means on how the clearing-house mechanism can be more effectively and efficiently utilized for the sharing of information on best practices and technologies that promote sustainable use, particularly on islands with limited information technological capacity.
11.3.3. Develop and implement effective communication and public awareness and education	11.3.3.1. In collaboration with relevant national and local leaders and organizations, as appropriate, develop and implement effective communication, public awareness and education programmes at all levels to promote and advance the programme of work on island biodiversity, taking into account local capacity, language and culture.

¹⁷² *Id.*

programmes at all levels, to promote the programme of work on island biodiversity, taking into account local capacity, language and culture	11.3.3.2. Develop and conduct public awareness and social marketing activities and programmes for key audiences and key species to increase public support and strategic action on critical issues within this programme of work. 11.3.3.3. Investigate perceptions of biodiversity by island inhabitants, tourists, developers and other stakeholders to improve the legitimacy and effectiveness of island-specific, science-based policy making. 11.3.3.4. Increase public awareness of the value of island biodiversity and of preventing species from becoming threatened. 11.3.3.5. Introduce island biodiversity issues into the curricula of schools and universities, and in the framework of education for sustainable development, to build the understanding of island biodiversity. 11.3.3.6. Integrate island environmental issues into non-formal education. 11.3.3.7. Undertake education, capacity-building and training activities at all levels, including indigenous and local communities, to contribute to sustainable management practices on islands. 11.3.3.8. Involve United Nations agencies and intergovernmental organizations in the promotion of the programme of work on island biodiversity. 11.3.3.9. Enhance and promote public awareness and action to minimize, manage and recycle waste.
11.3.4. Adopt an integrated, inter-disciplinary and participatory approach at all levels of planning, management, inventory, monitoring, and governance involving all stakeholders related to the understanding, conservation and sustainable use of island biodiversity	11.3.4.2. Develop participatory decision-making mechanisms involving civil society, scientists, indigenous peoples, local communities and key economic sectors. 11.3.4.5. Develop mechanisms to allow for the integration of appropriate traditional conservation management systems and practices into national policies and management and development plans, with full involvement of relevant stakeholders. 11.3.4.6. Develop the capacity and enhance opportunities for community-based research and monitoring to conserve island biodiversity and provide greater benefits to island communities.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB contains several recommendations regarding knowledge-based decision-making, including with regards to traditional knowledge. Although no major gaps have been identified, in light of the multiple values attributed to biodiversity¹⁷³ across different island cultures, for the implementation of Target 21 in island contexts, it would be beneficial to gain a better understanding of such values especially those related to IPLCs. This further understanding would facilitate the integration of these values into planning and decision-making.

Indicative gaps in implementation

¹⁷³ U Pascual, P Balvanera, CB Anderson, *et al.* Diverse values of nature for sustainability. *Nature* 620, 813–823 (2023). <https://doi.org/10.1038/s41586-023-06406-9>

- Lack of evidence-based decision-making¹⁷⁴
- Lack of active management that incorporates research¹⁷⁵ and inclusion of monitoring, evaluation, and adaptive management¹⁷⁶

ix. Target 22: Ensure Participation in Decision-making and Access to Justice and Information Related to Biodiversity for all

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

Most relevant Aichi Biodiversity Target—Aichi Target 18: Traditional Knowledge

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.

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (low confidence)

The recognition of the significance of traditional knowledge and customary sustainable practices has markedly increased in both global policy circles and the scientific community. This enhanced acknowledgment reflects the pivotal role that such knowledge plays in promoting biodiversity conservation and the sustainable management of resources. Despite strides made in certain nations, evidence remains scarce that traditional knowledge and customary sustainable practices are being adequately integrated or reflected in national legislation aimed at implementing the Convention's goals. Moreover, data on the extent of effective participation by indigenous peoples and local communities in related processes is insufficient.

Furthermore, the SAMOA Pathway recognizes the importance of ensuring “peaceful societies and safe communities, including through building responsive and accountable institutions and ensuring access to justice and respect for all human rights, taking into account their [SIDS] national priorities and legislations”.¹⁷⁷

Elements of the PoWIB addressing Target 22

Relevant Priority Actions	Relevant Supporting Actions
Goal 9: Maintain sociocultural diversity of indigenous and local communities on islands	
<i>Target 9.1: Measures to protect traditional knowledge, innovations and practices associated with island biological diversity implemented, and the participation of indigenous and local communities in activities aimed at this promoted and facilitated</i>	
9.1.1. Recognize and protect island traditional knowledge,	9.1.1.1. Initiate programmes, where appropriate, to record and study traditional knowledge and practices, in particular those that support the

¹⁷⁴ Rose et al., “The major barriers to evidence-informed conservation policy and possible solutions.” Conservation Letters. Vol. 11. Issue 5. April 2018. <https://doi.org/10.1111/conl.12564>

¹⁷⁵ Jonathan A. Foley et al., Global Consequences of Land Use. Science 309, 570-574 (2005) DOI: 10.1126/science.1111772

¹⁷⁶ Lindenmayer, D.B. and Linkens, G.E., Adaptive monitoring: a new paradigm for long-term research and monitoring. Trends in Ecology & Evolution. Vol. 24. Issue 9, P482-486. September 2009. <https://doi.org/10.1016/j.tree.2009.03.005>

¹⁷⁷ SAMOA Pathway, para 83

innovations and practices which improve the understanding, conservation and sustainable use of biodiversity	sustainable use of island biodiversity with the full and effective participation of indigenous and local communities and their prior informed consent, in accordance with national legislation and international obligations. 9.1.1.2. Respect, preserve and maintain indigenous and local communities' linguistic diversity that maintains biodiversity-related knowledge. 9.1.1.3. Establish and implement mechanisms to respect traditional knowledge, innovations and practices on lands and waters traditionally occupied and/or used by indigenous and local communities. 9.1.1.4. Compile information on the methods of protection and maintenance of traditional knowledge and practices on islands.
9.1.2. Develop and implement measures and legislation, where appropriate and in keeping with national laws and relevant international obligations, for the respect and protection of indigenous and local communities rights over their traditional knowledge innovations and practices	9.1.2.1. Enhance access to appropriate information to ensure the full participation and involvement of indigenous and local communities in decisions that affect them in relation to island biodiversity. 9.1.2.2. Develop local capacities for protecting and facilitating the use of island traditional knowledge and practices, including, where appropriate, processes to ensure prior informed consent. 9.1.2.3. Facilitate opportunities for involvement and the participation of indigenous and local communities in implementation of the present programme of work. 9.1.2.4. Acknowledging that linguistic diversity can be important for island biodiversity conservation and use, support measures for its maintenance where appropriate and practical. 9.1.2.5. Develop and implement effective systems to respect, preserve and maintain traditional knowledge, innovations and practices, where appropriate, for sustainable use of island resources. 9.1.2.6. Document traditional knowledge, innovations and practices relevant to local species or the sustainable use of island biodiversity, with the full and effective participation and prior informed consent of indigenous and local communities consistent with Article 8(j).
Goal 11: Parties have improved financial, human, scientific, technical, and technological capacity to implement the Convention	
<i>Target 11.3: Capacity of islands to implement this programme of work on island biological diversity and all its priority activities is significantly strengthened</i>	
11.3.4. Adopt an integrated, inter-disciplinary and participatory approach at all levels of planning, management, inventory, monitoring, and governance involving all stakeholders related to the understanding, conservation and sustainable use of island biodiversity	11.3.4.2. Develop participatory decision-making mechanisms involving civil society, scientists, indigenous peoples, local communities and key economic sectors.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

The PoWIB integrates comprehensive recommendations on the involvement of IPLCs in decision-making. No major gaps have been identified.

Indicative gaps in implementation

- Limited representation where decisions are made.¹⁷⁸
- Limited financial, human, and technical resources restrict the ability of island communities and governments to participate fully in decision-making processes.¹⁷⁹

x. Target 23: Ensure Gender Equality and a Gender-responsive Approach for Biodiversity Action

Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.

