Indicator 14.2.1

SDG and Environment Statistics
Unit - UNEP

SDG Target 14.2 and Indicator 14.2.1

Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Target 14.2

"By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans"

Indicator 14.2.1

"Number of countries using ecosystem-based approaches to managing marine areas"

UNEP is the custodian agency for this indicator

Introduction

- We live on a blue planet, with oceans and seas covering more than 70 per cent of the Earth's surface.
- Oceans are an important part of the global system.
- They provide food and livelihoods for billions of people , absorb atmospheric heat and more than a quarter of carbon dioxide, and produce about half of the oxygen in the atmosphere.
- Due to human activities, global climate change and environmental problems have led to threats to marine ecosystems and environments.

Introduction

- **Marine Protected Areas** contribute to poverty reduction by increasing fish catches and income, creating new jobs, improving health, and empowering women.
  Increasing levels of debris in the world's seas and oceans is having a major and growing economic impact.
- Regional Seas Coordinated Indicator 22 **'Integrated Coastal Zone Management (ICZM)'** is proposed as the primary indicator.
- It is important to identify ways to measure existing plans and to build capacity for **integrated planning**.

Why is this SDG Important?

- This indicator refers to the management of exclusive economic zones using ecosystem-based approaches.
- From an ecological perspective, ecosystem approaches consider the connections between the living organisms, habitats, physical and chemical conditions within an ecosystem, focusing on the importance of ***ecological integrity, biodiversity and overall ecosystem health***.
- From a management perspective, ecosystem-based approaches refer to ***integrated management strategies*** for socio-ecological systems that consider ecological, social and economic factors and apply principles of sustainable development.

Definition

- **ICZM** - An Integrated Coastal Zone Management (ICZM) plan covers the entire coastal zone. Marine and terrestrial areas are managed together. Plans are developed through coordination across different marine and terrestrial institutions and agencies.
- **Marine Spatial Planning (MSP)** - Marine Spatial Planning is focused on the EEZ. It the integrates the needs and policies of multiple marine sectors in one coherent planning framework.
- **EEZ** - National Exclusive Economic Zone (EEZ) (200 nautical miles from the coast) as outlined by the United Nations Convention on the Law of the Sea (UNCLOS).

Limitations

This indicator only measures the policy formulation and not policy implementation.

Approaches

Two ways of tackling ecosystem-based approaches are;

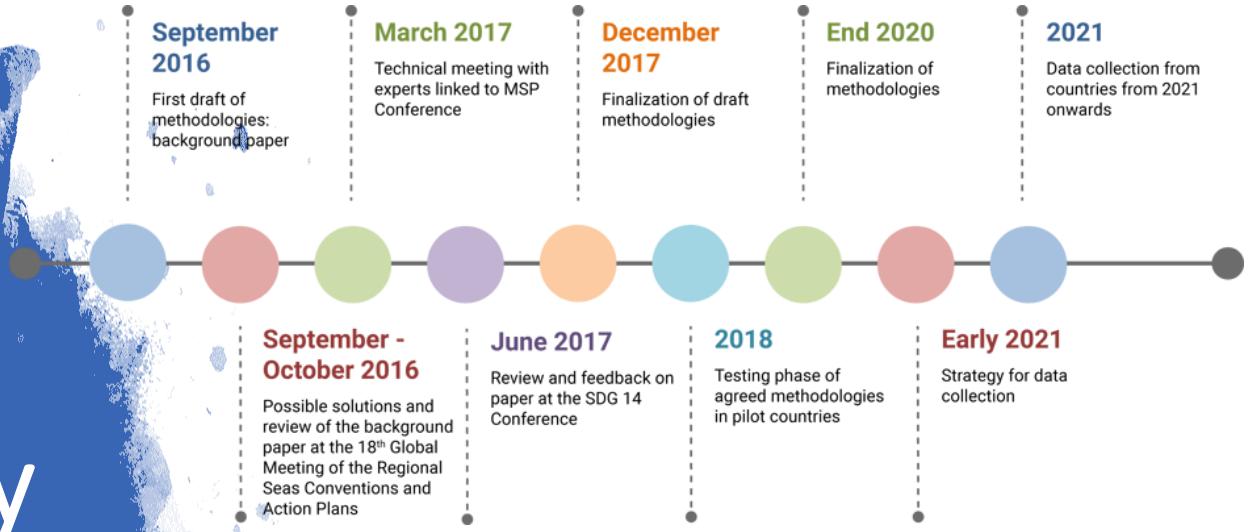
1. **Ecological indicators for the quality of marine ecosystems** - OSPAR (Northeast Atlantic) and UNEP-MAP (Mediterranean Sea) are using ecological indicators to monitor and assess the implementation of the ecosystem approach. The OSPAR indicators are in line with the descriptors of 'good environmental status' which are used to assess ecosystem-based marine management under the EU Marine Directive.
2. **Indicators for integrated management and planning strategies for socio-ecological systems** - implementation status of marine area-based, integrated planning and management approaches, such as Marine/Maritime Spatial Planning (MSP) or Integrated Coastal Zone Management (ICZM).

