MPAs in the context of Blue Growth
– Setting the scene

François Simard

IUCN Global Marine and Polar Programme
The definition of an MPA

IUCN revised definition of Protected Area (2008):

‘A protected area is 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’
## IUCN categories

<table>
<thead>
<tr>
<th>IUCN CATEGORY</th>
<th>MAIN OBJECTIVE OR PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>Managed mainly for science</td>
</tr>
<tr>
<td>IB</td>
<td>Managed mainly to protect wilderness qualities</td>
</tr>
<tr>
<td>II</td>
<td>Managed mainly for ecosystem protection and recreation</td>
</tr>
<tr>
<td>III</td>
<td>Managed mainly for conservation of specific natural/cultural features</td>
</tr>
<tr>
<td>IV</td>
<td>Managed mainly for conservation through management intervention</td>
</tr>
<tr>
<td>V</td>
<td>Managed mainly for landscape/seascape conservation and recreation</td>
</tr>
<tr>
<td>VI</td>
<td>Managed mainly for the sustainable use of natural ecosystems</td>
</tr>
</tbody>
</table>
# Relationship between different categories and different activities

## Table 5: Matrix of marine activities that may be appropriate for each IUCN management category.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Ia</th>
<th>Ib</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research: non-extractive</td>
<td>Y+</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Non-extractive traditional use</td>
<td>Y+</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Restoration/enhancement for conservation (e.g. invasive species control, coral reintroduction)</td>
<td>Y+</td>
<td>*</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Traditional fishing/collection in accordance with cultural tradition and use</td>
<td>Y</td>
<td>Y+</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Non-extractive recreation (e.g. diving)</td>
<td>N</td>
<td>*</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Large scale low intensity tourism</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Shipping (except as may be unavoidable under international maritime law)</td>
<td>N</td>
<td>N</td>
<td>Y+</td>
<td>Y+</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Problem wildlife management (e.g. shark control programmes)</td>
<td>N</td>
<td>N</td>
<td>Y+</td>
<td>Y+</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Research: extractive</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Renewable energy generation</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Restoration/enhancement for other reasons (e.g. beach replenishment, fish aggregation, artificial reefs)</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Fishing/collection: recreational</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Fishing/collection: long term and sustainable local fishing practices</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Works (e.g. harbours, ports, dredging)</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>Untreated waste discharge</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>Mining (seafloor as well as sub-seafloor)</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y*</td>
<td>Y*</td>
</tr>
<tr>
<td>Habitation</td>
<td>N</td>
<td>N+</td>
<td>N+</td>
<td>N+</td>
<td>N+</td>
<td>Y</td>
<td>N+</td>
</tr>
</tbody>
</table>

**Key:**
- No
- Generally no, unless special circumstances apply
- Yes
- Yes because no alternative exists, but special approval is essential
- Variable; depends on whether this activity can be managed in such a way that it is compatible with the MPA’s objectives
Compatibility of fishing and collecting activities and management categories

<table>
<thead>
<tr>
<th>IUCN category</th>
<th>Long term and sustainable local fishing/collecting practices</th>
<th>Recreational fishing/collecting</th>
<th>Traditional fishing/collecting</th>
<th>Collection for research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ia</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No*</td>
</tr>
<tr>
<td>Ib</td>
<td>No</td>
<td>No</td>
<td>Yes**</td>
<td>Yes</td>
</tr>
<tr>
<td>II</td>
<td>No</td>
<td>No</td>
<td>Yes**</td>
<td>Yes</td>
</tr>
<tr>
<td>III</td>
<td>No</td>
<td>No</td>
<td>Yes**</td>
<td>Yes</td>
</tr>
<tr>
<td>IV</td>
<td>Variable#</td>
<td>Variable#</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>V</td>
<td>Yes#</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>VI</td>
<td>Yes#</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Key:
- * any extractive use of Category Ia MPAs should be prohibited with possible exceptions for scientific research which cannot be done anywhere else.
- ** In Categories Ib, II and III MPAs traditional fishing/collecting should be limited to an agreed sustainable quota for traditional, ceremonial or subsistence purposes, but not for purposes of commercial sale or trade.
- # whether fishing or collecting is or is not permitted will depend on the specific objectives of the MPA.
Illustrative example of a matrix Aquaculture systems and MPAs categories. Any actual version would need to be developed through extensive discussion and dialogue, and so accordingly the below table should not be taken to reflect a formal view of IUCN or its Commissions.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Ia</th>
<th>Ib</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>High density fish cage culture</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>High density on-land close system fish culture</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Medium density on-land circulating system fish pond culture</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>Y</td>
</tr>
<tr>
<td>High density shell fish culture (table, long-lines)</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>Y</td>
</tr>
<tr>
<td>Low density pond /lagoon fish culture</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>Y</td>
</tr>
<tr>
<td>High density seaweed culture</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Low density shellfish culture</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>Y</td>
</tr>
<tr>
<td>Medium density invertebrate (e.g. sea cucumber) culture</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>Y</td>
</tr>
<tr>
<td>Integrated Multi-trophic culture</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>*</td>
<td>Y</td>
</tr>
<tr>
<td>Restoration purpose aquaculture *</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>Y</td>
</tr>
</tbody>
</table>
Target 11
By 2020, at least 17 per cent of terrestrial and inland water, 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 landscapes and seascapes.
Working definition of an OECM