****PoWIB Goal:** No specific goals were identified in the PoWIB.

****Island-Specific Actions** (decision VIII/I Annex §E.) No specific actions were set in the PoWIB

Most relevant Aichi Biodiversity Target—Aichi Target 18: Ecosystem Services

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.

GBO-5 assessment of level of achievement of the Aichi Target: Target not achieved (low confidence)

“There are numerous examples of the disproportionate impacts of a decline in ecosystem services on women and girls, although global information is limited. For example, women are more impacted by wetland degradation than men, due their use of wetlands for firewood, handicraft materials, water and herbal medicine. Conversely considering gender dimensions in biodiversity management can lead to positive outcomes for biodiversity and gender equality. Despite important advances in legislation to strengthen women’s land rights, significant gaps between countries and regions remain. To date, 164 countries explicitly recognize women’s rights to own, use, make decisions and use land as collateral on equal terms with men. However, only 52 countries guarantee these rights both in law and practice.”¹⁸⁰

With respect to SIDS, in the context of sustainable tourism, the SAMOA Pathway calls for participatory measures to improve employment opportunities for women, youth, and persons with disabilities, all while conserving their natural and cultural assets, with a special focus on the conservation of ecosystems and biodiversity. It further highlights the need for equality in rights to economic resources, which includes access to and ownership of land and natural resources.

The key interventions of the SIDS Nature Climate Action Roadmap (with its focus on SIDS’ MPAs) are set to be organized at the local level, in addition to the national and regional level, including the participation of women and youth, who can play a key role in the activities and in generating local benefits and contributing to sustainability in the long term.

Identified gaps in the PoWIB and areas of potential need of enhanced attention

¹⁷⁸ Abreu, J. S. et al (2017). Is there dialogue between researchers and traditional community members? The importance of integration between traditional knowledge and scientific knowledge to coastal management, *Ocean & Coastal Management*, 141, 10-19. <https://doi.org/10.1016/j.ocecoaman.2017.03.003>

¹⁷⁹ Sutherland, W., et al (2014). How can local and traditional knowledge be effectively incorporated into international assessments? *Oryx*, 48(1), 1-2. <https://doi.org/10.1017/S0030605313001543>

¹⁸⁰ Secretariat of the Convention on Biological Diversity (2020) *Global Biodiversity Outlook 5*. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. P. 98. www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf

The PoWIB does not contain recommendations specific to gender issues. Target 23 of the GBF is a cross-cutting target and the implementation of the Gender Plan of Action adopted by COP 15¹⁸¹ will contribute to filling this gap in the PoWIB. However, it would be beneficial to better understand how gender considerations (including cultural relationship with nature) could be best addressed in island-specific contexts.

Indicative gaps in implementation

- Lack of gender-disaggregated data¹⁸²
- Limited participation in the decision-making process related to biodiversity conservation by women.¹⁸³
- Gender bias in policies and practices.¹⁸⁴
- Insufficient recognition of women's roles in conservation and sustainable use of biodiversity.¹⁸⁵
- Gender-based inequalities in access to financial resources, land, and other critical assets.¹⁸⁶
- Lack of capacity building and empowerment to build capacity and empower women to take leadership roles.¹⁸⁷
- Deeply entrenched cultural and social norms that may restrict women's mobility.¹⁸⁸

¹⁸¹ CBD decision 15/11 (2022), para 1.

¹⁸² Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. P. 118.
<https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

¹⁸³ ¹⁸³ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. § Part II. Biodiversity in 2020: Progress towards the Aichi Biodiversity Targets. P. 136.
<https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

¹⁸⁴ Why gender matters for biodiversity conservation. <https://www.iied.org/sites/default/files/pdfs/2023-03/21266iied.pdf>

¹⁸⁵ Catacora-Vargas, G., “Indigenous women's rights in biodiversity conservation and sustainable use.” UN Women Expert Group Meeting ‘Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes’ 11 – 14 October 2021.
https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/CSW/66/EGM/Expert%20Papers/Georgina%20CATACORA%20VARGAS_CSW66%20Expert%20Paper.pdf

¹⁸⁶ OECD (2019), *SIGI 2019 Global Report: Transforming Challenges into Opportunities*, Social Institutions and Gender Index, OECD Publishing, Paris, <https://doi.org/10.1787/bc56d212-en>

¹⁸⁷ United Nations Population Fund. Issue 7: Women Empowerment. UNFPA

¹⁸⁸ OECD. Entrenched social norms prevent the equal distribution of caring responsibilities between men and women. March 2018. <https://www.oecd.org/gender/data/entrenched-social-norms-prevent-the-equal-distribution-of-caring-responsibilities-between-men-and-women.htm>

Annex

Gap analysis summary table

GBF Targets	Tools and guidance
Target 1: Plan and Manage all Areas To Reduce Biodiversity Loss	• Spatial planning that is ridge-to-reef inclusive. • Incorporate key ecological areas (KEA) into biodiversity management plans. • Multi and cross-sectoral approaches to biodiversity management. • Incorporate sustainable land-use planning and management into development goals. • Better integration of SDGs into management effectiveness of resources and “...implementing area-based management tools...”¹⁸⁹ • Ecologically or Biologically Significant Marine Areas (EBSA)¹⁹⁰ • Biodiversity and Climate Change¹⁹¹ • Establishing Protected Areas (Voluntary guidelines on biodiversity-inclusive impact assessment)¹⁹² • Compilation of views from parties on ways to integrate biodiversity considerations in climate-change-related activities¹⁹³ • Integrated land use planning
Target 2: Restore 30% of all Degraded Ecosystems	• Identify areas of biological significance, key sensitive areas, and significant areas of high ecosystem services. • Develop criteria for the classification of degraded island ecosystems and setting priority for ecosystems selected for restoration. • Establish conservation management plans for protected areas and micro-reserves. • Integrated management plans for coastal and marine areas to support ecosystem resilience and recovery. • Ecosystem restoration: short-term action plan¹⁹⁴
Target 3: Conserve 30% of Land, Waters, and Seas	• Prioritising conservation actions for biodiversity: Lessening the impact from habitat fragmentation and climate change (Synes et al, 2020) • Getting to 30X30: Guidelines for Decision-makers. Conservation strategies for protecting 30% of our terrestrial and marine systems by 2030 (Rosa and Malcom 2020) • Challenges and opportunities of area-based conservation in reaching biodiversity and sustainability goals (Hoffmann 2021)

¹⁸⁹ A/CONF.230/2022/12, para 13 (a).

¹⁹⁰ Decision COP IX/20, Annex 1: www.cbd.int/decision/cop?id=11663

¹⁹¹ Decision COP X/33, para 2: www.cbd.int/decision/cop?id=12299#cop-10-dec-33-fn74

¹⁹² Decision COP VII/28: www.cbd.int/decision/cop/default.shtml?id=7765

¹⁹³ UNEP CBD SBSTTA 14 INF 22: www.cbd.int/doc/meetings/sbstta/sbstta-14/information/sbstta-14-inf-22-en.pdf

¹⁹⁴ Decision COP XIII/5: www.cbd.int/decisions/cop/13/5

Target 4: Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts	• IUCN Red List of Threatened Species¹⁹⁵ • Global Biodiversity Outlook¹⁹⁶ • WWF Living Planet Report¹⁹⁷ • UNEP Frontiers Report¹⁹⁸ • Science for Nature and People Partnership (SNAPP) Human-Wildlife Conflict Collaboration¹⁹⁹ • FAO's work on Biodiversity for Food and Agriculture²⁰⁰ • The Nature Conservancy (TNC) Reports and Publications²⁰¹ • Bird Life International's State of the World's Birds²⁰² • Traffic Reports²⁰³ • Conservation International (CI) Publications²⁰⁴
Target 5: Ensure Sustainable, Safe and Legal Harvesting and Trade of Wild Species	• Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity²⁰⁵ • Area-based conservation management: "... to improve fisheries resources and restore productivity. In terrestrial environments, focus is largely on protecting animals without the expectation that they be harvested..."²⁰⁶ • Utilizing NBSAPs to include strategies for sustainable use, harvesting, and trade of wildlife.

