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Citation for published version:

Hazin, C & Diz, D 2024, 'Less Specific and More Comprehensive? An Analysis of How the Ocean Is Reflected in the Kunming-Montreal Global Biodiversity Framework', *Ocean Yearbook Online*, vol. 38, no. 1, pp. 323-373. <https://doi.org/10.1163/22116001-03801013>

Digital Object Identifier (DOI):

[10.1163/22116001-03801013](https://doi.org/10.1163/22116001-03801013)

Link:

[Link to publication record in Heriot-Watt Research Portal](#)

Document Version:

Publisher's PDF, also known as Version of record

Published In:

Ocean Yearbook Online

Publisher Rights Statement:

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PART 4

Marine Resource Management and Conservation



Less Specific and More Comprehensive? An Analysis of How the Ocean Is Reflected in the Kunming-Montreal Global Biodiversity Framework

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Introduction

This article addresses the extent to which conservation and sustainable use of marine and coastal ecosystems is featured in the Kunming-Montreal Global Biodiversity Framework (GBF)¹ adopted in December 2022 at the 15th meeting of the Conference of the Parties (COP15) of the Convention on Biological Diversity² (CBD) and offers a perspective on the relevance of the framework to ocean conservation and sustainability. It also outlines, based on the CBD Programme of Work (PoW) on Marine and Coastal Biodiversity and relevant marine CBD decisions, how targets of the GBF relate to the marine realm, despite the lack of explicit reference to marine ecosystems in all of its targets.

The post-GBF adoption view is that this Framework has little coverage of ocean biodiversity.³ The argument relates to the number of targets that spell out marine and coastal-related wording. In contrast, we interpret the scope of the GBF as a whole in addition to the number of occurrences of marine-related terms in the Framework.

The question we pose is whether the perceived limited reference to marine biodiversity in the GBF will result in poorer commitment or intention to conserve and promote the sustainable use of marine and coastal ecosystems. It is beyond the aim of this article to cover the probability of success or failure

1 CBD decision 15/4 (2022) (GBF).

2 United Nations Convention on Biological Diversity, 5 June 1992, 1760 *United Nations Treaty Series* 79 (entered into force 29 December 1993) (CBD).

3 D. Obura, "The Kunming-Montreal Global Biodiversity Framework: What's in it for Africa marine conservation," *WIOMSA Newsbrief* 32, no. 1 (2023); International Institute for Sustainable Development (IISD), 9(783) *Earth Negotiations Bulletin* (ENB), "CBD WG2020 Highlights, CBD COP15 Daily Report, 3 December 2022," available online: <<https://enb.iisd.org/un-bio-diversity-conference-oewg5-cbd-cop15-daily-report-3dec2022>>.

in implementing the GBF or why previous frameworks failed to achieve their respective goals. Rather, the point raised here is that the level of reference to any ecosystems should not be open for an oblique interpretation of the commitments or possibility to fully implement the CBD and its three objectives and be an excuse for lack of action.

While the assumption—the “out of sight out of mind” saying—may hold true, during the negotiations of the Framework, Parties acknowledged and advocated for a streamlined plan that would be more communicable to a wider and more diverse constituency, and consequently, would potentially gain an increased uptake. However, in order to lean in the other direction and avoid leaving critical issues uncovered, the path pursued during the negotiations was to design targets that would cover all ecosystems and to avoid ones that were too specific on certain conservation issues or sub-types of ecosystems.

This article first provides a brief legal context of the CBD, including its geographical area of competence, but also the scope of the ecological realms the treaty has as a mandate. On scope, how consultations around the inclusion of marine and coastal biodiversity evolved during the nearly four years of negotiations of the GBF are outlined.

In order to evaluate if the GBF falls short in reference to ocean conservation, the marine-related terms used within the text of the Framework have been quantified, and also compared to the number of occurrences of marine-related terms in the previous CBD Strategic Plan for Biodiversity 2011–2020 (SPB). In addition to this assessment on the GBF and SPB decision text, goals and targets, the indicators that were coastal- and marine-specific within the monitoring framework of the two frameworks mentioned above have been compiled. The intention is not only to compare the number of terms, but to also assess the framing and specificity of the targets and the indicators that embedded marine-related terms within them in order to determine the applicability of the GBF to the marine environment as a whole.

Finally, the GBF targets are mapped against the existing PoW on Marine and Coastal Biodiversity and relevant CBD COP decisions to further reveal the linkages of the targets with ocean conservation, regardless of the express reference to marine-related terms in all targets. The aim is to reiterate that the GBF is an authoritative framework applicable to all ecosystems and as such it should be equally implemented in all realms, including marine ecosystems.

Legal Context

Global conservation and sustainability targets, although not always legally binding *per se* (depending on the nature of the instrument that establishes

those and on how it is described/qualified),⁴ are often set under intergovernmental processes advancing environmental agendas. The GBF is a policy instrument, adopted through a COP decision, as opposed to a legally binding protocol adopted under the Convention (e.g., the Nagoya Protocol on Access and Benefit Sharing⁵ or the Cartagena Protocol on Biosafety⁶). Nevertheless, soft-law instruments still carry normative force and drive interpretation and implementation of international obligations.⁷ CBD decisions also contribute to the evolution of the Convention.⁸

The CBD is a quasi-universal treaty which has among its objectives the conservation of biodiversity and the sustainable use of its components.⁹ It applies to terrestrial, inland waters and marine biodiversity alike, however, in the case of components of biodiversity (e.g., genetic resources) it applies to areas within national jurisdiction, and with respect to processes and activities carried out under the jurisdiction or control of its Parties, it applies to both areas within and beyond national jurisdiction.¹⁰

Conservation obligations emphasized under the Convention include, *inter alia*, the establishment of a system of protected areas; restoration of degraded ecosystems; prevention of the introduction of invasive alien species; and the adoption of legislation for the protection of threatened species and populations.¹¹

With regards to sustainable use, the Convention obliges its Parties to mainstream biodiversity conservation and sustainability into national

4 For instance, the Paris Agreement, a legally binding treaty, establishes a global target within its text. In contrast, the 169 targets of the Sustainable Development Goals (SDGs) were adopted through a United Nations General Assembly resolution (UNGA) (UNGA resolution 70/1 (2015)). UNGA resolutions, different from UN Security Council resolutions, are policy instruments and therefore non-binding. The GBF was adopted through a CBD COP decision, and therefore is also a policy instrument.

5 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, 29 October 2010, 1760 *United Nations Treaty Series* 79 (entered into force 12 October 2014).

6 Cartagena Protocol on Biosafety to the Convention on Biological Diversity, 29 January 2000, 2226 *United Nations Treaty Series* 208 (entered into force 11 September 2003).

7 A. Boyle and C. Redgwell, *Birnie, Boyle and Redgwell's International Law and the Environment*, 4th ed. (Oxford: OUP, 2021).

8 B. Ferreira de Souza Dias and K. Garforth, "Historical perspectives on the challenge of biodiversity conservation," in: *Biodiversity and Nature Protection Law*, eds., E. Morgera and J. Razzaque (Cheltenham: Edward Elgar Publishing, 2017), 13–30.

9 CBD, n. 2 above, art. 1. The third objective, which is beyond the focus of this article, relates to fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

10 *Id.*, art. 4.

11 *Id.*, art. 8.

decision-making.¹² The implementation of environmental impact assessments (EIAs) and strategic environmental assessments (SEAs) that assess whether proposed projects, programs, policies or plans are likely to have significant adverse effects on biodiversity is also an obligation under the Convention.¹³ Several COP decisions on these and other matters have further elaborated on these issues and provided guidance on implementation, including with respect to the marine environment (see Annex A below).

The GBF, as a global policy instrument adopted by a COP decision, aims to facilitate the implementation of the above obligations under the Convention in all ecosystems. The extent to which the GBF addresses marine and coastal biodiversity has been highly debated and the interpretation among the different actors differ. To clarify this issue, the next section focuses on the scope of the GBF vis-à-vis the marine environment, while also providing a quantitative analysis of the marine-related terms used.

Scope and Quantity

As mentioned above, much debate has surrounded the negotiations of the GBF with respect to the application of the Framework and its goals and targets to coastal and marine biodiversity. In the run-up to the COP, the co-chairs of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework convened a series of thematic and regional workshops to collect proposals from the Convention Parties and other actors on the structure and content of the Framework. In 2019, they guided the Thematic Workshop on Marine and Coastal Biodiversity for the Post-2020 Global Biodiversity Framework¹⁴ with that purpose.

