

Regional Seas indicators

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Indicators and indices

- Indicators are to simplify, quantify, standardise and communicate complex information as a contribution to assessing conditions
- Indicators are based on verifiable data
- Indices are normally composites of two or more indicators. E.g. Human Development Index

Why using indicators in the marine and coastal environment?

To assess and monitor the State of the marine and coastal environment, particularly, describe chronological changes of the state of the marine and coastal environment.

Regional seas – regularly carry out the state of the marine and coastal environment assessment. So far, the SOME reports are based on anecdotal information, and chronological changes cannot be tracked down.

Contribution to the global assessment – World Ocean Assessment (WOA), Transboundary Waters Assessment Programme (TWAP)

Track down the achievement of the defined and agreed management targets Regional seas action plans, GEF IW Strategic Action Programmes, projects

Contribution to global goals – possibly the Sustainable Development Goals

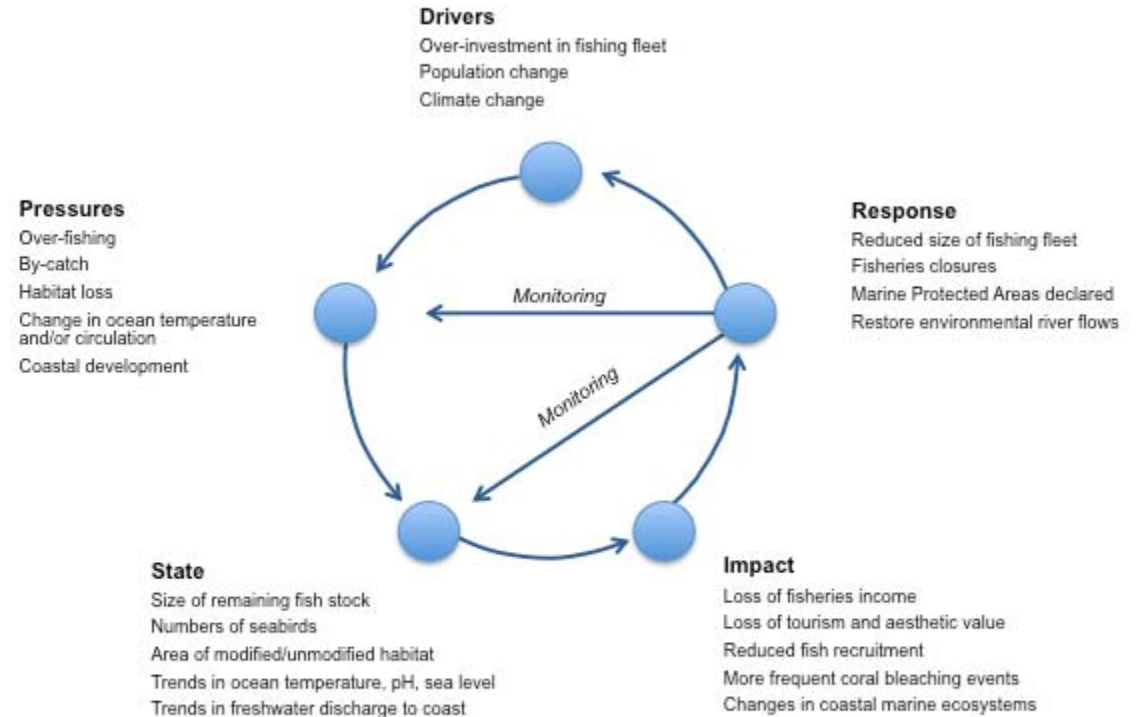


State of the Marine Environment

DPSIR framework

1. Driver (D)
2. Pressure (P),
3. State (S),
4. Impact (I), and
5. Response (R)

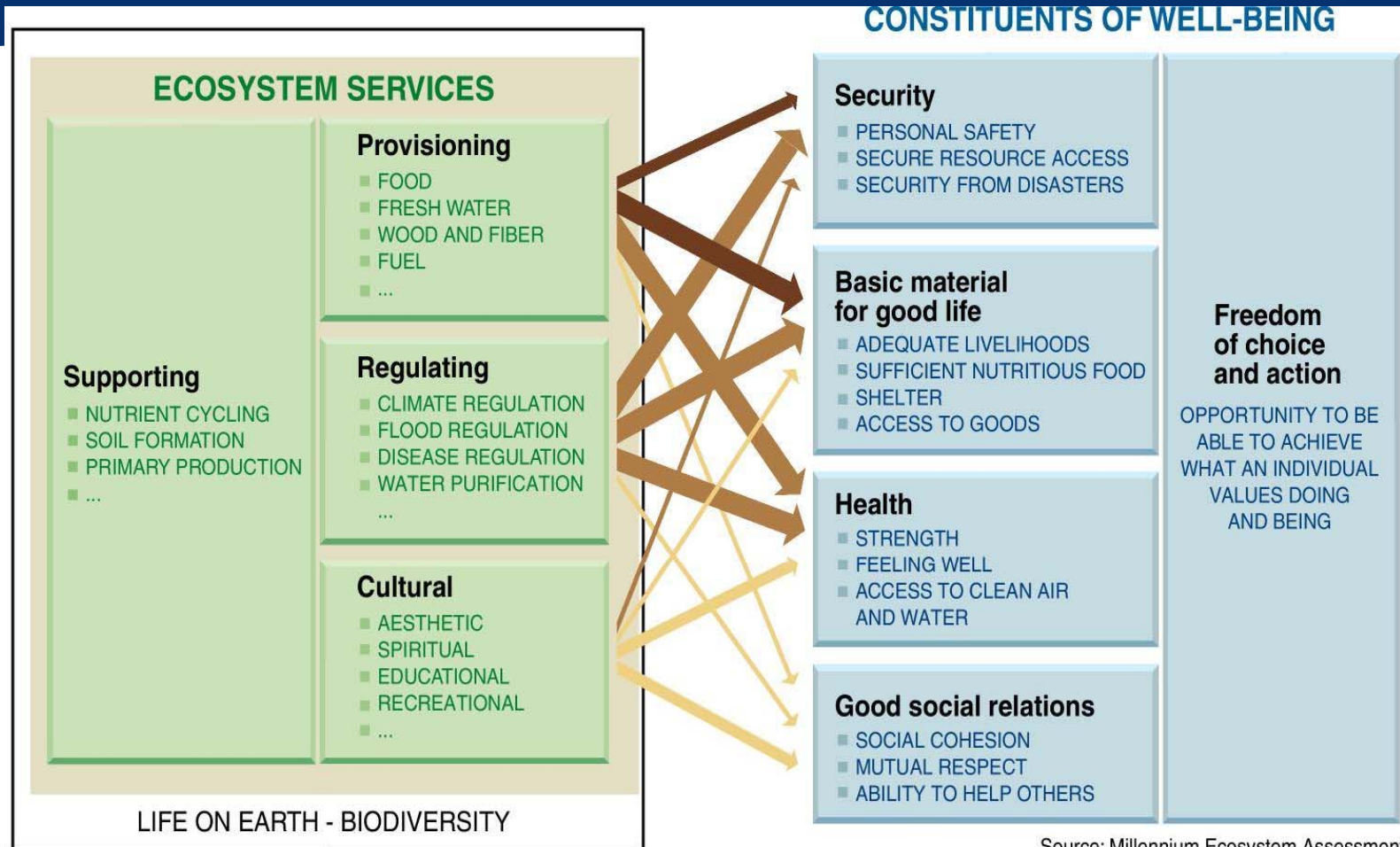
OECD, EEA,
Global International
Waters Assessment,
UNEP GEO
TWAP



Ecosystem Approach

- The ecosystem – functional ecological systems including biotic and abiotic elements, which are interacting to each other.
- Ecosystem services – the benefits human populations derive, directly or indirectly from ecosystem functions.
- Ecosystem approach – a conceptual framework incorporating human activities at sustainable levels as an accepted element of ecosystem functioning

Ecosystem services