¹⁹⁵ The International Union for Conservation of Nature (IUCN) provides comprehensive assessments of the conservation status of species worldwide, highlighting threats to biodiversity and actions needed to mitigate extinction risks. <https://www.iucnredlist.org/>

¹⁹⁶ Published by the CBD, this report assesses the state of the world's biodiversity and the progress towards the Aichi Biodiversity Targets. While it's a CBD publication, it offers a broad overview of global efforts and challenges in biodiversity conservation. <https://www.cbd.int/gbo/>

¹⁹⁷ The World Wildlife Fund (WWF) publishes this report, which analyzes the state of the planet's wildlife, highlighting the decline in biodiversity and offering solutions to reverse these trends. <https://www.worldwildlife.org/pages/living-planet-report-2020>

¹⁹⁸ The United Nations Environment Programme (UNEP) report explores emerging issues of environmental concern, including topics related to biodiversity, genetic resources, and human-wildlife coexistence. <https://www.unep.org/resources/frontiers-2022-noise-pollution-biodiversity-and-health>

¹⁹⁹ SNAPP brings together research and practical guidance on managing human-wildlife conflicts, focusing on coexistence strategies. <https://snapppartnership.net/>

²⁰⁰ The Food and Agriculture Organization of the United Nations (FAO) provides insights into the importance of genetic diversity for food security, agriculture, and livelihoods. (<http://www.fao.org/biodiversity/en/>)

²⁰¹ TNC offers various resources on conservation strategies, including protecting biodiversity and managing natural resources sustainably. <https://www.nature.org/en-us/about-us/who-we-are/accountability/performance-and-annual-reports/>

²⁰² This report provides an overview of the health of the world's bird populations, serving as an indicator for broader biodiversity trends. <https://www.birdlife.org/worldwide/science/state-worlds-birds>

²⁰³ Traffic, the wildlife trade monitoring network, produces reports on wildlife trade issues, including the impacts on species extinction and recommendations for sustainable management. (<https://www.traffic.org/publications/reports/>)

²⁰⁴ CI offers research and reports on biodiversity conservation, ecosystem services, and sustainable development strategies. <https://www.conservation.org/publications>

²⁰⁵ Secretariat of the Convention on Biological Diversity (2004) Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (CBD Guidelines) Montreal: Secretariat of the Convention on Biological Diversity 21 p.

²⁰⁶ Decision COP XIV/8, Annex IV

	• Conservation and Sustainable Use of Biodiversity in Islands²⁰⁷ • The role of indigenous peoples and local communities in effective and equitable conservation. • Global Assessment Report on Biodiversity and Ecosystem Services²⁰⁸ • Sustainable Wildlife Management and Biodiversity²⁰⁹ • Sustainable Use (Article 10)²¹⁰ • Sustainable Use as a Cross-Cutting Issue²¹¹ • Marine and Coastal Biological Diversity: Conservation and Sustainable Use of Deep Seabed Genetic Resources Beyond the Limits of National Jurisdiction²¹² • Sustainable Use of Biodiversity²¹³ • Islands As Model Systems for Exploring How To Reconcile Conservation with Biodiversity Use²¹⁴
Target 6: Reduce the Introduction of Invasive Alien Species by 50% and Minimize Their Impact	• Global Invasive Species Database (GISD)²¹⁵ • Guidelines for Invasive Species Management in the Pacific²¹⁶ • A Toolkit for Developing Legal and Institutional Frameworks for Invasive Alien Species²¹⁷ • Management of Biological Invasions²¹⁸ • Preventing the Introduction of Invasive Species: A Toolkit for Islands²¹⁹

²⁰⁷ Weerakoon, D., Goonatilake, S. De A., Wijewickrama, T., Rajasuriya, A., Perera, N., Kumara, T.P., De Silva, G., Miththapala, S. and Mallawatantri, A. (2020). Conservation and sustainable use of biodiversity in the islands and lagoons of northern Sri Lanka. Colombo, Sri Lanka: IUCN Sri Lanka Country Office. xx+330.

²⁰⁸ IPBES (2019): Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. S. Díaz, J. Settele, E. S. Brondízio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany. 56 pages.

²⁰⁹ Collaborative Partnership on Sustainable Wildlife Management (CPW) Factsheet CPW, October 2014. <https://www.cbd.int/sustainable/doc/cpw-factsheets/cpw-fs-biodiversity-en.pdf>

²¹⁰ Decision COP VII/12: www.cbd.int/decision/cop?id=7749

²¹¹ Decision COP V/24: <https://cbd.int/decision/cop?id=7166>

²¹² Decision COP VIII/21: www.cbd.int/decision/cop?id=11035

²¹³ Decision COP X/32: www.cbd.int/decision/cop?id=12298

²¹⁴ Kueffer, C., & Kinney, K. (2017). "Islands as model systems for exploring how to reconcile conservation with biodiversity use." Conservation Biology, 31(3), 570-576.

²¹⁵ A comprehensive database providing information on invasive alien species' ecology, distribution, impacts, and management. Invasive Species Specialist Group (ISSG). "Global Invasive Species Database." <http://www.iucngisd.org/gisd/>

²¹⁶ Meyer J.-Y., Claridge, D. (2009). "A Guide to the Management of Invasive Plant Species in the Pacific Islands." SPREP, IUCN. <https://www.sprep.org/attachments/Publications/Factsheet/invasive-guidebook.pdf>

²¹⁷ Shine, C., Williams, N., & Gündling, L. (2000). "A Guide to Designing Legal and Institutional Frameworks on Alien Invasive Species." IUCN, Gland, Switzerland, Cambridge, UK. <https://portals.iucn.org/library/node/6259>

²¹⁸ Journal focusing on invasive species research and management. <http://www.reabic.net/journals/mbi/>

²¹⁹ Commonwealth Secretariat. (2018). "Preventing the Introduction of Invasive Species: Toolkit for the Commonwealth." <https://thecommonwealth.org/toolkit/preventing-introduction-invasive-species-toolkit-commonwealth>

	• Island Invasives: Scaling Up to Meet the Challenges²²⁰ • SBSTTA Recommendation V4, Alien Species: guiding principles for prevention, introduction and mitigation of impacts.²²¹ • Best Practices Guidelines for Rat Eradication on Tropical Islands²²² • Biosecurity for Islands: A Legal and Institutional Framework²²³ • Pacific Invasives Learning Network (PILN) – a network providing tools, resources, and a forum for practitioners managing invasive species in the Pacific.²²⁴ • Eradicating Island Invasives: Practical Actions and Results Achieved²²⁵ • IUCN Guidelines for Reintroduction and Other Conservation Translocations²²⁶ • CABI Invasive Species Compendium²²⁷ • Designing Effective Control Programs for Invasive Species: Best Practices for Island Ecosystems²²⁸ • Invasive Species: A Leading Threat to Our Environment²²⁹
Target 7: Reduce Pollution to Levels That are not Harmful to Biodiversity	• Utilize the SAICM as a framework for establishing chemical and hazardous waste management policies and management plans. • Promote ratification/accession and implementation of international treaties, global standards, and regulations. • Mobilize global responses to halt plastic pollution and monitor impacts on wildlife. • Include EIAs for all construction on land and seascapes.

