

Transboundary and Adaptive Ecosystem Management: Obligations and Challenges

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**Law and Policy Working Group
Transboundary Fisheries Management in an Era of
Shifting Ecosystems: An Integrative Opportunity for OceanCanada?
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Outline

- I. Managing Fisheries in a Changing Ocean: Ecosystem Approach to Fisheries Management**
- II. Transboundary Fisheries: States' Obligations in Implementing EAFM**
- III. Challenges for Ecosystem and Adaptive Management of Transboundary Fisheries**

**Distribution/migration of stocks
Stocks' productivity, Production variability
Community and foodweb structure
Habitat alteration
Disease impact
Fishing/community infrastructure/gear
Access to fishing grounds/Risk at sea**

Marine Ecosystems



**Ocean warming
Sea Level rise
Frequency and intensity of extreme events
Changes in ocean salinity, density and stratification (precipitation, evaporation, river run-off, ice melt)
Changed circulation patterns
Hypoxia
Ocean Acidification**

Legal and Policy Framework for EAFM

UNCLOS

UNFSA

CBD

RFMOs
Agreements

FAO Code of
Conduct

2001 Declaration on
Responsible Fisheries

UNGA Resolutions

UNFSA Review
Process

FAO Technical
Guidelines

FAO EAFM Toolbox

Rio Declaration, Agenda
21

Johannesburg PoI

Sustainable
Development Goals

CBD CoP Decisions

Jakarta Mandate

Aichi Biodiversity
Targets

Sectoral, single-species management

Holistic (system) management

Few specific goals

Comprehensive goal, multiple objectives

Man not part of nature

Man is part of the ecosystem (social-ecological system)

