Identifying Common LME Indicators

Towards Common Reporting and Comparability Between LMEs

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Based on materials prepared by Virginie Hart, GEF LME:LEARN

GRID ARENDAL

A Centre Collaborating with UNEP

Based in Arendal, southern Norway.

Established in 1989 to support environmentally sustainable development by working with UNEP and other partners.

Core activities: Communication of environmental knowledge & capacity building (e.g. IW:LEARN)

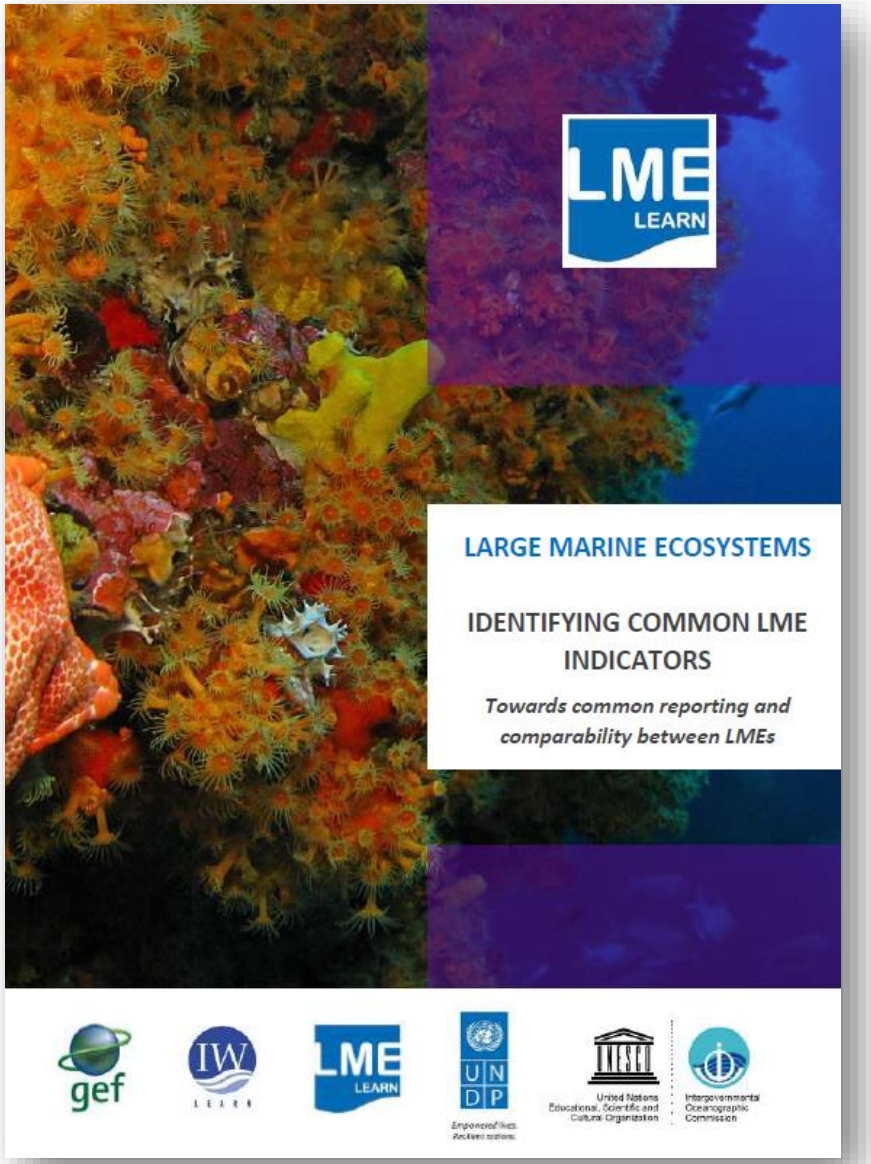
Vision: A society that understands, values and protects the environment on which it depends.

Focus of this session: Common indicators for LMEs

- **Presentation:** Introduction and overview of LME:LEARN report on indicators

- **Work session:**
  - review proposed core set of indicators

  → Next phase of IW:LEARN
  - identify partnerships and possible next steps to support their use