²²⁰ Proceedings of an international conference on invasive species on islands, providing insights and case studies on management and eradication. Veitch, C. R., Clout, M. N., Martin, A. R., Russell, J. C., & West, C. J. (Eds.). (2019). "Island Invasives: Scaling up to Meet the Challenge." IUCN. <https://portals.iucn.org/library/node/48480>

²²¹ CBD Secretariat. (2002). "Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that Threaten Ecosystems, Habitats or Species." <https://www.cbd.int/doc/publications/ais-guiding-principles-en.pdf>

²²² Howald, G., Donlan, C. J., Galván, J. P., Russell, J. C., Parkes, J., Samaniego, A., Wang, Y., Veitch, D., Genovesi, P., Pascal, M., Saunders, A., & Tershy, B. (2007). "Invasive Rodent Eradication on Islands." *Conservation Biology*, 21(5), 1258-1268. <https://doi.org/10.1111/j.1523-1739.2007.00755.x>

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²²⁴ Secretariat of the Pacific Regional Environment Programme (SPREP). "Pacific Invasives Learning Network." <https://www.sprep.org/pacific-invasives-learning-network-piln>

²²⁵ Veitch, C. R., Clout, M. N., & Towns, D. R. (Eds.). (2011). "Island Invasives: Eradication and Management." IUCN. <https://portals.iucn.org/library/node/10315>

²²⁶ IUCN/SSC. (2013). "Guidelines for Reintroductions and Other Conservation Translocations." Version 1.0. Gland, Switzerland: IUCN Species Survival Commission. <https://www.iucn.org/content/guidelines-reintroductions-and-other-conservation-translocations>

²²⁷ An online resource offering detailed information on invasive species, including distribution, biology, and management strategies. CABI. "Invasive Species Compendium." <https://www.cabi.org/isc/>

²²⁸ Reaser, J. K., Meyerson, L. A., Cronk, Q., De Poorter, M., Eldrege, L. G., Green, E., Kairo, M., Latasi, P., Mack, R. N., Mauremootoo, J., O'Dowd, D., Orapa, W., Sastroutomo, S., Saunders, A., Shine, C., Thrainsson, S., & Vaiutu, L. (2007). "Ecological and Socioeconomic Impacts of Invasive Alien Species in Island Ecosystems." *Environmental Conservation*, 34(2), 98-111. <https://doi.org/10.1017/S0376892907003815>

²²⁹ Provides an overview of strategies and actions taken by The Nature Conservancy to combat invasive species, including tools and resources for management. The Nature Conservancy. "Invasive Species: A Leading Threat to Our Environment." <https://www.nature.org/en-us/what-we-do/our-insights/perspectives/invasive-species-a-leading-threat-to-our-environment/>

	• Improve monitoring of water (freshwater, coastal areas, lagoons, etc.) quality and quantity. • Include tourism sector to support the reduction of plastic pollution. • United Nations Environment Programme (UNEP) - Marine Litter Legislation²³⁰ • International Maritime Organization (IMO) Guidelines on Ballast Water Management²³¹ • Secretariat of the Pacific Regional Environment Programme (SPREP) – Pacific Regional Action Plan: Marine Litter 2018-2025²³² • Food and Agriculture Organization (FAO) – Integrated Pest Management²³³ • IUCN – Guidelines for Invasive Species Planning and Management on Islands²³⁴ • IUCN – Plastic Waste Free Islands Blueprint²³⁵ • Guidelines for National Waste Management Strategies: Moving from Challenges to Opportunities²³⁶
Target 8: Minimize the Impacts of Climate Change on Biodiversity and Build Resilience	• Promote ecosystem-based adaptation. • Promote nature-based solutions for Disaster Risk Reduction, including through asset creation and public works programs. • Integrate nature-based solutions with climate risk insurance programs. • Promote cooperation between traditional indigenous and scientific capacities to manage extreme weather events. • Enhance observation, forecasts, predictions, early warning systems, and community preparedness in the face of ocean-related risks. • Support integrated climate security measures. • Explore linkages between environmental degradation, conflict, and migration. • Special Report on the Ocean and Cryosphere in a Changing Climate (2019)²³⁷ • United Nations Framework Convention on Climate Change (UNFCCC) National Adaptation Programmes of Action (NAPA)²³⁸

²³⁰ UNEP (2018). "Legal Limits on Single-Use Plastics and Microplastics: A Global Review of National Laws and Regulations."

<https://www.unenvironment.org/resources/report/legal-limits-single-use-plastics-and-microplastics-global-review-national-laws>

²³¹ IMO (2018). "Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens."

<http://www.imo.org/en/OurWork/Environment/BallastWaterManagement/Pages/Default.aspx>

²³² SPREP. (2018). "Pacific Marine Litter Action Plan." <https://www.sprep.org/publications/pacific-regional-marine-litter-action-plan>

²³³ FAO. Integrated Pest Management (IPM). Case studies on IPM. <https://www.fao.org/pest-and-pesticide-management/ipm/integrated-pest-management/en/>

²³⁴ IUCN SSC Invasive Species Specialist Group. (2012). "Guidelines for Invasive Species Planning and Management on Islands."

<https://portals.iucn.org/library/sites/library/files/documents/2018-030-En.pdf>

²³⁵ IUCN (2023). Plastic Waste Free Islands Blueprint - A journey to zero plastic waste. <https://www.iucn.org/resources/grey-literature/blueprint-zero-plastic-waste>

²³⁶ United Nations Environment Programme (2013). *Guidelines for national waste management strategies: moving from challenges to opportunities*.

<https://wedocs.unep.org/20.500.11822/8669>.

²³⁷ IPCC, 2019: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate. <https://www.ipcc.ch/srocc/>

²³⁸ UNFCCC. (2005). Guidelines for the preparation of National Adaptation Programmes of Action. https://unfccc.int/topics/adaptation-and-resilience/resources/guidelines-for-national-adaptation-plans-naps?gad_source=1&gclid=EAIaIqobChMIs-rQrobIhAMVWBetBh3-GwaWEAAYASAAEgLKH_D_BwE

	• Small Island Developing States (SIDS) Accelerated Modalities of Action (SAMOA) Pathway²³⁹ • UNEP Guidelines for Integrating Ecosystem-based Adaptation into National Adaptation Plans²⁴⁰ • CBD Technical Series No. 93 Voluntary Guidelines for the Design and Effective Implementation of Ecosystem-based Approaches to Climate Change Adaptation and Disaster Risk Reduction²⁴¹ • MANAGING ECOSYSTEMS IN THE CONTEXT OF CLIMATE CHANGE MITIGATION: A review of current knowledge and recommendations to support ecosystem-based mitigation actions that look beyond terrestrial forests²⁴²
Target 9: Manage Wild Species Sustainably To Benefit People	• CBD Technical Series No. 79: Voluntary Guidelines for Sustainable Use of Biodiversity²⁴³ • IUCN Policy Statement on Sustainable Use of Wild Living Resources²⁴⁴ • FAO's Sustainable Wildlife Management Program (SWM)²⁴⁵ • Sustainable Harvest and Use of Wild Plant Resources: Best Practice for Reducing Impacts on Biodiversity • CBD Technical Series No. 100: Synthetic Biology²⁴⁶
Target 10: Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry	• Building a common vision for sustainable food and agriculture: Principles and approaches²⁴⁷ • Farming for Biodiversity: Guidelines to Apply Biodiversity-friendly Practices • Aquaculture development. 4. Ecosystem approach to aquaculture. • The World Bank. (2014). Environmental and Social Considerations in Aquaculture • Technical Guidelines for Responsible Fisheries No. 4: Fisheries management. 2. The ecosystem approach to fisheries. 2.2 The human dimensions of the ecosystem approach to fisheries • Sustainable Fisheries and Conservation Management • FAO (2018). Sustainable Forest Management Toolbox²⁴⁸

²³⁹ Small Island Developing States (SIDS) Accelerated Modalities of Action (SAMOA) Pathway. <https://www.un.org/ohrrls/content/samoa-pathway>

²⁴⁰ UNEP Guidelines for Ecosystem-based Adaptation. United Nations Environment Programme (2021). *Guidelines for Integrating Ecosystem-based Adaptation into National Adaptation Plans: Supplement to the UNFCCC NAP Technical Guidelines*. <https://wedocs.unep.org/20.500.11822/36703>.