Short-term focus

Long-term focus

Management within defined (ecological) boundaries

Uses top-down approaches

Relies on collaborative decision-making

Predictive management

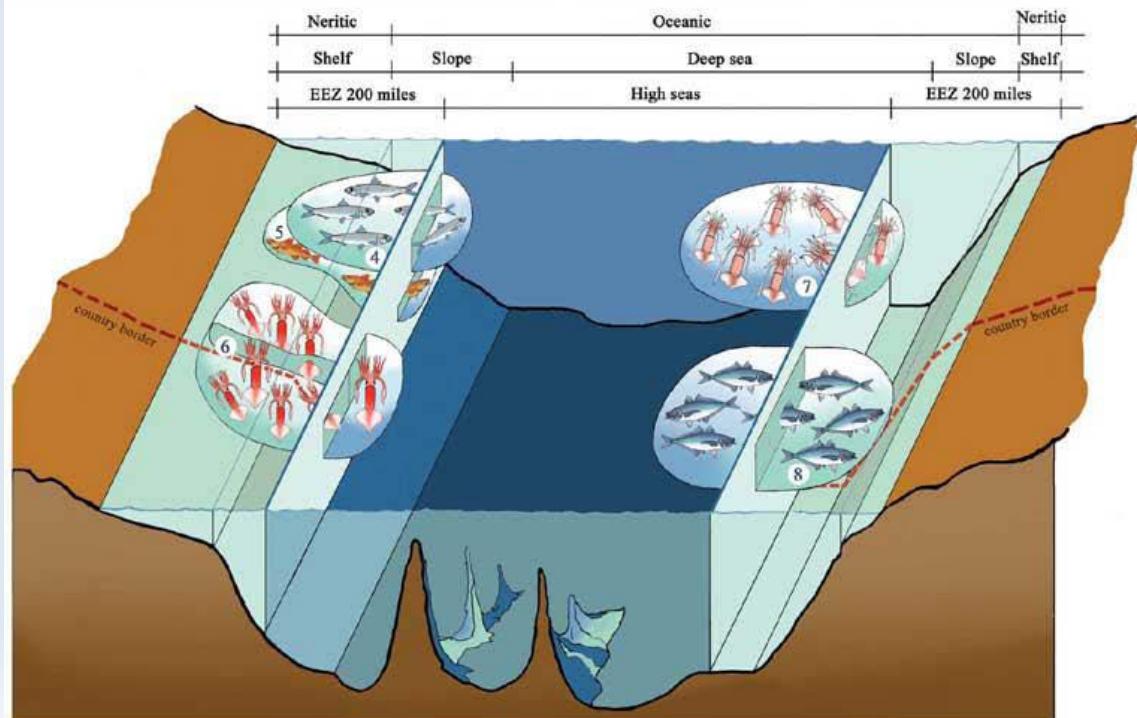
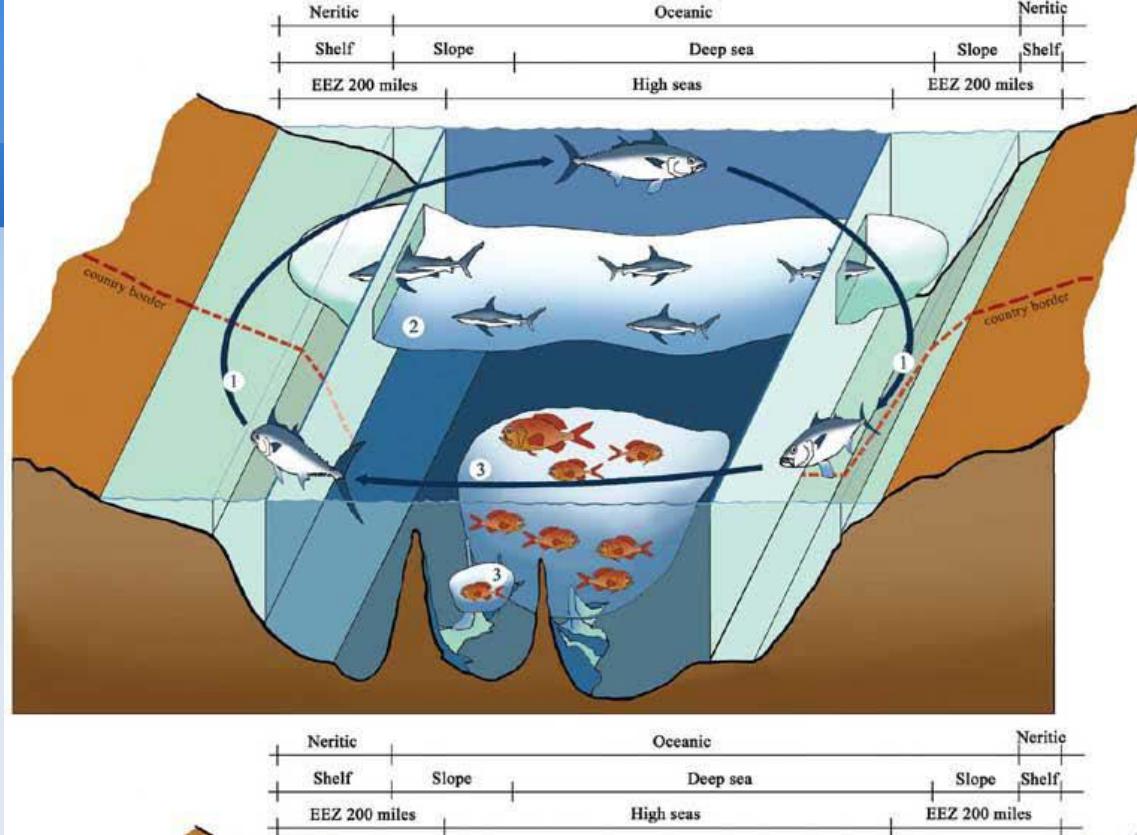
Decentralized

Knowledge-based; multidisciplinary/ traditional and local knowledge

Precautionary approach

Adaptive management

II. Transboundary Fisheries and EAFM

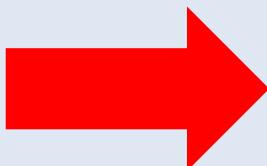


Source: Maguire et al.,
*The state of world highly
migratory, straddling and
other high seas fishery
resources and associated
species*, 2006

