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EXPERT WORKSHOP ON MARINE PROTECTED
AREAS AND OTHER EFFECTIVE AREA-BASED
CONSERVATION MEASURES FOR ACHIEVING
AICHI BIODIVERSITY TARGET 11 IN MARINE
AND COASTAL AREAS

Montreal, Canada, 6-9 February 2018

**BACKGROUND DOCUMENT ON CROSS-CUTTING ISSUES AND KEY MESSAGES
RELATED TO THE ACHIEVEMENT OF TARGET 11 THROUGH THE USE OF
MARINE PROTECTED AREAS AND OTHER EFFECTIVE AREA-BASED
CONSERVATION MEASURES**

Note by the Executive Secretary

1. The Executive Secretary is circulating herewith, for the information of participants in the Expert Workshop on Marine Protected Areas and Other Effective Area-based Conservation Measures for Achieving Aichi Biodiversity Target 11 in Marine and Coastal Areas, a background document on cross-cutting issues and key messages related to the achievement of Target 11 through the use of marine protected areas and other effective area-based conservation measures. The document was prepared by a consultant, as commissioned by Secretariat of the Convention on Biological Diversity, with financial support from the Government of Canada.

2. The document is being circulated in the form and language in which it was received by the Secretariat.

Cross-Cutting Issues and Key Messages Related to the Achievement of Target 11 through the Use of Marine Protected Areas and Other Effective Area-Based Conservation Measures

Background Information Document for the

CBD Expert Workshop on Marine Protected Areas and Other Effective Area-based Conservation Measures for Achieving Aichi Biodiversity Target 11 in Marine and Coastal Areas

(6 - 9 February 2018 - Montreal, Canada)

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Executive Summary

Marine protected areas (MPAs) are accepted as one tool to protect biodiversity, mitigate human impacts, restore species diversity and ecosystem function and provide an insurance policy against broad scale climate impacts. The Convention on Biological Diversity (CBD) Aichi Target 11 commits Parties to protect 10% of their marine and coastal environment by 2020. Progress is being made towards this target, with more than a doubling of MPA coverage since the adoption of Target 11 in 2010. Efforts to achieve Aichi Target 11 also assist with meeting other Aichi Targets, including 6 (Sustainable fisheries), 10 (Coral reef protection), 12 (Prevent extinction), 14 (Ecosystem Services) and 18 (Traditional Knowledge and Indigenous Rights), among others.

Target 11 can be met both by marine protected areas (MPAs), as defined by the Convention on Biological Diversity and where the primary objective is conservation of biodiversity, and “other effective area-based conservation measures” (OEABCM), where biodiversity outcomes are achieved, but are not considered as protected areas for various reasons. OEABCMs can be considered as additional to marine protected areas (MPAs), but not a subset of them. International guidelines for OEABCMs have not yet been agreed, however draft guidelines have been produced by an IUCN Task Force.

OEABCMs can result from sector-based initiatives and can be simply, although not exclusively, categorized into non-fishery and fishery measures where the outcome of *in situ* conservation must be demonstrated. Some area-based fisheries measures may be considered as OEABCMs if they fulfill the intent of Target 11 regarding *in-situ* conservation objectives and the goals of the CBD. The onus on ensuring that the OEABCM is protecting biodiversity is a critical aspect of including any such areas towards meeting Target 11. Indigenous Community Conserved Areas (ICCAs) and Locally Managed Marine Areas (LMMAs), depending on elements of biodiversity protection within the designated area, can contribute to ecological and social benefits including protection of biodiversity and ecosystem services as well as access rights, food security and co-governance.

Concerns remain about the strength of protection in many of the areas being reported as protected and more work needs to be done to set clear standards and simplify reporting mechanisms through which effectiveness can be measured. Effective protection elements include design issues relating to both individual sites and protected area systems; adequacy and appropriateness of management systems and processes; and delivery of protected area objectives including conservation of values. All areas positioned as part of meeting the Target should be evaluated through the same effectiveness standard.

As MPAs and OEABCMs are being implemented, a broader understanding of elements to achieve biodiversity conservation is emerging. Often, large, long lasting and no-take MPAs delivering maximum benefits to ecological outcomes, while stakeholder inclusion, co-governance and clearly defined economic benefits or economic alternatives are key elements of achieving social outcomes. Conservation objectives are also more likely to be met if governance and management processes are agreed across all stakeholders.

Gaps exist in reporting on effective protection, accepted indicators for equity of protected area measures, connectivity, climate change mitigation as well as indicators to assess how MPAs and OEABCMs can be assessed as integrating into the broader seascape. For existing and new MPAs

and OEABCMs, qualitative and quantitative measures of effectiveness must be a focus going forward, with a commitment to strengthening protection and meeting global standards, in order to stem the tide of marine and coastal biodiversity loss. Considerations for financial mechanisms and capacity for States to be able to ensure effective protection, through meeting MPA objectives and measuring outcomes should be made to ensure both equity and ability for all States to achieve meaningful conservation of biological diversity, and maximize ecological and social outcomes.

1. Introduction

In response to a growing number of threats to the marine environment to improve biodiversity protections via international agreements and national laws and policies, parties to the Convention on Biological Diversity (CBD) agreed to a suite of Targets at the 2010 Conference of Parties (COP)¹, including a target of focused on area-based conservation of 10% of coastal and marine environments by 2020.² Spatial protections can achieve a variety of objectives, from species and habitat protection to biomass increases as well as foster equitable governance frameworks that can enable and support monitoring and enforcement. In addition, spatial protections are identified as a key component to achieving Target 5 of the Sustainable Development Goal 14 to “conserve and sustainable use the oceans, seas and marine resources.”³

This document provides an overview of existing frameworks for marine spatial protections, including other effective conservation measures, as input to an expert workshop⁴. Marine protected areas and other effective area-based conservation measures are addressed in more detail in additional background documents prepared for the meeting.^{5,6,7} This background document compiles existing information progress towards achieving Aichi Target 11, effectiveness of protected areas, governance, science basis and needs to achieve biodiversity and ecosystem functioning outcomes of spatial protections in coastal and marine environments. Finally, gaps in current knowledge and frameworks as well as reporting systems are discussed as a means to engage expertise in addressing these gaps.

2. Commitments to Biodiversity Protection: Aichi Target 11

The recognition that coastal and marine environments are increasingly under threat from human activity, and in some cases unlikely to recover losses of biodiversity and ecosystem function as a result of cumulative impacts has resulted in global commitments to protect 10% of the marine and coastal environment by 2020. This agreement is a key aspect of the CBD Aichi Targets agreed in 2010. Initial calls for a representative global network of marine protected areas by 2012 were made at the the World Summit on Sustainable Development (WSSD) in 2002, and reiterated at the IUCN World Parks Conference in 2004. Following a lack of progress towards the WSSD goal of 2020, the CBD COP 10 extended the initial deadline to 2020.

¹ CBD COP 10 <https://www.cbd.int/cop10/>

² Aichi Target 11 <http://www.un.org/sustainabledevelopment/oceans/>

³ Sustainable Development Goal 14 <https://sustainabledevelopment.un.org/sdg14>

⁴ <https://www.cbd.int/meetings/MCB-EM-2018-01>

⁵ CBD/MCB/EM/2018/1/INF/2

⁶ CBD/MCB/EM/2018/1/INF/3

⁷ Rees, S.E., Foster N.L., Langmead, O., Pittman, S., Johnson, D.E., (2016). Defining the qualitative elements of Aichi Biodiversity Target 11 with regard to the marine and coastal environment. A report to the Convention on Biological Diversity expert meeting compiled by the Marine Institute at Plymouth University, UK. p. 54

The Convention on Biological Diversity⁸ is the main international legal instrument addressing protected areas and has catalyzed State level legal frameworks that enable protection of terrestrial and marine environments. Article 2 of the Convention defined protected areas as “a geographically defined area, which is designated or regulated and managed to achieve specific conservation objectives”⁹ and Article 8 of the Convention contains specific references to protected areas by encouraging Parties to:

- Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity;
- Develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity;
- Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use;
- Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas;
- Cooperate in providing financial and other support for in-situ conservation, particularly to developing countries.¹⁰

As part of implementing the protected areas aspects of the Convention, the 2010 Aichi Targets included clear objectives for achieving specific percentages of area-based protection in the terrestrial and marine environment, through Target 11 which commits signatories to the Convention to:

By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape.¹¹

The recognition that progress is needed and implementation slow, has resulted in an increasing number of commitments linked to ocean protection including meeting the Aichi Target 11 as well as voluntary commitments relating to Target 5 as part of the UN Oceans Conference on SDG 14 (393 commitments by State and non-state actors as of January 2018).¹²

2.1 Progress Towards Commitments

Progress as measured by the United Nations Environment Program World Conservation Monitoring Centre (UNEP-WCMC) assessment of areas reported to the World Database on Protected Areas (WDPA) shows 6.97% of the world coastal and marine areas protected with 15,609 areas registered. As of January 2018, 16.03% of coastal and marine areas within national jurisdiction have been protected, with 1.18% on the high seas. Recent contributions towards

⁸ CBD Convention <https://www.cbd.int/convention/>

⁹ Article 2 of the Convention <https://www.cbd.int/convention/articles/default.shtml?a=cbd-02>

¹⁰ Article 8 of Convention <https://www.cbd.int/convention/articles/default.shtml?a=cbd-08>

¹¹ TARGET 11 - Technical Rationale extended (provided in document COP/10/INF/12/Rev.1) <https://www.cbd.int/sp/targets/rationale/target-11/>

¹² Registry of Voluntary Commitments for UN Oceans Conference: <https://oceanconference.un.org/commitments/>

meeting the Aichi Target have been made by the establishment of large marine protected areas greater than 100,000 km².¹³

States have made commitments to further protection, and if all national commitments are met by 2020, areas considered protected according to the CBD definition of protected areas, there would be a 4.0% increase in the global ocean. Marine protected area coverage for areas under national jurisdiction would reach 23.7%; global ocean coverage would reach 10.3%. More robust consideration of the contributions of other effective area-based conservation measures may help fill current gaps in the more than 11 million km² gap remaining to reach the minimum 10% coverage target for the whole ocean.¹⁴

For areas identified as Key Biodiversity Areas (KBAs)¹⁵, as of April 2016 19.3% of all KBAs were protected by MPAs as reported in the WDPA and as of October 2017, out of 232 marine ecological regions, 94 (or 41%) have reached 10% coverage by designated marine protected areas reported in WDPA. The ~ 8 million km² increase in MPA coverage between April 2016 and August 2017 will have increased the protection of many marine ecoregions and marine KBAs. Recognition and appropriate accounting of OECMS may further improve the coverage of marine ecological regions and KBAs.

The quality of protection is not reported to the WDPA, however the development of the IUCN Green List Standard for Protected Areas,¹⁶ which includes criteria for good governance, sound design and planning and effective management, can provide a mechanism to standardize protection criteria and incentivize continuous improvement of the strength protection of existing areas. Assessing effectiveness of areas reported to the WDPA database is also needed in order to ensure that spatial measures are achieving their stated objectives.

2.2 Relationship of Target 11 to Other Aichi Targets

Spatial protection in coastal and marine environments can achieve a myriad of biodiversity conservation objectives from habitat conservation, reduction of human impacts and direct threats to biodiversity and protection of important life history stages for depleted species. Generally marine protected areas have a variety of objectives, that can be met by reducing a single threat or reducing and managing multiple threats. Additionally, the mechanism and governance structures through which protected areas are established and implemented, can help meet Aichi Targets related to restoring ecosystem services, incorporating traditional knowledge and protecting social and cultural values.

Progress towards Target 11 can achieve outcomes in other Targets and related Strategic Goals. For marine protection, these explicitly include:

Under Strategic Goal B – to reduce the direct pressures on biodiversity and promote sustainable use:

Target 6: *By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem-based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species,*

¹³ UNEP-WCMC (2016) Protected Planet Report <https://www.protectedplanet.net/marine> (online portal with updated information accessed January 29 2018).

¹⁴ Information provided by the CBD Secretariat.

¹⁵ IUCN (2016). A Global Standard for Identification of Key Biodiversity Areas. Gland, Switzerland. 27p.

¹⁶ IUCN and WCPA (2016) OUCN Green List of Protected and Conserved Areas. Standard Version 1.1. Gland. Switzerland.

fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

Target 10: *By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.*

Clarifying where Target 11 measures can achieve Target 6 objectives and vice versa is a key aspect of providing guidance to States on what should count as effective *in situ* conservation. For example, a single species spatial measure may only restrict one activity, and may be effective in restoring a population, however it is unlikely that such measures will also meet standards required for biodiversity protection as a whole with effective management of all activities. Protected areas in coral reefs may assist in meeting Target 10, but only if these protected areas are effective at reducing multiple anthropogenic impacts.

Under Strategic Goal C - To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity:

Target 12: *By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.*

Under Strategic Goal D - Enhance the benefits to all from biodiversity and ecosystem services:

Target 14: *By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.*

Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building:

Target 18: *By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.*

State focus has been largely on designating areas that can be counted towards the 2020 10% Target (See Appendix 1 for a summary of State responses to CBD Notification 2017-084), establishing criteria and evaluating effectiveness for Target 11 areas as the specific quantitative Target is in theory, more measureable than the others. Other related Targets are more complex in terms of State and sub-State level legal and policy frameworks and may rely on metrics and outcomes developed by a variety of government departments as well as local and indigenous communities through customary or Indigenous Law and governance structures.

2.3 Further Integration of Area-Based Conservation with Other Relevant International Commitments and Agreements

As noted above, Target 5 of Sustainable Development Goal (SDG) 14 includes implementing coastal and marine protected areas.

The 1995 United Nations Fish Stocks Agreement (UNFSA)¹⁷ provides for an ecosystem approach to fisheries management, including protecting protection of biodiversity in the marine environment and conservation and management measures to restore depleted species – which can include spatial protections for the management of fisheries and habitats. The benefits to fisheries from marine protected areas are well established from a variety of ecosystems.¹⁸¹⁹

While there is evidence that spatial protections can contribute to climate change mitigation²⁰ and increased resilience of ecosystems to climate change impacts,²¹ specific links between marine protected areas as part of implementing the United Nations Framework Convention on Climate Change (UNFCCC)²² or “Paris Agreement” have yet to be made on any significant level.

Governance frameworks for protected or conserved areas that allow for effective co-management with indigenous peoples, or full governance by indigenous peoples, including access to food security and sustainable livelihoods can assist with implementation of the United Nations Declaration of Rights of Indigenous Peoples (UNDRIP).²³

To date, comprehensive reporting on how marine protected areas or other effective area-based conservation measures fulfill the obligations of other agreements or commitments does not exist. However, efforts to evaluate management effectiveness may begin to address other agreements particularly where there is an alignment of objectives.

3. Range of Area-Based Management Tools in Coastal and Marine Areas

The primary focus of States has been on incorporating protected areas under relevant national legislation as well as finding mechanisms through which to include areas where there may be biodiversity outcomes without the primary goal being conservation of biodiversity (See Appendix 2).

For areas where the primary purpose is biodiversity protection, the IUCN protected area categories and related guidance for the marine environment provide a baseline for categorizing the level of protection expected, based on a range of management measures or prohibitions on types of human activity. While the categories – ranging from no take areas to managed protected areas that allow multiple uses – provide a useful basis for assessing type of protection and identifying objectives, these categories are not currently being comprehensively applied nor reported upon as protected area are established. Secondly, criteria for “other effective conservation measures” that are not deemed protected and where biodiversity protection may not be the primary objective – but is an intended or unintended outcome have also yet to be agreed internationally. However, there is considerable literature and methods to assess qualitative

¹⁷ United Nations Fish Stocks Agreement, Article 5

http://www.un.org/depts/los/convention_agreements/texts/fish_stocks_agreement/CONF164_37.htm

¹⁸ Roberts, C., 2012. Marine ecology: reserves do have a key role in fisheries. *Current Biology*, 22(11), pp.R444-R446.

¹⁹ Sciberras, M., Jenkins, S.R., Mant, R., Kaiser, M.J., Hawkins, S.J. and Pullin, A.S., 2015. Evaluating the relative conservation value of fully and partially protected marine areas. *Fish and Fisheries*, 16(1), pp.58-77.

²⁰ Micheli, F., Saenz-Arroyo, A., Greenley, A., Vazquez, L., Montes, J.A.E., Rossetto, M. and De Leo, G.A., 2012. Evidence that marine reserves enhance resilience to climatic impacts. *PloS one*, 7(7), p.e40832

²¹ Green, A.L., Fernandes, L., Almany, G., Abesamis, R., McLeod, E., Aliño, P.M., White, A.T., Salm, R., Tanzer, J. and Pressey, R.L., 2014. Designing marine reserves for fisheries management, biodiversity conservation, and climate change adaptation. *Coastal Management*, 42(2), pp.143-159.

²² http://unfccc.int/paris_agreement/items/9485.php (Accessed January 23 2018)

²³ United Nations Declaration on the Rights of Indigenous Peoples www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf (Accessed January 21, 2018)

elements of area-based management tools.²⁴ Reaching agreement on these key aspects will ensure that quantification of what counts as marine protection becomes more systematic and standardized.

3.1 Marine Protected Areas (MPAs)

The CBD defines coastal or marine protected areas as:

*"an area within or adjacent to the marine environment, together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation or other effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings."*²⁵

In order to be included in the World Database on Protected Areas, areas must meet the definition of marine protected areas agreed by the IUCN and applies across marine and terrestrial environments:

"a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values."