“A clearly defined geographical space, beyond the protected areas network, governed and managed in ways that deliver the long-term and effective conservation of nature and associated ecosystem services and cultural values, regardless of its current dedication.”

The destination (conservation outcome) is the same as protected areas, but the origin and journey may be very different.
OECMs

LOCATION: The area is a clearly defined geographical space. Wider measures for species and/or environment that are not ‘area-based’, such as species-specific national or regional hunting bans or temporary fishing closures.

GOVERNED AND MANAGED: The area is governed and managed. Areas where there is no governance authority or conscious management are not OECMs. Accordingly, an area currently in a natural or near natural state is not automatically an OECM.

EFFECTIVE, LONG-TERM CONSERVATION: The area delivers the long-term, and effective conservation of nature and associated ecosystem services and cultural values. Areas that deliver conservation outcomes only over the short-term or areas that are intended or offer potential to conserve nature but do not yet deliver conservation outcomes do not qualify as OECMs.

RECOGNITION OF CONSERVATION: The area need not be dedicated to nature but there must be [recognition of the conservation significance by those managing the area,] a direct causal link between the primary objective(s) of the OECM and a demonstrable conservation outcome in the long-term.
**Area Based Management Tools (ABMTs)**

**Definition**

“Regulations of human activity in a specified area to achieve conservation or sustainable resource management objectives.”

**Sectoral ABMTs**: “measures adopted by a competent international organization to achieve biodiversity conservation objectives for a specific area.”

**Existing ABMTs**
- IMO’s Particularly Sensitive Sea Areas (PSSAs),
- traffic routing systems;
- MARPOL Special Areas;
- RFMO temporal or spatial closed areas such as “Vulnerable Marine Ecosystems” (VMEs),
- ISA’s Areas of Particular Environmental Interest and Preservation Reference Zones

**Distinction from MPAs**

while sectoral ABMTs provide important protection, they generally are only targeted at one use, may be short term, and do not provide comprehensive protection for the full range of features in an area.

**Cross-sectoral ABMTs** are those tools that at present require consultation, cooperation and coordination across multiple organizations and bodies, including MPAs and marine spatial planning.
Sustainable Development Goals

GOAL 14

CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT
“protecting biodiversity and the essential ecosystem services it supports has become a priority for the scientific community, resource managers, and national and international policy agreements…” (Selig et al, 2014)
FIGURE 1 WHAT IS THE ECONOMIC VALUE OF THE WESTERN INDIAN OCEAN (WIO)?

MARINE ASSETS VALUE IN THE WIO - SHARED WEALTH FUND

Ocean assets in the WIO provide considerable value and could provide even more if they are well managed.

US$333.8 bn

TOTAL SHARED WEALTH FUND ASSET BASE

MANGROVES, CORAL REEFS, SEAFOOD, FISHERS, TOURISM OPERATORS — THEY’RE ALL CONNECTED.

Across the WIO, people’s livelihoods and incomes are often inextricably linked to healthy functional ecosystems. When these are damaged, all pay the price.