Obligation to Cooperate

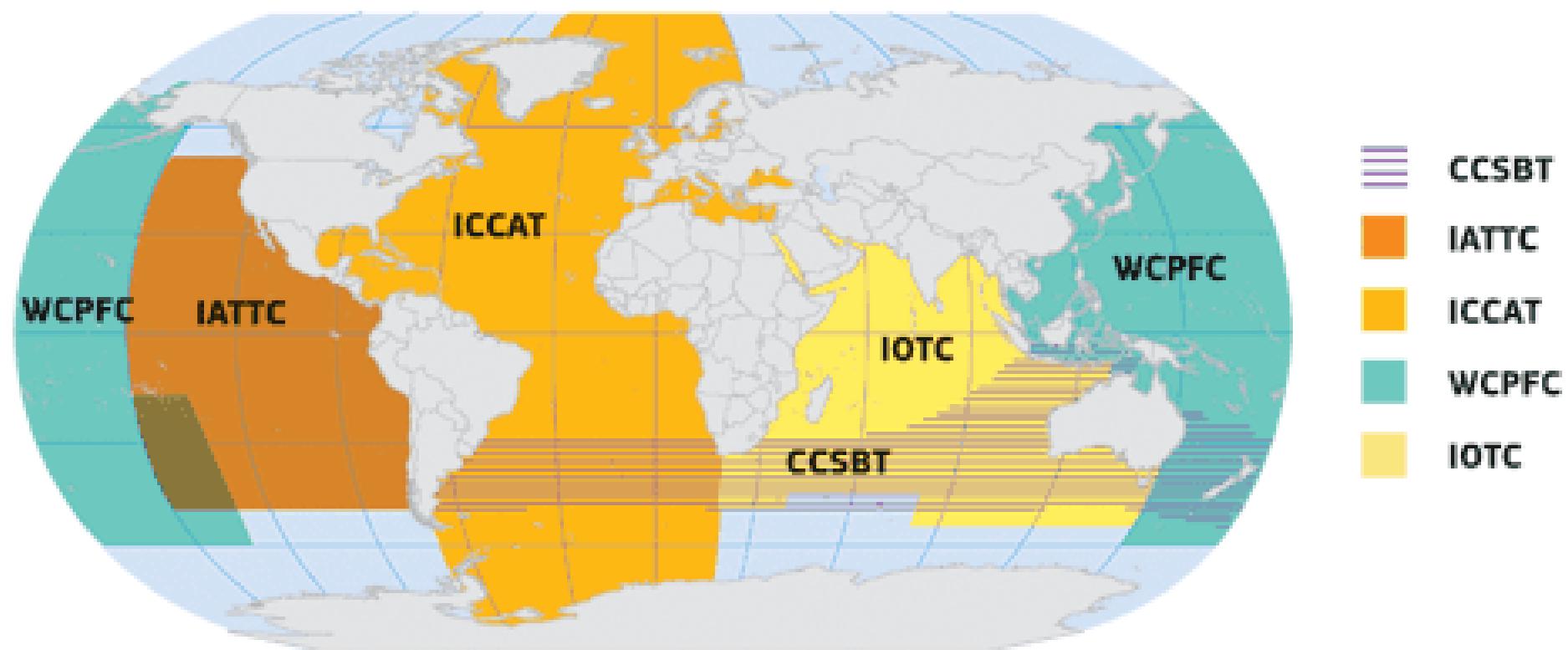
LOSC art. 63 & 64; UNFSA arts. 5 & 7

- “seek [...] to agree upon the measures necessary to coordinate and ensure the conservation and development of such stocks”
- “seek [...] to agree upon the measures necessary for the conservation of these stocks”.
- “cooperate [to ensure] conservation and promoting the objective of optimum utilization of such species throughout the region