²⁴¹ Secretariat of the Convention on Biological Diversity (2019). Voluntary guidelines for the design and effective implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction and supplementary information. Technical Series No. 93. Montreal, 156 pages. www.cbd.int/doc/publications/cbd-ts-93-en.pdf

²⁴² Epple, C., García Rangel, S., Jenkins, M., & Guth, M. (2016). Managing ecosystems in the context of climate change mitigation: A review of current knowledge and recommendations to support ecosystem-based mitigation actions that look beyond terrestrial forests. Technical Series No.86. Secretariat of the Convention on Biological Diversity, Montreal, 55 pages. <https://www.cbd.int/doc/publications/cbd-ts-86-en.pdf>

²⁴³ CDB Technical Series No 79 PBL report number 01448 ISBN 92-9225-553-3 ISBN 92-9225-554-. www.cbd.int/doc/publications/cbd-ts-79-en.pdf

²⁴⁴ <https://portals.iucn.org/library/efiles/documents/Rep-2000-054.pdf>

²⁴⁵ FAO. Sustainable Wildlife Management (SWM) Programme. 2019. <https://www.fao.org/3/ca5100en/CA5100EN.pdf>

²⁴⁶ Secretariat of the Convention on Biological Diversity. 2022. Synthetic Biology. CBD Technical Series No. 100. Montreal, 196 pages. www.cbd.int/doc/publications/cbd-ts-100-en.pdf

²⁴⁷ FAO. (2014) Building a common vision for sustainable food and agriculture: Principles and approaches. Rome, 2014. www.fao.org/3/i3940e/i3940e.pdf

²⁴⁸ www.fao.org/sustainable-forest-management/toolbox/en/

	• UNEP-WCMC (2011). Developing ecosystem service indicators: Experiences and lessons learned from sub-global assessments and other initiatives²⁴⁹ • CBD Global Biodiversity Outlook 5²⁵⁰ • (IUCN) Nature-based Solutions to Address Global Societal Challenges²⁵¹ • Mainstreaming Biodiversity in Production Landscapes²⁵²
Target 11: Restore, Maintain, and Enhance Nature's Contributions to People	• CBD Technical Series No. 85: Synthesis Report on Experiences with Ecosystem-Based Approaches to Climate Change²⁵³ • Navigating the Transformation to Community-Based Resource Management²⁵⁴ • (IUCN) Building Island Resilience – Best Practices and Innovations from Around the World²⁵⁵ • Guidelines on Biodiversity and Tourism Development²⁵⁶ • Biodiversity and Tourism in the Framework of the Convention on Biological Diversity: The Case of Tayrona National Park, Colombia²⁵⁷ • Tourism Supporting Biodiversity: A Manual on Applying the CBD Guidelines on Biodiversity and Tourism Development²⁵⁸

²⁴⁹ UNEP-WCMC 2011. Developing ecosystem service indicators: Experiences and lessons learned from sub-global assessments and other initiatives. Secretariat of the Convention on Biological Diversity, Montréal, Canada. Technical Series No. 58, 118 pages. <https://www.cbd.int/doc/publications/cbd-ts-58-en.pdf>

²⁵⁰ Secretariat of the Convention on Biological Diversity (2020) Global Biodiversity Outlook 5. Montreal. <https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

²⁵¹ IUCN (2020). Global Standard for Nature-based Solutions. A user-friendly framework for the verification, design and scaling up of NbS. First edition. Gland, Switzerland: IUCN. <https://portals.iucn.org/library/sites/library/files/documents/2020-020-En.pdf>

²⁵² Mijatović, D., Sakalian, M. and Hodgkin T. (2018) Mainstreaming Biodiversity in Production Landscapes. United Nation Environment Programme. https://wedocs.unep.org/bitstream/handle/20.500.11822/26878/biodivers_production.pdf?sequence=1&isAllowed=y

²⁵³ Lo, V. (2016). Synthesis report on experiences with ecosystem-based approaches to climate change adaptation and disaster risk reduction. Technical Series No.85. Secretariat of the Convention on Biological Diversity, Montreal, 106 pages. <https://www.cbd.int/doc/publications/cbd-ts-85-en.pdf>

²⁵⁴ Blythe, J., Cohen, P., Abernethy, K., Evans, L. Navigating the Transformation to Community-Based Resource Management. Australian Research Council Centre of Excellence for Coral Reef Studies, James Cook University, Townsville QLD 4811, Australia. (2017). 14 pages. https://www.researchgate.net/profile/Jessica-Blythe/publication/319320061_Navigating_the_transformation_to_community-based_resource_management/links/5b046051aca2720ba099d980/Navigating-the-transformation-to-community-based-resource-management.pdf

²⁵⁵ Forum hosted by IUCN, with the objective “...to highlight and share successful islands’ solutions to strengthen their resilience to climate change. The session will address these issues thanks to a “Bright Spot Café” during which participants will identify islands bright spots and share good practices. The session will specifically emphasize the role of islands communities in finding innovative solutions.” <https://www.iucncongress2020.org/programme/official-programme/session-43504>

²⁵⁶ Secretariat of the Convention on Biological Diversity (2004) Guidelines on Biodiversity and Tourism Development: International guidelines for activities related to sustainable tourism development in vulnerable terrestrial, marine and coastal ecosystems and habitats of major importance for biological diversity and protected areas, including fragile riparian and mountain ecosystems. (CBD Guidelines) Montreal: Secretariat of the Convention on Biological Diversity 29 p. www.cbd.int/doc/publications/tou-gdl-en.pdf

²⁵⁷ This volume is the report of the international workshop at Cañaveral, Tayrona National Park, which was organised between 25 – 30 November 2001 in the framework of the bilateral cooperation between the Colombian Special Administrative Unit for the National Parks System and the German Federal Agency for Nature Conservation. <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=24d10109112981768f49d16cf20b73c7dfe4c891>

²⁵⁸ Secretariat of the Convention on Biological Diversity (2015) Tourism supporting Biodiversity - A Manual on applying the CBD Guidelines on Biodiversity and Tourism Development. Montreal, 56 pages. www.cbd.int/tourism/doc/tourism-manual-2015-en.pdf

	• Joint Programme of work on the links between biological and cultural diversity: review and update of the four adopted traditional knowledge indicators²⁵⁹ • Report of the Workshop on the “Feral ungulates and their impact on Island Biodiversity in the Mediterranean and Macaronesian Regions”, La Gomera (Spain).²⁶⁰
Target 12: Enhance Green Spaces and Urban Planning for Human Well-being and Biodiversity	• Integrate ecosystem impacts in city planning, expansion, and zoning.
Target 13: Increase the Sharing of Benefits From Genetic Resources, Digital Sequence Information, and Traditional Knowledge	• (CBD) Guide to the Access and Benefit-Sharing Clearing-House²⁶¹ • (CBD) Akwé: Kon Guidelines: Voluntary guidelines for the conduct of cultural, environmental, and social impact assessments 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 communities²⁶² • Guidelines for the Implementation of the Nagoya Protocol – “Nagoya Protocol Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity”²⁶³
Target 14: Integrate Biodiversity in Decision-making at Every Level	• Building Resilience in Small Island Developing States: A compendium of research by UNCTAD for Africa, Least Developed Countries and Special Programmes²⁶⁴ • Guide to Best Practices for Sectoral Integration: Integration of Biodiversity into National Forestry Planning²⁶⁵

²⁵⁹ CBD. 2023. Ad Hoc Open-ended Intersessional Working Group on Article 8(j) and Related Provisions of the Conventions on Biological Diversity Twelfth Meeting. Geneva, 12-16 November 2023. CBD/WG8J/12/Rev.1

²⁶⁰ <https://rm.coe.int/1680746617>

²⁶¹ Secretariat CBD. ABS Clearing-House Practical Guide. “Access and Benefit-Sharing Clearing-House. (2024) www.cbd.int/abs/theabsch.shtml

²⁶² Secretariat of the Convention on Biological Diversity (2004). 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 Montreal, 25p. (CBD Guidelines Series). www.cbd.int/doc/publications/akwe-brochure-en.pdf

²⁶³ Decision COP VIII/1. Annex §E. p. 13.

²⁶⁴ UNCTAD/ALDC/INF/2022/2. https://unctad.org/system/files/official-document/aldcinf2022d2_en.pdf

²⁶⁵ Nasi, R.