Some negotiators called for a specific GBF goal on the ocean and/or for specific marine-related targets, similar to the structure of the Sustainable Development Goals (SDGs), in particular, SDG 14. The suggested goal would read:

By 2030, the ocean is on the path to recovery, supporting healthy ecosystems, thriving species, and human well-being, to achieve a 100%

¹² Id., art. 10, see also art. 6(b).

¹³ Id., art. 14.

¹⁴ CBD/POST2020/WS/2019/10/2, Report of the Thematic Workshop on Marine and Coastal Biodiversity for the Post-2020 Global Biodiversity Framework (Montreal, Canada, 13–15 November 2019).

[responsibly managed/ecologically sustainable] ocean by 2050 that supports the three objectives of the Convention (conservation, sustainable use, fair and equitable sharing of benefits).¹⁵

Furthermore, the report of the 2019 Thematic Workshop on Marine and Coastal Biodiversity for the Post-2020 Global Biodiversity Framework features aspirations of including a target that called for 100 percent well-managed ocean (which is already an obligation under the CBD and the United Nations Convention on the Law of the Sea), as well as focus on areas that require special attention, applying the ecosystem approach, and variations of that. The call for an ocean-specific target was suggested to feature in the Framework in addition to one calling for 30 percent of the ocean surface to be effectively managed through protected or conserved areas. The call for specificity went even further, namely, a few negotiators and/or members of non-governmental groups were of the view that the Framework should explicitly reference specific types of marine ecosystems such as mangroves, seagrass beds or coral reefs.¹⁶ In addition to the argument of existing evidence of threats that these ecosystems are under, the view was that the GBF should not take a reverse approach from the SPB 2011–2020.

The Strategic Plan for Biodiversity 2011–2020 of the CBD, which preceded the GBF as the global implementing framework for biodiversity conservation and sustainable use, carried a few targets dedicated to the marine realm. Some negotiators or advocates reasoned that this approach should also be reflected in the new Framework.

While the benefits of the higher visibility offered by SDG 14 was recognized, as negotiations progressed, the structure of the GBF was set in a way to reflect the three objectives of the Convention, namely, biodiversity conservation, sustainable use and equitable utilization,¹⁷ through the GBF's Goals A–C, respectively. This structure was meant to be inclusive of all biodiversity attributes without specific considerations for specific ecosystems, which also reflects the ecosystem approach,¹⁸ and the approach taken under the Convention itself. In addition to these, it was felt that it would be important to also incorporate a fourth goal on implementation (Goal D) where financial and enabling commitments could facilitate the implementation of the framework as a whole. In view of this proposal of four goals, there was an overall

15 CBD/WG2020/2/4 (2020), para. 18.

16 CBD/POST2020/WS/2019/10/2, n. 14 above.

17 CBD, n. 2 above, art. 1.

18 See CBD decisions V/6 (2000) and VII/11 (2004).

agreement that the set of targets should be streamlined and the GBF text communicable, but several delegates questioned the degree to which the ocean conservation needs had been sufficiently incorporated into the Framework.¹⁹ For some, having explicit and ambitious reference to marine and coastal ecosystems in specific targets continued to be a high priority. This was the case especially because, historically, terrestrial ecosystems have been emphasized in international policy instruments (e.g., considering the number of decisions targeted at terrestrial ecosystems as opposed to those related to marine and coastal ecosystems). The following data depicts the higher attention that has been given to the terrestrial environment in the conservation work: the number of Key Biodiversity Areas (KBAs) identified in terrestrial ($n = 15,693$) versus marine environments ($n = 644$);²⁰ the number of threatened species in the IUCN Red List that have been assessed, of which below 15 percent of the total species assessed are marine;²¹ and finally, the global coverage of areas protected, which is 16.01 percent terrestrial against 8.16 percent marine.²²

In the case of the GBF, the absence of dedicated marine and coastal goals and targets does not imply exclusion of the matter. In assessing this issue, we address the scope of the Framework, and then explore the occurrence of marine-related references within the GBF decision text (CBD decision 15/4). These occurrences in the 2011–2020 Strategic Plan (CBD decision X/2) for Biodiversity are compared vis-à-vis the GBF.

Scope

As discussed in the “Legal Context” section above, the CBD Convention applies to the components of biodiversity within the limits of national jurisdiction (e.g., marine genetic resources), and to “processes and activities, regardless of where their effects occur, carried out under its jurisdiction or control, within the area of its national jurisdiction or beyond the limits of national jurisdiction.”²³ As such, the GBF, which was adopted by a COP decision aiming to contribute to the implementation of the Convention,²⁴ has the same

19 IISD, 9 (783) ENB (2022), n. 3 above.

20 Key Biodiversity Areas Data, available online: <<https://www.keybiodiversityareas.org/kba-data>>.

21 IUCN, “Human Activity Devastating Marine Species from Mammals to Corals—IUCN Red List,” Press Release (2022), available online: <<https://www.iucn.org/press-release/202212/human-activity-devastating-marine-species-mammals-corals-iucn-red-list>>.

22 Protected Planet, available online: <<https://www.protectedplanet.net/en>>.

23 CBD, n. 2 above, art. 4.

24 CBD decision 15/4 (2022), n. 1 above, para. 1 adopts the GBF contained in the decision's Annex.

jurisdictional scope. Marine and coastal biodiversity is therefore an intrinsic element of the Convention and of the Framework, especially when considering that the definition of biological diversity under the Convention explicitly refers to marine ecosystems.²⁵

Furthermore, the COP decision that adopted the GBF emphasized “the need for a balanced and enhanced implementation of all provisions of the Convention, including its three objectives.”²⁶ It is clear that when referring to biodiversity, ecosystems and habitats, the GBF targets do not exclude marine ecosystems, but rather, encompass those by default. In addition, it is important to note that the GBF is expected to be implemented by the whole-of-government and whole-of-society, relying “on action and cooperation by all levels of government and by all actors of society,”²⁷ once again indicating that all ecosystem realms, economic sectors, government departments and governance levels are included.

It is also important to consider the value of specificity in the targets: all-ecosystem-encompassing targets versus specific targets addressing specific issues of the conservation and sustainable use agenda. The practice of listing particular sub-types of ecosystems (e.g., mangroves and coral reefs), pressures/pollution type (e.g., excess nutrients and underwater noise) in targets may be considered detrimental to action that addresses also those non-listed.

For instance, GBF Target 7 states the following:

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.²⁸

25 CBD, n. 2 above, Article 2 defines biological diversity as “the variability among living organisms from all sources including, inter alia, terrestrial, *marine* and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems” (emphasis added).

26 CBD decision 15/4 (2022), n. 1 above, preambular paragraph.

27 Id., Annex, Section C.

28 Id., Annex, target 8.

Although it is clear that Target 7 applies to *all* sources of pollution, which is aligned with the United Nations Convention on the Law of the Sea,²⁹ obligations regarding marine pollution,³⁰ the explicit reference to excess nutrients, pesticides and highly hazardous chemicals, and plastic pollution, could make Parties prioritize actions on the reduction of these sources, while other sources, such as underwater noise and artificial light pollution, which are relevant to the marine realm, could be sidelined.

To avoid this situation, the role of indicators under the monitoring framework³¹ of the GBF becomes of high relevance. They may work as drivers for Parties to take action as governments are required to report on the status of the subject matter of those indicators. The challenge, however, is that, in the case of the GBF, currently Parties are only required to report on headline indicators (component and complementary indicators are suggested, therefore, of voluntary use), which are more high level, rather than more detailed, such as the component or complementary indicators (see Annex B below).³² The risk of this path is that Parties may “cherry pick” which ecosystem realms to report on.

Despite this limitation, the Global Biodiversity Outlook 5 (GBO-5)³³ provides evidence on the contrary with respect to the reporting on progress of targets of the SPB 2011–2020. The GBO-5 scores the progress of each of the elements (specific commitments within a target) of the 20 Aichi Biodiversity Targets and summarizes national achievements based on the set of generic and specific indicators.³⁴ Of these descriptions found at the GBO-5, some do not actu-

29 United Nations Convention on the Law of the Sea, 10 December 1982, 1833 *United Nations Treaty Series* 397 (entered into force 16 November 1994) (UNCLOS). In addition to the CBD, UNCLOS is a key legal framework for ocean governance, and as recognized by the UNGA, “the Convention sets out the legal framework within which all activities in the oceans and seas must be carried out” (UNGA resolution 77/248 (2022), 6th preambular para.) See also N. Oral, “A 50-year reflection on global ocean governance for protection of the marine environment,” in: *Research Handbook on Ocean Governance Law*, eds., S. Borg, F.G. Attard, P. Mallia Vella de Fremeaux (Cheltenham: Edward Elgar Publishing, 2023), 10–23; J. Harrison, *Saving the Oceans through Law: The International Framework for the Protection of the Marine Environment* (Oxford: OUP, 2017).