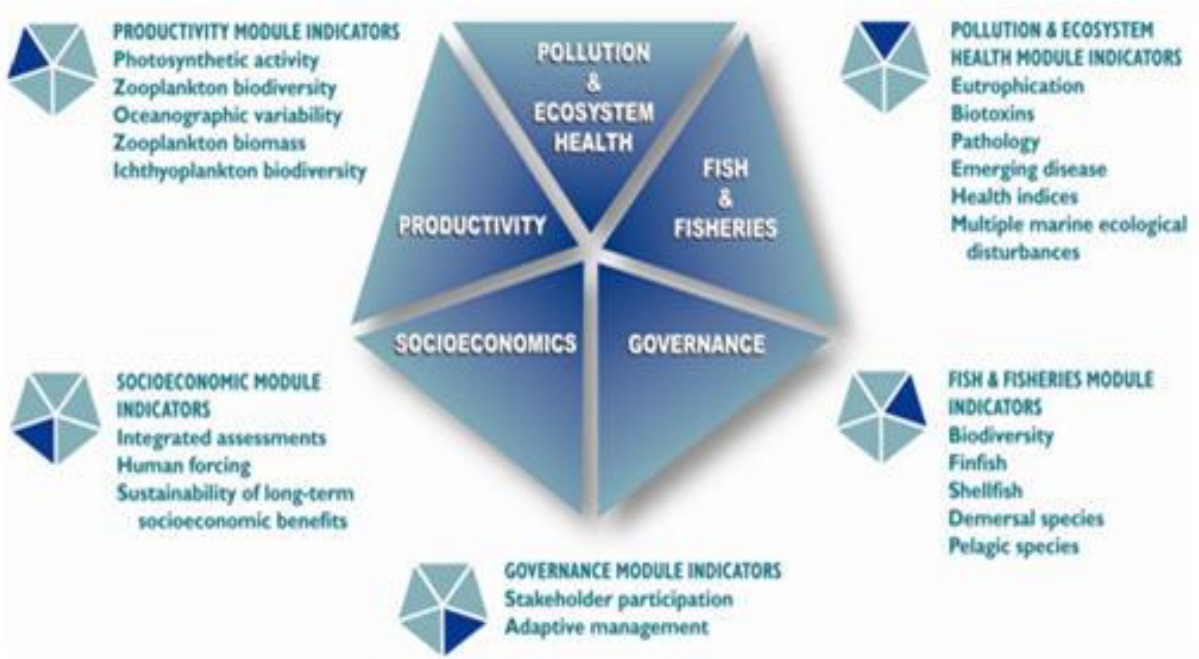
Common Indicators – context of report

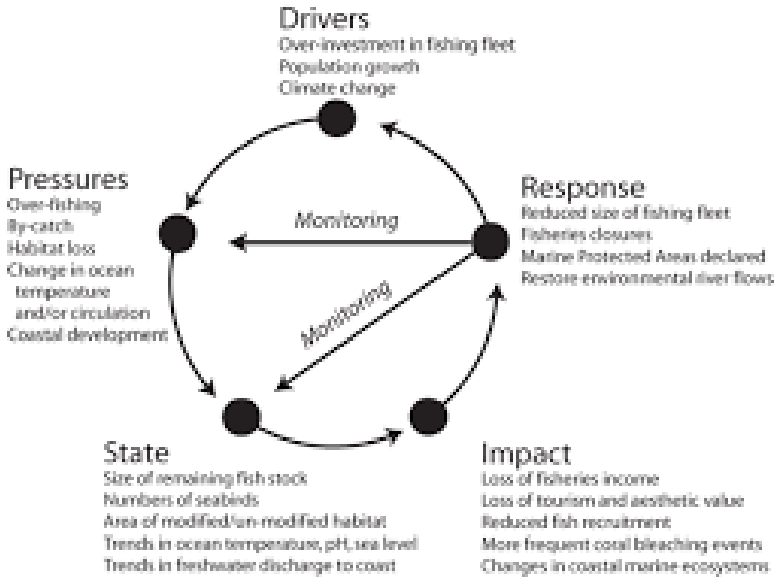
Towards a more integrated approach between LMEs, the SDGs and key global indicator frameworks

- LMEs have developed indicators:
  - 1) To assess the achievement of management targets e.g. the GEF SAPs, thematic strategies etc.
  - 2) To assess and monitor the state of the marine and coastal environment and assess trends and changes over time.
- LMEs contribute to a number of SDGs, and some alignment of indicators and reporting can support countries;
- Other relevant indicators to align with: GEF 6&7 core indicators, TWAP, Regional Seas Core indicators, Biodiversity Indicators Partnership (BIP), Organisation for Economic Co-operation and Development (OECD), etc.

Approaches and categorization of indicators

- Indicators structured according to LME 5 Modules – in line with SAPs and TWAP
- Many GEF projects include process, stress reduction, and environmental/Water Resource status indicators
- Many regional and global assessments based Driver-Pressure-State-Impact-Response (DPSIR) approach





Selection of the proposed LME core indicators

✓ Review and compilation of 105 most relevant indicators (Table 6).

→ Could be the start of a "toolbox" of indicators that LMEs can choose and select from;

✓ Sub-selection of **28 LME core indicators (Table 8)** based on criteria (see box)

→ Recommendation that these 28 are integrated into **all** LME indicators systems, reporting & assessments in future;

✓ Three sources of data:

(1) **LME reporting** (i.e. 73. Level of Transboundary Diagnostic Analysis and Strategic Action Program formulation and implementation);

(2) **National databases**, which may be limited and not comparable; and

(3) **Global/Regional databases**

Criteria for selecting core indicators

- ✓ Provide fundamental baseline information about the current status of the LME;
- ✓ Capture the major features related to pollution and biodiversity degradation/loss common to all the LMEs;
- ✓ Provide information on the status of governance reforms and the implementation of SAP and other key regional agreements and targets.
- ✓ GEF 7 Core Indicators which projects are obligated to report on;
- ✓ Core indicators used for the TWAP Assessment of LMEs (where methodology defined and data available);
- ✓ Include relevant SDG and Regional Seas (RS) indicators (where methodology defined and data available: Others may be included in future.)