Categories of protected areas as well as guidance on assessing these categories have been developed by the IUCN (Box 1).^{26,27} The 2012 IUCN Guidance provides further detail on specific examples and elements for consideration in assigning protected areas categories with particular considerations to the marine environment.²⁸ Efforts have also been made to further define qualitative elements of protected areas, which include representivity, replication, adequacy, viability, connectivity, management and level of protection²⁹ the majority of which can be applied to a single protected area as well as protected areas networks. Reporting on protected areas to the World Database on Protected Areas (WDPA) does not require details on the level of protection as outlined by the IUCN categories, but rather uses the IUCN and CBD definitions for protected areas.

²⁴ Rees, S.E., Foster N.L., Langmead, O., Pittman, S., Johnson, D.E., (2016). Defining the qualitative elements of Aichi Biodiversity Target 11 with regard to the marine and coastal environment. A report to the Convention on Biological Diversity expert meeting compiled by the Marine Institute at Plymouth University, UK

²⁵ CBD (2003). Marine and Coastal Biodiversity: Review, Further Elaboration and Refinement of the Programme of Work. Report of the Ad Hoc Technical Expert Group on Marine and Coastal Protected Areas (13 February 2003), UNEP Doc. UNEP/CBD/SBSTTA/8/INF/7, para. 30.

<https://www.cbd.int/kb/record/meetingDocument/4748?RecordType=meetingDocument&Event=SBSTTA-08>. (Accessed January 20 2018)

²⁶ Dudley, N. (Editor) (2008). Guidelines for Applying Protected Area Management Categories. Gland, Switzerland: IUCN. x + 86 pp.

²⁷ Day J., Dudley N., Hockings M., Holmes G., Laffoley D., Stolton S. & S. Wells, (2012). Guidelines for applying the IUCN Protected Area Management Categories to Marine Protected Areas. Gland, Switzerland: IUCN. 36pp.

²⁸ Dudley, N. (Editor) (2008). Guidelines for Applying Protected Area Management Categories. Gland, Switzerland: IUCN. x + 86 pp.

https://cmsdata.iucn.org/downloads/guidelines_for_applying_protected_area_management_categories.pdf

²⁹ Rees, S.E., Foster N.L., Langmead, O., Pittman, S., Johnson, D.E., (2016). Defining the qualitative elements of Aichi Biodiversity Target 11 with regard to the marine and coastal environment. A report to the Convention on Biological Diversity expert meeting compiled by the Marine Institute at Plymouth University, UK. p. 54

Box 1. IUCN Protected Area Categories

I Strict protection [(Ia) Strict nature reserve and (Ib) Wilderness area]

II Ecosystem conservation and protection (i.e., National park)

III Conservation of natural features (i.e., Natural monument)

IV Conservation through active management (i.e., Habitat/species management area)

V Landscape/seascape conservation and recreation (i.e., Protected landscape/seascape)

VI Sustainable use of natural resources (i.e., Managed resource protected area)

3.2 Areas Managed by Indigenous Peoples and Local Communities (ICCAs and LMMAs)

Indigenous stewardship and Indigenous Community Conserved Areas (ICCA) or Indigenous Protected Area (IPAs) are increasingly being documented and recognized as legitimate and effective mechanisms through which biodiversity conservation can be achieved. Locally Managed Marine Areas (LMMAs) which may in some cases be considered ICCAs, are also increasing in prevalence and depending governance structure and levels of biodiversity protection, could be included as part of protected area targets. With a growing awareness of the role that community-based initiatives can play, as well as the integration of these initiatives into Aichi Target 11 and in consideration of efforts to meet Target 14 and 18, efforts have been made better understand both effectiveness and viability of Indigenous and local governance structures³⁰

While ICCA's have been reported to a greater extent in terrestrial areas,³¹ LMMA's occur exclusively in the coastal and marine environment. LMMA's tend to focus on benefits to local communities from improved governance and equity in marine areas, with food security and livelihoods supported by fisheries and other coastal industries seen as the primary benefit. ICCA's and LMMAs may be considered protected areas or OEABCMs if objectives and or outcomes benefit provide tangible biodiversity protection.³² Incorporation of Indigenous and local community benefits into can increase willingness and engagement in biodiversity protection, however depending on the level and intensity of use as well as percentage of no-take areas within an ICCA or LMMA, biodiversity protection could be compromised rather than enhanced. Assessing these areas for clear objectives related to biodiversity is a critical aspect in determining whether or not they contribute to Target 11 or more prominently to other Aichi Targets and international commitments.

ICCAs have specific criteria through which to determine if they can be considered as such. These include three elements: decisions and conservation objectives are often tied to food security and access to resources for Indigenous peoples, communities and governments or non-state actors work collaboratively as equals in decision-making (effective co-governance) and the management authority has been ceded to local communities. The role of government or non-state organizations is largely restricted to providing advice and endorsing management decisions made

³⁰ Borrini-Feyerabend, G., P. Bueno, T. Hay-Edie, B. Lang, A. Rastogi and T. Sandwith (2014). A primer on governance for protected and conserved areas, Stream on Enhancing Diversity and Quality of Governance, 2014 IUCN World Parks Congress. Gland, Switzerland: IUCN.

³¹ ICCA Registry <http://www.iccaregistry.org/>

³² Dudley, N. (Editor) (2008). Guidelines for Applying Protected Area Management Categories. Gland, Switzerland: IUCN. x + 86pp. https://cmsdata.iucn.org/downloads/guidelines_for_applying_protected_area_management_categories.pdf

by local communities, rather than having control over management and decision making.³³ ICCAs are diverse across a variety of factors including size, longevity, ecosystem and resources specific to geographic context, objectives, values and uses as well as degree of formal recognition and security of tenure of the Indigenous community. Common variables include that all ICCAs are tangible examples of local and legitimate community governance of specific territories.

LMMA's are defined by overarching objectives include objectives including but not entirely limited to (1) enhancing long-term sustainability of resource use; (2) increasing short-term harvesting efficiency; (3) restoring biodiversity and ecosystems; (4) maintaining or restoring breeding biomass offish or invertebrates; (5) enhancing the economy and livelihoods; (6) reinforcing customs; (7) asserting access and tenure rights; and (8) empowering communities.³⁴ Biodiversity conservation is not necessarily a primary objective but can be considered as one of a subset of broader objectives linked to resource access and livelihoods.³⁵

3.3 Other Effective Area-Based Conservation Measures (OEABCMs)

OEABCMs have been defined as a suite of measures where biodiversity outcomes may be achieved because of specific resource management measures or areas where characteristics preclude a human activity – such as wreck sites, military dumping sites, undersea cable corridors, etc. where biodiversity is protected as an outcome.³⁶ The IUCN Draft Guidelines for Recognising and Reporting OEABCMs defines them as:

*A geographically defined space, not recognised as a protected area, which is governed and managed over the long-term in ways that deliver the effective in-situ conservation of biodiversity, with associated ecosystem services and cultural and spiritual values.*³⁷

Protection through OEABCMs can be achieved through conservation objectives considered primary conservation, or secondary, where conservation is not the explicit purpose of the area. There may also be cases where conservation occurs as a result of, but not because of the intent of the governance mechanism, which is termed ancillary conservation. Guidance on these OEABCMs is required so that States can adequately measure progress towards Aichi Target 11- and to meet, at least in part this need for further articulation of what constitutes an OEABCM an IUCN Task Force was created with the goal of developing draft guidance and to feed into deliberations for the 2018 CBD COP.³⁸

The current draft IUCN Guidelines hold that OEABCMs should meet the qualitative elements of a protected area, but are not formally designated as such - either because of jurisdictional reasons or because the output is conservation rather than having specific conservation objectives. Through reviewing a series of case studies as well as expert advice³⁹, the current proposed criteria to identify OEABCMs includes four main elements: (1) ensure the area is not already

³³ <http://www.iccaforum.org/>

³⁴ Jupiter, S.D., Cohen, P.J., Weeks, R., Tawake, A. and Govan, H., 2014. Locally-managed marine areas: multiple objectives and diverse strategies. *Pacific Conservation Biology*, 20(2), pp.165-179.

³⁵ <http://Immanetwork.org/>

³⁶ Spalding, M.D., Meliane, I., Milam, A., Fitzgerald, C. and Hale, L.Z., 2013. Protecting marine spaces: global targets and changing approaches. *Ocean Yearbook Online*, 27(1), pp.213-248.

³⁷ <https://www.cbd.int/doc/c/0165/9fc3/962fae6c8e6d0f8bc8ca361d/mcb-em-2018-01-inf-05-en.pdf>

³⁸ IUCN WCPA, 2018. (Draft) Guidelines for Recognising and Reporting Other Effective 27 Area-based Conservation Measures. IUCN, Switzerland. Version 1.

³⁹ www.iucn.org/theme/protected-areas/wcpa/what-we-do/other-172-effective-area-based-conservation-measures-OEABCMs

considered a protected area, (2) essential conservation characteristics (location, governed, managed and long term, (3) effective in situ conservation is achieved and (4) ensure conservation outcome can be sustained – with the consideration that all 4 criteria should be met in order to be considered an OEABCM.

As States identify areas that may produce conservation outcomes consistent with a protected area, efforts are being made to develop criteria in the absence of internationally agreed advice. Canada has produced guidelines on OEABCM that focus only on fishery closures and has used these guidelines to screen 1000 potential fisheries management measures, effectively reducing the number that met the criteria to less than 50. The Canadian Council of Ecological Areas has also established guidelines for OEACBMs across terrestrial and marine environments. To date, other criteria have not been published – however sector-based closures and locally or indigenous managed and conserved areas already in existence may potentially be considered as OEABCMs.^{40, 41}

3.3.1 Area-Based Fisheries Management

Fishing is the most globally prevalent human impact on the marine environment, taking place in coastal areas and in all ocean basins, with a long history and variety of levels of exploitation, intensity, frequency. Fisheries management has also long employed a variety of spatial management measures, with a range of objectives, however largely focused on reducing fishing pressure, protecting spawning areas and protecting habitat features or reducing impacts of fishing on non-target species. Such management measures could contribute to the protection of biodiversity, but not all fisheries management measures will meet expected qualitative aspects of protected areas nor will they produce biodiversity protection outcomes. Fisheries management measures are most likely to contribute to Aichi Biodiversity Target 6, however there are cases where the measure could also be considered as contributing to Target 11.

In a comprehensive overview of how fisheries management measures might be considered as OEABCMs, key elements of the particular management area should include an assessment of the ecological components of conservation concern in both the specific area and the larger region, and how the measure could contribute to their conservation, the size, duration, extent of restrictions and placement of the area; the ability of the management authority to implement the measure if adopted, and monitor and provide enforcement in area while the measure is in place; the structure of the fisheries that would be excluded by the measure, including how their likely responses to the measure could impact the effectiveness of the measure at providing biodiversity outcome and the potential contributions the measure could make to overall performance of the of the fishery.⁴²

The context within which the fisheries management measure is established should be considered when evaluating a fisheries management measure as a potential OEABCM. Whether or not the measure is implemented within a broader ecosystem approach to fisheries management, the degree to which the measure was established based on best available science, the degree of protection offered to high priority biodiversity objectives and whether or not impacts in the adjacent area are also mitigated, and the governance process underlying the measure, including monitoring and enforcement all need to be considered in assessing the effectiveness and

⁴⁰ CBD/MCB/EM/2018/1/INF/2

⁴¹ CBD/MCB/EM/2018/1/INF/3

⁴² CBD/MCB/EM/2018/1/INF/3

outcomes of a fisheries management measure that could be considered towards achieving Aichi Target 11.⁴³

3.3.2 Non-Fishery Sector-Based Approaches

As a result of sector based impacts on the marine environment, management measures have been put in place to limit these impacts or in some cases, prohibit human activities because of reasons unrelated to biodiversity objectives, but resulting in biodiversity outcomes.⁴⁴ These include but are not limited to designated areas for subsea cables, where all potential activities that could disturb the infrastructure in question are prohibited, areas protected from shipping activity because of biodiversity concerns, wreck sites, cultural and historical sites that are protected from human activity. Critical to the success of these is the ability of States to monitor biodiversity outcomes.

4. Networks and Connectivity

Generally, a single marine protected area will not be enough to achieve overall biodiversity protection targets, particularly in the marine environment where there is considerable movement of species. Marine protected area networks can combine a suite of spatial conservation measures to achieve biodiversity objectives at larger scales, including maintaining ecosystem processes and function, synergistic interaction between sites to achieve overall protection.^{45,46} Given that considerable efforts are still needed to develop and assess single protected areas and there currently are no network assessment tools *per se*, qualitative elements of individual protected areas could be applied to networks.⁴⁷ From a jurisdictional perspective, networks will be most easily established within State waters, however assessment of transboundary effectiveness, between EEZs and across EEZs and areas beyond national jurisdiction requires coordination between States and sectoral governance bodies, particularly where OEABCMs are included in protected area networks. Network designs must also take into account overall biodiversity objectives and desired outcome for the ecosystem and species in question.⁴⁸

As protected areas are to be integrated into the wider seascape, there is a need to ensure that marine spatial planning (MSP) initiatives incorporate protected areas within the planned areas. As well, in order to achieve biodiversity objectives and outcomes, MSP plans should take into account activities adjacent to proposed and established protected areas. Without the broader objective of MSP, there is a tendency to focus on the types of activities that can occur within a proposed protected area. MSP can help to ensure that stakeholders and governance agencies are involved in overall assessment of potential conflicts in the marine environment and how planning and zoning can avoid such conflicts. MSP has, to date, been most effective where there is a direct conflict (i.e. renewable energy and fishing activity) and hence a driver to create multi-sectoral plans. Assessment of MPA networks within the broader MSP context should also take

⁴³ CBD/MCB/EM/2018/1/INF/3

⁴⁴ CBD/MCB/EM/2018/1/INF/2

⁴⁵ OSPAR Commission. Guidance on Developing an Ecologically Coherent Network of OSPAR Marine Protected Areas. 1-11 (2006).

⁴⁶ Government of Canada. 2011. *National Framework for Canada's Network of Marine Protected Areas*. Fisheries and Oceans Canada, Ottawa. 31 pp.

⁴⁸ Jessen, S., K. Chan, I. Côté, P. Dearden, E. De Santo, M.J. Fortin, F. Guichard, W. Haider, G. Jamieson, D.L. Kramer, A. McCrea-Strub, M. Mulrennan, W.A. Montevicchi, J. Roff, A. Salomon, J. Gardner, L. Honka, R. Menafra and A. Woodley. 2011. *Science-based Guidelines for MPAs and MPA Networks in Canada*. Vancouver: Canadian Parks and Wilderness Society. 58 pp.

into account the unintended impacts on biodiversity – either positive or negative as a result of creating areas where specific activities are permitted or prohibited.

5. Governance of Marine Protected Areas and OEABCMs

The IUCN distinguishes four broad governance types for protected and conserved areas according to the actors who take or took the fundamental decisions about them (e.g. the actors that “established” them and decided their main purpose and management). The four main governance types are:

- Type A. governance by government (at various levels and possibly combining various agencies)
- Type B. governance by various rights holders and stakeholders together (shared governance)
- Type C. governance by private individuals and organizations (usually the landholders), and
- Type D. governance by indigenous peoples and/or local communities.

Having these categories apply to both MPAs and OEABCMs could ease evaluation of management and governance effectiveness.

Good governance has also been recognized and supported by scientists as a foundational aspect of effective protection. A recent analysis of MPA governance undertaken through the United Nations Environment Programme (UNEP) suggests that the governance effectiveness depends largely on institutional diversity.⁴⁹ A comparison of 20 MPAs worldwide demonstrated the effectiveness of combining top-down, bottom-up, and economic-incentive approaches to governance yielded optimal outcomes for the protected areas in question. For example, local-community participation can provide detailed knowledge, but top-down structures are often essential for taking into account knowledge of ecological linkages across larger areas and more time.⁵⁰ While this work was focused on existing MPAs, it is anticipated that similar governance characteristics will also apply to OEABCMs and their relative effectiveness at delivering conservation outcomes.

Incentives are seen as a primary element of governance frameworks, with five categories of incentives identified as useful in improving MPA governance: (i) participation, (ii) legal, (iii) interpretative, (iv) knowledge, and (v) economic.

Participative incentives ensure that a wide range of stakeholders collaborate in planning and ensure broader cooperation protected area management and monitoring. Depending on the level of collaboration and governance partnerships, the establishment of formal co-governance can be seen as offering a legal incentive to ensure that the protected area is effective. Such collaboration or co-management has proved effective in coordinating both top-down and bottom-up governance of MPAs.⁵¹

⁴⁹ McCay, B.J. and Jones, P.J., 2011. Marine protected areas and the governance of marine ecosystems and fisheries. *Conservation biology*, 25(6), pp.1130-1133.

⁵⁰ Cudney-Bueno, R. and Basurto, X., 2009. Lack of cross-scale linkages reduces robustness of community-based fisheries management. *PLoS one*, 4(7), p.e6253.