30 UNCLOS, n. 29 above, Part XII, and art. 1.

31 CBD decision 15/5 (2022), n. 1 above.

32 See CBD decisions 15/5 (2022) and 15/6 (2022).

33 Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 5* (Montreal, 2020).

34 CBD COP decision 128 (2016).

ally relate to elements of the targets. For instance, on target 2,³⁵ the Outlook reports that countries were working on the development of national legal frameworks to incorporate biodiversity values including on fisheries (Generic indicator: “Trends in integration of biodiversity and ecosystem service values into sectoral and development policies.” Specific indicator: “Number of countries that have integrated biodiversity in National Development Plans, Poverty reduction strategies or other key development plans.”) In the case of target 3,³⁶ it reports that countries were falling behind in reducing fisheries subsidies in the past decade (Specific indicator: “Trends in potentially harmful elements of government support to fisheries”). In neither of the targets outlined above was there marine-related language in the target text.

Quantity

As noted above, the Strategic Plan for Biodiversity 2011–2020 contained five goals under which there were 20 targets, widely known as the Aichi Biodiversity Targets. In that, the following words related to the marine realm were included 13 times (in four targets and twice in the decision text):³⁷ “seascape,” “marine,” “coastal,” “coral,” “fish,” “fisheries,” “overfishing,” “ocean acidification,” and “aquaculture.” In contrast, we can find the words “ocean,” “sea,” “seascape,” “marine,” “blue,” “coastal,” “fisheries,” “ocean acidification,” “aquaculture,” and “plastic pollution” (the last two not being exclusively applicable to the marine, but also to inland waters),³⁸ also 13 times, but embedded in seven of the targets and in the GBF decision text to guide the world’s policies and actions to halt biodiversity loss.

35 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” CBD decision X/2 (2010).

36 Target 3: “By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimise 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” CBD decision X/2 (2010).

37 Note that more than one term can be used in one single target, explaining the total of targets and text references that we count as referencing marine-related terms not equaling the total number of times the term appears.

38 The authors acknowledge that fisheries, aquaculture and plastic pollution are not terms only associated with the marine, but rather to aquatic ecosystems, that is, also including inland waters. However, these are issues of high relevance to marine and coastal conservation and clearly associated with ocean space.

In the Strategic Plan for Biodiversity 2011–2020, the terms were used in Target 6 (sustainable fisheries), Target 7 (sustainable production—aquaculture), Target 10 (pressures on coral reefs) and Target 11 (protected and conserved areas). Targets 6 and 10 were considered as ocean-specific (although, in reality, target 6 was equally applicable to all aquatic ecosystems, including fresh waters), while Target 7 and 11 referred, respectively, to other sustainable productive activities and to protected and conserved areas in the terrestrial and inland water ecosystems as well.

The above does not mean, however, that other targets within the Plan were aimed, exclusively, at terrestrial and/or inland waters ecosystems. For instance, Targets 1 and 2 (on biodiversity values), Target 5 (on natural habitats), Target 8 (on pollution), Target 9 (on invasive alien species), Target 12 (on threatened species), Target 13 (on genetic diversity), Target 15 (on carbon stocks), among others, are also applicable to marine/coastal biodiversity, even without express referencing.

Some of those listed terms are also mentioned in the section that outlines the rationale of the Plan and in Section v on “Implementation, monitoring, review and evaluation.” In Section v, Parties are directed to the PoW agreed to under the Convention, including the PoW on marine and coastal biodiversity, as existing guidance to support implementation of the Aichi Biodiversity Targets.

In respect to the GBF, marine-related terms were used in Target 1 (spatial planning), Target 2 (habitat restoration), Target 3 (protected and conserved areas), Target 7 (pollution—plastics), Target 8 (climate change), Target 10 (sustainable production, e.g., aquaculture, fisheries) and Target 12 (access to natural spaces). All the above targets where the marine-related terms are mentioned, the reference relates not specifically to protection or sustainable use of marine resources, but rather, to all ecosystem types. It is therefore interesting to note that despite delegates’ opinion that the GBF targets insufficiently covered marine-related issues, the explicit reference to marine-related terms were included in more targets than in the previous Strategic Plan. Moreover, similarly to the Aichi Targets, the lack of explicit reference in the other targets does not imply that those other targets are not applicable to the marine environment (see Scope section above).

Furthermore, to reference within target texts, the term “sea” is also referred to in Section A “Background” of the GBF decision, which, based on the *Global Assessment Report of Biodiversity and Ecosystem Services* by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) report, outlines that land and sea use change were among the major drivers of biodiversity loss.

Giving Meaning to the Ocean in the Global Biodiversity Framework through the Marine and Coastal Biodiversity Programme of Work

As considered above, the fact that some targets do not expressly mention marine and coastal biodiversity does not mean that these cannot be implemented in the ocean space. In order to clarify the linkages between these targets with the marine environment, we illustrate how they can be implemented by cross-referencing them with the CBD PoW on Marine and Coastal Biodiversity operational objectives and activities, while also identifying areas that would benefit from further attention in future COP decisions.

The PoW was first adopted in 1998, and revised in 2004 and 2010, therefore, recognizably needing to be updated to reflect current needs and approaches. The CBD decision that adopted the GBF requested the Secretariat to conduct a strategic review and analysis of all PoWs of the Convention to facilitate the implementation of the GBF.³⁹ Draft updates of the PoWs will be prepared for the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) and the Subsidiary Body on Implementation (SBI) consideration prior to submission to COP16 scheduled for 2024.⁴⁰ More specifically, the update of the marine and coastal biodiversity PoW by COP16 was called for under the marine and coastal biodiversity decision of COP15.⁴¹

While the current marine and coastal PoW contains very pertinent objectives and activities that are still relevant today for the implementation of the GBF, it does not cover all elements contained in the GBF, and in this sense, an update would indeed facilitate the implementation of the framework as a whole. In this respect, this section provides an overview of a rapid gap analysis of the current PoW vis-à-vis the GBF targets, while also highlighting a few examples of relevant instruments adopted or considered by previous CBD COPs that merit further implementation attention given their important role in achieving the GBF targets (see Annex A below).

Current PoW vis-à-vis the GBF

In 1998, the CBD COP through its decision IV/5 adopted the PoW on marine and coastal biodiversity under the Convention for three years.⁴² The PoW comprised five programme elements, namely:

39 CBD decision 15/4 (2022), n. 1 above, para. 9.

40 Id.

41 CBD decision 15/24 (2022), para. 4.

42 CBD decision IV/4 (1998), para. 1.

- (i) integrated marine and coastal marine and coastal area management;
- (ii) marine and coastal living resources;
- (iii) marine and coastal protected areas;
- (iv) mariculture; and
- (v) alien species and genotypes.

Further to this, in 2004, CBD decision VII/5 recognized that the elements of the PoW were still global priorities,⁴³ and refined the PoW considering new developments and priorities, such as climate change.⁴⁴

Upon the adoption of the Strategic Plan for Biodiversity 2011–2020 and its Aichi Biodiversity Targets, and after an in-depth review of implementation, COP10 reaffirmed that the marine and coastal biodiversity PoW still corresponded to global priorities, encouraging Parties to continue to implement the program elements, while also endorsing further guidance contained in decision X/29.⁴⁵

Each program element contains a goal, operative objectives, suggested activities, and ways and means of implementation. In the rapid assessment (see Annex A below), the existing program elements' goals, operative objectives, and activities are matched with the GBF targets in order to identify GBF areas that are not covered by the PoW and that would benefit from updates. Furthermore, key instruments or recommendations adopted by CBD COP (focus on decisions from COP10) that could assist the implementation of the GBF, and that therefore, could be reinforced in the updated marine and coastal biodiversity PoW are identified. The reason for that being that the PoW was last updated at COP10.