Approaches – Ecosystem approach indicators

Summary of ecosystem approach indicators and assessment criteria currently used by Regional Seas Programmes and other key agencies

Regional Seas Programme/Organisation	Indicator/assessment criteria
OSPAR	Ecological indicators that are in line with MSDF Descriptors of good environmental status
HELCOM	HELCOM indicator for maritime spatial planning: Number of countries having maritime spatial plans coherent across boarders and applying the ecosystem approach
UNEP-MAP	Common Indicators (ecological indicators)
NOWPAP	Mid-Term Strategy 2018-2023 Objective: NOWPAP countries increasingly apply ecosystem-based approach to planning and management as a basis to achieve healthy and productive coastal and marine ecosystems. Outcomes/ Expected Accomplishments for this priority area: • NOWPAP member states are developing and applying ecosystem-based management policies, tools and practices to support sustainable development of coastal zones and the marine environment; • Planning and decision-making processes for ICZM and MSP by NOWPAP member states recognize inter-connectedness between the land and the sea and promote cross-sectoral cooperation; • Planning mechanisms, including integrated water resources management, ICZM and MSP in NOWPAP member states contribute to reduced pressures on the coastal and marine environment.
EU MSFD (Marine Directive)	Descriptor of good environmental standard (ecological indicators)

Methodology – Steps of development



Methodology – Steps of development

- **Step One** – Identify national authorities/ agencies/organisations responsible for coastal and marine/maritime planning and management.
- **Step Two -** Identify and spatially map the boundaries **of ICZM plans or other plans** at national, sub-national and local level. Coordinate with the national authorities/ agencies/organisations responsible for coastal and marine/maritime planning and management to complete a questionnaire on the ICZM plans (Shipman and Petit 2014).
- **Step three -** Determine the status of implementation of each plan, and categorise the spatial map according to implementation stages:

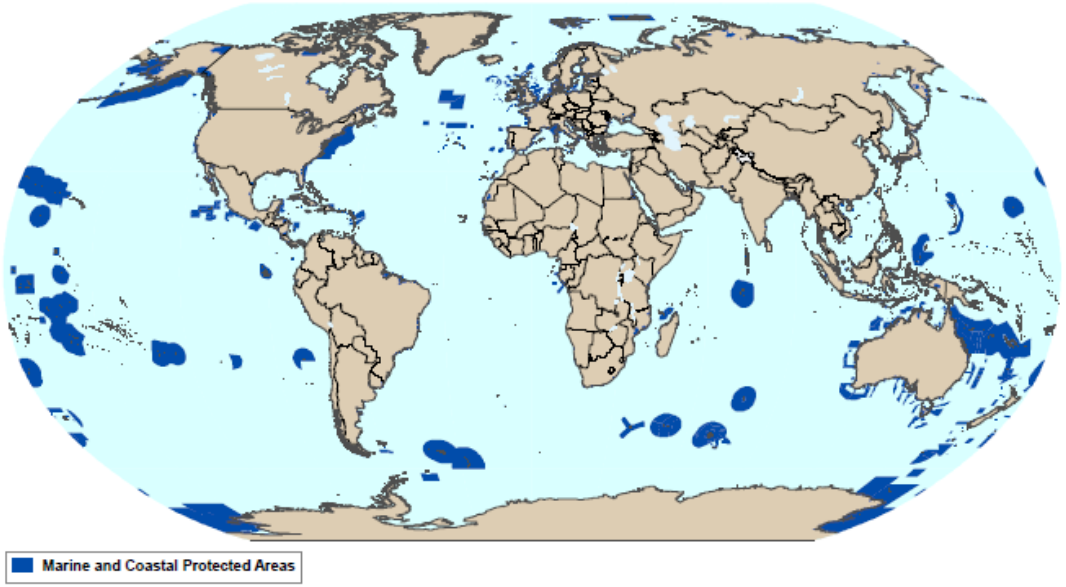
1. Initial plan preparation
2. Plan development
3. Plan adoption/designation
4. Implementation and adaptive management

Methodology - Analysis

- Questionnaire responses are collected and the answers are documented.
- The spatial maps developed in step two are used to calculate the proportion of national waters or national exclusive economic zone, covered by relevant plans.
- This is done by overlaying the spatial layer of relevant plans with a spatial layer of national waters, or of the EEZ, to identify where the two layers coincide.

Methodology - Example

- **Managing and conserving marine areas is essential for achieving the SDGs.** Marine spatial planning, Inter-Coastal Zone Management, Protected Areas, Ecosystem-Based Adaption Plans and other forms of marine management all play a part in managing oceans.



Official MPA map

- As of the close of 2018, marine protected areas cover 7.4 per cent of the global ocean at almost 27 million km2. About 90 per cent of this area lie within the territorial sea or Exclusive Economic Zones of coastal nations, and only 10 per cent is located in the high seas.
- A recent analysis by Lewis (2017) indicates that only 41 per cent of 232 marine ecoregions, less than half, have met the 10 per cent target, with 10 ecoregions still without protection to date. It is important to conserve at least 10 per cent of each ecoregion to ensure ecological representation among protected areas for measuring progress in effective marine area protection.