Source: Millennium Ecosystem Assessment

ARROW'S COLOR
Potential for mediation by socioeconomic factors

- Low
- Medium
- High

ARROW'S WIDTH
Intensity of linkages between ecosystem services and human well-being

- Weak
- Medium
- Strong

Regional Seas

- 18 Regional Seas Conventions and Action Plans (RSCAPs) spanning the world
- Priority issues
 - Monitoring and assessment
 - Land-based sources of pollution (LBS)
 - Specially Protected Areas and Wildlife (SPA)
 - Oil spill contingency/recovery plans
 - Coastal habitat management
 - Integrated Coastal Zone Management (ICZM)
 - Marine Litter, including ship generated marine pollution
 - Regional legal and institutional frameworks





Application of the Ecosystem Approach to Regional Seas

- EU Marine Strategic Directive (MSFD), Large Marine Ecosystems (LMEs), Ecosystem Approach to Regional Seas (EARS)
- Setting ecological objectives for the region, assess the ecosystem functions and achievement of ecological objectives
- Apply DPSIR framework for the assessment
- Introduction of indicators for measuring the changes and success of interventions to achieve goals

Ecosystem based indicators in regional seas

- Regional seas – many carrying out SOMER, a few using the indicators. Action plans are implemented, but no ecological objectives set and no monitoring of the implementation of the action plans
- EU relevant regional seas – Marine Framework Strategy Directive, Ecological Objectives, Good Environment Status, monitoring through ecosystem-based indicators;
- GEF IW or TDA-SAP Many setting ecological objectives, but monitoring of their achievement is not clearly done through indicators. TDA is carried out through anecdotal information. TWAP LME module is based on indicators, but no sustainable mechanism at the moment and linkage with SAP implementation monitoring unknown.