From Annex A below, it is clear that:

- (i) all GBF targets are relevant to the marine environment;
- (ii) the current PoW and existing COP decisions continue to be relevant for the implementation of the GBF; and
- (iii) to perfectly align with the GBF, the updated PoW and future COP decisions would benefit from further work with respect to, *inter alia*:
 - a. the role of blue carbon ecosystems and respective conservation and management measures to ensure that these continue to perform mitigation, adaptation and disaster risk reduction functions (in relation to Target 8), since so far the main focus of the work conducted on the marine biodiversity-climate nexus has been on coral reefs, cold water areas and ocean acidification. In addition,

43 CBD decision VII/5 (2004), para. 4.

44 *Id.*, para. 5.

45 CBD decision X/29 (2010), para. 13.

other climate change-related pressures on marine ecosystems, such as warming and deoxygenation, could also be the object of further attention.

- b. mainstreaming of biodiversity (Targets 14 and 15) within and across sectors active in marine and coastal spaces would also benefit from further attention in the revised PoW despite existing guidance on mainstreaming from other COP decisions more broadly, and the ongoing work being conducted on the long-term strategic approach on mainstreaming (CBD decision 15/17 (2022)) to ensure that the marine sectors are fully represented.
- c. Sustainable consumption (Target 16) with regards to the marine environment would also benefit from further attention in the revised PoW. This could include a compilation of best practices regarding sustainable consumption initiatives related to seafood for instance, and even supply chain analysis of products that rely on and could pose an impact on marine and coastal ecosystems (e.g., electric car batteries with respect to deep seabed mining, sand mining, etc.).⁴⁶

Conclusion

Biodiversity is under threat in all geographies of the globe, and increasing pressures are putting several species on the verge of extinction in all realms: terrestrial, inland waters, coastal and marine.⁴⁷ In response to this crisis, the GBF “aims to catalyze, 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.”⁴⁸

The authors of this article were able to collect impressions in communication exchange with peers within, for instance, informal coalitions of non-governmental organizations that were formed along the process of and present at the negotiations of the GBF, as well as through the participation in

46 See, for instance, P.A. Lusty et al., *Deep-sea Mining Evidence Review (2021) British Geological Survey Commissioned Report* (2021) CR/21/119.

47 IPBES, *Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*, eds. E.S. Brondizio et al. (Bonn: IPBES Secretariat, 2019), available online: <<https://doi.org/10.5281/zenodo.3831673>>.

48 CBD decision 15/4 (2022), n. 1 above, para. 4.

the marine and coastal biodiversity thematic workshop⁴⁹ with a diverse range of stakeholders and CBD negotiators, and other negotiating fora (Open-ended Working Group on the GBF, SBSTTA, SBI, COP). For most, the limited reference to marine ecosystems or marine species or even the lack/fewer dedicated targets to the marine realm were a cause of concern. The fear was that by not referring to the marine environment, there would be a risk of continued neglect on addressing the impacts this ecosystem has been suffering. However, the scope of the GBF is clear, especially when considering the jurisdictional scope of the Convention: it applies to all ecosystem realms.

Another critical consideration is that, notwithstanding the ‘umbrella’ scope of the GBF for ocean conservation, there are other crucial multilateral agreements that will spur ocean conservation and sustainability. The recently adopted Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biodiversity of Areas Beyond National Jurisdiction (BBNJ Agreement), is an example.⁵⁰ This Agreement will reinforce and complement CBD obligations and efforts made by CBD Parties with respect to areas beyond national jurisdiction (ABNJ). While the BBNJ Agreement is not yet into force, the role of other regional or global binding or voluntary commitments on ocean protection under Regional Seas Conventions and Action Plans; the Sustainable Development Goal 14, regional fisheries management organizations, the International Maritime Organization, the International Seabed Authority, among others, will be crucial for the implementation of the GBF in a mutually supportive manner. This synergistic approach can help pave the ground for the BBNJ COP deliberations when it is first convened, with a view to achieve policy coherence, while also facilitating reporting streamlining to some degree.

While one could argue that the SDG 14 elevated the visibility and awareness about the need to enhance ocean protection, the expected outcome on improving ocean health has not held true.⁵¹ The UN report on SDG14 outlines a failure in relevant progress throughout the whole set of targets under this goal.⁵² Indeed, some targets are experiencing regression.

49 CBD/POST2020/WS/2019/10/2 (2019), n. 14 above.

50 Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction, 19 June 2023, C.N.203.2023.TREATIES-XXI.10 (not yet into force).

51 UN, *The Sustainable Development Goal Report 2023. Extended Report. Life Below Water* (New York: United Nations, 2023), available online: <https://unstats.un.org/sdgs/report/2023/extended-report/Extended-Report_Goal-14.pdf>.

52 Id.

It is also worth noticing that Parties of the CBD built the GBF based on a theory of change (ToC) that was underpinned by the recognition of the need for urgent action to halt biodiversity loss in all ecosystem types. This ToC was structured around the aim to “(a) put in place tools and solutions for implementation and mainstreaming, (b) reduce the threats to biodiversity and (c) ensure that biodiversity is used sustainably in order to meet people’s needs and that these actions are supported by enabling conditions, and adequate means of implementation, including financial resources, capacity and technology.”⁵³ And, in this respect, drivers of change have effects on all applicable ecosystems (i.e., drivers such as non-sustainable agriculture practices are applicable to terrestrial ecosystems, while fisheries apply for marine and freshwater ecosystems), according to the IPBES report.⁵⁴ We are here not arguing that a dedicated goal to the marine environment could not potentially drive the attention of CBD Parties to this ecosystem. Rather, we believe that, given the logic structure of the Framework, singling out any ecosystems in goals or targets would turn it into a repetitive set of goals and targets for terrestrial, inland waters and coastal and marine environments.

Furthermore, through a rapid assessment of marine and coastal biodiversity terminology contained in the previous framework in comparison with the GBF, it is clear the ocean is better represented in the GBF than in the SPB 2011–2020. The sort of representation is, however, different. In the latter, there are some targets that are considered marine and coastal biodiversity-specific. And possibly for that reason, there is an interpretation that the others are terrestrially focused. In contrast, in the GBF, marine and coastal biodiversity is referred to in half of the targets (excluding the ones on enabling conditions—Targets 14 to 23 “Tools and solutions for implementation and mainstreaming”), which are cross-cutting to the substantive ones.

Moreover, indicators are an important and integral part of the Framework that can potentially drive implementation. And, in this regard, the Monitoring Framework of the GBF falls short in marine-specific headline indicators, but it has a suite of component and complementary indicators that can be utilized to measure the status of marine biodiversity nationally and globally.

Finally, the GBF has been mapped against the Programme of Work on Marine and Coastal Biodiversity operational objectives and key COP decisions

53 CBD/WG2020/3/3 (2021), First Draft of the Post-2020 Global Biodiversity Framework, para. 6.

54 IPBES, *Summary for Policymakers of the Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*, eds., S. Díaz et al., (Bonn: IPBES Secretariat, 2019).

related to the marine environment. The result of this exercise demonstrates that the current PoW and marine-related COP decisions and the several guidance instruments adopted by COP to date can significantly contribute to the implementation of the GBF in the marine realm. In addition, the results of this exercise reinforce the notion that all GBF targets are applicable to the marine environment, while also pointing to areas that could benefit from further attention in the revised PoW and in future COP decisions for a comprehensive implementation of the Framework.

The 23 actionable targets that address conservation, sustainable use of biodiversity and benefits to people, the equitable share resulting from the use of genetic resources and the ways and means to achieve the Framework goals should be equally applicable to all types of ecosystems.

Annex A. Relationship between the GBF Targets and the CBD Programme of Work (PoW) on Marine and Coastal Biodiversity and Relevant Marine-Related COP Decisions/Policy Instruments⁵⁵

GBF targets (summarized version) PoW—Programme elements, operational objectives, relevant activities, and appendix Key CBD COP decisions

Legend:

PE = programme element

OO = operational objective

APX = appendix

Target 1: Areas are planned or managed to bring loss of areas of high biodiversity importance close to zero. **PE. 1: Integrated marine and coastal area management (IMCAM)** Application of the ecosystem approach in MSP. **OO. 1.1:** policy instruments and strategies for effective implementation of IMCAM Guidance on the ecosystem approach is provided by CBD decisions V/6 (2000) and VII/11 (2004). **OO. 1.2:** protection of the marine environment from negative impacts **Decision XIII/9, Marine spatial planning and training initiatives (2016)**—Parties to take into account

⁵⁵ The COP decisions referenced herein are solely those on marine and coastal biodiversity and ecologically or biologically significant marine areas, with the exception of: decision 14/8 (2018) on protected areas and other effective area-based conservation measures (OECMs), given its relevance for marine OECMs as well as MPAs; decision V/6 (2000) and VII/11 (2004) on the ecosystem approach given its prominence in the GBF; and decision XIII/3 (2016) on mainstreaming, which made specific recommendations on mainstreaming biodiversity into fisheries.