PRIMARY ASSETS
- Marine Fisheries: US$135.1 bn
- Mangroves: US$42.7 bn
- Coral Reefs: US$18.1 bn
- Seagrass: US$20.8 bn

ADJACENT ASSETS
- Productive Coastline: US$33.2 bn
- Carbon Sequestration: US$24.0 bn

WIO GROSS MARINE PRODUCT

Direct services enabled by the ocean: 20.7%
- 13.0% marine tourism
- 0.8% research & development
- 0.5% security & control
- 0.2% ocean survey
- 0.1% cruise industry
- 0.1% education & training

Adjacent benefits of the ocean: 70.2%
- 50.0% coastal tourism
- 14.6% marine recreation
- 6.6% coastal protection
- 0.2% marine biotechnology

Direct output of the ocean: 9.1%
- 7.8% industrial fisheries
- 1.2% subsistence fisheries
- 0.1% aquaculture / mariculture

How does the WIO Gross Marine Product compare to regional GDPs? (World Bank 2014)

1. SOUTHERN AFRICA: US$60.8 bn
2. SUDAN: US$92.0 bn
3. TANZANIA: US$23.0 bn
4. WIO GMP: US$20.8 bn
The Western Indian Ocean economy is the 4th largest in the region.

Analysis for this section is provided by: BCG

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Blue Carbon
Ocean Resources Conservation Areas Securities ("ORCAS")

**Investment Highlights**
- Exposure to a unique asset class
- Diversification of sovereign and market risk through portfolio of MPAs across multiple geographies
- Coupon of 5.0% p.a. with significant potential upside of 2.5x return via monetization of blue carbon credits and mitigation banking credits
- Clearly measurable social and environmental impact goals
- Risk reduction through US$5.0m equity buffer (to be provided by EU designated funding for MPAs and government partners)
- **Target investors** include traditional institutional investors, impact investment funds, international financial institutions and environment conservation funds

**Portfolio Overview**
Number of MPAs: 10+
Typical size: 5 - 50km²
Blue Growth Sectors

The 5 Blue Growth sectors

- **Biotechnology**
  medicines, industrial enzymes

- **Renewable energy**
  wind, waves, tides, biofuel

- **Coastal & Maritime Tourism**
  coastal tourism, cruise tourism, yachting

- **Aquaculture**
  farming of fish, shellfish, marine plants

- **Mineral resources**
  gravel, sand, zinc, cobalt, copper

Source: DG Maritime Affairs, EU
• A society in which the marine environment is *sustainably managed*, giving future generations the opportunity to *enjoy and benefit from the many services and resources* provided by a healthy ocean, while also preserving *ecosystem integrity and functioning*.

• **This requires:**
  - A system of governance in which the ocean is recognized as a *global common that must be collectively managed*.
  - A balanced approach that *leverages the ocean’s potential while preserving its integrity and functioning* to the benefit of all.

• **Blue Society Expert Group:** analysed the outcomes of the consultation and mobilization phases of the SFS project to: develop and enrich the Blue Society concept, and formulate recommendations for improved ocean governance and research.
Defining marine spatial planning

Marine spatial planning:
- public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that usually have been specified through a political process.
- include ecosystem-based, area-based, integrated, adaptive, strategic and participatory.
- not an end in itself, but a practical way to create and establish a more rational use of marine space and the interactions among its uses
- to balance demands for development with the need to protect the environment, and to deliver social and economic outcomes in an open and planned way.
What is marine spatial planning NOT?

• Marine spatial planning is not a substitute for single-sector planning and management.
• Marine spatial planning is not a one-time plan.
• Marine spatial planning is not only conservation planning.
• Marine spatial planning is not ocean zoning.
Managing around MPAs
Regional connectivity in the Indian Ocean

**BETWEENNESS CENTRALITY**

7 reefs: Occurrences = 4 ➔ the most important for multigenerational connectivity within the WIO

"Occurrences" ranges from 0-5 and gives the number of PLDs for which each reef’s betweenness centrality score was higher than the mean for that PLD.
Conclusions
IUCN position on SDG14 - Call for Action
The Ocean Conference, New-York, 5th-9th June 2017

2. Marine Protected Areas and Marine Spatial Planning

BE ENCOURAGED by the recently increased marine conservation efforts reaching a coverage of 12.7% of the waters under national jurisdiction and 5.1% of the global ocean under marine protected area, but also;

