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## The Post-2020 Global Biodiversity Framework: Identifying Indicators for Measuring Progress Towards Effective Marine Protected Areas and Other Effective Area-Based Conservation Measures

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I. Background.....	1
II. Text recommendations to GBF draft Target 3 and its component, headline indicators, and component indicators.....	2
III. Protected Area Management Effectiveness and the Global Database on Protected Area Management Effectiveness (GD-PAME).....	4
IV. MPA Guide: importance of ensuring protected and conserved areas are effective and deliver biodiversity outcomes.....	5
V. Conclusion .....	6
References .....	7

### I. Background.

Substantively achieving a global target of protecting and conserving at least 30% of the global ocean<sup>1</sup> by 2030 (hereafter ‘30x30’) will not be possible if we only measure the areal extent or coverage of protected areas and conserved areas (also known as other effective area-based conservation measures (OECMs)). It will require **global uptake of measures related to effectiveness, including outcomes, for all area-based conservation measures attributed towards 30x30**. Fortunately, many Parties to the UN Convention on Biological Diversity (CBD) have already intervened during the Post-2020 Global Biodiversity Framework (GBF) negotiations in favor of measuring effectiveness.

As of August 2021, the headline indicator for draft GBF Target 3 (which includes 30x30) focuses on coverage, with a reference to “by effectiveness”, and proposes Protected Area Management Effectiveness (PAME) as a component indicator. This likely refers to a breakdown of reporting according to data contained in the Global Database on Protected Area Management Effectiveness (**GD-PAME**). While well-intentioned, and part of the existing reporting framework for protected and conserved areas, this **alone would be wholly insufficient to measure the effectiveness** of area-based conservation. For example, while GD-PAME records whether a management effectiveness assessment has been undertaken, it **offers no**

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<sup>1</sup> Despite the focus on marine sites, the recommendations in this suggestion are equally relevant to protected and conserved areas in non-marine ecosystems as explained below.

**information on assessment results.** GD-PAME also does **not offer data on whether a protected and conserved area is well governed**, including equitability for local people, or achievement of conservation outcomes.

In fact, some of the **best proxies for the likelihood of positive outcomes for biodiversity** are **the stage of establishment** of a protected or conserved area and its **level of protection**, meaning degree to which the area is **safeguarded from environmentally damaging activities** like industrial fishing or seabed mining. Proxies like this are especially helpful in cases where the ability to monitor biodiversity outcomes may be limited. This information is further detailed in the recently published **MPA Guide** (Grorud et al., 2021), which provides a tool that should be used for **reporting on targets and indicators** relating to protected areas and OECMs.

## II. Text recommendations to GBF draft Target 3 and its component, headline indicators, and component indicators.

The table below includes our recommended edits to the current draft Target 3 of the GBF along with its components, headline indicator, and component indicators as outlined in [CBD/WG2020/3/INF/2](#) (August 5, 2021).

Target	Rationale
<p><b>T3.</b> Ensure that at least 30 per cent globally of <b><u>terrestrial, including freshwater, and of marine ecosystems</u></b> <del>land areas and of sea areas</del>, especially areas of particular importance for biodiversity and its contributions to people, are <b><u>effectively and equitably</u></b> conserved <b><u>and managed</u></b> through <del>effectively and equitably managed</del>, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, <b><u>which prohibit environmentally damaging activities</u></b> and <b><u>are</u></b> integrated into the wider landscapes and seascapes.</p>	<ul style="list-style-type: none"> <li>• Target should specifically mention freshwater areas, which are under critical threat; alternatively “land areas” must be defined in the glossary as including freshwater.</li> <li>• Protected areas and OECMs must not only be effectively and equitably managed; they must also be EFFECTIVE in delivering conservation objectives and outcomes. A poorly designed and lightly or minimally protected area is likely to deliver limited benefits regardless of how well it is managed.</li> <li>• Under the original CBD target Aichi 11, many protected areas submitted toward the 10% marine goal allowed mining, oil and gas, industrial-scale fishing (now addressed in <a href="#">IUCN motion 66</a> adopted in 2020), and more. New Target 3 must call for all sites attributed toward 30x30 to be free from such environmentally damaging activities, otherwise there is no beneficial difference from areas outside those counted towards the 30x30 target.</li> </ul>