Global Initiatives

- World Ocean Assessment (WOA) or regular process
- Transboundary Waters Assessment Programme (TWAP)
- Aichi Targets
- UNEP Marine Biodiversity Outlook
- GPA target setting
- Sustainable Development under discussion
- Sustainable Development = more coordinated development of three pillars – Mediterranean Sustainable Development Strategy, SAMOA pathway



Introducing ecosystem-based indicators

- Regional seas may move towards setting their ecosystem-based indicators for their state of the marine environment reporting, so that the change in the marine environment may be chronologically monitored.
- Application of DPSIR framework will be possible in setting the indicators, as regional seas use DPSIR in their SOMER.
- Regional seas do not have sufficient data for indicators and use of existing global and regional data sets should be maximised.
- There must be a sound scientific basis for setting the indicators.
- Existing systems and their knowledge should be shared with the other regions for their replication.

Introducing ecosystem-based indicators

Indicators to track down the achievement of ecological objectives can be set where these objectives are defined and agreed upon among the member states.

These indicators to track down the objective/goal achievement may be different from the indicators for state of the regional seas. However these may be coordinated.

Ecosystem services based indicators are yet to be discussed – YSLME examples.



Recommended coordinated action by regional seas

Last Global Meeting of Regional Seas Conventions and Action Plans reviewed the UNEP indicator report draft, and decided to organise the present workshop.

Regional seas then decided to discuss development of a Regional Seas core set of indicators (and possibly supplementary set of indicators)



Core set of ecosystem-based indicators

The core set of indicators are a group of indicators that should be adopted by the regional seas action plans and conventions which are willing to report them. These also support the Regional Seas SOMER effort.

The supplementary set of indicators are a group of indicators that could be relevant to specific regional seas and which may be adopted by them seas as those that indicate their regional state of the marine environment.

Core set of indicators

- By adopting such core and supplementary sets of indicators, UNEP may be more effectively support regional seas in providing scientific basis for them and coordinated data support through, inter alia, global data systems, such as UNEP-Live, TWAP database, Biodiversity Indicator Partnership
- The core set of indicators would form a basis for the regional seas to move towards adopting the ecosystem approach – the first step of implementing the Ecosystem Approach to Regional Seas. UNEP and its partners are developing a Regional Seas support programme.

Objectives of the workshop

- to have an overview of existing and planned indicators for regional seas (regional seas programmes under UNEP coordination, GEF International Waters LME projects, regional components of global ocean assessments, and other thematic regional ocean assessments); and
- to preliminarily discuss a core set of indicators and supplementary set of indicators together with their scientific background and possible data sources and future monitoring.

Questions to be answered

- Does each of regional seas try to establish ecosystem based indicators for their state of the marine environment reporting, if these are not adopted yet?
- Do we want a coordinated set of ecosystem-based indicators among the regional seas programmes, which would contribute to global initiatives, such as WOA and TWAP?
- The existing scientific backgrounds are rigid enough for the regional seas to consider adopting indicators?
- Could UNEP-based data systems be of assistance for the regional seas to monitor the core and supplementary sets of indicators?
- Could regional seas further consider setting ecological objectives or goals, which may be linked with global goals – e.g., Aichi Targets and SDGs?

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Break-out Groups

- Ecosystems and Biodiversity (Damon Stanwell-Smith) – IEH/MIE 2 Rhin
- Pollution and Water Quality (Vincent Sweeney) - IEH/MIE 1 Room 4
- Global Changes (Pascal Peduzzi) – IEH/MIE 1 Room 5
- Socio-economic (Liana McManus) – IEH/MIE 2 Rhin and Lobby space



Core set of indicators

Indicators	State or pressure?	Periodicity of measuring	Scientific background	Possible data sources	Other remarks

A supplementary set

Indicators	State or pressure ?	Periodicity of measuring	Scientific background	Possible data sources	regional applicability, and other remarks



Thank you