⁵¹ Oyanedel R., et al., (2014). Establishing marine protected areas through bottom-up processes: insights from 2 contrasting initiatives in Chile. *Aquatic Conserv. Mar. Freshw. Ecosyst.* DOI: 10.1002/aqc.2546

Co-management refers to partnerships between local resource users and governments and is accepted as a viable approach to ocean governance, particularly for less migratory fisheries on which local coastal communities depend^{52 53 54} Co-management brings experience-based and traditional knowledge, the legitimacy of rules developed democratically, and the strength of local institutions together with the powers and resources of centralized governments.⁵⁵

There is growing evidence that community-led MPAs and OEABCMS, including those that overlap or considered synergistic with ICCAs and LMMAs can be cost effective, resilient and often a more socially acceptable alternative to more traditional top-down methods of marine resource management. These types of governance systems are more prominent in developing countries and within tropical marine areas, and almost wholly based in coastal environments. Compliance is also improved where there is local governance, as there is a stronger sense of ownership over the protected area and its intended outcomes for local livelihoods.⁵⁶

6.0 Effectiveness of Marine Protected Areas and OEABCMS

The effectiveness of marine spatial protections has long been seen as a vital aspect in determining their ability to achieve intended biodiversity conservation objectives.⁵⁷ While the WDPA is the most comprehensive database on both terrestrial and marine environments, there is currently no reported measure of effectiveness of these areas in achieving biodiversity outcomes or in identifying the types of protected areas. Reporting on management effectiveness is complex, given that States have a variety of mechanisms through which protected areas are managed and monitored and also that State capacity to do so will vary considerably.

The CBD COP [Decision X/31](#) calls for “...Parties to...expand and institutionalize management effectiveness assessments to work towards assessing 60 per cent of the total area of protected areas by 2015 using various national and regional tools, and report the results into the global database on management effectiveness”. Considerable work is being undertaken at to further define criteria for effective and equitable management and how these elements can be measured. The Protected Areas Management Effectiveness (PAME) initiative of the WCPA has developed tools and frameworks through which States and entities can evaluate how well a particular protected area or network of areas is managed.

The term management effectiveness reflects three main ‘themes’ in protected area management, which include (i) design issues relating to both individual sites and protected area systems; (ii) adequacy and appropriateness of management systems and processes; and (iii) delivery of protected area objectives including conservation of values.⁵⁸ While criteria for effectiveness are important at the outset, in identifying and establishing marine protected areas, it is only over time

⁵³ Defeo, O. and Castilla, J.C., 2005. More than one bag for the world fishery crisis and keys for co-management successes in selected artisanal Latin American shellfisheries. *Reviews in Fish Biology and Fisheries*, 15(3), pp.265-283.

⁵⁴ Gutiérrez, N.L., Hilborn, R. and Defeo, O., 2011. Leadership, social capital and incentives promote successful fisheries. *Nature*, 470(7334), p.386.

⁵⁵ McCay, B.J. and Jones, P.J., 2011. Marine protected areas and the governance of marine ecosystems and fisheries. *Conservation biology*, 25(6), pp.1130-1133.

⁵⁶ Bennett, N.J. and Dearden, P., 2014. From measuring outcomes to providing inputs: Governance, management, and local development for more effective marine protected areas. *Marine Policy*, 50, pp.96-110.

⁵⁷ Hockings, M., Stolton, S., Leverington, F., Dudley, N. and Courrau, J. (2006). *Evaluating Effectiveness: A framework for assessing management effectiveness of protected areas*. 2nd edition. IUCN, Gland, Switzerland and Cambridge, UK. xiv + 105 pp.

⁵⁸ Requirement in the Programme of Work: Goal 4.2 - To evaluate and improve the effectiveness of protected areas management <https://www.cbd.int/protected-old/PAME.shtml>

that effectiveness and biodiversity conservation value can be assessed. Effectiveness can be measured in terms of qualitative and quantitative measures, with qualitative related largely to governance elements and qualitative related to conservation objectives and measurement of those objectives over time.

Ecological and social factors are known to foster effective MPAs, with primary factors including, but not limited to broad coverage of representative habitats, diverse size and spacing of protected areas (networks) and at the governance level - participatory decision-making, agreed upon resource use rights, active and accountable monitoring and enforcement systems as well as accessible conflict resolution mechanisms. A review of conservation benefits of 87 MPAs investigated globally found an exponential increase as a result of five key features: no take, well enforced, old (>10 years), large (>100 km²), and isolated by deep water or sand.⁵⁹ Effectiveness is also expected to be improved where there MPAs are considered as part of larger scale marine planning, where activities surrounding the protected area are also well managed.⁶⁰ Effectiveness of community-led MPAs has been found to be dependent on six key factors, including a small population size in the adjacent area, protection has been implemented in response to a perceived crisis, alternative income streams are available, relatively high level of community participation in decision making and where there is ongoing advice from the implementing organization as well as appropriate engagement from the relevant government agency.⁶¹ While ecological factors are key to enhancing the performance of MPAs, available capacity including resources and staff are fundamental for effective protected area management.⁶² Standardization of effectiveness measures across MPAs and OEABCMs will be critical in ensuring that they are delivering on conservation outcomes.

For MPAs to realize their full potential as a tool for ocean governance, further advances in policy-relevant MPA science are required. These research frontiers include MPA impacts on non-target and wide-ranging species and habitats; impacts beyond MPA boundaries, on ecosystem services, and on resource-dependent human populations, as well as potential scale mismatches of ecosystem service flows. Explicitly treating MPAs as “policy experiments” and employing the tools of impact evaluation holds particular promise as a way for policy-relevant science to inform and advance science-based MPA policy.⁶³

7.0. Equitable Management of Marine Protected Areas and OEABCMs

As implementation of protected areas progress and in addition to biodiversity outcomes there is a growing requirement for equity – either in compensation for lost income or livelihoods due to closed areas (i.e. fishers having to leave an area that is being used for another marine use, or being removed from harvesting), or to have governance be equitable. Ensuring that measures to

⁵⁹ Edgar, G.J., Stuart-Smith, R.D., Willis, T.J., Kininmonth, S., Baker, S.C., Banks, S., Barrett, N.S., Becerro, M.A., Bernard, A.T., Berkhout, J. and Buxton, C.D., 2014. Global conservation outcomes depend on marine protected areas with five key features. *Nature*, 506(7487), pp.216-220.

⁶⁰ Agardy, T., Di Sciara, G.N. and Christie, P., 2011. Mind the gap: addressing the shortcomings of marine protected areas through large scale marine spatial planning. *Marine Policy*, 35(2), pp.226-232.

⁶¹ Jones, P.J.S., Qiu W, and De Santo EM (2011): Governing Marine Protected Areas - Getting the Balance Right. Technical Report. United Nations Environment Programme. <http://www.mpag.info/governing-mpas-final-technical-report-web-res.pdf>

⁶² Gill, D.A., Mascia, M.B., Ahmadi, G.N., Glew, L., Lester, S.E., Barnes, M., Craigie, I., Darling, E.S., Free, C.M., Geldmann, J. and Holst, S., 2017. Capacity shortfalls hinder the performance of marine protected areas globally. *Nature*, 543(7647), p.665.

⁶³ Fox, H.E., Mascia, M.B., Basurto, X., Costa, A., Glew, L., Heinemann, D., Karrer, L.B., Lester, S.E., Lombana, A.V., Pomeroy, R.S. and Recchia, C.A., 2012. Reexamining the science of marine protected areas: linking knowledge to action. *Conservation Letters*, 5(1), pp.1-10.

achieve Aichi Target 11 are used to also meet Aichi Targets 14 and 18 can provide some assurance that equity is included in spatial protection measures.

A primary element of equity at the outset are processes from the initial identification of an area to be protected that are founded in comprehensive stakeholder inclusion. Stakeholder inclusion will depend on social structure and technology and equity will depend partly on the ability of affected groups to adapt to changed governance arrangement. Incorporating ICCAs and parts of LMMAs into protected area networks is a key aspect of building in equity to spatial protection. Research has demonstrated that post-MPA establishment, food security in adjacent communities generally remains stable or increased in older and smaller MPAs. With regards to local governance of MPAs, increased resource rights were positively correlated with MPA zoning and compliance with MPA regulations, however protection generally impacts at least a minority of the fishing activity – which can be expected given that areas are protected to reduce human impacts on biodiversity.⁶⁴

Standardized criteria for equity in marine protection measures has not yet been established, and will likely need to be tailored to specific communities and governance structures. It can be guided by lessons learned from existing protected areas and elements of ICCAs and LMMAs. Case studies compiled by the International Collective in Support of Fishworkers (ICSF)⁶⁵ show mixed results in terms of effective and equitable MPAs. Inclusion of local communities and ensuring that conservation objectives and social objectives can be met through the protected area establishment is often more likely to lead to equitable outcomes, than top down approaches.

In addition to equitable management of individual area-based conservation measures, there are also equity factors to be considered in terms of capacity for States to effectively monitor these areas. Mechanisms to better use local and traditional knowledge as well as build science and community monitoring capacity should be an aspect of financing mechanism and knowledge and technology transfer between developed and developing States. This may become particularly important as area-based conservation measures are used to mitigate impacts of climate change.

8. Science and Information Considerations for Establishment, Monitoring and Effectiveness of MPAs and OEABCMs

Identification of areas that warrant protection, including biodiversity hotspots and representative areas, and post-establishment management and monitoring for effectiveness, rely on scientific information. This reliance is increasing as area-based conservation measures are established and then required to measure progress on achieving objectives. For both MPAs and OEABCMs, where biodiversity outcomes are expected, there is a need to clearly demonstrate conservation benefits.

As area-based conservation measures are established, there are opportunities to begin to measure progress against objectives. Efforts to bring together scientific consensus have been made in both the primary literature through various meta-analyses of marine protected areas.

Calls for improved scientific criteria for measuring the effectiveness of protected areas have come as States are reporting on area-based targets, with few additional quantitative metrics, and

⁶⁴ Mascia, M.B., CLAUS, C. and Naidoo, R., 2010. Impacts of marine protected areas on fishing communities. *Conservation Biology*, 24(5), pp.1424-1429.

⁶⁵ ICSF Case Studies on MPAs <https://mpa.icsf.net/>

often claiming biodiversity outcomes when other metrics are indicating declines in species or habits.⁶⁶ While the 10% goal is one that was negotiated and deemed politically acceptable and achievable, there are debates about how much of our ocean needs to be protected to ensure continued ecosystem function, biodiversity protection, restoration of depleted fisheries or resilience to climate change.

Scientific information is required for identifying and designating area-based conservation measures, for setting clear objectives and to provide the basis for long term monitoring and assessment of effectiveness, as measured by biodiversity outcomes. While MPAs may require more scientific expertise at the outset, in order to ensure that OEABCMs are in fact producing biodiversity conservation outcomes, more attention is needed to ensure that there is capacity to track these outcomes. A counterpoint to achieving scientific proof of biodiversity protection, as increasingly the onus is on the protected area to “prove” that is worth restricting from various human uses, may be to shift the burden of proof onto human activities. Finally, impacts of scientific research itself must not compromise biodiversity objectives and consideration should be given to no-go zones that also prohibit research.

As networks of area-based conservation measures are established, and more areas set aside from industrial activities, there will likely be an increasing demand for adaptive management – particularly where fisheries resources are concerned, and biomass increases found within protected areas – or where climate change influences species distributions. More science is needed to inform adaptive management and develop clear objectives for when such adaptation – either in boundaries or in permitted use can occur. As the length of time from MPA establishment increases, there are opportunities to document trends in biodiversity outcomes and to conduct broader scale analysis over a number of MPAs and OEABCMs to better understand how outcomes are related to characteristics of the protected area.

9. Contrasts Between Marine and Terrestrial Environments

Part of the rationale to develop guidance for applying the IUCN protected area categories in marine protected areas was to account for the inherent differences between marine and terrestrial environments. Key contrasts include the multi-dimensional aspect of the marine environment, the dynamic nature of marine environment (e.g., currents and tides), lack of clear ownership in many areas and the multiple jurisdictional aspect of marine management, lack of visibility and/or remoteness of features being protected, boundary demarcation, and connectivity between ecosystems and habitats.⁶⁷ While the basic criteria and standards, as well as effectiveness evaluations, can be the same for both environments jurisdictional elements and ecosystem elements often require different approaches in marine and terrestrial environments.

From an economic perspective, area-based conservation measures in the marine environment are expected, in many cases to improve fisheries resources and restore productivity. In terrestrial

⁶⁶ Watson, J.E., Darling, E.S., Venter, O., Maron, M., Walston, J., Possingham, H.P., Dudley, N., Hockings, M., Barnes, M. and Brooks, T.M., 2016. Bolder science needed now for protected areas. *Conservation Biology*, 30(2), pp.243-248.

⁶⁶ O'Leary, B.C., Winther-Janson, M., Bainbridge, J.M., Aitken, J., Hawkins, J.P. and Roberts, C.M., 2016. Effective coverage targets for ocean protection. *Conservation Letters*, 9(6), pp.398-404.

⁶⁷ Day J., Dudley N., Hockings M., Holmes G., Laffoley D., Stolton S. & S. Wells, (2012). Guidelines for applying the IUCN Protected Area Management Categories to Marine Protected Areas. Gland, Switzerland: IUCN. 36pp.

environments, the focus is largely on protecting animals without the expectation that they can be harvested once populations increase. The concept of habitat fragmentation and connectivity is fundamentally different in marine environments, but also more well understood terrestrially.

From a primary production perspective, the standing stock in terrestrial environments is wide spread and structural– while in the marine environment, primary production is limited to the coastal zone for habitat forming species with phytoplankton distributed through the pelagic photic zone. There is much higher turnover in the primary production and it varies with annual cycles, directly tied to temperature and currents.

In terrestrial environments, the atmosphere is well mixed at a much broader scale, whereas mixing in marine environments can change within significantly smaller scales. Climate change impacts will also affect marine and terrestrial areas much differently -as coastal areas are subject to erosion and storm surges and protection efforts can be lost as the result of one large weather event. The pervasive impact of ocean acidification can impact the entire standing stock of primary productivity in one area, having knock-on effects throughout the food web.

The fluidity of the marine environment means that land-based pollution or marine derived pollution can spread to areas well outside of the initial area of impact – and it is harder to prevent these impacts within protected areas in the marine environment, than the terrestrial environment.

10. Gaps in Assessments and Indicators

While the WDPA provides a shared database and portal for States to submit information on protected areas, it is currently lacking in metrics for the quality of these protected areas as well as quantitative metrics on effectiveness and qualitative metrics on equity.

Evaluation of effectiveness is also hampered by achieving a balance between biodiversity outcomes, equity in governance structures and decision making where management decisions may be made to improve social outcomes at the expense of biodiversity outcomes. Comparing MPAs and OEABCMs in terms of objectives vs outcomes is highly dependent on management inputs, capacity for monitoring and the mechanism through which an OEABCM is achieving biodiversity outcomes. For example, a fisheries closure may be monitored as part of a larger science-based assessment where as a cable corridor or munitions dump may never be monitored for changes to biodiversity because the management tool does not require monitoring, but is based on prohibiting activity to protect a non-living structure.

Calls have been made to the wider scientific community to assist with establishing ecologically sensible protected area targets, to prioritize important biodiversity areas, identify comparable performance metrics of ecological effectiveness in order to standardize assessment towards ecological targets.⁶⁸ Bolder science could include recommendations for the amount of area that needs to be set aside from industrial activity to achieve a variety of biodiversity outcomes. Trade-offs on the management and capacity needs for monitoring and evaluation between smaller, multi-use areas and large no take areas or between comprehensive fisheries management measures and marine reserves should be assessed.

⁶⁸ Watson, J.E., Darling, E.S., Venter, O., Maron, M., Walston, J., Possingham, H.P., Dudley, N., Hockings, M., Barnes, M. and Brooks, T.M., 2016. Bolder science needed now for protected areas. *Conservation Biology*, 30(2), pp.243-248.

10.1 Scientific and Knowledge Gaps

Connectivity: There are several areas where progress is needed in order to better assess elements that are deemed important qualitative aspects of MPAs and OEABCMs. Some of these elements rely on ecological information and require further input by scientists as well as policy makers as not all States will have monitoring capacity to collect the necessary data. There are no globally agreed indicators to assess connectivity of MPAs or area-based conservation measures, as connectivity will depend on the type of ecosystem (i.e. coral reef, open ocean, coastal area, offshore bank) as well as the objectives of the measures.

Integration into the Seascape: Aichi Target 11 specifies that MPAs and OEABCMs should be integrated into the wider seascape, which implies marine spatial planning (MSP) and an understanding of the level of adherence to such plans on a sectoral basis, as well as assessment of cumulative impacts. Given that MSP is only beginning to take hold in a tangible way, there is a lack of agreed indicators to assess the integration of protected areas into a broader framework, and alignment of MSP objectives with objectives of area-based conservation measures cannot necessarily be expected. There are opportunities for further research in areas where MSP has been implemented and where area-based conservation measures are an aspect of such plans.

Climate change: While spatial protections are expected to mitigate impacts of climate change, and effectiveness may be best evaluated in coastal areas where erosion and storm surge damage can be quantified and compared between protected and unprotected areas, there are few broad indicators as to how MPAs and OEABCMs can demonstrably be shown to protect biodiversity and ecosystem function from the impacts of climate change. Quantitative indicators may be best assessed when there are enough large areas protected to better compare population levels of species that are vulnerable to climate related impacts such as ocean acidification and coral bleaching. There are also overarching indicators needed to ensure that climate change and connectivity indicators are addressed simultaneously.⁶⁹

Linking with Traditional and Local Knowledge: A current challenge to the paradigm of conservation effectiveness and biodiversity protection is that quantitative assessments often focus on natural science outcomes, which require budget for monitoring and management. For community led MPAs or OEABCMs, additional provisions for the use of traditional and local knowledge is imperative in both setting objectives and assessing outcomes.

10.2 Governance Gaps

In addition to science-based indicators and assessments of effectiveness of MPAs and OEABCMs, there are gaps in governance and social indicators as well. Despite commitments made to assess effectiveness for 60% of protected areas by 2015, as set by CBD Decision X/31⁷⁰, only 17.5% have been assessed.⁷¹ Part of the difficulty in reaching this target is that there is limited data on many protected areas and States differ in their processes for collecting and reporting on effectiveness, making comparisons and evaluation difficult.