Component	Headline indicator	Component indicator	Rationale
3.1 Area protected and conserved	3.0.1 Coverage <u>and effectiveness</u> of Protected areas and OECMS ( <del>by effectiveness</del> )		Measuring area coverage (percentage) alone will not be meaningful unless effectiveness is also assessed, this edit offers a streamlining recommendation.
3.2 Areas of particular importance for biodiversity protected and conserved		3.2.1 Protected area coverage of key biodiversity areas ( <u>KBAs</u> ), <u>Vulnerable Marine Ecosystems (VMEs)</u> , <u>Ecologically or Biologically Important Marine Areas (EBAs)</u> (SDG 14.5.1 and 15.1.2)	Component indicator must take into account important biodiversity areas recognised through systems other than just KBAs.
Component	Headline indicator	Component indicator	Rationale
3.3 Effective management and equitable governance of the system of protected areas and other effective area-based conservation measures		3.3.1 Protected Area Management Effectiveness (PAME) (Protected Planet) ( <u>e.g. ranking/qualitative system</u> )	A generic reference to PAME seems incomplete and could benefit from additional detail on the degree to which sites are effectively managed, threats reduced, and ecological and social objectives achieved. This could be done using an approach similar to that used by OSPAR, Indonesia, and other countries/regions, where the results of individual PAME assessments are synthesised to produce a simple scoring system. A method could potentially be developed using, for example, the results of PAME assessments such as METT4, IMET, Green list, etc.
		<u>3.3.2 Stage of establishment (e.g. tentatively WDPA using MPA Guide)</u>	Four additional component indicators should be added for component 3.3.  Outcomes are as critical as the percentage of coverage, and one important proxy for the likelihood of positive outcomes for biodiversity is the stage of establishment of a protected or conserved area.

Component	Headline indicator	Component indicator	Rationale
		<b><u>3.3.3 Level of protection (e.g., tentatively WDPA using MPA Guide)</u></b>	Another very important proxy for the likelihood of positive outcomes for biodiversity is the level of protection, meaning degree to which the area is safeguarded from environmentally damaging activities like industrial fishing or seabed mining.
<b>3.4</b> Connectivity within the system of protected areas and other effective area-based conservation measures		3.4.1 Species Protection Index (GEOBON)	No changes proposed.
<b><u>3.5 Ecological representation</u></b>		<b><u>3.5.1 Protected area coverage by ecosystem type (e.g. mountains, coral reefs, forests, deserts, or more specific classifications)</u></b>	A new component and component indicator should be added to address ecological representivity, i.e. the need to ensure representation of key ecosystem types.

In the next section of our brief, we expand on several key elements of our recommendation outlined in the above table.

### III. Protected Area Management Effectiveness and the Global Database on Protected Area Management Effectiveness (GD-PAME).

Protected area management effectiveness (PAME) is a key component of GBF draft Target 3. We understand the draft’s reference to protected area management effectiveness in component indicator 3.3.1 is intended to imply the **Global Database on PAME (GD-PAME)**, a searchable database providing data on **site-level management effectiveness assessments** submitted by a wide range of government and non-governmental organizations to the UNEP-WCMC. While GD-PAME records whether a management effectiveness assessment has been undertaken, it **offers no information on assessment results**. GD-PAME also **does not store data on whether a protected and conserved area is well governed**, including equitability for local people, or achieving conservation outcomes. Additionally, many completed assessments are never actually submitted to the GD-PAME, the record of which is therefore **an underestimate**. This is often because of political sensitivities (e.g. concern that poor performance will result in the withdrawal of funding) or lack of reporting capacity (Geldmann et al., 2020).

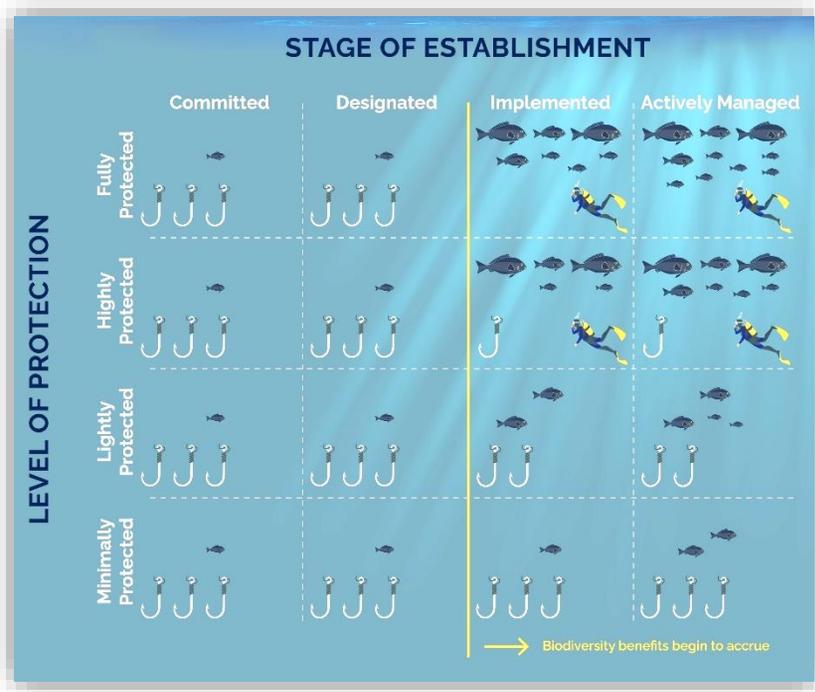
Numerous methodologies, tools and indicators have been developed to measure protected area management effectiveness, ranging from detailed, **resource-intensive approaches** for specific purposes such as **World Heritage Sites**, to more simple approaches based on scorecards or questionnaires, such as the **METT** (Stolton et al., 2019), and the **IUCN Green List Standard** (Hockings et al., 2019). Other methods have been developed for **regional** (e.g. Regional Seas Conventions, such as OSPAR in the NE Atlantic (OSPAR 2007) and the Cartagena Convention in the Caribbean (Wells et al., 2016)) **and national purposes** (e.g. France (Pelletier, 2020), Indonesia (Kementerian Kelautan dan Perikanan, 2020)), or for particular aspects of PAME, such as **governance and equity** (e.g. SAGE, GAPA, SAPA (Franks et al., 2021)). Additional methods and approaches are in development (e.g. EU Marine Natura programme (Stelljes et al., in press)).