RECOGNIZE the inadequacy of the 10% marine target for protection versus the growing scientific and global consensus of what is actually needed for the global ocean, including marine areas beyond national jurisdiction, and the global consensus from the Hawaii World Conservation Congress in 2016 of ‘at least 30%’, alongside firm implementation of frameworks to deliver sustainability of all practices across the whole ocean seascape, subject to the rights of indigenous peoples and local communities;

STRENGTHEN and REINFORCE international targets in the light of the pressing challenges and a changing ocean;
Conclusions

BE GUIDED by the CBD/IUCN definitions of a Marine Protected Area (MPA) which are clear and unambiguous. There is need to ensure that CBD and IUCN standards around MPAs are recognized and attention drawn to concerns of misinterpretation of the IUCN protected areas definition and categories. Experience has shown that better meeting of international standards delivers benefits; while misuse of standards misses opportunities to stem ecosystem decline and species loss;

BE AWARE that other effective area-based conservation measures – which may not have conservation as their primary objective – are a key component of an effective and well-connected networks of managed area, but they should not take the place of marine protected areas;

COMBINE coastal and marine protected areas in the wider land/seascape with other area-based conservation measures and area based management tools including Marine Spatial Planning to ensure comprehensive decision-making;
Conclusions

5. Areas beyond National Jurisdiction

REACH a consensus on the substantive recommendations to the UNGA on the elements of a draft text of an international legally-binding instrument under UNCLOS for the conservation and sustainable use of marine biological diversity of ABNJ;

USE their existing powers to support science-based processes that allow for the establishment of an ecologically representative and well-connected system of MPAs including reserves as an element of the new agreement and to adopt ecosystem-based protection measures for ecologically or biologically significant marine areas in ABNJ, including through MPAs, environmental assessments, Marine Spatial Planning and sector-based management tools;

CALL on the UNGA to decide to convene an intergovernmental conference to take place in 2018 on an international legally binding instrument under UNCLOS.
Thank you for your attention
Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions

International ocean governance: an agenda for the future of our oceans

- Action 1: Filling the gaps in the international ocean governance framework
- Action 2: Promoting regional fisheries management and cooperation in key ocean areas to fill regional governance gaps
- Action 3: Improving coordination and cooperation between international organisations and launching Ocean Partnerships for ocean management
- Action 4: Capacity building
- Action 5: Ensuring the safety and security of seas and oceans
- Action 6: Implementing the COP21 Agreement and mitigating the harmful impact of climate change on oceans, coastlines and ecosystems
- Action 7: Fighting illegal fishing and strengthening the sustainable management of ocean food resources globally
- Action 8: Banning harmful fisheries subsidies
- Action 9: Fighting marine litter and the ‘sea of plastic’

- **Action 10: Promoting maritime spatial planning (MSP) at global level**
- **Action 11: Achieving the global target of conserving 10% of marine and coastal areas and promoting the effective management of MPAs**
  - Action 12: A coherent EU strategy on ocean observation, data and marine accounting
  - Action 13: Strengthening investment in ‘blue’ science and innovation
  - Action 14: International ocean research, innovation and science partnerships
ACTION 1 IMPLEMENT EFFECTIVE MANAGEMENT OF OCEAN ASSETS
- Implement steps to achieve Aichi Target 11 and SDG 14 through new ecologically and socially coherent networks of marine protected areas (MPAs) and locally managed marine areas (LMMAs) in critical nearshore and offshore habitats, and ensure effective management.

ACTION 2 ENSURE SUSTAINABILITY OF SMALL-SCALE AND INDUSTRIAL FISHERIES AND AQUACULTURE

ACTION 3 TRANSFORM TO 21ST CENTURY CLIMATE-RESILIENT AND CARBON-NEUTRAL ECONOMIES

ACTION 4 ADOPT A SUSTAINABLE, INCLUSIVE BLUE ECONOMY APPROACH

ACTION 5 IMPLEMENT INTEGRATED OCEAN PLANNING AND MANAGEMENT

ACTION 6 INVEST IN SOCIAL CAPITAL AS A CORNERSTONE OF FUTURE PROSPERITY

ACTION 7 BUILD PARTNERSHIPS FOR SUSTAINABLE DEVELOPMENT