⁶⁹ Magris, R.A., Pressey, R.L., Weeks, R. and Ban, N.C., 2014. Integrating connectivity and climate change into marine conservation planning. *Biological Conservation*, 170, pp.207-221.

⁷⁰ CBD Decision X/31 Para 19 (a) <https://www.cbd.int/doc/decisions/cop-10/cop-10-dec-31-en.pdf>

⁷¹ Information provided by the CBD Secretariat.

Equity: Indicators for the assessment of equity also prove to be elusive, however there is progress in how Parties are measuring governance and the expansion of ICCAs and LMMAs including registering, reporting and convening around these systems is contributing to a community of practice around equity. There is an opportunity to use other international commitments, including United Nations Declaration on the Rights of Indigenous Peoples and the level of implementation of the FAO Guidelines on Small Scale Fisheries⁷² to track governance, co-management and equity in protected and conserved areas. Efforts to assess equity of governance mechanisms OEACMs – some of which may be also identified as ICCAs or LMMAs have yet to be made, and such assessment could be elaborated as part of proposed IUCN guidance on OEACMs.

11.0 Conclusions

Protected areas – and particularly large no take areas – are seen as an “insurance policy” with which multiple objectives can be achieved to mitigate the impacts of extractive human activity as well as build resilience against climate change. As 2020 approaches, States are taking action on implementing a range of MPAs and seeking to count what could be considered OEACMs and there for contribute qualitatively and quantitatively to the 10% Target. Where biodiversity objectives and outcomes are not being met or are compromised by the lack management effectiveness, it can be expected that the benefits of these efforts will also be compromised.

While Aichi Target 11 sets out the basic expectations of these protected areas, there is a need to further refine and agree upon elements of what classifies a protected area as effective – from governance frameworks and biodiversity outcomes – and how these elements are measured. Perhaps most importantly, building the capacity for States to assess effectiveness and make decisions for marine protection to ensure the best outcomes for biodiversity is required in order to stem the tide of coastal and marine biodiversity loss.

The development of standards and guidance needs to be met with an equal amount of effort on ensuring that States are aware of the existing tools, and that efforts are made to increase capacity to implement them. Engagement with agreed processes for reporting on marine protection targets, as well as the effectiveness of these targets, is needed. While efforts to improve marine protected area standards and to adequately assess outcomes from other effective conservation measures are needed, these must be complimented by financial mechanisms as well as clear articulation of benefits. A model of continuous improvement and feedback mechanisms when objectives are not being met is also needed. Continued efforts are needed to engage States in enforcing existing protected areas and working towards continuous improvements in management, enforcement and monitoring.

There is also a need for improved, but easy to measure, scientific metrics for effectiveness that can be applied across ecosystems and scales of protection. Goals towards these metrics may be included in other Aichi Targets, as well as in national frameworks for ecosystem functioning and biodiversity protection. There also need to be mechanisms to jointly measure progress towards complimentary Aichi Targets.

⁷² FAO (2015) Voluntary Guidelines for Securing Sustainable Small Scale Fisheries www.fao.org/3/a-i4356e.pdf

Aichi Target 11 and the SDG 14 have provided a focus for global efforts for marine and coastal biodiversity conservation. Inclusion of OEABCMs may allow States to make further progress on biodiversity protection than focusing only on marine protected areas, and the inclusion of ICCAs can allow for indigenous rights to be upheld as well as progress on evaluating equity of protected areas. In many aspects, the 2020 Target of 10% is only the beginning, as it is clear that efforts are underway to exceed that target, and to ensure that more is done to strengthen existing protections and achieve higher standards of protection for new areas. The focus must continue past 2020 and be integrated into efforts to mitigate and reduce climate change impacts on the global ocean, with the appropriate financial assistance and capacity development to ensure success over the long term.

Appendix 1: Summary of Submissions by Parties and Other Governments to Notification 2017-065

Country	Protected areas and other effective area-based conservation measures, taking into account the work of the International Union for Conservation of Nature and other appropriate expert bodies;	Additional measures to enhance integration of protected areas and other effective area-based conservation measures into the wider land- and seascapes;	Mainstreaming of protected areas and other effective area-based conservation measures across sectors to contribute, inter alia, to the Sustainable Development Goals and as natural solutions to combat climate change;	Effective governance models for management of protected areas, including equity, taking into account work being undertaken under Articles 8(j).
Venezuela	<ul style="list-style-type: none"> - Have been making progress in planning, creating, expanding and strengthening the management of 49 protected areas - The project seeks improve the mgmt and operation of the Coastal Areas MPA - 5 new proposals in place to create protected areas, elaboration of plans for 3 protected areas, update of plans for 3 Pas and enlargement of 2 Pas - Communities have participated in these processes 	<ul style="list-style-type: none"> - Have expanded of the environmental monitoring system to help implement measures - Compilation and definition of a Master Plan which specifies how various stakeholders and users will interacted within the Marine-Coastal Protected Areas System - Important component of the plan is the integration of conservation and economic considerations (look for synergies between sectors) 	<ul style="list-style-type: none"> - Govt formally implemented a process for the integrated management of its coastal area in 2001 – aimed at strengthening institutional capacity, planning and competencies b/w organs of power - Led to the Plan of Management and Integrated Mgmt of Coastal Areas (POGIZC) - POGIZC establishes coordination mechs, programs for integrated mgmt., public domain, guidelines for mgmt., and financing mechs - 10 programs for integrated mgmt have been designed (conservation of natural and cultural spaces, public domain spaces, vulnerable areas, research, recovery and sanitation, enviro education, etc.) 	<ul style="list-style-type: none"> - Governance of PAs is done through government - but working on shared management based on norms that promote greater participation and organization of indigenous peoples and local communities - Work is being completed to establish coordination mechs between entities of the State and different types of social organizations - Work with indigenous communities to demarcate indigenous lands and how they overlap with protected areas
United States – report also	US National Park Service activities - Central role in development of the IUCN best practice guidelines for	US National Park Service activities - Supported production of	US NPS activities: - Released a Cultural Resources Climate Change Strategy	US NPS Activities - Have started to incorporate TEK into mgmt. planning

<p>contains reviews of case studies for different biospheres, reserves, national parks, biological stations – many with different forms of governance and landscape conservation. No marine areas were examined</p>	<p>climate adaption</p> <ul style="list-style-type: none"> - Co-chairs multiple forums and works groups on climate change and protected areas through the IUCN <p>US Geological Survey</p> <ul style="list-style-type: none"> - Manages protected area database of US - Geodatabase illustrate public lands, management and other conservation lands, and private lands <p>NOAA</p> <ul style="list-style-type: none"> - MPAs in US. Have an MPA geospatial database - Active participant in IUCN task force on OEABCMs - Developed draft framework for assigning IUCN protected area categories to US MPAs 	<p>IUCN Best Practice Guidelines on climate adaption</p> <p>US Geological Survey</p> <ul style="list-style-type: none"> - Nature’s Network Conservation Design depicts an interconnected network of lands and waters that if protected will support a diversity of fish and wildlife - The design offers voluntary guidance to protect the irreplaceable, look ahead to make better decisions today, maximize limited resources <p>NOAA</p> <ul style="list-style-type: none"> - National Environmental Policy Act (NEPA) provides a useful framework for integration - E.g: Stellwagen Bank National Marine Sanc – worked with NOAA, coastal guard, shipping industry and IMO to move ship lanes - Connectivity is important but has not been widely implemented. NOAA has put out recs on how to improve <p>Other</p> <ul style="list-style-type: none"> - Have worked with Canada and Mexico to review terrestrial conservation in NA 	<p>(2016) that establishes a framework for addressing the impacts of climate change on cultural heritage sites and drawing on these resources to inform climate change science, adaptation, mitigation and communication overall</p> <p>US Geological Survey activities:</p> <ul style="list-style-type: none"> - Working toward identification and implementation of effective mgmt. practices to maintain or improve habitat conditions for the Sage Grouse and Sagebrush Conservation Planning <p>NOAA</p> <ul style="list-style-type: none"> - Published a summary on how MPAs can help build resilience to climate change impacts and established a Blue Carbon working group - 13 national marine sancs and 2 national monuments have taken the leadership role in piloting “climate smart conservation” – which aim is to mitigation and reduce the impacts of climate change <p>Other</p> <ul style="list-style-type: none"> - All protected areas have compliance report and within these reports they review their contribution to the SDGs 	<ul style="list-style-type: none"> - In support of the broad goals to share diverse cultural perspectives on resource mgmt. NPS maintains a website which provides a forum for info, resources and discussion about TEK <p>US Geological Survey Activities:</p> <ul style="list-style-type: none"> - Building partnerships to assess tribal adaptation to climate change (partnering with universities) <p>NOAA</p> <ul style="list-style-type: none"> - Active public engagement is essential and provides opportunities for ongoing public involvement in the mgmt. of sancs - Communities can submit nominations to designate an area as a National Marine Sanc <p>Other</p> <ul style="list-style-type: none"> - Strong push for community outreach and engagement activities through the NPS Biodiversity Discovery Program - such as citizen science
<p>St. Kitts and</p>	<ul style="list-style-type: none"> - 3 officially declared ecological 	<ul style="list-style-type: none"> - Established the St. Kitts and 	<ul style="list-style-type: none"> - National Biodiversity Strategy 	<ul style="list-style-type: none"> - Mgmt. framework for protected

<p>Nevis</p>	<p>conservation areas: Central Forest Reserve National Park, Royal Basseterre Valley National Park and the Brimstone Hill Fortress National Park</p> <ul style="list-style-type: none"> - A draft PA systems plan does exist and draft PA management plans for selected site. H/w have not been implemented - Currently implementing the UNDP/GEF ‘Conserving Biodiversity and Reducing Habitat Degradation in Protected Areas and Their Buffer Zones Project’ – aim is to improve ecosystem representation in the country’s protected area system, system PA mgmt., and strengthen institutional, policy and legislative, and financing frameworks for PA systems (scheduled to end in 2018) 	<p>Nevis Marine Mgmt area – conserve biological resources in the area. Number of initiatives are being negotiated with the aim of establishing an effective mgmt. framework for the effective management of the MMA</p>	<p>and Action Plan (NBSAP) have proposed 12 national biodiversity targets – similar to Aichi Targets.</p> <ul style="list-style-type: none"> - Anticipated that by the end of the Conserving Biodiversity Project in 2018, 2 new terrestrial areas will be declared - 3 earmarked marine protected areas would be co-managed as well - NBSAP provides guidance for mainstreaming and integrating biodiversity conservation into different sectors of national development (e.g. poverty reduction, agriculture, environmental protection, land and water resource mgmt., marine resource mgmt. etc.) 	<p>areas is outlined in the Protected Areas Systems Plan and other draft management plans</p> <ul style="list-style-type: none"> - Ideally need protected areas legislation, and a sustainable finance mech <p>Lessons Learned</p> <ul style="list-style-type: none"> - PAs in the country are at its infancy stage - Roles and functions for PA mgmt. are not clearly defined - UNDP/GEP Protected Areas project is first of its kind - Exclusive reliance on external funding is a major challenge - Need long term measures to ensure sustainability
<p>Slovenia</p>	<ul style="list-style-type: none"> - Nationally designated protected areas cover approx. 14% of territory - 9 nationally designed PAs, 4 have valid mgmt. plans and 4 mgmt plans are in preparation - Natura 2000 network covers app 38% of territory - Ecologically important areas cover 54% of territory and overlap with Natura 2000 network - For nationally designated PAs the IUCN is taken into account as much as possible (want to achieve IUCN standards) 	<ul style="list-style-type: none"> - Established the network of Natura 2000 sites - New Spatial Development Strategy of Slovenia by 2050 is currently in preparation - will include green infrastructure 	<ul style="list-style-type: none"> - Intergovernmental affairs ministry is using a system to integrate protected areas to policies in other sectors - Natura 2000 Management programme from 2015-2020 involved all relevant sectors - Protected areas are included in Slovenia’s tourism strategy 	<ul style="list-style-type: none"> - PA governance is completed by national or local govt. At national level special public organizations are established as mgmt authorities - Main financial source for management is state budget - Advisory bodies are created for PAs (required by law) - No indigenous groups are registered in Slovenia - The needs of women, local communities and vulnerable groups are taken into account in the planning and

	- Natura 2000 guidance docs are followed and delegated by the European Commission			implementation of PAs
Philippines	<ul style="list-style-type: none"> - Developed of a Guide to Local Conservation Area Mgmt Planning - Formulated the National Protected Area System Master Plan (systems approach to PA planning) - Improving Governance and Mgmt of Indigenous Ppls and Local Communities Conserved Areas and Territories project (spearheading the documentation and recognition/registration of Indigenous and local protected areas 	<ul style="list-style-type: none"> - Pilot project: Integrated Ecosystem Mgmt approach to mgmt. of protection and conservation areas (completing in different provinces) - Integrating conservation concerns in the Land-use plan and development programs of local government units - Declaration of local conservation areas and possible up-scaling into critical habitats through the comprehensive land-use plan of local government units 	<ul style="list-style-type: none"> - Integration of Biodiversity Conservation into National and Local land-use planning <ul style="list-style-type: none"> o Transboundary mgmt. plans, formulation of biodiversity responsive land-use plans, technical assistance to local governments while designing land-use plans, etc. - Strengthening the policy framework for PAs and Biodiversity Conservation <ul style="list-style-type: none"> o Development of tools, manuals and case studies for establishment of local conservation areas, enactment of policies in support of local conservation areas, more financing for PAs - Strengthening the capacity and competency of PAs and PA managers <ul style="list-style-type: none"> o Development of competency standards for PA system mgmt. o Training stuff on PA mgmt. - Strengthening partnerships for PA Mgmt and Governance and 	<ul style="list-style-type: none"> - Magsasaka at Siyentpilo para sa Pag-unlad ng Agrikultura (MASIPAG) <ul style="list-style-type: none"> o Aim to empower resource poor farmers and improve their quality of life by farming traditionally - Conflict Sensitive Resource Asset Mgmt (COSERAM) <ul style="list-style-type: none"> o Seeks to introduce and strengthen governance that provides sustainable access to natural resources for marginalized pops o Indigenous ppls have become involved o Guides developed on how to document indigenous knowledge systems and practices - National Indigenous Peoples and Community Conserved Territories and Areas (ICCAs) Consortium <ul style="list-style-type: none"> o Aim is to undertake dialogues with govt and development partners to generate support for greater ICCA recognition in the country

			<p>Biodiversity Conservation</p> <ul style="list-style-type: none"> ○ Partnerships with NGOs ○ Partnerships with national agencies in support of local conserved areas <p>Lessons learned:</p> <ul style="list-style-type: none"> - Keep an open mind to new ideas and opportunities - Some sites may take longer time and more resources for PAs to be established b/c of multiple factors - NGO partners have different levels of capacity and approaches to conservation. Work to harness the strengths of each - Need to gain trust with local communities - Huge gap in capacity development - Need support for local communities to implement plans - Need for info on the state of biodiversity resources 	<p>Lessons Learned</p> <ul style="list-style-type: none"> - ICCA offers a very cost-effective approach for accelerating conservation - ICCAs offer an excellent win-win for indigenous communities and the govt pursuing biodiversity conservation - Local conservation areas and ICCAs are not fully protected by law
Benin	Same proposal submitted for the MPA question posed by the CBD (no new information)			
EU (Belgium)	<ul style="list-style-type: none"> - Provides overview of Natura 2000 - Approx. 12.3% of territory of Flanders is Natura 2000 site - 38 special areas for conservation 	<p>Flanders</p> <ul style="list-style-type: none"> - Multiple different sites owned by govt, local govt, private (majority have mgmt. plans), closed 	<p>Flanders</p> <ul style="list-style-type: none"> - LIFE Nature and Biodiversity Projects: restoration and development of nature areas and connectivity zones. Aim is 	<p>Flanders</p> <ul style="list-style-type: none"> - In framework for Natura 2000 a formal consultation process has been established (decides on nature objectives, approval of