No	Indicator/Indices title	Indicator Source	Data source	Theme/Purpose of indicators
1) PRODUCTIVITY AND OCEANOGRAPHY				
3	Annual mean sea surface temperature and trends	Regional Sea Indicator 4 TWAP/LME Scorecard	National data Regional and global databases and satellite data	Assess general trends in oceanography and possible changes as a result of climate change
4	Chlorophyll a concentration and trends	RS Indicator 1 TWAP/LME Scorecard	National data Regional and global databases and satellite data	Ecosystem health, nutrient loading from point/non-point sources and eutrophication
5	Primary production	TWAP/LME Scorecard	National data Regional and global databases	

Table 8 (extract). Core Indicators applicable for LME reporting

1) PRODUCTIVITY AND OCEANOGRAPHY	
3	Annual mean sea surface temperature and trends
4	Chlorophyll a concentration and trends
5	Primary production
2) FISH AND FISHERIES	
8	Proportion of fish stocks within biologically sustainable levels
12	FAO stock status: % stocks overfished compared to MSY
14	Marine trophic index
3) POLLUTION AND ECOSYSTEM HEALTH	
20	Index of coastal eutrophication and floating plastic debris density
21	Concentrations of key nutrients (DIN, TP, etc)
22	Locations and frequency of algal blooms reported
23	Quantification and classification of beach litter items
27	Trends for selected priority chemicals including POPs and heavy metals
33	Coverage of protected areas in relation to marine areas
35	Change in extent of mangrove habitat
4) SOCIOECONOMICS	
48	% GDP on Fisheries
49	% GDP on International tourism
50 **53**	Urban and Rural Population living within 10m coastal elevation *OR* % of population living in Coastal Areas
51	Human Development Index
52	Deaths per 100,000 caused by climate related natural disasters
5) GOVERNANCE	
71	Level of Transboundary Diagnostic Analysis and Strategic Action Program formulation and implementation
72	Level of regional legal agreements and regional management institution(s) to support its implementation
73	Level of national/local reforms and active participation of Inter-Ministerial Committees
74	Level of engagement in IW:LEARN through participation and delivery of key products
78	No. of % of countries with National Monitoring programmes to assess the state of the marine environment and its coastal areas and compliance with domestic standards on releases and/or quality of the marine environment; No. of assessment publications made publicly available
79	Degree of integrated water resources management implementation (0-100)
85	Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations
87	% Land-based sources- National Action Plans ratified / operational
88	No. of Large Marine Ecosystems with reduced pollution and hypoxia
102	National ICZM guidelines and enabling legislation adopted

Table 8 (extract). Core Indicators applicable for LME reporting

Availability of data

- Global and regional databases. Can we create an extended list?
- National monitoring programs – limited in some countries, issues of quality control and sharing data. Also different methodologies used that create problems of comparison.
- Main challenge: projects are not responsible for long-term monitoring, which is under responsibility of regional organizations together with countries, therefore coordination and joint working groups of experts needed. Project data may be localized depending on site specific activities.

Table 7. Main databases available

Database	Link	Data available
IUCN Global Ocean Observing System	http://www.goosocean.org/	Ocean Data
IODE Ocean Data Portal	http://www.oceandataportal.org/	Ocean Data
National Oceanic and Atmospheric Administration (NOAA)	https://www.nodc.noaa.gov/	Ocean and atmospheric data
Sea Around Us database	http://www.seaaroundus.org	Fisheries
FAO fisheries and aquaculture	http://www.fao.org/fishery/statistics/en	Fisheries
UN Biodiversity data	https://www.unbiodiversitylab.org/	Marine and land biodiversity data
The Sustainable Development Goals indicators database	https://unstats-undesa.opendata.arcgis.com/	SDGs
Un Environment WCMC Ocean+	https://library.oceanplus.org/metadata https://protectedplanet.net/	Oceans, MPAs and habitats
IUCN Red list	https://www.iucnredlist.org/assessment/red-list-index	Biodiversity
World Bank	https://data.worldbank.org/indicator	Socioeconomic data
UNDP Human Development	http://hdr.undp.org/en/data	Socioeconomic data/ Human Development Index (HDI)
Our World in Data	https://ourworldindata.org/natural-disasters	Socioeconomic/Natural disasters
UN Environment Situation Room (under development)	http://uneplive.unep.org/wesr/ https://app.mapx.org/	Environment data and GIS

MATUR SUKSMA
TERIMA KASIH
THANK YOU

Work session questions

Review the core indicators (Table 8):

- Task 1:
  - Which indicators are you already reporting on (fully or in part)? What information sources do you use?
  - Could you report on the others, too? What information sources could you use?
- Task 2:
  - Which of the 28 core indicators do you think are especially important? Should any more be added?
- Task 3:
  - How can LME projects support each other in using common indicators? What other organisations can they form partnerships with?