	• Enhancing legal frameworks for biodiversity conservation in the Pacific²⁶⁶ • (NF) For the Better Conservation and Management of Islands and Their Surrounding Ocean Areas²⁶⁷ • Law and National Biodiversity Strategies and Action Plans²⁶⁸ • (UNEP) Ad hoc Technical Expert Group On Island Biodiversity, Proposals for A Programme of Work on Island Biodiversity. Target 9.1: "... the guidelines on integration of biodiversity into... national legal, policy, institutional and economic frameworks..."²⁶⁹ • Policy brief: Biodiversity challenges and solutions in Asia and the Pacific²⁷⁰ • Summary for Policymakers of the Regional Assessment Report on Biodiversity and Ecosystem Services for Asia and the Pacific of the IBES²⁷¹ • Improving data collection and management for informed decision making in the Pacific through the Inform project²⁷² • Improving Development Impact in Small Island Developing States: Implementing Effectiveness Principles²⁷³ • Opportunities and constraints for implementing integrated land-sea management on islands²⁷⁴ • Integrated Coastal Zone Management Strategies on Small Islands²⁷⁵ • Integrated land-sea management²⁷⁶ • The Economics of Ecosystem and Biodiversity • Mainstreaming Biodiversity Where It Matters²⁷⁷ • The literature on biodiversity mainstreaming: an overview²⁷⁸ • The Political Economy of Biodiversity Policy Reform²⁷⁹ • Community-Based Biodiversity Conservation in the Pacific: Cautionary Lessons in "Regionalising" Environmental Governance²⁸⁰ • Adaptive Comanagment for Building Resilience in Social and Ecological Systems²⁸¹
Target 15: Businesses Assess,	

²⁶⁶ Techera, E. "Enhancing Legal Frameworks for Biodiversity Conservation in the Pacific." Pacific Conservation Biology 21(1). 2015. University of Western Australia.

²⁶⁷ Ocean Policy Research Foundation. Australian National Centre for Ocean Resources and Security at the University of Wollongong. "For the Better Conservation and Management of Islands and Their Surrounding Ocean Areas." (2014). The Nippon Foundation.

²⁶⁸ United Nations Environment Programme (2018). Law and National Biodiversity Strategies and Action Plans, Nairobi, Kenya.

https://wedocs.unep.org/bitstream/handle/20.500.11822/25655/LawBiodiversity_Strategies.pdf?sequence=1&isAllowed=y

²⁶⁹ UNEP/CBD/AHTEG-IB/1/5 (2004). www.cbd.int/doc/meetings/island/tegib-01/official/tegib-01-05-en.pdf

²⁷⁰ André Derek Mader (Institute for Global Environmental Strategies) and Christmas Uchiyama (AsiaPacific Network for Global Change Research).

https://www.iges.or.jp/en/publication_documents/pub/policy/en/10878/%5BFinal%5D+Policy+Brief+1-+National+biodiversity+challenges+and+solutions.pdf

²⁷¹ IPBES. 2018b. Summary for Policymakers of the Regional Assessment Report on Biodiversity and Ecosystem Services for Asia and the Pacific of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. M. Karki, S. Senaratna Sellamuttu, S. Okayasu, W. Suzuki, L. A. Acosta, Y. Alhafedh, J. A. Anticamara, A. G. Ausseil, K. Davies, A. Gasparatos, H. Gundimeda, I. Faridah-Hanum, R. Kohsaka, R. Kumar, S. Managi, N. Wu, A. Rajvanshi, G. S. Rawat, P. Riordan, S. Sharma, A. Virk, C. Wang, T. Yahara and Y. C. Youn (eds.). IPBES secretariat, Bonn, Germany. 41 pages. <https://zenodo.org/records/3237383>

Disclose, and Reduce Biodiversity-related Risks and Navigate Impacts	
Target 16: Enable Sustainable Consumption Choices To Reduce	• Factors influencing changes in island waste systems: The case of Bornholm, Denmark²⁸² • The 31st Secretariat of the Pacific Regional Environment Programme (SPREP) Meeting of Officials, themed, Sustainable, transformative and resilient for a Blue Pacific, plenary session endorsed that SPREP develops a Circular Economy Policy Framework and establish a Circular Economy Network.²⁸³ • Promoting Sustainable Consumption: Good Practices in OECD Counties²⁸⁴

²⁷² SPREP. <https://www.sprep.org/news/improving-data-collection-and-management-for-informed-decision-making-in-the-pacific-through-the-inform-project>

²⁷³ This guidance document has been developed by a dedicated secretariat made up of representatives of Small Island Developing States (SIDS), development partners, and multilateral organizations. The process was co-chaired by Antigua and Barbuda in its capacity as Chair of the Alliance of Small Island States (AOSIS), as well as Canada and the United Kingdom on behalf of development partners. Contributing multilateral organizations included the Organisation for Economic Co-operation and Development (OECD), the United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLS), the United Nations Department of Economic and Social Affairs (UN DESA) and the United Nations Development Program (UNDP). https://www.international.gc.ca/world-monde/assets/pdfs/issues_developpement-enjeux_developpement/priorities-priorites/SIDS-PEID-eng.pdf

²⁷⁴ JUPITER SD, WENGER A, KLEIN CJ, et al. Opportunities and constraints for implementing integrated land-sea management on islands. *Environmental Conservation*. 2017;44(3):254-266. doi:10.1017/S0376892917000091 <https://www.cambridge.org/core/journals/environmental-conservation/article/opportunities-and-constraints-for-implementing-integrated-landsea-management-on-islands/743553E3C983F2F783556E163AC69695>

²⁷⁵ CALADO, H., QUINTELA, A. and PORTEIRO, J., 2007 Integrated Coastal Zone Management Strategies on Small Islands. *Journal of Coastal Research*, SI 50 (Proceedings of the 9th International Coastal Symposium), 125 - 129. Gold Coast, Australia, ISSN 0749.0208 https://discomap.eea.europa.eu/map/Data/Milieu/OURCOAST_126_PT/OURCOAST_126_PT_Doc2_ICZMSmallIslands.pdf

²⁷⁶ REUTER, KIM E., DANIEL JUHN, and HEDLEY S. GRANTHAM. "Integrated Land-Sea Management: Recommendations for Planning, Implementation and Management." *Environmental Conservation* 43, no. 2 (2016): 181-98. <https://www.jstor.org/stable/26320650>.

²⁷⁷ Mainstreaming biodiversity where it matters most Wageningen University: Public Administration and Policy Group, Wageningen University and PBL Netherlands Environmental Assessment Agency. Wageningen, 2014 ISBN 978- 94- 6257- 384- 0. <https://edepot.wur.nl/335490>

²⁷⁸ Smith, J. Bass, S., Roe, D. "Biodiversity mainstreaming: A review of current theory and practice." International Institute for Environment and Development (2020). www.jstor.org/stable/resrep28989.7.

²⁷⁹ OECD (2017), *The Political Economy of Biodiversity Policy Reform*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264269545-en>.

²⁸⁰ Rose, Justin. (2008). Community-Based Biodiversity Conservation in the Pacific: Cautionary Lessons in "Regionalising" Environmental Governance. *Biodiversity Conservation, Law + Livelihoods: Bridging the North-South Divide*. 193-224. 10.1017/CBO9780511551161.013.

²⁸¹ Olsson, Per & Folke, Carl. (2004). Adaptive Comanagement for Building Resilience in Social/Ecological Systems. *Environmental management*. 34. 75-90. 10.1007/s00267-003-0101-7.

²⁸² Jens Hjul-Nielsen, Aginaldo Santos, David Christensen, Bruna Andrade, Factors influencing changes in island waste systems: The case of Bornholm, Denmark, *Cleaner Waste Systems*, Volume 4, 2023, 100080, ISSN 2772-9125, <https://doi.org/10.1016/j.clwas.2023.100080>.