	<p>(SAC), 24 special protection areas (SPA)</p> <ul style="list-style-type: none"> - Working to restore multiple habitats - Subsidies provided for nature mgmt. <p>Wallonia</p> <ul style="list-style-type: none"> - 13.11% of territory is protected - Network is based on the hydrological network so good connectivity b/w sites - Multiple habitats protected <p>Brussels Capital Region</p> <ul style="list-style-type: none"> - 3 sites designated as SAC – 14% of territory – working on mgmt. plans at the moment <p>Belgium part of the North Sea</p> <ul style="list-style-type: none"> - 4 Natura 2000 sites, 3 of them for the protection of birds, one for habitats - Conservations objectives have been adopted and mgmt. plans are under development 	<p>military areas</p> <ul style="list-style-type: none"> - 4 RAMSAR sites - Important inter-regional projects for the mgmt. of Natura 2000 with EU subsidies: OZON project for the Sonien Forest, BNIP Integrated Project for Natura 2000 in Flanders-Wallonia-Federal marine - Flemish Ecological Network is adopted in the Spatial Structural Plan Flanders and comprises large natural units and large natural units in development - Incentives are established to promote ecological quality in these supporting areas - The new spatial planning policy includes development of green-blue network systems between and within rural and urbanised areas - Main programs to enhance development or restoration of green infrastructure includes: Hoge Kempen National Park, Nature in your Neighbourhood <p>Wallonia</p> <ul style="list-style-type: none"> - Govt protects areas through: govt nature reserves, chartered nature reserve, forest reserve, wetlands of biological interest and 	<p>restoration of large grasslands and support climate adaption by restoring and enhancing green infrastructure</p> <ul style="list-style-type: none"> - Sigma Plan : aim to protect Flanders against flood, natural flood plains being restored - Nature development in the harbor area of Antwerp: - Cooperation with business sector to enhance green spaces - Projects under the EU Rural Development Programme – work with framers in developing agri-environment measures for the development and restoration of Natura 2000 sites <p>Walloon Region</p> <ul style="list-style-type: none"> - Water Code foresees the registry of protected zones – zones for protection of economically important aquatic species 	<p>protection programmes, implementation of nature sites)</p> <ul style="list-style-type: none"> - Consultation occurs at various levels, with strong stakeholder representation - Capacity building are organized to support private owners and other actors for the development and implementation of Natura 2000 sites <p>Wallonia</p> <ul style="list-style-type: none"> - Participative process on nature conservation - Organized mostly by local authorities <p>Brussels Capital Region</p> <ul style="list-style-type: none"> - Participative science to gather info - Promotes multifunctional and participative mgmt. plans for green areas
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		<p>underground cavity of scientific interest</p> <ul style="list-style-type: none"> - The network of sites grows slowly and covers 0.9% of Walloon territory - PEFC certified forests cover nearly 54% of region's forest – owners engage in voluntary measures to diversify their forest, maintain wood patches <p>Brussels Capital Region</p> <ul style="list-style-type: none"> - Has 14 natural reserve and 2 forest reserve officially designated and protected at regional level - Green Infrastructure - aiming at connecting Natura 2000 sites, forest nature reserves, parks, to create green and blue corridors - Working on inner city connected sites ‘ <p>Federal- Marine area</p> <ul style="list-style-type: none"> - Marine spatial plan combined with the Marine Strategy is leading to more integration and sustainable use of the marine enviro 		
Norway	- No info provided for Norway			
Iraq	- 28 proposed protected areas under Natural protected areas System No. 2	- Cooperation with local councils and environmental policy for protecting natural areas	- have a nomination form to nominate protected areas as a natural solution to combat the effects of climate change	-the mgmt. of protected areas will establish the mgmt. authority to work with the local population to protect sites and preserve heritage
Brazil	- National Action Plans for Endangered Species Conservation	Carajas National Forest Mgmt Plan	Biodiversity Monitoring Program in federal protected areas:	<ul style="list-style-type: none"> - have participative processes - mgmt. plans can be established

	<p>(PAN) is a public policy instrument complementary to protected areas that defines priorities and actions to improve the conservation of species and its environments by the integration of different sectors of the society.</p>	<ul style="list-style-type: none"> - Use environmental licensing to promote economic growth with biodiversity conservation - Govt carried out a PA zoning negotiation, aim is to enable mining with no net loss of biodiversity 	<ul style="list-style-type: none"> - standardizes monitoring protocols - Aims is to evaluated the effectiveness of Brazilian PA, subsidize actions for climate change impacts and for general mgmt. activities, and to strengthen social participation in the mgmt. of biodiversity 	
<p>Australia</p>	<ul style="list-style-type: none"> - under Australia’s Strategy for the National Reserve System 2009-2030 the Govt and all state/territory govts agreed to a national approach to achieve a fully implemented reserve system by 2030 (includes protected areas and OEABCMs) <ul style="list-style-type: none"> o such as IPAs, private protected areas - Australian govt has direct mgmt. for 6 national parks. All other protected areas are owned and managed by state/territory govts, conservation orgs, and/or indigenous and private landowners - Heads of Parks Agencies Meetings – biannual meetings that provide for ongoing cooperation and knowledge sharing - In early stages of developing management effectiveness measures and reviewing monitoring parameters for PAs 	<ul style="list-style-type: none"> - Zoning for the GBR: provide a range of ecologically sustainable uses - The GBR zones have been successful – notably for some fish populations - Also appear to benefit overall ecosystem health and resilience - Effectiveness of zoning depends critically on effective compliance - The zoning network provides a critical and cost-effective contribution to enhancing the resilience of the GBR 	<ul style="list-style-type: none"> - Aust. Is committed to the 2030 Agenda for Sustainable Development – is supportive of work on the mainstreaming of biodiversity and integration of biodiversity in cross-sectoral policies - Australia’s Biodiversity Conservation Strategy: promotes links between nature and human well-being. Also works with IPAs and Indigenous ranger programs - Australia’s Threatened Species Strategy: outlines an action-based approach to protecting and recovering threatened plants and animals based on principles of science, action and partnerships - Threatened Species Prospectus: new financing model that extends species protection to the private sector. Designed to build partnerships and connect conservation partners with business 	<p>Terrestrial PAs</p> <ul style="list-style-type: none"> - Minimum standards for PA (long term, must contribute to the comprehensiveness, adequacy and representativeness of the national reserve system, follow one of the 6 IUCN PA categories) - Indigenous and publically protected areas - Indigenous protected areas are managed by Indigenous land managers which is built upon Indigenous traditional knowledge <p>MPAs</p> <ul style="list-style-type: none"> - Primary goal of National Representative System of MPAs is to establish and effectively mgmt. a CAR system of marine reserves to contribute to the long term conservation of marine biodiversity - Over 40 marine parks – many established after 2012 –

				<p>working on mgmt. plans now for all of them</p> <ul style="list-style-type: none"> - 36% of it marine jurisdiction is protected <p>Intergovernmental arrangements</p> <ul style="list-style-type: none"> - Ranges of intergovernmental agreements are in place to help support sustainable development and enviro mgmt. - E.g: GBR Intergovernmental Agreement provides a framework for the Australian Govt and Queensland Govt to work together to protect the GBR
<p>EU (Finland)</p>	<ul style="list-style-type: none"> - Finland’s national PA network covers almost 16,000 sites and 4.6 million hectares – 12% of land and water - 95% of PA are state-owned - 40 national parks and almost 700 other statutory nature reserves - More than 85% of the Natura 2000 network overlaps with the national PA network. While Natura 2000 covers 14.4% of Finland’s land area and 13.6% of marine area - Info on all protected areas is available in a national database - Finland has extended the national and international protected areas network through their National Nature Conservation Programmes (over 200 new state natures reserves) - Have continuously been enhancing 	<ul style="list-style-type: none"> - Using the Zonation software to support forest and mire protection programmes - Development of national urban parks - River basin mgmt. planning: has approved 7 regional river basin mgmt. plans for 2016-2021 - Following the 2014 EU directive on MSP. Regions will complete their own MSPs by 2021 	<ul style="list-style-type: none"> - Finland has created a working group for enhancing implementation of the National Biodiversity Action Plan - working group is entitled: “Saving Nature for People”. The group will evaluate the implementation of the National Biodiversity Action plan - Implementation of other biodiversity related action plans: <ul style="list-style-type: none"> o Improving the state of threatened habitats o Protection of threatened species o Ramsar wetlands action plan - Developing PAs in the changing climate: conducting a study on assessing the 	<ul style="list-style-type: none"> - the regional environmental admin is responsible for the regional implementation and development tasks of the central govt - municipalities manage their own nature reserves - private nature reserves, with the help of government agencies create their own site-specific provisions - have been applying the CBD’s Akwe:Kon guidelines in the Sami Homeland Area : the process aims at safeguarding culture and traditional knowledge of the Sami - Akwe:Kon working group is an addition to the participatory planning system already in place. Increase’s interaction

	<p>info mgmt. on national PAs</p> <ul style="list-style-type: none"> - Have assigned IUCN PA categories to national sites - Have been updating info on regional and international PAs (Natura 2000 sites, HELCOM MPAs, Ramsar wetland sites) - In 2014 developed and released guidelines on the aims, functions and mgmt. of PAs - Created regional master plans for Natura 2000 sites - Have ensured the financial sustainability of PA administration and mgmt. and that it is cost-efficient 		<p>sufficiency and the ability of the PA network to protect the enviro in the changing climate</p> <ul style="list-style-type: none"> - Completed many studies highlighting the benefits of PAs (E.g.: Economics of Ecosystems and Biodiversity) - Large citizen science campaigns 	<p>b/w different stakeholders</p>
EU (Germany)	<ul style="list-style-type: none"> - 2016 Federal Enviro Ministry launched the initiative for a broad process to further develop Germany's network of PAs - A number of regional strategies for PAs already exist and are being implemented 	-	<ul style="list-style-type: none"> - A joint action plan on PAs will be developed by 2019 and will coordinate the broad range of activities for achieving target 11. Elements for securing increased acceptance will also be given consideration - Further goal is to enhance appreciation of the importance of the natural heritage represented within PAs and strengthen a sense of common responsibility 	-
EU (France)	<ul style="list-style-type: none"> - No doc – just links to MULTIPLE PAPERS 	-	-	-
EU (UK)	<p>UK</p> <ul style="list-style-type: none"> - Nature Improvement Areas – of a 2014 evaluation all have reported to have good or satisfactory progress towards their objectives 	<p>UK</p> <ul style="list-style-type: none"> - Looking at Countryside Stewardship agreements where baseline environmental surveys are 	<p>UK</p> <ul style="list-style-type: none"> - Benefits of Sites of Special Scientific Interest (SSSIs) 2011 Report: estimates the monetary value of SSSIs ecosystem 	<p>UK</p> <ul style="list-style-type: none"> - Implementation of PA policy is largely devolved and involves a range of agencies - Work with stakeholders such as

	<p>and ensuring connectivity</p> <ul style="list-style-type: none"> - Improvement programme for England’s Natura 2000 sites – will be creating individual site improvement plans to achieve broader biodiversity objectives <p>Wales</p> <ul style="list-style-type: none"> - Well-being of Future Generations Act includes a set of statutory sustainable development goals for Wales - call for the ecosystem approach, among many other things - Welsh Govt Nature Recovery Action Plan (NRAP): sets out specifically how Wales will address the CBD’s Strategic plan for biodiversity and Aichi Targets - NRAP developed alongside the context of the Well-being of Future Generations Act - Biodiversity and Ecosystem Resilience Duty introduced to help drive biodiversity conservation actions within public authorities and assist them in meeting objectives - EU LIFE Program is the EU’s funding instrument for the environment. Objective is to contribute to the implementation, updating and development of EU enviro policy and legislation: Wales has been a major supporter of this - Committed to delivering 	<p>being carried out</p> <p>Wales</p> <ul style="list-style-type: none"> - See Nature Recovery Action Plan 	<p>services including regulating climate change , and cultural services</p> <ul style="list-style-type: none"> - Under increased funding scenario, services were estimated to be worth an additional 769 million euros per year <p>Wales</p> <ul style="list-style-type: none"> -see nature recovery action plan <p>Northern Ireland</p> <ul style="list-style-type: none"> - has an annual programme to assess the condition of sites. Largely carried out by scientists within the Department of Agri, Enviro and Rural Affairs 	<p>landowners, NGOs, etc.</p> <ul style="list-style-type: none"> - The devolved approach, informed by the National Biodiversity Strategies/planning policy appears to be working well and is sufficiently flexible to allow for adaptive management - Recently focusing to accommodate a great emphasis on the ecosystem/natural capital approach with governance arrangements <p>Wales</p> <ul style="list-style-type: none"> - See Nature Recovery Action Plan <p>Northern Ireland</p> <ul style="list-style-type: none"> - Governance arrangements should be put in place to ensure that actions are integrated and coordinate to ensure the best use of available resources
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	<p>ecologically coherent system of MPAs (special areas of conservation, special protection areas, sites of special scientific interest, marine conservation zones and Ramsar sites</p> <ul style="list-style-type: none"> - Supporting marine conservation and biodiversity protection through multiple measures: Marine and Coastal Access Act 2009, Well-being of Future Generations Act 2015 and Environment Act 2016 <p>Northern Ireland</p> <ul style="list-style-type: none"> - Focus is on mgmt. measures to maintain or improve overall condition of European sites. Will require greater coordination across stakeholders and govt - Site info is collated by the Joint Nature Conservation Committee; condition statistics are produced each year 			
<p>EU (Natura 2000)</p>	<ul style="list-style-type: none"> - Natura 2000 covers 18% of the EUs land and 6% of marine territory - A network of core breeding and resting sites for rare and threatened species and natural rare natural habitat types - Stretches across all 28 EU countries - Aim of the network is to ensure long-term biodiversity conservation - Natura 2000 is key to implement 	<ul style="list-style-type: none"> - Natura 2000 is not a system of strict nature reserves. Human activities occur within 	<ul style="list-style-type: none"> - Natura 2000 Viewer is an online tool to view the sites, provides key info on species and habitats, conservation status and estimated pop size 	<ul style="list-style-type: none"> - Within six years of designation there needs to be conservation measures adopted and be further designated as Special Areas of Conservation (SAC). - Conservation objectives should be met while taking into account economic, social, cultural, regional and recreational requirements - The EU has published many guidance docs on implementation and mgmt.

	<p>the EU Biodiversity Strategy: aim is to halt the loss of biodiversity and ecosystem services</p>			<ul style="list-style-type: none"> - Review and evaluation does occur: Most recently the EU Habitats and Birds Directives. Provide a wealth of info and adaptive changes were made to improve the Directives
<p>Canada</p>	<ul style="list-style-type: none"> - Uses the IUCN PA categories - Work is underway within Can to determine a Canadian approach to identifying OEABCMS - To meet Target 1 have engaged with the IUCN/WCPA Task Force <p>Terrestrial PAs and OEABCMS</p> <ul style="list-style-type: none"> - Working with govts (indigenous included) to reach Target 1 - A National Advisory Panel has been appointed by Min of Enviro and CC - A key element of the Pathway to Target 1 is the Indigenous Circle of Experts – created to ensure Indigenous Advice is applied - ICE offering advice on how to incorporate IPCAs <p>MPAs and OEABCMS</p> <ul style="list-style-type: none"> - Reached 5% protection by end of 2017 - Multiple ways to protect marine enviro : MPAs, MWA,NMCAs – all with different agencies - Tabled Bill C-55 to amend Oceans Act and CPRA – amendments seek to improve MPA designation process (freeze the footprint) - MPAs are managed on a site-by-site basis each with their own 	<p>Terrestrial PAs and OEABCMS</p> <ul style="list-style-type: none"> - Expert task teams have provided guidance to the National Advisory Panel on : PAs and OEABCMS, equitable mgmt. from a local community perspective, ecological representation, connecting conservation areas and integrating into landscapes, mgmt. effectiveness, areas for important biodiversity ecological reserves - Can conserve biodiversity more effectively through networks <p>MPAs and OEABCMS</p> <ul style="list-style-type: none"> - Developed the National Framework for Canada’s Network of MPAs - A general national process has been defined for bioregional network development and national guidance has been developed to support DFO staff in the network development process 	<p>Terrestrial PAs and OEABCMS</p> <ul style="list-style-type: none"> - 2020 Biodiversity Goals and Targets for Canada – highlight Canada’s biodiversity-related priorities - Established 18 biosphere reserves - each promoting biodiversity conservation and sustainable use <ul style="list-style-type: none"> o Used a multi-stakeholder approach - Mainstreams OEABCMS and PA through national municipal orgs such as the Federation of Canadian Municipalities – work to emphasize the value of biodiversity conservation in an urban context <p>MPAs and OEABCMS</p> <ul style="list-style-type: none"> - Increase public awareness of these areas – govt works with NGOs – “Musquash Paddle” - Interdepartmental Committees on Oceans are committees at several levels that serve as a forum for discussion and joint action on the development and implementation of ocean-related initiatives - DFO, PCA, and ECCC working 	<ul style="list-style-type: none"> - 95% of PAs and OEABCMS are governed by Federal or prov/territory govts - Only 16% of terrestrial PAs and 28% of marine protected areas has up-to-date mgmt. plans - Nearly all PA organizations identified challenges related to mgmt. of PAs - Working with Indigenous communities and groups to create new protected areas and conserve biodiversity is integral to the PA strategy - reflected in Canada’s 2020 Biodiversity goals and targets - Indigenous Ppls have had an increased level of participation in the decision-making process to related PAs <p>DFO Case:</p> <ul style="list-style-type: none"> - Report goes through the MPA designation process: collect data, engage with stakeholders, announce AOI, consultations, designation, etc. etc. - Example: in the case of Sgaan-Kinghlas Bowie Seamount MPA a MOU was signed

	<p>mgmt. plan – along with surveillance in each</p> <ul style="list-style-type: none"> - Developed guidelines for OEABCMs from CSAS advice - Fed govt meets regularly with all stakeholders to achieve MCTs 	<ul style="list-style-type: none"> - 5 bioregions are currently drafting network plans – OEABCMs will be a part of this! - Some existing area-based measures that do not qualify as OEABCMs can still potentially play a supporting role in strengthening bioregional MPA networks - Acknowledges that MPAs and MPA networks should be embedded within broader spatial planning and ecosystem-based mgmt. regions to max. their contribution to ensure long-term sustainability 	<p>collaboratively to mainstream protected areas</p> <ul style="list-style-type: none"> - MPAs and regs are integrated into IFMPs - MPA regs and boundaries are presented to the coast guard and training on how to respond to infringements - Fisheries Protection Program – partners with federal and provincial govts. to review sites, proposed works and establish guidelines and regulations 	<p>between Can and the Council of the Haida Nation which confirms a mutual commitment for cooperative mgmt. and planning . Provides a process for parties to exchange views and provide advice to the govt</p> <ul style="list-style-type: none"> - Example: Tarium Niryutait MPA – established together by the Inuvialuit and DFO is cooperatively managed with the FJMC. Inuvialuit are involved in mgmt. and monitoring of the MPA - Canada requires formal impact, benefit and cooperative mgmt. agreements to provide a framework for collaboration b/w Indigenous Ppls and other forms of govt. – create a formal mech to ensure that Indigenous Ppls are receiving the benefits of PAs
<p>Peru</p>	<ul style="list-style-type: none"> - Have a National Strategy on Protected Areas – established guidelines for the management of national network of PAs - 9 different categories of PAs: National Parks, Historic Sanctuaries, National Sanctuaries, Reservations, Wildlife Refuges, Landscape Reserves, Communal Reserve and Game Preserves - 17.2% of land is protected - Using a regional approach for network planning. All bioregions 	<ul style="list-style-type: none"> - Promoting systems operations – working with regional governments on this! - Successful Experience: Amazon Regional Conservation System: made up for different types of protected areas – very connected and high representability - Tri-National Program for Conservation and 	<ul style="list-style-type: none"> - Discuss how Peru is meeting Target 15, but not Target 11. - No discussion of marine environments at all - Financial Sustainability Initiative for Effective Mgmt – implementing a fundraising strategy to mobilize resources so Peru can have effectively managed PAs - Managing PAs through conceptual models to ensure that conservation objectives are 	<ul style="list-style-type: none"> - PA contracts – mgmt. contracts where the govt works with communities, orgs, allies such as indigenous or NGOs to ensure the effective mgmt. of the PA (currently 7 areas with mgmt. contracts) - Conservation agreements – involves local people that provides incentives for communities or businesses to be involved in conservation and make their work more eco-