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- 00. 1.3:** guidelines for ecosystem evaluation and assessment
- the report 'Consolidated Practical Guidance and a Toolkit for Marine Spatial Planning', as well as other international guidance.
- PE. 2: Marine and coastal living resources**
- 00. 2.1:** ecosystem approaches
- Decision X/28. *Inland waters biodiversity* (2010)**—Request connectivity of inland waters with marine ecosystems.
- PE. 6. General**
- 00. 6.1:** database of initiatives on programme with special emphasis on integrated marine and coastal areas management
- APX. 3: Elements of a marine and coastal biodiversity management framework**
- Decision XI/15. *Review of the programme of work on island biodiversity* (2012)**—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).
- Decision XI/18. *Marine and coastal biodiversity: Sustainable fisheries and addressing adverse impacts of human activities, voluntary guidelines for environmental assessment, and marine spatial planning* (2012)**—Took note of the voluntary guidelines for the consideration of biodiversity in environmental impact assessments and strategic environmental assessments annotated specifically for biodiversity in marine and coastal areas, including in ABNJ.

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<p>Decision XI/25. Sustainable use of biodiversity: Bushmeat and sustainable wildlife management (2012)—Parties to strengthen the application of the ecosystem approach in spatial planning and sectoral policies that relate to the wider landscape and seascape.</p>	
<p>The compilation of submissions on experiences in the implementation of marine spatial planning (MSP) (CBD/SBSTTA/22/INF/14) as noted in CBD decision 14/10 (2018) may also be useful in this context.</p>	
<p>Several COP decisions on ecologically or biologically significant marine areas (EBsAs) have recognized their role in MSP.</p>	
<p>Decision X/28. Inland waters biodiversity (2010)—Requests for connectivity of inland waters and the marine ecosystems and for restoration to adapt to climate change.</p>	<p>Target 2: 30 percent of degraded areas are under effective restoration.</p> <p>PE.1: Integrated marine and coastal area management (IMCAM) OO.1.2: protection of the marine environment from negative impacts</p>

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<p><i>Activity:</i> a) protection of areas important for reproduction and restoration of such areas and other important habitats for marine living resources</p> <p>OO. 1.3: guidelines for ecosystem evaluation and assessment</p> <p><i>Activity:</i> (c) identification of key habitats for marine living resources on a regional basis</p>	<p>Decision XII/23. Marine and coastal biodiversity: <i>Impacts on marine and coastal biodiversity of anthropogenic underwater noise and ocean acidification, priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems, 10 for coral reefs and closely associated ecosystems, and marine spatial planning and training initiatives (2014)</i>—Priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems contained in the annex of the decision.</p> <p>Parties to strengthen existing sectoral and cross-sectoral management with a view to address stressors, including overfishing, destructive fishing practices, all sources of pollution, coastal development, tourism and recreational uses.</p> <p>Decision XIII/5. Ecosystem restoration: Short-term action plan (2016)—Parties to carry out restoration, including in the marine environment, with a stress to reef systems.</p>
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<p>Target 3: 30 percent of areas are effectively conserved.</p>	<p>PE. 1: Integrated marine and coastal area management (IMCAM) OO. 1.2: protection of the marine environment from negative impacts</p> <p><i>Activities:</i> (a) protection of areas important for reproduction and restoration of such areas and other important habitats for marine living resources (b) special attention and measures in respect to closed and semi-closed seas (c) identification of key habitats for marine living resources on a regional basis (d) identification of components of the ecosystems critical to their functioning and of key threats (t) maintain the productivity and biodiversity of important and vulnerable marine and coastal areas, including areas within and beyond national jurisdiction</p>	<p>All protected areas-related decisions are relevant for the coastal and marine ecosystem, e.g., decision X/31 (2010), decision XI/24 (2012).</p> <p>Decision IX/20—<i>Marine and coastal biodiversity</i> (2008) (although before COP10, and out of the scope of this exercise, this is quite a relevant decision that should feature here)—Adopted the criteria for identification of areas in need of protection (EBSA criteria) in its Annex I; addresses scientific guidance for selecting areas to establish a representative network of marine protected areas (MPAs), including in open ocean waters and deep sea habitats (Annex II), and four initial steps to be considered in the development of representative networks of MPAs (Annex III). This decision has also been recognized by decision X/29 (2010) that updated the PoW in 2010.</p>
<p>PE. 3: Marine and coastal protected areas (M&C PAS) OO. 3.1: establish and strengthen national and regional systems of M&C PAS integrated into a global network</p>	<p>All other EBSA related decisions are relevant for implementation of this target: decision XII/22 (2012), decision XIII/12 (2014), decision 14/9 (2016), decisions 15/25 and 15/26 (2022)</p>	

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<p>00. 3-2: conservation and sustainable use of BBNJ</p> <p>00. 3-3: effective management of existing PAS</p> <p>00. 3-4: monitoring of national and regional systems of M&C PAS</p> <p>00. 3-5: research and monitoring activities on knowledge gaps and priority information needs of management of M&C PAS</p> <p>APX. 3: M&C biodiversity management framework</p>	<p>Decision XIII/2. Progress towards the achievement of Aichi Biodiversity Targets 11 and 12 (2016)—Particular relevance for the marine environment as Parties are to identify areas of particular importance for biodiversity, taking into account EBSAs, KBAs, vulnerable marine ecosystems (VMEs), particularly sensitive sea areas; addresses also the efforts on systematic assessments of management effectiveness, and connectivity considerations.</p>
	<p>Decision 14/8. Protected areas and other effective area-based conservation measures (2018)—Defines other effective area-based conservation measures (OECMs) and sets the criteria for their identification (Annex III). The same decision includes the Voluntary guidance on the integration of protected areas and OECMs into wider land- and seascapes and mainstreaming across sectors to contribute, <i>inter alia</i>, to the sustainable development goals (Annex I), and the voluntary guidance on effective governance models for management of protected areas, including equity, taking into account work being undertaken under Article 8(j) and related provisions (Annex II); and considerations in achieving Aichi Biodiversity Target 11 in marine and coastal areas (Annex IV).</p>

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<p>Target 4: Threatened species are recovering, genetic diversity is being maintained and human-wildlife conflict is being managed.</p>	<p>PE. 2: Marine and coastal living resources OO. 2.1: ecosystem approaches to the conservation and sustainable use of M&C living resources <i>Activity:</i> (j) strengthening of taxonomic expertise at regional and national levels</p>	<p>Decision X/17. <i>Consolidated update of the Global Strategy for Plant Conservation 2011–2020 (2010)</i>—To understand, conserve and use sustainably the world's immense wealth of plant diversity whilst promoting awareness and building the necessary capacities for its implementation. The strategy considers plants also in the marine environment.</p>
<p>OO. 2.4: conservation and sustainable use of BBNJ <i>Activity:</i> (a) threats to BBNJ, in particular areas with seamounts, hydrothermal vents, and cold-water corals, and certain other underwater features APX. 2: Elements of a work plan on physical degradation and destruction of coral reefs, including cold water corals</p>	<p>Decision XIII/1. <i>Voluntary specific workplan on biodiversity in cold water areas within the jurisdictional scope of the Convention (2016)</i>—Adopted the referred workplan as an addendum to the marine and coastal PoW. The decision calls for implementation of activities of the workplan.</p>	<p>Decision 14/10. <i>Other matters related to marine and coastal biodiversity (2018)</i>—To protect biodiversity in cold-water areas.</p>
<p>Decision 14/30. <i>Cooperation with other conventions, international organizations and organizations (2018)</i>—Parties to provide further support for the implementation of the Coastal Forum for coastal wetland conservation.</p>		