Methodology – Example

Colombia: A national indicator on ICZM implementation

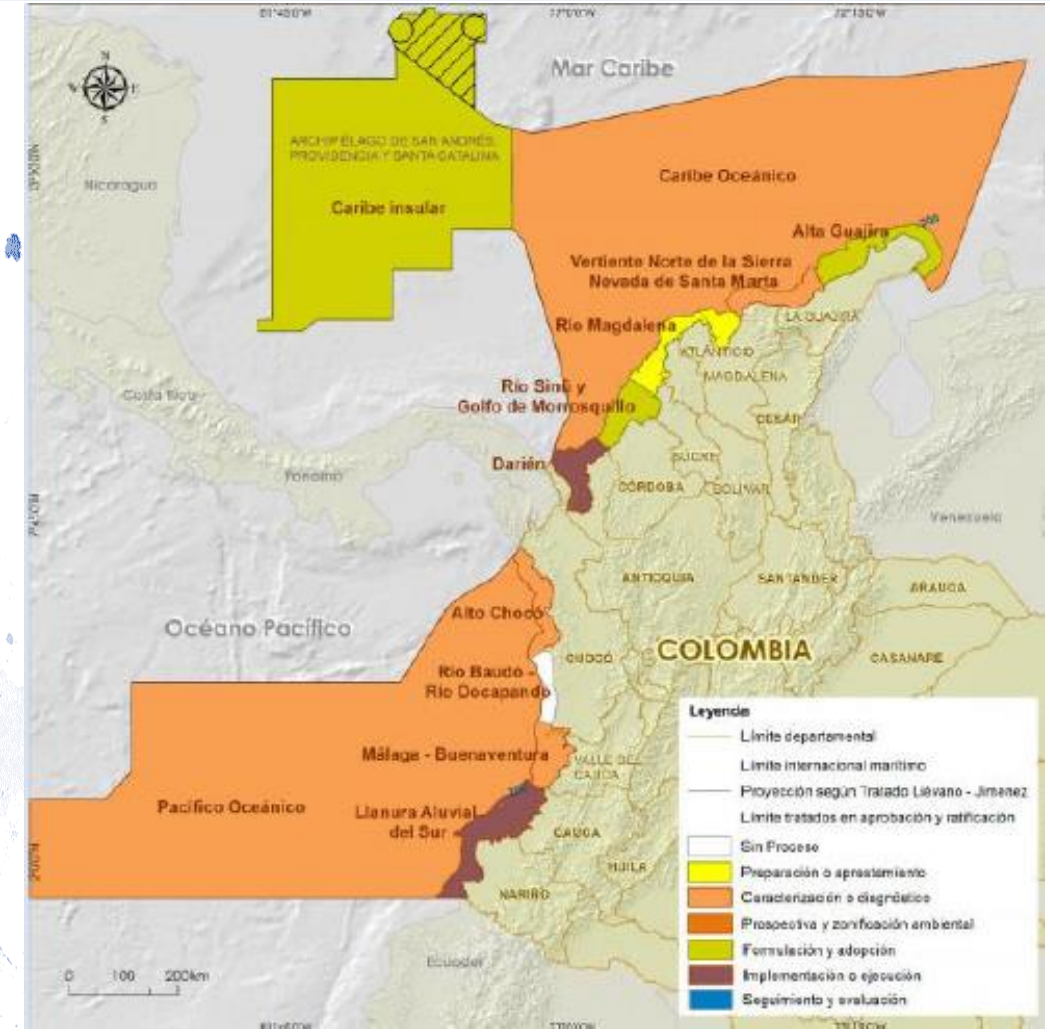
- Colombia is already implementing its own national proxy indicator for SDG indicator 14.2.1.
- The indicator measure the number of UACs (Spanish for *Coastal and Oceanic Environmental Units),* that are making progress towards the implementation of ICZM and specifies what stage of the ICZM implementation process each UAC is at.
- It is calculated using the formula below:

$$\frac{\#\ \text{UAC with progress in N stage from the ICZM}}{\#\ \textit{Total of UAC in coastal zon}}$$

- Where 'N' refers to one the following stages:

1. Preparation
2. Characterization
3. Diagnostic
4. Foresight and environmental zoning
5. Guidelines
6. Formulation
7. Adoption
8. Implementation/Execution
9. Monitoring and evaluation

Methodology – Example



- The indicator results are spatially presented as a map, onto which the UACs are colour-coded depending on their ICZM implementation stages.
- The Colombian indicator currently focuses on coastal areas but has the potential to be adapted to include the country's EEZ.
- The Colombian formula to calculate ICZM implementation progress could provide an alternative option to the step-by-step methodology for countries to implement the proxy indicator for SDG Target 14.2.

Data

- Data will be aggregated at the sub-regional, regional and global levels by counting the number of countries with a plan for each group.
- Data sources – National governments
- Data Collection – through the Regional Seas Programmes. Countries not included in the programme will be contacted directly by UNEP.
- Data will be available for all member states
- Reporting on this indicator will be conducted *every **5 years**.*
- First data reporting is expected to be compiled in **2021.**
- Data is already being collected.
- First reporting cycle will be in **2021**

Summary

- This indicator is slated to begin in 2021
- Additional research on how to combine information on different types of management is needed.
- All countries should report on the spatial boundaries of their ICZM plans and the implementation stage as the core parameter.
- Where in-country capacity or opportunities exist, countries can also assess the implementation of other area-based, integrated management and planning approaches, or monitor ecological parameters.

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