	<ul style="list-style-type: none"> - exceed 10% representativeness - Biosphere reserves – promote conservation and certain socio-economic activities (ie. Fairs, ecotourism, local markets) - Transboundary Biosphere Reserve b/w Peru and Ecuador: Forest of Peace 	<p>Sustainable Development Corridor Areas Protected Areas wildlife Reserve – working with Ecuador and Colombia on this. Joint management for the three border protected areas</p>	<ul style="list-style-type: none"> - met with the impending impacts from climate change (looks at PAs vulnerability to climate change too) - Incorporating ecosystem services into network/PA planning 	<p>friendly</p> <ul style="list-style-type: none"> - Monitoring to see how orgs and individuals are participating in PAs - Do have IPAs – work closely with Indigenous groups
<p>Mexico</p>	<ul style="list-style-type: none"> - Annex 2 - As of Dec 2016 the amount of terrestrial environment that counts towards Aichi Target 11: 15.91%, marine environ: 22.29% - Can find all protected areas on the “Geographic Database of State Protected Natural Areas” - The National Commission of Natural PAs has evaluated the effectiveness of the PAs (use a score card) - 3 different levels of implementation and mgmt.: Low, medium and high. The higher the better and the more likely conservation objectives will be met - Have a Rapid Assessment of Mgmt Effectiveness in MPAs : objective is to help marine managers determine how MPA mgmt. effectiveness (based on a questionnaire) 	<ul style="list-style-type: none"> - have mapped out the corridors for connectivity between Protected Areas - have marine-coastal natural protected areas – the mgmt. programs allow artisanal or riparian fishing in certain subzones 	<ul style="list-style-type: none"> - Annex 3 – list of contributions from the National Commission on Natural Protected Areas (CONANP) - CONANP has promoted the prep of C.C. Adaptation Plans for 29 Protected areas - CONANP has developed adaption measures based on ecosystems in PA which contribute to reducing socio-economic vulnerability through the prevention and attention of negative climate change impacts - CONANP has implemented an ambitious plan to mobilize funds to strengthen the mgmt. of Mexico’s PA system - Economic valuation of protection services against climate change has served as a tool to promote financing for adaption measures - Gender perspective for strengthening the mgmt. of PA in the face of climate change continues to develop 	<ul style="list-style-type: none"> - Mexican legislation establishes a requirement to have the sustainable development of ecosystems and the participation of society in the management of those policies - The Secretariat of Enviro and NR integrates consultations bodies for organizations/stakeholders to participate - have regulations to establish mgmt. plans, assist in the procurement of financial resource, technical and scientific assistance , support the participation of local society in conservation actions and contribute to the solution of socio-environmental problems - currently 91 advisory councils - created a Citizen Participation Index of the Environment Sector for the purpose of measuring society’s participation on conservation actions

			- Coordinates with the universities to increase scientific understanding	
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Appendix 2. Summary of Submissions by Parties and Other Governments to Notification 2017-084

Country	MPA
<p>United States</p>	<ul style="list-style-type: none"> - Uses a variety of ABMs (MPAs, Fisheries Mgmt Areas, Security Zones, Shipping Lane and restrictions, oil and gas leasing exclusion areas - MPAs are established through many different federal and state authorities - Most MPAs have specific goals, objectives and outcomes (detailed mgmt. plan on websites) - Over 1700 areas that meet the US definition of an MPA (broader than IUCN) <ul style="list-style-type: none"> o Includes MPAs in coastal areas, open ocean, estuaries, Great Lakes - Has completed an analysis of representativeness of the National System of MPAs – collection of some 437 sites (Monterey Bay National Marine Sanc, Papahanaumokuakea Marine National Mon, - Scientific and socio-economic info are applied in the MPA process through the National Environmental Policy Act. Traditional knowledge may be incorporated. Also look at local knowledge to inform decisions - Many area-based measures do interact in US waters. NOAA is working with Anthropocene Institute to develop a mapping website that includes both MPAs and other ABMTs. Also NOAA is developing a database DeFacto MPAs (has not been updated since 2005) - National Ocean Policy established under Obama calling for regional ocean planning. This process is now being led by states - Planning on consultation process depends on the authority used to establish an MPA <ul style="list-style-type: none"> o At Fed level there is a process, where environmental impact statement maybe required o Must be public scoping, public comment period o Full process takes 3-5 years o May consult with different agencies in government and with Indian tribes - Stakeholder engagement processes depend on the authority developing the MPA <ul style="list-style-type: none"> o Community-based process (California MLPA) - Unsure how progress towards achieving conservation goals/objectives are assessed or how often it is complete. Examples were given however: National Park vital signs, Sanctuary condition reports (Links were broken) - Most data on MPA effectiveness is in peer reviewed scientific literature but has not been compiled or synthesized - Many MPA programs evaluate and adjust their mgmt. based on scientific or other info. MPA Federal Advisory Committee recently published guidance on adaptive management for MPAs <ul style="list-style-type: none"> o Examples: Moved shipping lanes in a sanctuary and has resulted in reduced whale mortality (Stellwagen National Marine Sanc) - Overlap in different forms of protection with varying jurisdictions and levels of government exist throughout US waters (Florida Keys).

	<ul style="list-style-type: none"> ○ Can lead to confusion regarding regulations. Not sure if the measures reinforce for complement one another - Most comprehensive MPA network is in California - In 2017 the US MPA Federal Advisory Committee developed guidance on how MPA programs can better integrated ecological spatial connectivity into their programs. This falls largely on the responsibility of states to implement
<p>Togo</p>	<ul style="list-style-type: none"> - 50 km coastline that is characterized by sandy supra-littoral - Many species along coast are in danger (5 of the 8 sea turtles can be found here!) - 2014 Togo developed a National Strategy and Plan of Action for Biodiversity - Does not have any MPAs. H/w it has an environmental law framework that works to limit pollution protect marine resources, and construct infrastructure. The Ministry of Enviro and Forest Resources works with NGOs within the framework to monitor sea turtles and marine mammals. - The Govt work with fishermen, who act as security officers, reporting when they see something illegal - Currently working with the German Cooperation of Togo to create a transboundary biosphere reserve on the Mono Delta (has been approved by UNESCO). Crosses boundaries with Benin. <ul style="list-style-type: none"> ○ Need strong financial support for a management plan, implementation, training, public awareness, - Trying to create an oceanography department at the University of Lomé to train capable marine managers - Need a sustainable financing plan for the management of marine and coastal biodiversity and the challenges related to the application of the law in biodiversity conservation - Need to build capacity and relationships between scientists and other stakeholders - Will to learn – particularly through the Western African MPAs network
<p>St. Lucia</p>	<ul style="list-style-type: none"> - Do have MPAs – had issues in the past in making sure that infringements were not occurring within - fishermen lose prime fishing grounds - Have seen successes in protected areas with fish populations growing - Collaboration occurs through the formation of multi-sectoral technical advisory committees – as well as relevant governmental and NGO agencies - No national policy on protected area, lack of readily available consolidated data on protected areas at a national level – need an overarching law on protected areas to be develop which rationalizes the current multiple laws on protected areas - Several institutions involved in the designation and management of protected areas - Have marine reserves, marine management areas, marine management area/marine reserve, national park and marine management area, world heritage site, local fisheries marine management area, nature reserve and marine reserve - Need to establish a forum for all government agencies involved in protected areas to collaborate - Need to take into account the 2008 OECS Policy on Protected Areas Systems and the OECS Model Protected Areas Systems Act for developing the final protected areas network for Saint Lucia.

	<ul style="list-style-type: none"> - Unsure of any evaluation/assessment of protected areas - Unsure if Saint Lucia is monitoring their progress towards Target 11
Peru	<ul style="list-style-type: none"> - AMBTs used in Peru: there are 4 National Protected Areas that follow IUCN categories for classification – all followed a the “Protected Area Master Plan” for Peru that was adopted in 2016 - Each protected area has their own management document with a master plan that establishes objectives, goals for the protected area. It appears they are reviewed every 5 years - Protected areas cover a variety of ocean ecosystems (benthic and pelagic): warm temperate south eastern pacific, tropical - Science data and user data (fishermen, tourism operators) is gathered to inform MPA process and designation - Currently no other conservation-based measures that directly interact with MPAs – but it is possible - Consultation process before MPA is designated. There is a management committee composed of various public and private stakeholders - Participatory processes for approving management documents and implementing protected areas can vary - Opportunities for communities and stakeholders to implement MPA strategies - Protected areas are evaluated according to their management docs and plans. Different types of evaluation but all are either completed quarterly or semi-annually - Unsure how effective their protected areas have been - There are different forms of protection that complement each other in Peru. For example, law that protected natural bank scallops – some of these banks overlap with the Lobos Isla De Tierra sector that protects other marine organisms - Consider their 4 MPAs as a network that protect and conserve marine biodiversity of Peru – not sure how this is measured - Do take into account connectivity between the protected areas - Take into account how their protected areas contribute to Aichi Target 11. - Need more research into how monitoring systems, indicators, assessments of MPAs integrate with other protection measures
Mexico	<ul style="list-style-type: none"> - Areas of refuge (focuses mostly on fisheries) and safeguard areas (prohibits the exploitation of hydrocarbons) are used as ABMs\ - Propose of protection in Mexico is to : <ul style="list-style-type: none"> o Preserve natural environment of the different biogeographic regions o Safeguard genetic diversity, in particular species that are in danger of extinction o Ensure the preservation and sustainable use of ecosystems, their elements, and its functions o Provide an enabling field for scientific research o Protect natural historical, archaeological and monuments – as well as tourist areas, and other reasons of importance for recreation, culture, and indigenous peoples - So MPAs as a way to mitigate climate change

	<ul style="list-style-type: none"> - Have pursued the issues of connectivity and representability within protected areas but seems it is not binding by law or policy - Protect a diverse range of habitats: coastal dunes, mangroves, coral reefs, seagrass beds, pelagic areas, benthic areas. With coral reefs and mangroves as priority ecosystems - Work with fishermen so that the protected area contributes to maintain the fishermen's' livelihoods - Did not fill out the entire doc
Japan	<ul style="list-style-type: none"> - Japan uses a variety of ABMs to protection marine environments : Natural Parks and Natural Seashore Conservation Areas that aim to protect the natural landscape <ul style="list-style-type: none"> o Nature Conservation Areas, Wildlife Protection Areas, Natural Habitat Conservation Areas that aim to protect the natural environment or the habitat or nursery ground of organisms o Protected Water Surface that aim to protect and cultivate aquatic animals and plants, Coastline Marine Resource Development areas and other designated areas by different entities and governments - a large number of protected areas already exist in Japan - in designing MPAs Japan aims to develop a system of effective ecological networks - strong emphasis on community-based/fishermen –led MPAs or protected areas - continuous monitoring for adaptive management and review of measures based on assessment of the monitoring are extremely critical – a framework for such a system should be established - establishment of consultative bodies for relevant stakeholders to cooperate are being promoted – especially for Marine Park Areas
Iraq	<ul style="list-style-type: none"> - unable to read files
EU (UK)	<ul style="list-style-type: none"> - UK Marine Acts call for a network of MPAs comprised of National and EU marine sites - UK's devolved administrations (N Ireland, Scotland, England, Wales) follow several key principles in their development of the MPA network – follow OSPAR guidance <ul style="list-style-type: none"> o Features, representivity, connectivity, resilience, management - 23% of UK waters are MPAs, 105 special areas of conservation with marine components, 102 special protection areas, 56 marine conservation zones, and 30 nature conservation marine protected areas <ul style="list-style-type: none"> o Boundaries of the MPAs in UK waters can be viewed on an interactive map o Sites of special scientific interest (SSSIs) will also form part of the UK's contribute to an MPA network
EU (Sweden)	<ul style="list-style-type: none"> - Case Study 1: Fisheries Conservation Measures – Bratten MPA and Kosterfjorden MPA/group of MPAs <ul style="list-style-type: none"> o Focus on implementing fisheries conservation measures in MPAs to help establish a well-connected network of MPAs o Analysis of the network of MPAs was conducted in 2014 – found that in approx.. 30 of 300 needed fisheries conservation measures to reach their objectives o Progress on implementing fisheries conservation measures have been done in two separate processes: through national fisheries legislation and secondly through agreeing on a joint recommendation,

	<p>together with concern member states within EU</p> <ul style="list-style-type: none"> ○ Focus protecting the most vulnerable areas in MPAs from mobile bottom contact fishing gear (lophelia reefs) , as seapens, sponge communities, coral gardens and big fish associated with reefs and cartilaginous fish ○ Both these MPAs/group of MPAs are located in areas with a high degree of fisheries activities ○ Bathymetrical data was used to identify areas with a presumed high biodiversity - fishermen identified areas with presumed high biodiversity ○ For Bratten MPA consultation focused on commercial fisheries stakeholders and was conducted within the framework of an EU interreg project with financial resources for staff and accommodation for stakeholders. For Kosterhavet group of MPAs there is a forum including local fisheries, agencies and scientists ○ Do have infringements on closed areas ○ Overlap between Natura 2000 sites and OSPAR MPAs and both complement each other – make a more coherent MPA network ○ Sweden is currently in the process of establishing a framework for MPAs that will allow for setting goals for ecological representativity, connectivity and functionality ○ The framework for MPA networks is intended to able to align with the work going on in green infrastructure, which would enable integration into the wider seascape <p>- Case Study 2: Integrating MPAs in the Marine Spatial planning</p> <ul style="list-style-type: none"> ○ MPAs shall be taken into account in the development of the Swedish marine spatial plans ○ Exploring possible ways and methods of using the concept of green infrastructure in Swedish marine spatial planning to secure connectivity
<p>EU</p>	<ul style="list-style-type: none"> - 2015 review showed that the EU Member states had designated 5.9% of their seas as MPAs – by 2017 this expanded more than 3100 marine Natura 2000 sites which cover approx. 7% of the total EU marine area - The EU has so far not considered criteria to differentiate b/w different types of measures or designations and whether they would count towards the achievement of Target 11. H/w recognizes the importance of OEABCMs - Can view all MPAs (higher proportion are coastal) through different databases – notably the Natura 200 Network viewer. RSCs also make an effort to make their data available through HELCOM MPA database, OSPAR MPA tool or MAPAMED - EU is using many tools to ensure proper follow-up to agreed targets – the most important ones being the EU “acquis” on environmental protection and fisheries, international agreements and other relevant policy initiatives: The Birds and Habitats Directives, Action Plan for Nature, People and the Economy, Marine Strategy Framework Directive, Common Fisheries Policy <ul style="list-style-type: none"> ○ All require the creation of protected areas that are based on science and have strong consultation processes

	<ul style="list-style-type: none"> - Directive to establish maritime spatial planning - each member state is to identify, by 2021, the spatial and temporal distribution of existing and future activities and uses in their marine waters, including nature and species conservation sites
Ecuador	<ul style="list-style-type: none"> - Navy does a lot of ocean science work for Ecuador – looking at the biota - No universal agreement to define marine-coastal ecosystems - Management plans can be built using a participatory process with local actors – work so that communities respect the type of protection - Traditional knowledge of fishermen and the scientific research is used to help designate protection areas - Committees evaluate management effectiveness for protected areas - Some progress has been made towards the goals of protected areas – e.g. protected beaches allow for greater nesting events - Claim that different types of measures do complement each other and support connectivity - A goal of the network in Peru is to make sure it is incorporated into the wider marine landscape. Not sure how it is evaluated. - Peru has sent over 7 peer-reviewed docs on oceanographic work completed in their waters. However – the above info represents their responses to the questions posed by the CBD.
Costa Rica	<ul style="list-style-type: none"> - Multiple different types of reserves in Costa Rica: <ul style="list-style-type: none"> o Biological Reserves and Absolute Natural Reserves: very restrictive, does not allow development of tourist industry, fishing or any type of extraction o National Parks: restrictive. Permitted uses: ecotourism, research and education. There are 8 national parks that contain MPAs o Marine Management Areas: industrial fishing is prohibited or the use trawls. No oil and gas either. There are 2. Sustainable use zones are allowed - Each area has a fundamental management plan – based on science - Efforts are made to carry out joint patrols with other national authorities that usually have great capacity (e.g. Coast Guard) - Recent agreement has been reached to establish a network of radars to monitor any type of activity within the boundaries of MPAs - Tourism is huge within protected areas – monitoring is taking place to observe the negative impacts of tourism. Nearly all tourist operations follow the regulations set in place - Taking firm steps to establish ecological monitoring plans - The general management plans for MPAs in Costa Rica required consultation process at the local level. Workshops are always held to present the plans – same happens for the tourism and fishing industry <ul style="list-style-type: none"> o These plans must be approved by the Regional Council of Conservation Areas, which is made up of regional representatives. - Monitoring measures have recently been put in place – had to evaluate their effectiveness currently