²⁸³ SPREP (2023). <https://www.sprep.org/news/unlocking-waste-as-a-resource-through-a-circular-economy>

²⁸⁴ OECD (2008) <https://www.oecd.org/greengrowth/40317373.pdf>

Waste and Overconsumption	
Target 17: Strengthen Biosafety and Distribute the Benefits of Biotechnology	• Regional biosecurity Plan for Micronesia and Hawaii²⁸⁵ • Caribbean Biosecurity Interceptions System (CBIS)²⁸⁶ • Regional Coordinating Mechanism on Health Security (RCMHS)²⁸⁷ • European Union Biosecurity and Island Restoration Advisory Group (EBIRAG)²⁸⁸ • Biosecurity for LIFE²⁸⁹ • Biosafety and Biosecurity Initiative 2021-2025 Strategic Plan²⁹⁰
Target 18: Reduce Harmful Incentives by at Least \$500 Billion per Year and Scale Up Positive Incentives for Biodiversity	• Key Messages on Sustainable Trade in Fish²⁹¹ • Valuing the Environment in Small Islands – An Environmental Toolkit²⁹² • National-level guidance to identify and assess incentives, including subsidies, harmful to biodiversity.²⁹³ • (IUCN) Using Economic Incentives for Biodiversity Conservation²⁹⁴ • Unlocking Hidden Investment Opportunities in Biodiversity²⁹⁵ • Moving Mountains, Unlocking Private Capital for Biodiversity and Ecosystems²⁹⁶

²⁸⁵ <https://pacific.navfac.navy.mil/About-Us/Regional-Biosecurity-Plan-for-Micronesia-and-Hawaii/#:~:text=The%20plan%20attempts%20to%20cover,of%20multiple%20countries%20and%20cultures.>

²⁸⁶ This system aims to improve surveillance for IAS across the Caribbean by encouraging travelers to self-declare items that may pose a biosecurity risk.

²⁸⁷ Aims to implement a regional roadmap for health security, highlighting the importance of a regional approach to effectively manage health security risks. It is part of the Caribbean Public Health Agency (CARPHA).

²⁸⁸ Established in 2021 for the purpose of providing an expert advice and document review service for island biosecurity and invasive species eradication practitioners in Europe. EBIRAG focuses on island restoration operations within any European territory, including Outermost Regions and Overseas Territories.

²⁸⁹ Aims at protecting the UK's seabirds by preventing the introduction of invasive species.

²⁹⁰ Focuses on enhancing the capacity of African Union Member States in areas such as disease control and prevention, emergency preparedness and response, laboratory systems and networks, public health and information systems, and surveillance and disease intelligence.

²⁹¹ UNCTAD. Parmentier. R. "Tackling Harmful Incentives and Unstable Fisheries Practices." Global Ocean Commission. p. 1. https://unctad.org/system/files/official-document/ditcted2016d3_part3_en.pdf

²⁹² <https://www.cbd.int/financial/values/g-valueislands.pdf>

²⁹³ Matthews, A. and K. Karousakis (2022), "Identifying and assessing subsidies and other incentives harmful to biodiversity: A comparative review of existing national-level assessments and insights for good practice", *OECD Environment Working Papers*, No. 206, OECD Publishing, Paris, <https://doi.org/10.1787/3e9118d3-en>.

²⁹⁴ Emerton, L. "Using Economic Incentives for Biodiversity Conservation" IUCN Economic and Biodiversity Programme. <https://portals.iucn.org/library/sites/library/files/documents/PDF-2000-002.pdf>

²⁹⁵ De Graaf, K. and Reinders, S. April 20, 2023. "Unlocking Hidden Investment Opportunities in Biodiversity." <https://www.gsam.com/content/gsam/global/en/market-insights/gsam-insights/perspectives/2023/biodiversity-investment-opportunities.html>

²⁹⁶ UNDP (2020). *Moving Mountains: Unlocking Private Capital for Biodiversity and Ecosystems*. New York. <https://www.biofin.org/sites/default/files/content/publications/BIOFIN%20-%20Moving%20Mountains%20-%20Unlocking%20private%20capital%20for%20biodiversity%20and%20ecosystems%20%28Web%20Version%29.pdf>

	Investor Action on Biodiversity: Discussion Paper²⁹⁷
Target 19: Mobilize \$200 Billion per Year for Biodiversity From all Sources	- The Caribbean Biodiversity Fund - The Micronesia Challenge (UNDP) BIOFIN - Green Finance Platform – Nature Finance - Island Innovation: Sustainable finance solutions for islands²⁹⁸ - Scaling up green finance practices: A blueprint to break – through into a climate resilient Cook Islands as a catalyst to mobilize private sector investment²⁹⁹ - Isle of Man Treasury. Sustainable Financing Framework³⁰⁰ - Unlocking Access to Climate Finance for Pacific Island Countries³⁰¹ - A Framework for Addressing the Financing Needs of Small Island Developing States³⁰² - Payment for Ecosystem Services (PES). Assessment of PES Potential in Seram Island³⁰³ - Developing Payment for Ecosystem Services Scheme on Pari Island Kepulauan Seribu³⁰⁴ (DCNA) Trust Fund³⁰⁵ - Debt-for-nature swap (CBD) Resource Mobilization Information Digest No. 51³⁰⁶
Target 20: Strengthen Capacity-building, Technology	Concepts, methods, and tools to support science-based decision-making in Integrated Coastal and Ocean Management: Examples from Balearic Islands³⁰⁷

²⁹⁷ Principles for Responsible Investment (PRI). “Investor Action on Biodiversity: Discussion Paper.” UNEP. London. <https://www.unpri.org/download?ac=11357>

²⁹⁸ <https://islandinnovation.co/articles/sustainable-finance-solutions-for-islands-the-way-to-a-more-resilient-future/>

²⁹⁹ GCF. <https://www.greenclimate.fund/document/scaling-green-finance-practices-blueprint-break-through-climate-resilient-cook-islands>

³⁰⁰ <https://www.gov.im/media/1374138/iomtreaury-sustainable-financing-framework.pdf>

³⁰¹ IMF (2021) Prepared by Manal Foad, Natalia Novta, Gemma Preston, Todd Schneider, and Sureni Weeranthunga. <file:///Users/mae/Downloads/UACFPICEA.pdf>

³⁰² ADB (2019). ADF 13 Replenishment Meeting. <https://www.adb.org/sites/default/files/page/561776/framework-financing-needs-sids-discussion-paper.pdf>

³⁰³ Fripp E, Liswanti N, Tjoa M and Silaya T. 2014. Payment for Ecosystem Services (PES): Assessment of PES Potential in Seram Island. Working Paper 166. Bogor, Indonesia: CIFOR. 2014. https://www.cifor.org/publications/pdf_files/WPapers/WP166Liswanti.pdf

³⁰⁴ Hidayati, Nurul & Karuniasa, Mahawan & Mufti, Patria & Suparmoko, M.. (2018). Developing Payment for Ecosystem Services Scheme on Pari Island Kepulauan Seribu. E3S Web of Conferences. 68. 02010. 10.1051/e3sconf/20186802010.

³⁰⁵ Providing sustainable and regular funding to cover the operating costs of the organizations managing the marine and terrestrial protected areas on the six islands has proven to be a challenge as the funds strongly depend on one-time project subsidies, limited ad hoc financial assistance from local government authorities and fluctuating revenues from tourism.

³⁰⁶ CBD (2013). <https://www.cbd.int/financial/doc/id51-caribbean-financial-planning-en.pdf>

³⁰⁷ Diedrich, Amy & Balaguer Huguet, Pablo & Tintoré, J.. (2011). Concepts, methods, and tools to support science-based decision-making in Integrated Coastal and Ocean Management: Examples from the Balearic Islands.