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<p>Target 5: Use, harvesting and trade of wild species is sustainable, safe and legal.</p>	<p>PE. 1: Integrated marine and coastal area management (IMCAM)</p> <p>OO. 1.2: action to protect the marine environment from negative impacts</p> <p><i>Activity:</i> (e) reduce by-catch</p> <p>OO. 2.1: ecosystem approaches to the conservation and sustainable use of living resources</p> <p><i>Activities:</i> (f) study on the effects of fish and invertebrate stock enhancement on M&C biological diversity at the species and genetic levels</p> <p>(g) implement the FAO 1995 Code of Conduct</p> <p>(h) eliminate destructive fishing practices, and restore and maintain fisheries stocks to sustainable levels</p> <p>OO. 2.4: conservation and sustainable use of BBNJ</p> <p><i>Activities:</i> (a) identify threats to the BBNJ, in particular areas with seamounts, hydrothermal vents, and cold-water corals, and certain other underwater features</p> <p>(b) short-, medium- and long-term measures to eliminate/avoid destructive practices</p>	<p>Decision X/29. Marine and coastal biodiversity (2010)—Addresses impacts of unsustainable fishing such as destructive fishing practices, overfishing, and illegal, unreported and unregulated (IUU) fishing on marine and coastal biodiversity.</p>
<p><i>Activities:</i> (e) reduce by-catch</p> <p>OO. 2.1: ecosystem approaches to the conservation and sustainable use of living resources</p> <p><i>Activities:</i> (f) study on the effects of fish and invertebrate stock enhancement on M&C biological diversity at the species and genetic levels</p> <p>(g) implement the FAO 1995 Code of Conduct</p> <p>(h) eliminate destructive fishing practices, and restore and maintain fisheries stocks to sustainable levels</p> <p>OO. 2.4: conservation and sustainable use of BBNJ</p> <p><i>Activities:</i> (a) identify threats to the BBNJ, in particular areas with seamounts, hydrothermal vents, and cold-water corals, and certain other underwater features</p> <p>(b) short-, medium- and long-term measures to eliminate/avoid destructive practices</p>	<p>Decision XI/18. Marine and coastal biodiversity: Sustainable fisheries and addressing adverse impacts of human activities, voluntary guidelines for environmental assessment, and marine spatial planning (2012)—Addresses biodiversity considerations in sustainable fisheries.</p>	<p>Decision XII/23. Marine and coastal biodiversity: Impacts on marine and coastal biodiversity of anthropogenic underwater noise and ocean acidification, priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems, and marine spatial planning and training initiatives (2014)—Addresses impact of overfishing and destructive fishing.</p>

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The priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems (Annex to **decision XI/23** (2014)) contain specific fisheries recommendations to minimize the impacts on coral reefs and associated ecosystems.

Decision XIII/3. Strategic actions to enhance the implementation of the Strategic Plan for Biodiversity 2011–2020 and the achievement of the Aichi Biodiversity Targets, including with respect to mainstreaming and the integration of biodiversity within and across sectors (2016)—Adopts recommendations on actions to mainstream biodiversity into the fisheries sector.

Decision XIII/11. Voluntary specific workplan on biodiversity in cold water areas within the jurisdictional scope of the Convention (2016)—Adopted the referred workplan and contains relevant recommendations applicable to fisheries in vulnerable ecosystems.

Decision XI/15. Review of the programme of work on island biodiversity (2012)—A relevant decision for invasive alien species (IAS) in the marine environment.

Decision XI/29. Global Taxonomy Initiative (2012)—Produce and continue to share taxonomic tools

PE. 5: Invasive alien species

- OO. 5.1: understanding of the pathways and the causes of the introduction of alien species and the impact of such introductions on biological diversity
- OO. 5.2: mechanisms to control all pathways, including shipping, trade and mariculture
- OO. 5.3: list on introductions of alien species

Target 6:
Reduce rates of introduction and establishment of invasive alien species by 50 percent.

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and risk-analysis tools in the context of invasive alien species and biosafety, to identify and analyze species and traits that are useful to agriculture and aquaculture.

Decision XI/28 (2012) on IAS; **decision XII/16** (2014) on management of risks associated with introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food, and related issues; **decision XIII/13** (2016) on addressing risks associated with trade, experiences in the use of biological control agents, and decision support tools; **decision 14/11** (2018) on the supplementary voluntary guidance for avoiding unintentional introductions of invasive alien species associated with trade in live organisms; **decision 15/27** (2022) on the outcomes of the Online Forum on Invasive Alien Species and of the meeting of the *Ad Hoc* Technical Expert Group on Invasive Alien Species are also applicable to the marine environment and can provide guidance in addressing this threat.

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<p>Target 7: Pollution reduced, halving nutrient loss and pesticide risk.</p>	<p>PE. 1: Integrated marine and coastal area management (IMCAM) OO. 1.2: protect the marine environment from negative impacts <i>Activity:</i> (b) promote action to reduce and control sea-based sources of pollution</p>	<p>Decision XI/18. Marine and coastal biodiversity: <i>Sustainable fisheries and addressing adverse impacts of human activities, voluntary guidelines for environmental assessment, and marine spatial planning (2012)</i>—Parties to submit information of the impact of marine debris on marine biodiversity. Also addresses the impacts of underwater noise on marine and coastal biodiversity and habitats.</p>
		<p>Decision X/13. New and emerging issues (2010)—Takes into account the impact of ocean noise on MPAS and on biodiversity.</p>
		<p>Decision XI/18. Marine and coastal biodiversity: <i>Sustainable fisheries and addressing adverse impacts of human activities, voluntary guidelines for environmental assessment, and marine spatial planning (2012)</i>—Impacts of anthropogenic underwater noise on marine and coastal biodiversity.</p>

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Decision XII/23. *Marine and coastal biodiversity: Impacts on marine and coastal biodiversity of anthropogenic underwater noise and ocean acidification, priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems, and marine spatial planning and training initiatives* (2014)—Implement actions that address potential significant adverse impacts of anthropogenic underwater noise.

Decision XIII/10. *Addressing impacts of marine debris and anthropogenic underwater noise on marine and coastal biodiversity* (2016)—Mentions the report “Scientific Synthesis of the Impacts of Underwater Noise on Marine and Coastal Biodiversity and Habitats.”

It also refers to the voluntary practical guidance on preventing and mitigating the impacts of marine debris and call for action.

Decision 14/4. *Health and biodiversity* (2014)—Parties to promote dialogue among ministries and agencies responsible for health sectors, environment, pollution including marine plastic debris, pesticides,

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nutrition, food security, climate change adaptation and mitigation by mainstreaming biodiversity and health links.

Decision 15/24. *Conservation and sustainable use of marine and coastal biodiversity (2022)*—Parties to support the development of an ambitious international legally binding instrument on plastic pollution that addresses the full life cycle of plastics.

Decision x/13. *New and emerging issues (2010)*—Considers impact on ocean acidification.

Decision x/33. *Biodiversity and climate change (2010)*—About assessing the impacts of climate change on biodiversity; to identify and address the impact of climate change and ocean acidification on biodiversity and ecosystem services.

Decision xi/18. *Marine and coastal biodiversity: Sustainable fisheries and addressing adverse impacts of human activities, voluntary guidelines for environmental assessment, and marine spatial planning*

Target 8: APX.1: Specific work plan on coral bleaching

Minimize impacts of *Areas of work:*

- 1. Management actions and strategies to support reef resilience, rehabilitation and recovery
- 2. Information gathering
- 3. Capacity-building
- 4. Policy development/implementation
- 5. Financing

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(2012)—Deliberates on the workplan on coral bleaching, and recognizes the need for the application of ecosystem-based adaptation measures and to assess the impact of ocean acidification on biodiversity and ecosystem functions.

The same decision takes note of the elements in Annex III to document UNEP/CBD/SBSTTA/16/6 as guidance for practical responses to the impacts of ocean acidification.

Decision XII/23. *Marine and coastal biodiversity: Impacts on marine and coastal biodiversity of anthropogenic underwater noise and ocean acidification, priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems, and marine spatial planning and training initiatives* (2014)—Welcomes the updated synthesis of the impacts of ocean acidification on marine biodiversity. Parties to continue monitoring ocean acidification and reduce the stressors.

The same decision adopted the priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems (contained in

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the annex of the decision), as an addendum to the marine and coastal POW (para 11).

Decision XIII/4. Biodiversity and climate change (2016)—Reducing biodiversity impacts of climate change mitigation and adaptation measures; ensure that any activity related to ocean fertilization are based on science and in accordance with the precautionary approach and no climate-related geo-engineering activities that may affect biodiversity take place.

Decision XIII/11. Voluntary specific workplan on biodiversity in cold water areas within the jurisdictional scope of the Convention (2016)—Adopted the referred workplan.

Decision 14/5. Biodiversity and climate change (2018)—On biodiversity and climate change; adopted the voluntary guidelines for the design and effective implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction also applicable to coastal and marine ecosystems.

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Target 9: Management of wild species is sustainable and benefits people.