	<ul style="list-style-type: none"> - Has a network of connected areas – need more info to designate more areas -
<p>Canada</p>	<ul style="list-style-type: none"> - Look at WEBCA as an OEABCM – deems it to be successful and meets all of DFOs criteria <ul style="list-style-type: none"> o Had to cut a scallop fishing area out of the closure as it was incompatible with the conservation objective o WEBCA is within an EBSA o Many different fisheries closures overlapped in the OEABCM o science and data came from science staff and DFO science publications o planning took place from 2016-2017. Consultation was over several months, through multiple mechanisms (Federal, Provincial, fishery advisory groups, indigenous). o Consultation included: Prov govt, Indigenous groups, NGOs, and Industry and played a role in developing the conservation objectives for the measure o Protected area has not been reviewed yet. H/w previous closures was assessed in 1998 and in 2011 - Narwhal Overwintering and Coldwater coral zone <ul style="list-style-type: none"> o Chose a geographic area where the intent was to enhance conservation of biodiversity o Zone is an EBSA o Different fisheries closures in the area – not all will count towards Target 11 o Science came from DFO science publications – and from working with a Marine Conservation Working Group which developed proposed adjustments to the Zone closures o TEK was sought through a series of consultations on adjustments to the Zone closure o Planning began in Oct 2016 and consultation in Jan 2017 – July 2017. All changes will be implemented on Jan 2018 o DFO sought the views of co-management orgs, indigenous partners, stakeholders and interested groups, territorial/provincial govts, and ENGOs. Primary avenue for consultation was through multi-stakeholder working groups o Development of indicators and targets is currently under consideration o Effectiveness of the Zone has been evaluated from a compliance, scientific and fishery management perspective o Additional time is needed to observe stock or ecosystem outcomes <ul style="list-style-type: none"> ▪ DFO is currently using tagging techniques to monitor Narwhal use and two research expeditions collected physical samples, photographs and video imagery of the benthic habitat in the Zone o Two fisheries had to change their operations: ground fish with fixed-gear was decreased by 6.2% and there will be minimal impact on the shrimp fishery o No info available on fishery performance for northern shrimp as closure was recent. Halibut fishing has noticed positive benefits h/w negative economic benefits were identified

- Changes have been made/adapted since their initial implementation to improve ecological effectiveness and reduce impacts on fishery performance
- Pacific Rockfish Conservation Area
 - 164 Pacific rockfish conservation areas – located on Canada’s west coast. Several fisheries occur within the RCAs
 - Approach was to use a spatial measure to address a specific conservation challenge for a specific fishery and set of interrelated fisheries. Closures were established in 2002 and 2007
 - Meet all of DFO’s OEABCM criteria besides the 5th : ecological components of interest are effectively conserved
 - Closures targeted depths and habitats known to be used by inshore rockfish species
 - Target adult inshore rockfish habitat, other benefits include:
 - Numerous other species of fish and invertebrates have been observed within the RCAs
 - Numerous types of fishing methods are prohibited: bottom trawl, ground fish hook and ling, ground fish by trap, shrimp trawl, salmon fishing, jig, mooching and spearfishing
 - Other fisheries management measures include: accounting for all inshore rockfish catch, improve stock assessment and fishery independent monitoring, reduce total allowable catch of two species of rockfish
 - DFO work with Provincial govt to protect rockfish in multiple jurisdictions
 - DFO does play a role in examining activities/works that occur in or near water to ensure they do not cause serious harm to fish or fish habitat
 - Sites where chosen using DFO science and traditional knowledge was sought throughout
 - Science and indigenous and local knowledge have not yet been sought as part of the review of RCAs against the MCT OEABCM criteria
 - Planning and implementation took place from 1999-2007, with consultations from 2001-2006. Three stages: Data gathering stage, internal DFO review, rockfish habitat analysis
 - Because of longevity and low productivity of rockfishes it will take 10-20 years for any detection, action, and response to the effects of management tactics
 - Monitoring program has not formally been pursued. Instead, progress has been assessed in an ad hoc manner via various academic research initiatives
 - Some evidence shows some RCAs are demonstrating an effect
 - Yes fisheries had to relocate – socioeconomic concerns were considered in determining RCA boundaries
 - All of this work has been based on the Inshore Rockfish Conservation Strategy and Ground fish Integration Program
 - RCA management measures have NOT been adapted since their final implementation in 2007 – an RCA review is planned to assess both the management measures within RCAs and their placement in

	<p>the marine environment.</p>
<p>Brazil</p>	<ul style="list-style-type: none"> - Marine area of 3.5 million km², considered the “Blue Amazon” - Many economic sectors rely or come from coastal and marine areas: fishing, mining, oil and gas extraction - Current stressors on the marine environment: pollution, overfishing, urban occupation, oil exploitation - Measure of Target 11 is done through the Ministry of Environment using the National Register of Nature Conservation Units (Protected Areas) – created in 2000 by federal law - Have been studying MPAs and what would be the best options for Brazil. Have studied Species Conservation and Reproduction Areas and also Fishing Exclusion Zones - Aichi Targets are internalized in Brazilian legislation – they are national goals and guiding principles - The Govt uses three different tools to measure implementation and effectiveness of the nature conservation units to achieve their objectives: Tracking tool developed by Global Environmental Facility, Rapid Assessment and Prioritization of Protected Area Management developed by WWF and measured every 5 years and the System of Evaluation and Monitoring of Management developed by Chico Mendes Institute for Biodiversity Conservation - 257 different protected areas – only 2.8% of marine and coastal ecosystems are protected - Each new protected area must be supported by environmental, economic, and social studies that justify their limits as important for nature conservation and their management viability. - Proposal must be submitted for public consultation where all stakeholders can contribute - The science guiding the selection of measures stems from the 1999 public policy doc entitled Priority Areas and Actions for Conservation : Sustainable Use and Benefit Sharing of Brazilian Biodiversity – updated in 2007 and will be again in 2018 - REVIMAR : Evaluation, Monitoring and Conservation of Marine Biodiversity – this initiative objective’s is evaluating, monitoring and promoting the conservation of biodiversity of Brazilian marine ecosystems – attempts to make sure that protected area measures are complementary to one another - Have management councils for consultation of protected areas – depending on the type of protected area (E.g. Extractive Reserves vs. Parks) each of the different stakeholders play a different role - The National Register of Nature Conservation Units measures/assess protected areas and if they are achieving their conservation goals - Successful cases have been observed in locally managed areas - At ecosystem scale it is important to note that Brazil started to have the world’s largest mangrove protection belt – 568,000 hectares of mangroves will benefit – results are in attached doc (there was not attached doc) - Within a protected areas there are different management zones – but measures try to complement each other as much as possible - Really no mention of OEABCM
<p>Benin</p>	<ul style="list-style-type: none"> - Protected areas should be managed by a Management Committee which includes fisheries managers, research structures, stakeholder and local population

	<ul style="list-style-type: none"> - Goals of conservation include: integrated sustainable management of the coastal and marine area and increased yields of resources and vegetation cover - Two zones are proposed for protection - one of them overlaps with Togo. Not official yet but both will include the involvement of local communities - Research info is used to inform decisions - particularly EBSAs - All stakeholders play a joint role in MPA management - Currently an ongoing process towards achieving their conservation objectives
<p>Australia</p>	<ul style="list-style-type: none"> - Marine parks are managed by the Commonwealth Director of National Parks. Zones set out what you can do in marine parks – there are 3 main types of zones: green, yellow, blue. All offer different forms of protection - Marine Parks cover 1/3 of Australian waters – 58 reserves in total. The reserves have been designed under the National Representative System of MPAs - In 2012 the govt introduced 40 new marine parks – all will have management plans, are included in a network of MPAs - GRBMMPA uses a combo of statutory zoning plans and plans of management - Spatial fisheries closures are enacted to deal with fishing pressures - Case Study: Heard Island and McDonald Islands Marine Reserve <ul style="list-style-type: none"> o Managed by multiple govt agencies - Objectives of Australia’s Marine Parks is to provide for the protection and conservation of biodiversity and other natural, cultural and heritage values; and ecologically sustainable use and enjoyment of the natural resources they contain - MPAs can be found in multiple ecosystems throughout Australian waters. The goal of the National Representation system of MPAs was to establish a comprehensive and representative system of marine parks - Marine parks can also be created under state and territorial govts - 37.2% of Australian EEZ is closed to bottom trawling by marine parks and 30.3% by fisheries closures - Have developed guidelines or “goals” for establishing MPAs - The development of marine parks is guided by a range of biophysical and socio-economic-cultural management operational principles. - Marine parks overlap with a variety of other measures such as fisheries, maritime, tourism, oil and gas, etc. - Public consultation is part of several management processes undertaken when designing marine parks - Australian marine parks were identified through a marine bioregional process in 2012. Have network plans for different regions – feedback was sought after the plans were released - Consultation is required by law and requires a min of 30 days for comment. Following this a draft management plan must be made public - Consultation is usually completed through comment periods and meetings with all stakeholders (fishing, energy, indigenous, ngo, science, tourism, transport, etc

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| | <ul style="list-style-type: none">- Under draft Australian Marine Park management plans, a monitoring and evaluation framework is established – plans are formally reviewed at both 4 and 8 years- Too soon to assess progress towards Australian Marine Park objectives – h/w have identified that some stocks have been increasing- Adaptive management is a fundamental principle within the Australian Marine Parks Monitoring, Evaluation and Review Framework- There has been the relocation of certain industries – impacts are expected to be minimal- Australia does have sites where multiple designations overlap – and do complement one another (E.g GBR Marine Park and the Great Barrier Reef Coast Marine Park - allows for seamless zoning arrangement between two different forms of govt)- Networks of Australian Mark Parks are designed using the CAR Principle (comprehensive, adequate and representative). Assessment of representativeness was undertaken a the design stage- Assessment of the success of Australian Marine Parks will form part of the monitoring and improvement framework set up at both the whole park and network scales |
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Appendix 2. Summary of Submissions by Organizations in Response to Notification 2017-084

Non-Party Organization	MPA
GFCM	<ul style="list-style-type: none"> - Main spatial mgmt. tool is Fisheries Restricted Areas (FRAs) – ranges from total fisheries bans (no-take zones) to specific spatial limitations to fishing activities - Since 2005, eight FRAs have been established <ul style="list-style-type: none"> o 3 deep-sea sensitive habitats where fishing with towed dredges and bottom trawls is prohibited (e.g. Lophelia reef, The Nile Delta Area, and the Erastothernes Seamount) o FRA in the Gulf of Lion to protect spawning aggregations and deep seas sensitive habitats o Prohibition of trawl nets and towed dredges at depths below 1000m in the Mediterranean o Protection of 3 FRAs for hake and deep-sea water rose shrimp in the Strait of Sicily – has a mgmt. plan in place - Process for establishing FRAs requires the submission of the Standard form for the submission of proposals for GFCM FRAs in the Mediterranean and the Black Sea – lists the type of info needed to initiate the process. The info is validated by the Scientific Advisory Committee on Fisheries and then submitted to the annual GFCM session for consideration by contracting parties - In 2016 GFCM established a working group on VMEs – objective is to compile info on priority areas for the establishment of FRAs - In 2016 Mediterranean and Black Sea countries adopted the Mid-term strategy towards the sustainability of the Mediterranean and Black Sea Fisheries – which incorporates the objectives of the Aichi Targets and SDGs – also highlights the need to promote the identification and establishment of new FRAs
Old Dominion University	<ul style="list-style-type: none"> - Call for dynamic ocean management – need to adaptive, need to be fluid - Dynamic management further complements existing management by increasing the speed at which decisions are implemented using predefined protocols - Examples demonstrate that dynamic mgmt. can successfully allow managers to rapidly respond to changes on-the-water - Gaps that need to be filled concerning dynamic ocean mgmt.: <ul style="list-style-type: none"> o Enhancing legal instruments o Incorporating ecological and socioeconomic considerations simultaneously o Developing ‘out-of-the-box’ platforms to serve dynamic management data to users o Developing applications broadly across additional marine resource sectors - Call for big pelagic marine protected areas (PMPAs) – the Big Ocean Network provides a forum for managers of large, mostly pelagic MPAs to communicate about challenges and successes in management - Need to ensure goals of the protected areas are clear - Use cost-effective approaches – it can identify the management action that ensures the most benefit to a range of factors - Need to think about how to deal with threats beyond PMPA boundaries - Need strong monitoring and enforcement – engage in participatory compliance – get stakeholders involved

	<p>through participatory monitoring (e.g. peer reporting). Or enforcement partnerships (E.g. US Coast guard and the US Navy)</p>
<p>ISA</p>	<ul style="list-style-type: none"> - Rules for the protection of the marine environment are adopted by the Authority and implemented by the Authority itself, states sponsoring activities in the Area and contractors that undertake those activities - The system relies on the application of the precautionary approach - The Authority is responsible for regulating, taking into account the best scientific info and for monitoring activities in the Area. Contractors are responsible for complying with the regs. Sponsoring states must cooperate with the Authority - Under Article 145 of the Convention, the Authority is required to take necessary measures to ensure effective protection for the marine environment from harmful effects which may arise from activities in the Area. Therefore, the Authority is required to adopt appropriate rules, regs and procedures in order to do so - The law-making power of the Authority is vested in the Assembly and in the Council - The Legal and Technical Commission of the Authority is vested with the power to formulate environmental regs - As of today, the Authority has adopted 3 sets of Regulations on Prospecting and Exploration <ul style="list-style-type: none"> o Require PA, attempt to strike a balance b/w a PA to activities and an incremental approach to regulation, impose a duty on each contractor to take necessary measures to prevent, reduce and control pollution and other hazards to the marine environment o Each contracting party must submit impact assessments – must also establish a carry out program to monitor and report on effects to the marine enviro o CPs must also submit an annual report - The Authority can issue emergency orders to prevent serious harm to marine enviros - The Commission is required to prepare assessment of the environmental implications of activities in the Area – and must make recommendations to the Council on the protection of the marine enviro (Clarion-Clipperton Fracture Zone) - Clarion-Clipperton Fracture Zone – covers 13.5 million km² – Council approved the EMP in July 2012 <ul style="list-style-type: none"> o Use of spatial mgmt. tools – such as the protection of areas to be representative of the full range of habitats, biodiversity and ecosystem structure and functions within the mgmt. area. o The plan identifies a network of 9 areas which area designated as areas of particular environmental interest (APEIs). – include a wide range of different habitat types and was based on scientific research - Commission is considering developing EMPs in other regions (Atlantic and Indian Ocean)
<p>BirdLife International</p>	<ul style="list-style-type: none"> - Over past 40 years BirdLife Int'l has identified over 12,000 Important Bird and Biodiversity Areas – IBAs - Recently invested in the identification, documentation and mapping of marine sites of c. 3000 marine sites of int'l important for birds - MIBAs are identified used a standardised set of data-driven criteria and thresholds. Take into account: <ul style="list-style-type: none"> o Important breeding colonies

	<ul style="list-style-type: none"> ○ Seaward extensions around breeding colonies ○ Non-breeding(coastal concentrations) ○ Migratory bottle necks and areas for pelagic species - IBAs capture a large and representative proportion of biodiversity - IBAs feed into Aichi Target 11 - BIRDLife Int’l has been working with CBD and national govts to established MPAs (provide workshops and data, capacity building as well) - Used Integrated Biodiversity Assessment Tool to help govts, business and conservation practitioners make informed decisions on development and conservation actions - IBA criteria are aligned with the EU’s criteria for Specially Protected Areas (SPAs) - Have helped catalyze the SPA designation process - Marine IBAs have progress indicators against Aichi Target 11
<p>UNDESA</p>	<p>DOALOS</p> <ul style="list-style-type: none"> - Emphasis on capacity building (E.g. Nippon Foundation and Hamilton Shirley Amerasinghe Memorial Fellowship) - Provide internships, opportunities, and increased skillsets for ocean law and policy - Capacity building at the individual level can have an impact on national and regional oceans-related efforts – contributing to the economic, social and environmental dimensions of sustainable development in different countries and regions - Case Study: Development of mariculture activities as an alternative livelihood option for coastal communities: Mtwara districts, Tanzania <ul style="list-style-type: none"> ○ Capture fisheries were in decline, needed another option for local communities ○ Promoted milkfish farming ○ Strong welfare gains, stronger sense of community, improved food security, enhancing investments and savings - Case Study 2: Ban of queen conch harvesting fisheries: Banco Chinchoro, Quintana Roo, Mexico <ul style="list-style-type: none"> ○ One of most valuable fisheries of Caribbean reefs, but in rapid decline ○ Communities depend on the fisheries – limited other methods to generate income ○ With little other options 3 cooperatives formed to manage the conch reserve – first stock recovery initiative in Mexico ○ Lead to increased compliance, sustained, long-term buy in form coastal communities, identified a clear legislative and policy framework ○ Established strong community-based measures – ended up being more effective <p>International Atomic Energy Agency (IAEA)</p> <ul style="list-style-type: none"> - Lessons Learned from dealing with ocean acidification on US west coast: primary mitigation measure for ocean acidification is CO2 reduction

- Cooperation and corrective action should take place at several levels and involve all stakeholders
- Although a local and regional problem – the global dimension of OA required increased int'l cooperation and coordination to address and prevent ocean acidification