Transfer, and Scientific and Technical Cooperation for Biodiversity	
Target 21: Ensure That Knowledge Is Available and Accessible To Guide Biodiversity Action	• Concepts, methods, and tools to support science-based decision-making in Integrated Coastal and Ocean Management: Examples from Balearic Islands³⁰⁸
Target 22: Ensure Participation in Decision-making and Access to Justice and Information Related to Biodiversity for all	• Human Rights and Biodiversity, Key Messages³⁰⁹ • Access to Justice Under the Kunming-Montreal Global Biodiversity Framework (GBF)³¹⁰ • Guidance on Integrating Human Rights in National Biodiversity Strategy Action Plans (NBSAP)³¹¹
Target 23: Ensure Gender Equality and a Gender-responsive	• Gender Equality, Women's Empowerment, and Leadership in National Biodiversity Planning, Monitoring and Reporting³¹² • (UN Women) Handbook on Gender Mainstreaming for Gender Equality Results³¹³

³⁰⁸ Diedrich, Amy & Balaguer Huguet, Pablo & Tintoré, J.. (2011). Concepts, methods, and tools to support science-based decision-making in Integrated Coastal and Ocean Management: Examples from the Balearic Islands..

³⁰⁹ UNEP "Human Rights and Biodiversity" supported by: GIZ. <https://wedocs.unep.org/bitstream/handle/20.500.11822/35407/KMBio.pdf>

³¹⁰ https://unece.org/sites/default/files/2023-06/15TFAJ_4Apr_pm_2b_1_AJ_biodiversity_CBD_Mweene.pdf

³¹¹ The purpose of this Guidance is to support UN Country Teams, States, policymakers and stakeholders in integrating human rights into their NBSAPs under the Convention on Biological Diversity (CBD, or Convention). The application of this Guidance will depend on the specific domestic context within which it is applied. It is intended for use alongside training and specific capacity-building/peer support. <https://www.cbd.int/doc/nbsap/Integrating-human%20rights-in-NBSAPs.pdf>

³¹² ©UNDP (2024). Gender Equality, Women's Empowerment, and Leadership in National Biodiversity Planning, Monitoring, and Reporting. United Nations Development Programme: New York. <https://www.undp.org/sites/g/files/zskgke326/files/2024-02/undp-gef-gender-equality-womens-empowerment-and-leadership-2.pdf>

³¹³ <https://www.unwomen.org/sites/default/files/2022-02/Handbook-on-gender-mainstreaming-for-gender-equality-results-en.pdf>

Approach for Biodiversity Action	• Gender inequality, biodiversity loss, and environmental degradation³¹⁴ • Gender in the Conservation or Protected areas³¹⁵ • Best Practices in Gender and Biodiversity: Pathways for Multiple Benefits³¹⁶ • Integrating Gender Considerations in National Biodiversity Strategies and Action Plans³¹⁷ • (UN Women) Indigenous women's rights in biodiversity conservation and sustainable use³¹⁸ • (FAO) Engaging Women and Men Equally in Managing Biodiversity³¹⁹ • The Role of Indigenous Women in the Transmission of Traditional Knowledge^{320,321} • (CBD) Protected areas and other effective area-based conservation measures 14/8. Para 11(a)³²² • Mainstreaming Gender into ABS Value Chains Gender Toolkit.³²³ • (IUCN) Upholding Gender Equality and Women's Empowerment in the Post-2020 Global Biodiversity Framework³²⁴
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³¹⁴ Prepared by EnGen Collaborative - A. Emmett Boyer and Margaux Granat - for the CARE-WWF Alliance. (2021)

³¹⁵ González, A.M., and Martin, A.S. 2007. "Gender in the Conservation of Protected Areas". Innovations in Conservation Series. Parks in Peril Program. Arlington, VA, USA: The Nature Conservancy. <https://www.cbd.int/doc/pa/tools/Gender%20in%20the%20conservation%20of%20protected%20areas.pdf>

³¹⁶ Secretariat of the Convention on Biological Diversity (2022). Best practices in Gender and Biodiversity: Pathways for multiple benefits. (2022). https://www.greenpolicyplatform.org/sites/default/files/downloads/best-practices/Best%20practices%20in%20gender%20and%20biodiversity_CBD.pdf

³¹⁷ As part of this project IUCN GGO has undertaken analyses on the extent that gender has been mainstreamed in NBSAPs and the Fifth National Reports presented by Parties to the CBD. A comparative analysis on the reflection of gender considerations in the draft and final revised NBSAPs by pilot countries is also being undertaken. Information on these analyses can be found on the websites of s to the CBD. A comparative analysis on the reflection of gender considerations in the draft and final revised NBSAPs by pilot countries is also being undertaken. Information on these analyses can be found on the websites of: 1. IUCN <http://genderandenvironment.org/> 2. CBD <http://www.cbd.int/gender/>

³¹⁸ EGM/ENV/EP.21 Expert paper prepared by: Georgina M. Catacora-Vargas* Academic Peasant Unit "Tiahuanacu", Bolivian Catholic University Centre for Development and Environment, University of Bern. (2021). https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/CSW/66/EGM/Expert%20Papers/Georgina%20CATACORA%20VARGAS_CSW66%20Expert%20Paper.pdf

³¹⁹ Picot, L., Sisto, I. & Furst, M. 2023. Engaging women and men equally in managing biodiversity. Guidelines to address gender equality in policies and projects related to biodiversity. Rome, FAO. <https://doi.org/10.4060/cc4257en>

³²⁰ Recognizing and respecting the traditional knowledge, institutions and values is paramount. Incorporating locally attuned management systems, customary institutions and management systems and co-management regimes that involve indigenous peoples and local communities can be an effective way to safeguard nature and its contributions to people (IPBES, 2019).

³²¹ Indigenous women's full, equal, and effective participation at all levels of decision-making is essential in equally sharing the benefits from biodiversity and natural resources. It is also crucial for designing policies and programmes on biodiversity, resources and environmental management, providing important insights into the processes of observation, adaptation and mitigation of climate change consequences, and improving local development to meet the 2030 Agenda for Sustainable Development (UN Women, 2018; FAO, 2020; IFAD, 2016).

³²² Decision COP. XIV/8 para 11(a). <https://www.cbd.int/decision/cop/default.shtml?id=13650>

³²³ The MIND Your Step! Gender Tool has been designed by Fouad Bergigui under the UNDP GEF Global ABS Project, in cooperation with Barbora Galvankova and Ciara Daniels. This self explanatory Toolkit has been prepared to guide country teams working on ABS in their efforts to mainstream gender considerations into ABS value chains and ensure that women, men, youth and elderly have equal opportunities to benefit from various ABS interventions.

https://www.undp.org/sites/g/files/zskgke326/files/publications/undp-gef-bpps-Mainstreaming_Gender_into_ABS_Value_Chains_Toolkit.pdf

³²⁴ https://www.iucn.org/sites/default/files/2022-11/gender_policy_brief_june_2022.pdf

	• The UNFCCC 5-year enhanced Lima work programme on gender and its gender action plan sets out objectives and activities that aim to advance knowledge and understanding of gender-responsive climate action and its coherent mainstreaming in the implementation of the UNFCCC and the work of Parties, the secretariat, United Nations entities and all stakeholders at all levels. • Women4Biodiversity's publication <u>Advancing Women's Rights, Gender Equality and the Future of Biodiversity in the Post-2020 Global Biodiversity Framework</u> provides in-depth context and guidance for the urgency of gender responsive action in the Post-2020 GBF, and implementing the Post-2020 GPA. • The CBD Secretariat's Information Note <u>Developing and Measuring a Gender Responsive Post-2020 Biodiversity Framework: Information on Gender Considerations Within the Draft Post-2020 Monitoring Framework</u>, prepared by IUCN, is intended to contribute to the consideration of the effective integration of gender considerations in the Post-2020 Global Biodiversity Framework and its implementation and monitoring and the development and implementation of the post-2020 gender plan of action. • The <u>Elements and Structure of a Gender Responsive Post-2020 Global Biodiversity Framework</u> submission from UN Women to the CBD Secretariat provides proposals for the structure and key elements to consider for the development of a gender-responsive Post-2020 Global Biodiversity Framework in order to achieve sustainable outcomes for both biodiversity and gender equality.
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