Decision x/29. *Marine and coastal biodiversity* (2010)—Addresses impacts of unsustainable fishing such as destructive fishing practices, overfishing, and IUU fishing on marine and coastal biodiversity.

Decision x/32. *Sustainable use* (2010)—Parties to coordinate with sectors, including fisheries, to fully account for the value of biodiversity and ecosystem services in decision-making.

Decision xi/18. *Marine and coastal biodiversity: Sustainable fisheries and addressing adverse impacts of human activities, voluntary guidelines for environmental assessment, and marine spatial planning* (2012)—Addressing biodiversity considerations in sustainable fisheries.

Decision xiii/3. *Strategic actions to enhance the implementation of the Strategic Plan for Biodiversity 2011–2020 and the achievement of the Aichi Biodiversity Targets, including with respect to mainstreaming and the integration of biodiversity within and across sectors* (2016)—Provides several recommendations on biodiversity mainstreaming into fisheries addressing also the human dimensions.

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<p>Decision 14/12. <i>The Rutzolijirixaxik Voluntary Guidelines for the Repatriation of Traditional Knowledge Relevant for the Conservation and Sustainable Use of Biological Diversity (2018)</i>—Adopted the referred Guidelines, which is also applicable to traditional knowledge related to fishing.</p>	
<p>Decision x/29. <i>Marine and coastal biodiversity (2010)</i>—Addresses the impacts of unsustainable fishing such as destructive fishing practices, overfishing, and IUU fishing on marine and coastal biodiversity.</p>	
<p>Decision x/32. <i>Sustainable use (2010)</i>—To coordinate with sectors, including fisheries, to fully account for the value of biodiversity and ecosystem services in decision-making.</p>	
<p>Decision xi/18. <i>Marine and coastal biodiversity: Sustainable fisheries and addressing adverse impacts of human activities, voluntary guidelines for environmental assessment, and marine spatial planning (2012)</i>—Addressing biodiversity considerations in sustainable fisheries.</p>	

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- Decision XI/29. Global Taxonomy Initiative (2012)**—Produce and continue to share taxonomic tools and risk-analysis tools in the context of invasive alien species and biosafety, to identify and analyze species and traits that are useful to agriculture and aquaculture.
- Decision XIII/3. Strategic actions to enhance the implementation of the Strategic Plan for Biodiversity 2011–2020 and the achievement of the Aichi Biodiversity Targets, including with respect to mainstreaming and the integration of biodiversity within and across sectors (2016)**—Provides recommendations on mainstreaming biodiversity into fisheries and aquaculture for sustainability.
- Target II:** Nature's contributions to people are restored, maintained and enhanced—nature based solutions.
- PE. 2:** Marine and coastal living resources
- OO. 2.3:** gather information, build capacity to mitigate the effects of, and promote policy development, implementation strategies and actions to address:
- (i) the biological and socio-economic consequences of physical degradation and destruction of key marine and coastal habitats
 - (ii) the impacts of mangrove forest destruction, coral bleaching and related mortality on coral-reef ecosystems and the *human communities which depend upon coral-reef services*
- Decision 15/24. Conservation and sustainable use of marine and coastal biodiversity (2022)**—Parties to strengthen efforts toward ocean accounting and economic valuation of ecosystem services provided.

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<p>Target 12: Urban green and blue spaces enhanced for human well-being.</p>	<p>No previous CBD decision addressed blue spaces for human well-being specifically.</p>
	<p>Decision XI/18. Marine and coastal biodiversity: <i>Sustainable fisheries and addressing adverse impacts of human activities, voluntary guidelines for environmental assessment, and marine spatial planning</i> (2012)—Took note of the voluntary guidelines for the consideration of biodiversity in environmental impact assessments and strategic environmental assessments annotated specifically for biodiversity in marine and coastal areas, including in ABNJ. The implementation of these guidelines would contribute to the quality of blue spaces.</p>
<p>Target 13: Fair and equitable sharing of benefits from genetic resources, digital sequence information and associated traditional knowledge.</p>	<p>COP decisions related to genetic resources and digital sequence information apply to terrestrial, inland waters and marine genetic resources (within national jurisdiction).</p>
<p>PE. 2: Marine and coastal living resources OO. 2.2: availability to Parties of information on marine genetic resources from publicly available information sources. <i>Activity:</i> (a) compile and synthesize information on the methods for the identification, assessment and monitoring of genetic resources of the seabed and ocean floor and subsoil thereof, beyond the limits of</p>	

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national jurisdiction, and information on their status and trends including identification of threats to such genetic resources and the technical options for their protection.

Target 14:

The multiple values of biodiversity are integrated into decision-making at all levels.

Decision X/32. Sustainable use (2010)—Coordinate with sectors, including fisheries, to fully account for the value of biodiversity and ecosystem services in decision-making.

Decision XI/18. Marine and coastal biodiversity: Sustainable fisheries and addressing adverse impacts of human activities, voluntary guidelines for environmental assessment, and marine spatial planning (2012)—Addressing biodiversity considerations in sustainable fisheries.

The same decision took note of the referred guidelines for the consideration of biodiversity in environmental impact assessments and strategic environmental assessments annotated specifically for biodiversity in marine and coastal areas, including in.

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Decision XIII/3. *Strategic actions to enhance the implementation of the Strategic Plan for Biodiversity 2011–2020 and the achievement of the Aichi Biodiversity Targets, including with respect to mainstreaming and the integration of biodiversity within and across sectors* (2016)—Deliberates on cross-sectoral mainstreaming, and with respect to sectoral mainstreaming applicable to the marine environment, it provides recommendations on fisheries and aquaculture and tourism.

Decision 14/3. *Mainstreaming of biodiversity in the energy and mining, infrastructure, manufacturing and processing sectors* (2018)—Deliberates on mainstreaming of biodiversity in the energy, mining, infrastructure, manufacturing and processing sectors.

Decision 14/10. *Other matters related to marine and coastal biodiversity* (2018)—Parties to increase efforts to address the potential impacts of deep-seabed mining on marine biodiversity.

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Decision 15/24. *Conservation and sustainable use of marine and coastal biodiversity (2022)*—Parties to ensure that before deep seabed mineral exploitation activities take place, the impacts on the marine environment and biodiversity are sufficiently researched and the risks understood, the technologies and operational practices do not cause harmful effects to the marine environment and biodiversity, and appropriate rules, regulations and procedures are put in place by the International Seabed Authority.

Target 15: Businesses assess and disclose biodiversity dependencies, impacts and risks, and reduce negative impacts.

No marine and coastal COP decision (at least since 2010) has addressed this issue to date.

Target 16: Sustainable consumption choices are enabled, and food waste reduced by half.

No marine and coastal COP decision (at least since 2010) has addressed this issue to date.

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<p>Target 17: Strengthen biosafety and distribute benefits of biotechnology.</p>	<p>PE. 4: Mariculture OO. 4.1: techniques to minimize adverse impact of mariculture <i>Activity:</i> (viii) prevent the inadvertent release of marine culture species and fertile polyploids, including, in the framework of the Cartagena Protocol on Biosafety, living modified organisms</p>	<p>No marine and coastal COP decision (at least since 2010) has addressed this issue to date.</p>
<p>Target 18: Reduce harmful incentives by at least US\$500 billion per year.</p>	<p>PE. 3: Marine and coastal protected areas OO. 3.4: monitoring of national and regional systems of M&C PAS <i>Activity:</i> (a) financial, technical and other support for the establishment of a global system of M&C PAS networks and the implementation, identification and removal of barriers and removal of perverse incentives for unsustainable activities</p>	<p>No marine and coastal COP decision (at least since 2010) has addressed this issue to date.</p>
<p>Target 19: Financial resources increased to US\$200 billion per year, including US\$30 billion through international finance.</p>	<p>PE. 2: Marine and coastal living resources OO. 2.1: ecosystem approaches <i>Activity:</i> (h) eliminate destructive fishing practices, and restore and maintain fisheries stocks to sustainable levels, including through financial assistance ... for improved enforcement, surveillance and patrolling</p>	<p>Marine and coastal decisions would not address resource mobilization <i>per se</i> since this issue is cross-cutting and is dealt with by dedicated decisions.</p>

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<p>OO. 3-4: monitoring of national and regional systems of M&C PAS</p> <p><i>Activity:</i> (a) financial, technical and other support for the establishment of a global system of M&C PAS networks and the implementation including ... removal of perverse incentives for unsustainable activities</p> <p>Section IV: Enabling activities:</p> <p>(i) mobilization of financial resources and identification of additional funding mechanisms</p> <p>(j) financial and technical support by the international community</p>		<p>Target 20: Capacity-building and development, technology transfer, and technical and scientific cooperation for implementation are strengthened.</p>	<p>PE. 1: Integrated marine and coastal area management (IMCAM)</p> <p>OO. 1-1: policy instruments and strategies, including building of capacity</p> <p>PE. 2: Marine and coastal living resources</p> <p>OO. 2-1: approaches to the conservation and sustainable use</p> <p><i>Activity:</i> (e) capacity-building at local, national and regional levels, including local and traditional knowledge</p>
			<p>All of the marine and coastal biodiversity decisions mentioned above have identified capacity-building needs with respect to the subject matters addressed by them. For instance, decision XI/23 Marine and coastal biodiversity: Impacts on marine and coastal biodiversity of anthropogenic underwater noise and ocean acidification, priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems, and marine spatial planning and training initiatives (2014) encourages Parties and other actors to build “capacity in developing</p>

(cont.)

- 00. 2.2:** information on marine genetic resources in ABNJ and on M&C genetic resources under national jurisdiction from publicly available information sources.
- 00. 2.3:** information, capacity-building to mitigate the effects of, and promotion of policy development, implementation strategies and actions to address:
- (i) biological and socio-economic consequences of physical degradation and destruction of M&C habitats
 - (ii) impacts of mangrove forest destruction and coral bleaching and related mortality on coral-reef ecosystems and the human communities
- PE. 3: Marine and coastal protected areas**
- 00. 3.4:** support for and facilitate monitoring of national and regional systems of M&C PAS
- Activity:* (c) transfer of technology and collaboration with regional initiatives to fund activities
- PE. 6. General**
- 00. 6.1:** database of initiatives—cooperative approach
- regions where the awareness and scientific capacity to address” underwater noise.
- Several decisions also refer to the Sustainable Ocean Initiative as a source of meaningful capacity-building.
- The EBSA process also provides an important vehicle for capacity building, and the EBSA decisions have reflected on this.

(cont.)

<p>Target 21: Data, information and knowledge for decision-making is available.</p>	<p>PE. 1: Integrated marine and coastal area management (IMCAM) OO. 1.3: guidelines for ecosystem evaluation and assessment, paying attention to the need to identify and select indicators</p>	<p>Most of the above mentioned decisions identify sources of data, data needs, or build on best available knowledge in relation to the specific subject matters addressed by those decisions.</p>
	<p><i>Activities:</i> ... (d) mechanisms for research, monitoring and assessment (e) exchange of information and experience (f) collaboration with relevant organizations to develop guidelines (g) establishment of a regular process under the United Nations for global reporting and assessment of the state of the marine environment, including socio-economic aspects</p>	
	<p>PE. 2: Marine and coastal living resources OO. 2.1: ecosystem approaches to the conservation and sustainable use <i>Activity:</i> (b) exchange of information and experience</p>	

(*cont.*)

PE. 3: Marine and coastal protected areas

OO. 3.5: research and monitoring activities that reflect identified global knowledge gaps and priority information needs

Activity: (c) exchange of information on research, management issues and problems

PE. 5: Invasive alien species

OO. 5.1: understanding of the pathways and the causes of the introduction of alien species and their impact

Activity: (a) information, data and case studies

PE. 6. General

OO. 6.1: database of initiatives on programme elements

(cont.)

<p>Target 22: Ensure participation, justice, and rights for indigenous peoples and local communities, women, youth persons with disabilities and environmental defenders.</p>	<p>PE. 3: Marine and coastal protected areas OO. 3-3: effective management <i>Activity:</i> (c) stakeholder and indigenous and local community participation</p> <p>PE. 4: Mariculture OO. 4-1: techniques which minimize adverse impact of mariculture on marine and coastal biological diversity <i>Activity:</i> (a) (i) environmental impact assessments, or similar assessment and monitoring procedures, for mariculture developments, ... to 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 communities.</p>	<p>All of the previously mentioned decisions are relevant. With respect to Target 3, decision 14/8 (2018), Annex II containing the 'Voluntary guidance on effective governance models for management of protected areas, including equity, taking into account work being undertaken under Article 8(j) and related provisions.'</p>
<p>Target 23: Implementation follows a gender-responsive approach.</p>	<p>Other CBD decisions on Article 8(j) also apply to the marine environment.</p> <p>Decision XI/14. Article 8(j) and related provisions (2012)—Identify best practices with full and effective participation of Indigenous Peoples and Local Communities (IP/LCs) including in establishment, governance, management of MPAs. Apply traditional knowledge in MPAs, affirm and promote customary sustainable use in MPAs.</p>	<p>Other CBD decisions on Article 8(j) also apply to the marine environment.</p> <p>Decision XI/14. Article 8(j) and related provisions (2012)—Identify best practices with full and effective participation of Indigenous Peoples and Local Communities (IP/LCs) including in establishment, governance, management of MPAs. Apply traditional knowledge in MPAs, affirm and promote customary sustainable use in MPAs.</p> <p>Decision 15/11. Gender Plan of Action (2022)—Adopted the most recent Gender Plan of Action which is applicable to all ecosystems.</p>

Annex B. Headline, Component and Complementary Indicators, Marine and Coastal Specific, for Assessing Progress of the Attainment of Global Biodiversity Goals and Targets of the GBF (CBD Decision 15.5).
 (x = Indicator Not Defined or Not Specific to the Marine Realm)

GBF—goals and targets	Headline indicators	Proposed component indicator	Proposed complementary indicator
	(High-level indicators, which capture the overall scope of the goals and targets)	(Optional indicators that, together with the headline indicators, cover components of the goals and targets)	(Optional indicators for thematic or in-depth analysis of each goal and target)
Goal A	x	x	Continuous global mangrove forest cover Trends in mangrove forest fragmentation Trends in mangrove extent Live coral cover Hard coral cover and composition Global coral reef extent Global seagrass extent (seagrass cover and composition) Global saltmarsh extent Macroalgal canopy cover and composition Cover of key benthic groups Fleshy algae cover

(cont.)

			Ocean Health Index
			Extent of physical damage indicator to predominant seafloor habitats
			physical damage
			Changes in plankton biomass and abundance
			Fish abundance and biomass
			Marine species richness
		x	Ocean acidification
	x		Change in the quality of coastal water ecosystems over time
			Maximum fish catch potential
Goal C	x	x	
Goal D	x	x	Joint scientific papers published (in Ocean Biodiversity Information System (OBIS)) by sector
Target 1	1.1 Percentage of land and sea area covered by biodiversity-inclusive spatial plans	x	Habitat patches located within marine protected areas or integrated coastal zone management (ICZM)
			Other spatial management plans (not captured as ICZM or marine spatial planning)
			Number of countries using ocean accounts in planning processes

<i>(cont.)</i>				
Target 2	x	x	x	
Target 3	x	x		Proportion of terrestrial, freshwater and marine ecological regions which are conserved by protected areas or other effective area-based conservation measures
Target 4	x	x	x	
Target 5		5.1 Proportion of fish stocks within biologically sustainable levels	x	Red List Index (for internationally traded species and for migratory species) Marine Stewardship Council (MSC) fish catch Total catch of cetaceans under the International Convention for the Regulation of Whaling By-catch of vulnerable and non-target species Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing Proportion of terrestrial, freshwater and marine ecological regions which are conserved by protected areas or other effective area-based conservation measures

(cont.)

				Implementation of measures designed to minimize the impacts of fisheries and hunting on migratory species and their habitats
				Number of MSC Chain of Custody Certification holders by distribution country
Target 6	x	x		
Target 7			7.1 Index of coastal eutrophication potential	Trends in the amount of litter, including microplastics, in the water column and on the seafloor Index of coastal eutrophication; Plastic debris density Underwater noise pollution
Target 8	x	x		Index of coastal eutrophication
Target 9	x	x		Proportion of fish stocks within biologically sustainable levels Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing Number of MSC Chain of Custody Certification holders by distribution country Spawning stock biomass (related to commercially exploited species)

(<i>cont.</i>)				
Target 10	x	x	x	
Target 11	x	x	x	
Target 12	12.1 Average share of the built-up area of cities that is green/blue space for public use for all	x	x	
Targets 13 to 20	x	x	x	
Target 21	x	x	x	Growth in marine species occurrence records accessible through the OBIS/ World Association of Zoos and Aquariums bio-literacy survey (biodiversity literacy in global zoo and aquarium visitors)
Targets 22 and 23	X	x	x	