Given the shortcomings of only focusing on GD-PAME, we recommend above that the component indicator 3.3.1 refer to a “ranking/qualitative system,” meaning assessments that produce a simple scoring methodology or other types of assessments such as METT4, IMET, IUCN Green list, etc. We also propose additional component indicators 3.3.2 and 3.3.3, discussed next.

#### IV. MPA Guide: importance of ensuring protected and conserved areas are effective and deliver biodiversity outcomes.

Expansion of the global system of protected areas and other effective area-based conservation measures (OECMs) will only be **successful if sites are protected from environmentally damaging activities, well governed, equitable, soundly designed, effectively managed and deliver positive outcomes** for marine biodiversity and society. One important new tool for measuring and recording management effectiveness is the newly launched **MPA Guide** (Grorud et al., 2021). Developed through a global participatory process with MPA practitioners and stakeholders, the *MPA Guide* categorizes MPAs according to whether they are **committed, designated, implemented or actively managed**, as well as if they are **minimally, lightly, highly, or fully protected**. Each successive stage of establishment is an important milestone in improving management effectiveness, but in most cases little or no actual conservation benefit is predicted to be realized until the MPA is implemented.

A highly or fully protected MPA (or area within an MPA) that is implemented or actively managed, in many cases, can be expected to **result in recovery of previously exploited species and habitats, stronger potential for carbon storage and adaptation to climate** and other environmental changes, and greater **opportunities for livelihoods** that depend upon a healthy ecosystem, among other outcomes (Sala et al., 2018; Kriegl et al., 2021). Positive impacts on **abundance** (i.e., density of individuals per area), **biomass, size of individuals and diversity** (i.e. number of species) have been found in such sites when compared to a time prior to implementation or equivalent unprotected sites (Gaines et al., 2010). Using these biological metrics to indicate the degree of MPA effectiveness, **positive correlations have been found** between effectiveness and level of protection. Positive correlations have also been found between effectiveness and enabling conditions (e.g. size and age of the MPA, extent of



enforcement and connectivity) (Claudet et al., 2010; Edgar et al., 2014) and social conditions (e.g. transparency and collaboration with local rights holders, stakeholders, and communities).

Ideally UNEP-WCMC Protected Planet reporting (as mandated via the CBD) should evolve to account not just for the percentage coverage but also **effectiveness, stage of establishment, and degree of protection**, all of which are critical elements that Parties must advocate for inclusion in the final Target 3, as well as its component, headline indicators, and component indicators.

Although the *MPA Guide* has been designed specifically for MPAs, the framework (i.e., the four core elements: (1) Level of Protection based on impact of activities that occur in an area; (2) Stage of Establishment based on degree to which conservation measures are active; (3) Enabling Conditions for success in the process of design, management and governance; and (4) the conservation Outcomes that can be expected based on the Level, Stage, and Conditions) is **likely to apply generally to non-marine protected areas, since these issues of quality and effectiveness are relevant to all designated areas.**

Further work is needed to test the appropriateness of the framework to non-marine areas. Equally, the *MPA Guide* framework could potentially apply to OECMs; further work will be required to provide the necessary guidance.

## V. Conclusion

Achieving a global target of protecting and conserving at least 30% of the global ocean by 2030 will succeed only if sites are protected from environmentally damaging activities, are well governed, equitable, soundly designed, effectively managed and deliver positive outcomes for marine biodiversity and people. GD-PAME, a database on site-level management effectiveness, is useful but insufficient for it offers no information on assessment results nor on quality of governance. Scoring methodologies (like METT4 or IUCN Green List) and other systems (e.g., under OSPAR, SAGE, GAPA, SAPA, others) would offer additional monitoring benefits. Further, as outlined in the *MPA Guide*, some of the best proxies for positive outcomes for biodiversity are the stage of establishment of a protected or conserved area and level of protection. GBF's Target 3 monitoring framework must incorporate *MPA Guide* reporting elements. Finally, a new component and component indicator should be added to Target 3 to address ecological representivity and the need to ensure representation of key ecosystem types like mountains, coral reefs, forests, etc.

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