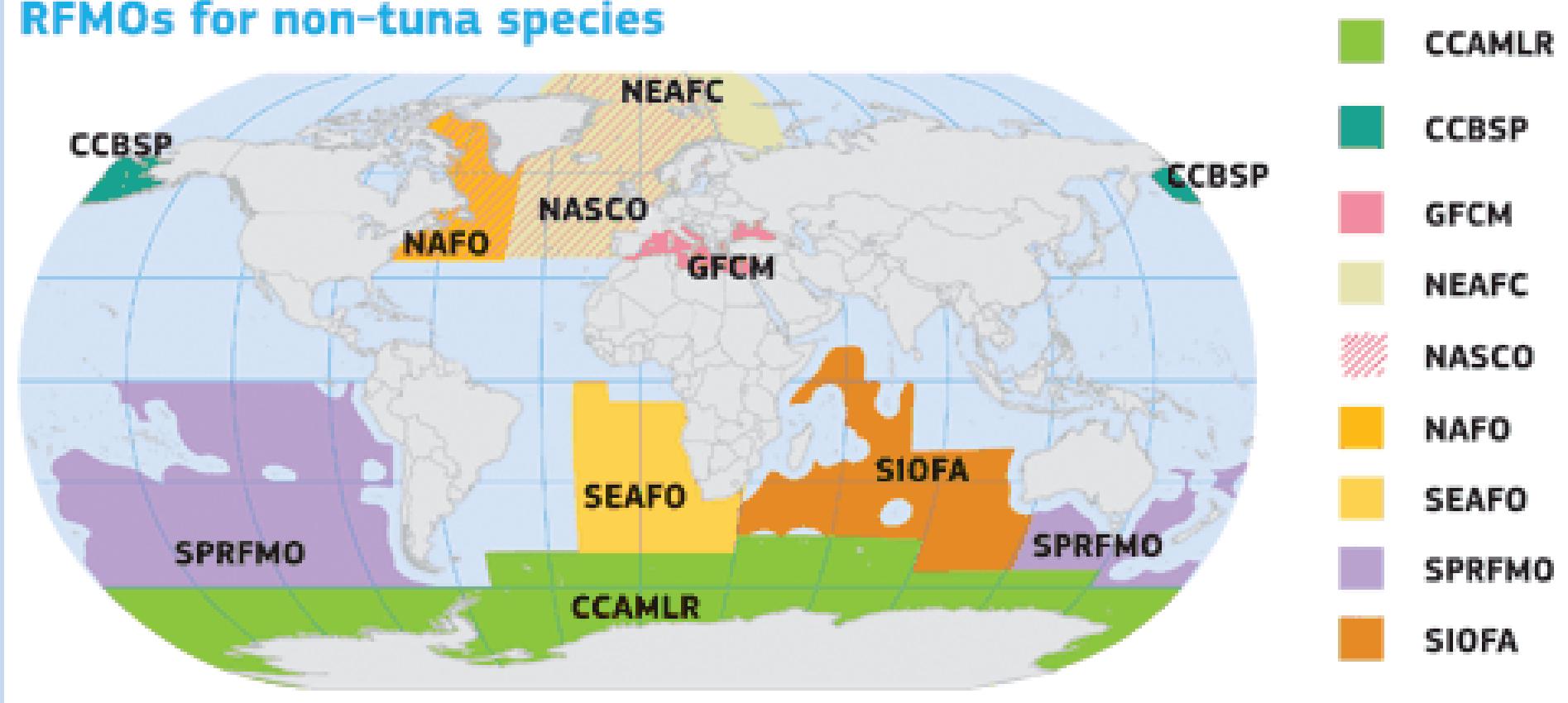
**REGIONAL FISHERIES MANAGEMENT
ORGANIZATIONS (RFMOs) OR ARRANGEMENTS**

RFMOs for highly migratory fish stocks (tuna and associated species)



Source: PESCALEX
<https://normativapesquera.wordpress.com/lex-ue/orps/>

RFMOs for non-tuna species



Source: PESCALEX
<https://normativapesquera.wordpress.com/lex-ue/orps/>

Objective of Conservation

- Achieve MSY...
- ... as qualified by relevant **environmental** and economic factors [...] taking into account [...] the interdependence of stocks and generally recommended international minimum standards

Specific Obligations

- Apply the **precautionary approach**
- Assess the **impacts of fishing, other human activities and environmental factors** on target stocks and species belonging to the same ecosystem
- Adopt management measures for **species belonging to the same ecosystem** (viability threshold)
- minimize **pollution, waste, discards**, catch by lost or abandoned gear, catch of **non-target species**, both fish and non-fish species (...) and impacts on associated or dependent species, in particular endangered species
- Protect **biodiversity** in the marine ecosystem (**CBD!**)
- Promote and conduct scientific **research** and develop appropriate technologies

III. Challenges for Ecosystem and Adaptive Management of Transboundary Fisheries

- **Fragmentation**
 - Scope and ratification of UNFSA
 - RFMOs' legal mandates
 - Institutional capacity
- **Adapting to change**
 - Assessing and incorporating climate change/OA
 - new areas, new players, new agreements
 - distribution of “costs” of climate-induced changes to marine fisheries (allocation!)
- **Negotiation process for a new implementation agreement for the protection of marine biodiversity in ABNJ**

Thank you!

Acknowledgments



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