IMO

- Case Study: Alien invasive species and ballast water management in Turkey (e.g. Comb jelly)
- IMO has been addressing alien species – through Ballast Water Mgmt Convention
- GEF, UNDP and IMO joined forces and introduced the GloBallast Project - aim is to catalyse innovative global partnerships to develop solutions and help developed countries reduce the transfer of harmful aquatic orgs
- Lessons learned:
 - o Strategic investments in prevention measures are required – rather than post invasion damage control – need countries to ratify BWM Convention
 - o National policy frameworks should meet international standards
 - o Economic assessments of alien invasive species, their possible impacts and different mgmt. options can support strategic decisions regarding responses and facilitate national planning
 - o Specific partnerships can be formed at the regional level (IMO- European Bank)

United Nations Development Program

- Case Study: Economic, social, and enviro benefits from sustainable mgmt. of tuna fisheries: the GEF/UNDP Pacific Islands Oceanic Fisheries Mgmt Project, Western Pacific
- Through EEZ 15 PSIDS share jurisdiction over majority of the water surrounding them - depend heavily on marine resources (specifically tuna which has been declining) – OVEREXPLOITATION
- Overcome this: the OFMP was created to support PSIDS in successful establishment of the WCPFC RFMO
- UNDP-GEF support lead to a number of major institutional, legal and policy outcomes – monitoring and compliance programmes, regional satellite-based vessel tracking system, and the first regional high seas boarding and inspection programme
- Lessons learned: capacity-building elements of the UNDP-GEF project have empowered PSIDS fishery managers and enabled them to present and negotiate their positions at Commission meetings and work to ensure sustainable mgmt. of the fisheries
 - o Sustainable managed local fisheries too
 - o Similar strategy should be replicated in other regions in the pacific and Indian ocean

UNEP

- Case study 1: marine litter, regional seas in Europe
- Case study 2: ecosystem health report card for managing Chilika Lake of Odisha State: a collaborative approach, India
- Case study 3: climate change adaption in Lami Town, Fiji

World Tourism Organization (UNWTO)

Case Study: Tourism development in coastal areas: promoting sustainability through governance and mgmt. mechs, Africa

- Lessons learned

- Tourism operators should pursue sound environmental mgmt. practices and tourism related actions should improve the attractiveness and conservation of coastal enviros
- Need to be delivery of benefits to local communities
- Responsibility for actions to improve governance and mgmt. for sustainable coastal tourism should largely rest with govts
- Need a coherent policy framework to guide and drive action for sustainable coastal tourism
- Need effective engagement of stakeholders and multi-stakeholder destination mgmt. bodies
- Need integrated planning for tourism in a wider coastal mgmt. context
- Need effective EIAs to assess tourism developments
- Financial incentives – such as conditional tax relief
- NGOs and civil society have potentially very important roles to play in the areas of facilitation and capacity-building
- Use academic and research bodies

UNDESA

Recs for the integrated planning and sustainable mgmt. of coastal areas:

- Listen to SIDS concerns and issues
- Integrate coastal zone management strategies into national sustainable development strategies
- Establish strong institutions
- Make disaster risk and reduction and mgmt. an integral element of integrated coastal area mgmt.
- Effectively apply an ecosystem-based approach and the precautionary approach
- Apply a spatial approach to integrated coastal mgmt. in order to support policy integration and coherence among sectors within coastal areas with the aim of promoting sustainable activities
- Take into account the land-sea interface
- Implement water quality mgmt. and monitoring
- Support the development of sustainable tourism
- Use legislation that calls for EIAs
- Involve all relevant stakeholders
- Strengthen the science-policy interface to support evidence-based decision making
- Strengthen the involvement of the private sector
- Take into account the rights and concerns of local communities when approving a new development
- Promote local ownership and awareness raising through the provision of incentives, the implementation of community measures and effective communication strategies
- Promote public education and awareness on integrated coastal mgmt.

	<ul style="list-style-type: none"> - Enhance marine scientific research methods - Enhance the sharing of national data within countries, as well as regionally and inter-regionally – maintain databases too - Make better use of existing regional programmes, financing mechs, initiatives and networks in order to access info and resources - Enhance the building of local capacity and provide sufficient financial and technical resources, including for the implementation, monitoring and enforcement of existing regulations as well as CC mitigation and adaption measures - Develop partnerships and networks to support integrated planning and sustainable mgmt. of coastal areas at the national and regional level
<p>FAO</p>	<ul style="list-style-type: none"> - Continuously pushes for the application of the ecosystem approach to fisheries (EAF) - Use RFMOs to enact spatially managed measures - National fisheries authorities have shifted from a target species approach to a more ecosystem approach (NPOAs have helped with this) - On a community level spatial management measures have been particularly impressive – but have not been always recognized for well documented - Sees more work needs to be done surrounding no-take MPAs - Sees OEABCMs as beneficial at providing a wide range of biodiversity benefits that ‘strict’ MPAs may not be able to provide - OEABCMs can be more inclusive and not have numerous negative socio-economic impacts - OEABCMs: cross-institutional scale cooperation in mgmt. can be achieved at larger scales than can generally be achieved through no-take MPAs - OEABCMs offer greater spatio-temporal flexibility – can be more easily negotiated in response to change <p>Different OEABCM measures</p> <ul style="list-style-type: none"> - Spatial-temporal fishing closures: different types of measures and are used in national settings (Territorial Use rights for Fisheries (TURFs) and Locally Managed Marine Areas (LMMAs) - Areas Beyond National Jurisdiction: RFMO closures such as VMEs - No agreed system for OEABCM characteristics - Need to be careful of the negative social impacts of protected areas – need a strong consultative process with early stakeholder involvement
<p>ICCA</p>	<ul style="list-style-type: none"> - ICCAs are strongly tied to the rights of small-scale fishing communities to participate in and take responsibility for the governance and management of fisheries and the conservation of local biodiversity - ICCAs are locally governed and managed such that the social, economic nutritional and ecological benefits belong to the local people and community <p>3 Examples provided of their benefits: Marine Areas of Responsible Fishing in Costa Rica</p>

	<ul style="list-style-type: none"> - Power and decision-making is shared with the government - Strong participation of artisanal fishers - Local leadership, understanding of the mgmt. process and formal mgmt. plans <p>Marine Extractive Reserves in Brazil</p> <ul style="list-style-type: none"> - Success occurs when there is increased indigenous involved in governance and mgmt. plans <p>Kawawana – Senegal</p> <ul style="list-style-type: none"> - Local fishermen created an ICCA with local governance - Allowed them to review and implement local traditional practices for the enforcement of their marine zoning and mgmt. plans – which includes no take areas <p>Kawesqar Peoples Territory</p> <ul style="list-style-type: none"> - Overlaps with Bernardo O’Higgins National Park in Chile - Auto-restoration of the Kawesqar culture and the protection of marine areas were achieved by bringing together Kawesqar traditional knowledge and leadership with science - Park now protected biodiversity and culture <ul style="list-style-type: none"> - Need the promotion of fair conservation governance and socially just actions in order for marine conservation to be both social acceptable and ecologically effective
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Appendix 3. Summary of Submissions by Organizations to Notification 2017-065

Non-party Organization	Protected Areas
ACCOBAMs	<ul style="list-style-type: none"> - Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area - Through the Scientific Committee of ACCOBAMs Parties have identified Cetacean Critical Habitats (CCHs) - Recent initiative to identify Important Marine Mammal Areas (IMMAs) was launched in the Mediterranean Sea - Focus on population level and interactions b/w cetaceans and humans to identify CCHs: <ul style="list-style-type: none"> o Conflicts b/w cetaceans and fishing activities o Significant or frequent bycatch of cetaceans is reported o Intensive whale watching or other marine tourism o Navigation presents a potential threat to cetaceans o Military exercises o Seismic activities - 22 CCHs were adopted in 2010 : 18 in Med Sea and 4 in Black Sea - Current imitative aimed at spatially mapping direct threats to cetaceans in ACCOBAMs is ongoing. Will lead

	<p>to:</p> <ul style="list-style-type: none"> ○ Creation of new specific MPAs ○ Extension of existing or neighboring MPAs ○ Implementation of other conservation tools – corridors, seasonal measures, PSSAs, Fisheries Restrictive Areas
<p>BirdLife International</p>	<ul style="list-style-type: none"> - Important Bird and Biodiversity Areas (IBAs) have identified over 13,000 sites worldwide - IBAs are directly related to Target 11 - IBAs form the most comprehensive network of sites worldwide and as such they are at the core of the network of Key Biodiversity Areas (KBAs) - Evidence suggests that species occurring in IBAs with greater protected-area coverage experienced smaller increases in extinction risk over recent decades - Long history of national govts establishing formal protected areas covering IBAs - One of the IBAs programmes main achievements is its close link to the Natura 2000 network in the EU - IBA criteria applied in the EU were deliberately aligned with SPA selection criteria - 66% of the terrestrial and 61% of the marine IBA network area in the EU is covered by SPAs - BirdLife International, UNEP, the Royal Society for the Protection of Bird, the IUCN and Cambridge Uni are currently undertaking a project to evaluate the role and relative effectiveness of OEABCMs in conserving important sites for biodiversity and achieving Aichi Target 11 <ul style="list-style-type: none"> ▪ The project will harness local knowledge mobilised through national conservation NGOs to assess the current role of OEABCMs in conserving the formally non-protected parts of KBAs ▪ Will assess the gaps that OEABCMs can fill and evaluate the effectiveness of different types of OEABCMs compared to formal PAs - BirdLife’s Migratory Soaring Birds Project aims to identify the most sensitive sites for bird species and advocate for the integration of their conservation into relevant sector policies, such as energy, agriculture and waste disposal - BirdLife has also been working closely with mining companies to minimize the negative impacts for biodiversity - BirdLife’s IBA network takes into account the impacts of climate change – - Pushes for local governance of protected areas – has bene extremely successful in Paraguay in San Rafael – site is managed with the Indigenous community
<p>MedPan Mediterranean PA Network</p>	<ul style="list-style-type: none"> - 2016 Status Report of Mediterranean MPAs - Review results of the 2013-2017 FFEM project – lead by MedPAN, WWF Mediterranean and Conservatoire du Littoral on “Management model of coastal, insular and marine areas in the Mediterranean” - Submission lists over 20 different articles, statements, brochures, proceedings and declarations to read
<p>Conservation</p>	<ul style="list-style-type: none"> - PADDD: protected area downgrading, downsizing and degazettement – undermine progress towards Aichi

<p>International</p>	<p>Target 11 – have been happening more frequently</p> <ul style="list-style-type: none"> - 3,200 enacted PADD events have been identified – affecting over 2 million km² of protected area estate over 70 countries - Another 700+ PADD have been proposed - PADD occurs in areas or regions of importance for biodiversity conservation – usually with strong economic development potential - CI’s calls for a need to highlight patterns, trends and causes and risks from PADDs - Current monitoring efforts focus primarily on state-designated protected areas and don’t fully consider other types of environmental governance – such as OEABCMs – working on creating a new Conservation Atlas that doesn’t just focus on “protected areas” - Lack of incentives to register Indigenous and Community Conservation Areas (ICCAs) – noting lack of funding capacity and that being registered does not lead to more secure protection <p>Recs:</p> <ul style="list-style-type: none"> - Recognize full range of approaches contributing to conservation targets - Encourage countries to properly doc and report different approaches - Engage multilateral and bilateral financial institutions to provide funding and resources to support the documentation, governance, mgmt., and monitoring of OEABCMs approaches - Engage the private sector to develop policies that respect OEABCMs - CI believes there should be a push to use SeaScapes – aims to improve ecological and socioeconomic outcomes at a significant scale. Working with coalitions of partners enables more resources to be mobilized, creates teams built of complementary strengths, and fortifies partner and govt institutions – more than 150 partners have engaged with the implementation of Seascales - Analysis by CI finds that nearly 30% of the SDG targets are dependent on nature to be achieved – that is, there is a nontrivial dependency b/w natural ecosystems and those targets – PAs and OEABCMs can help reach those targets <ul style="list-style-type: none"> o little guidance for countries on how to manage natural ecosystems to meet the target as outlined by the SDGs o CI has worked with reps from 9 countries to identify national-level examples of the role of nature in achieving the goals, the policies in place at the national level to sustainably manage natural resources and the institutional structures in place to address this mgmt. - Adaption of PA systems and mgmt. is needed dot maintain protected area benefits to surrounding communities, climate change mitigation benefits and global biodiversity <ul style="list-style-type: none"> o PAs therefore area at once important for mitigating climate change b/c of the large amounts of carbon they store, but are also vulnerable to climate change impacts and in need of adaption
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	<ul style="list-style-type: none"> ○ One project that may provide solutions is SPARC (Spatial Planning for PAs in Response to CC) – which is using big data approaches to bring answer to individual countries and sites. – project deploys a toolbox of CC techniques - New PAs are needed in the right places to respond to species movements and ecosystem change due to climate change - Strong push for community conserved areas – leads to better mgmt. <ul style="list-style-type: none"> - use of the Free, Prior and Informed Consent Principle (FPIC) - a clear vision for the mgmt. of the PA that includes not only the conservation of biodiversity but also the recognition of the interdependent nature of biodiversity and cultural practices and beliefs - Example: Kaasen Community-Owned Conservation Area (COCA) – developed a culturally relevant vision for the mgmt. of their PA that goes beyond the conservation of biodiversity – land is managed to conserved biodiversity and the traditional way of life
<p>OECD</p>	<p>OECD report “ Marine Protected Areas: Economics, Management and Effective Policy Mixes”</p> <ul style="list-style-type: none"> - cumulative economic impact of poor ocean mgmt. practices is estimated to bin the order of USD 200 billion per year - discusses key pressures: overfishing, pollution, habitat destruction, climate change, invasive species - MPAs are one policy instrument to address the above threats (Other policy instruments include: MSP, fishing closures, standards, catch limits or quotas, licenses, planning requirements) <ul style="list-style-type: none"> ○ There are also economic instruments: taxes, charges, ITQ, reform of subsidies harmful to the marine enviro, payments for ecosystem service, biodiversity offsets, non-compliance penalties - PAs are growing – marine are going the fastest! – mostly in part to LSMPAs - Key design and implementation features for more effective MPAs: <ul style="list-style-type: none"> ○ Clearly defined goals and objectives ○ More strategic siting of MPAs is needed, to enhance the environmental as well as cost-effectiveness of MPAs ○ Increased monitoring and effective reporting – including via online databases with publically available info can help to increase transparency and enable the sharing of info ○ Strong compliance and enforcement – with approaches for assessing compliance techniques - Strong financing needed for MPAs. Different methods: <ul style="list-style-type: none"> ○ Domestic government govt ○ External development finance (E.g. ODA, NGOs) ○ Trust funds ○ User fees ○ Taxes and fines ○ Subsidies ○ Payments for ecosystem services

	<ul style="list-style-type: none"> ○ Marine biodiversity offsets - Need more than just MPAs to reach Targets – a full package of policy measures is needed to ensure the sustainable use of marine resources – such as policies that lie beyond the mandates of environment ministries (MSP, e.g. 2008 Marine Strategy Framework Directive 2008/56/EC from the EU – a comprehensive and integrated approach to the protection of all European coasts and marine waters - Good practices for effective MPAs: <ul style="list-style-type: none"> ○ Clear understanding of the state and pressures on particular marine and coastal ecosystems ○ Define the goals and objectives of the MPA ○ Estimate the expected costs and benefits of MPAs ○ Siting of MPAs needs to be undertaken in a more strategic manner ○ MPA management plans are enforced ○ Monitoring and reporting ○ Compliance and enforcement ○ MPA financing strategies ○ Put in place effective policy mixes
<p>UNU-IAS</p>	<p>Socio-ecological Production Landscapes and Seascapes (SEPLS) as ‘protected areas and other effective area-based conservation measures’: A review of experiences under the International Partnership for the Satoyama Initiative (IPSI)</p> <ul style="list-style-type: none"> - There are several recs coming from the initiative: innovative measures such as “community-use zones” can enable a balance b/w conservation and ecosystem services in strictly protected areas - Subsidies can foster immaterial values that play a role in motivating ppl toward sustainable use in less-strictly PAs - Community involvement in creation of landscapes-strategy plans and agreements can ensure sustainable use in buffer zones and corridors - Market linkages must be considered and encouraged through policy and biodiversity-friendly products to succeed - Long-term monitoring and review are indispensable - Integrated landscape management approaches have been found to have benefits for protected areas in categories I through IV – where use is prohibited or restricted to greater or lesser degree <ul style="list-style-type: none"> ○ Case Study 1: Community use zones in Crocker Range Park – Sabah Malaysia – NOT MARINE ○ Case Study 2: Mountain pasture management in the Solktaler Nature Park, Styria, Austria – NOT MARINE - Discusses the benefits of OEABCMs when PAs are not possible. All terrestrial examples <p>Info Paper on Food and Agriculture Organization of the United Nations (FAO) Globally Important Agricultural Heritage Systems (GIAHS) Programme</p> <ul style="list-style-type: none"> - FAO launched in 2002, a global partnership initiative on conservation and adaptive mgmt. of “Globally

Important Agricultural Heritage Systems (GIAHS)

- A GIAHS is a living, evolving system of human communities in an intricate relationship with their territory, cultural or agricultural landscape or biophysical and wide social environment
- GIAHS sites are resilient and are adapted to cope with climatic variability and change
- Encompass dynamic conservation strategies and process to allow maintaining biodiversity
- Japan has an entire system of GIAHS
- In relation to the CBD a major outcome of the GIAHS initiative is the contribution to the implementation of the CBD Article 10c: “protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements”