

AORAC-SA FAO workshop: Making the ecosystem approach operational

20-22 January 2016

EEA Headquarters, Copenhagen, Denmark

The NAFO Roadmap for an Ecosystem Approach to Fisheries

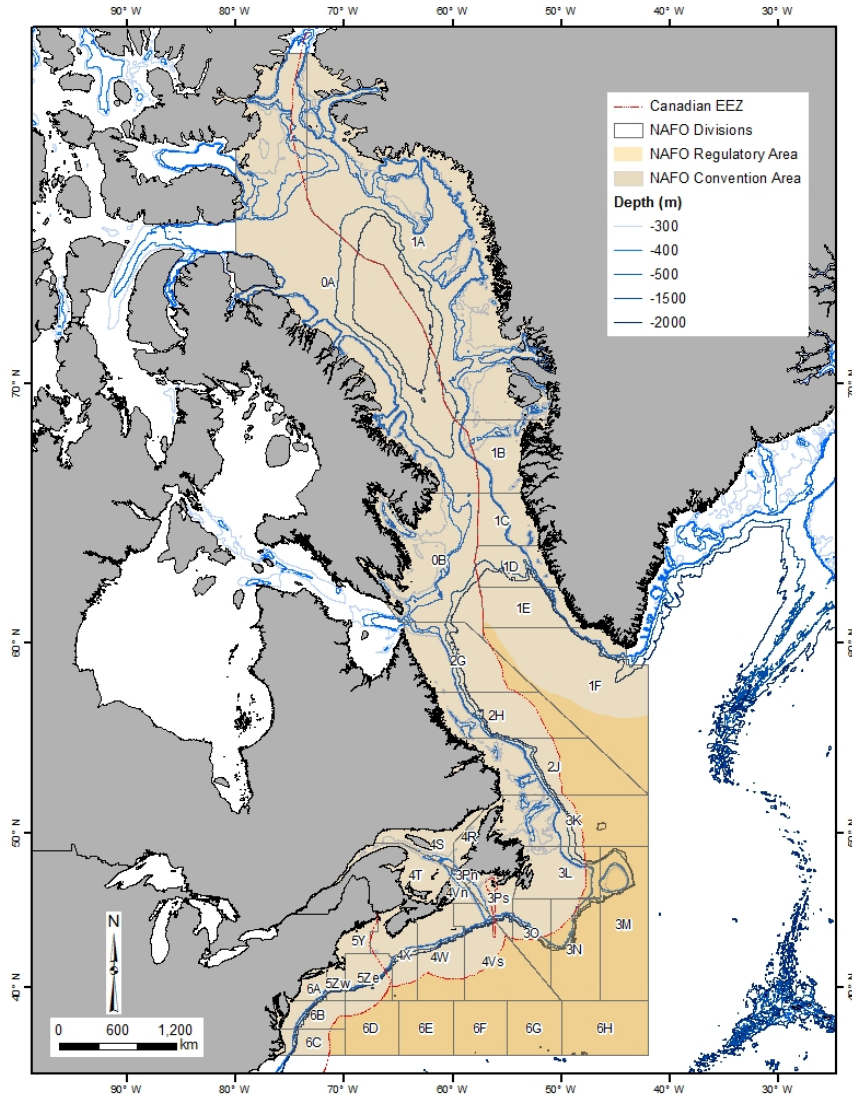
Mariano Koen-Alonso

Fisheries and Oceans Canada (DFO)

and

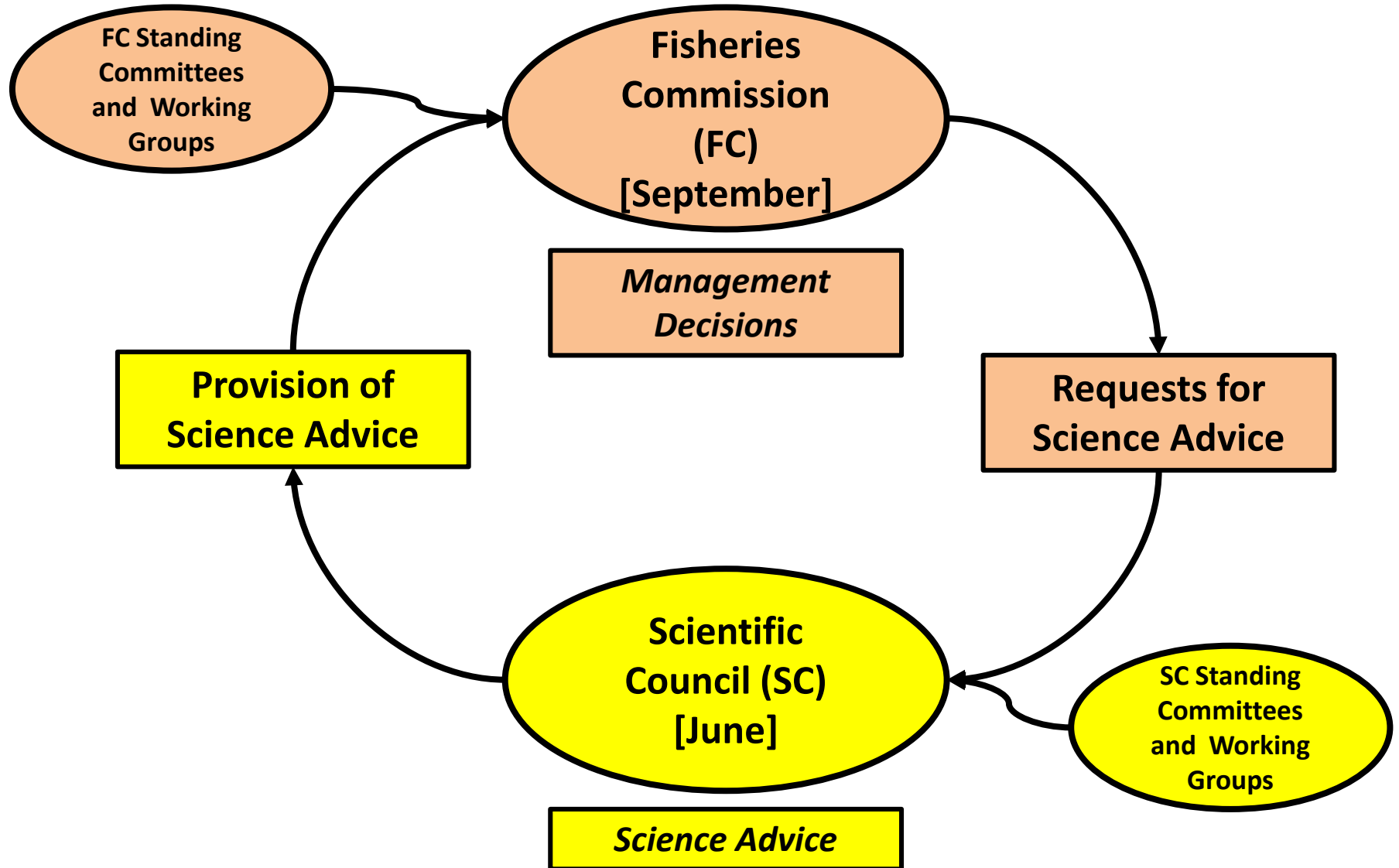
Northwest Atlantic Fisheries Organization (NAFO)

Case Study: NAFO

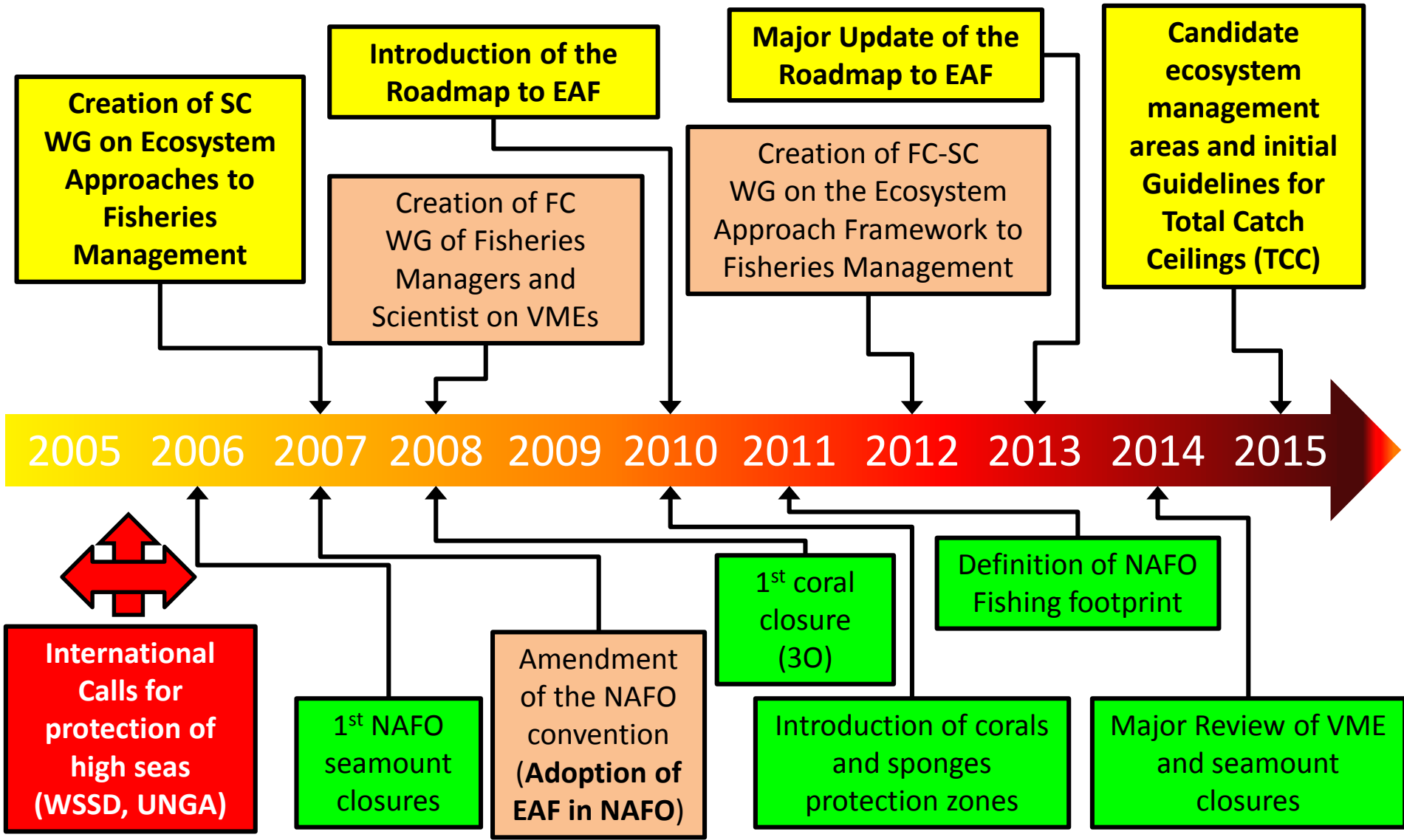


- Regional Fisheries Management Organization (RFMO)
- 12 Contracting Parties (CPs)
- NAFO Regulatory Area (NRA) outside the 200nm EEZ
- Manages fisheries on:
 - NRA stocks
 - Straddling stocks
- 19 stocks (11 species)
- Also provides advice on stocks upon requests of CPs

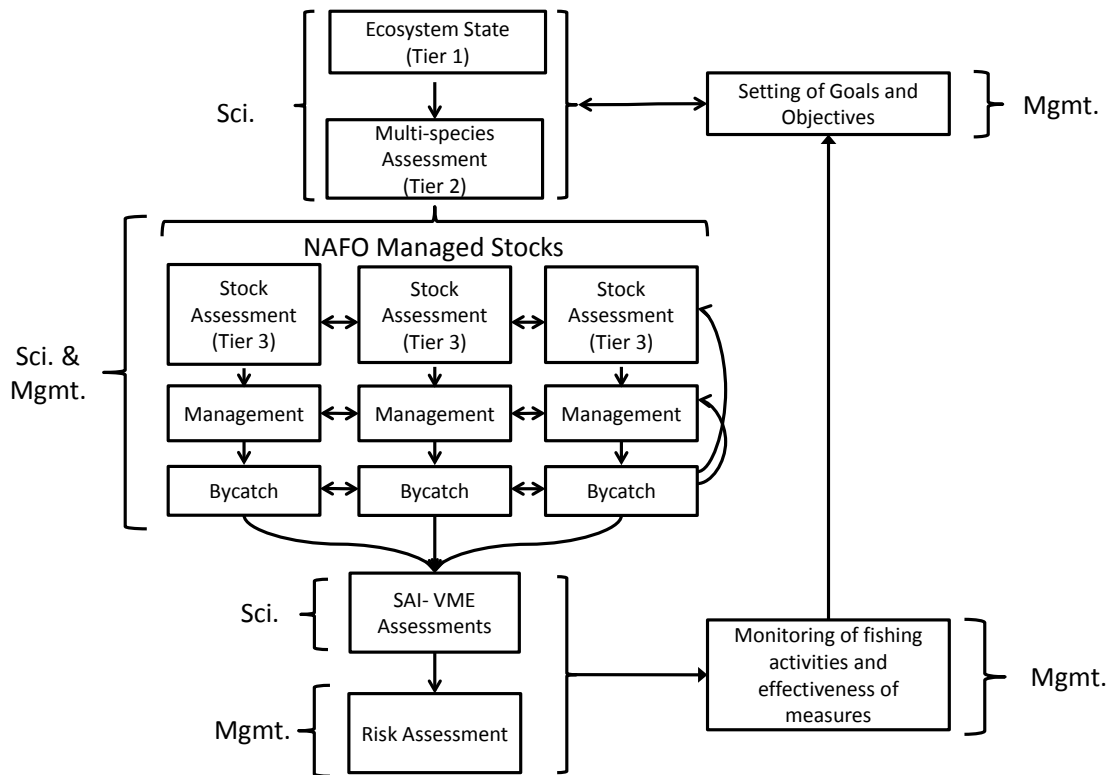
NAFO Management Cycle



NAFO Ecosystem timeline: Highlights



The NAFO Roadmap to EAF



What is it?

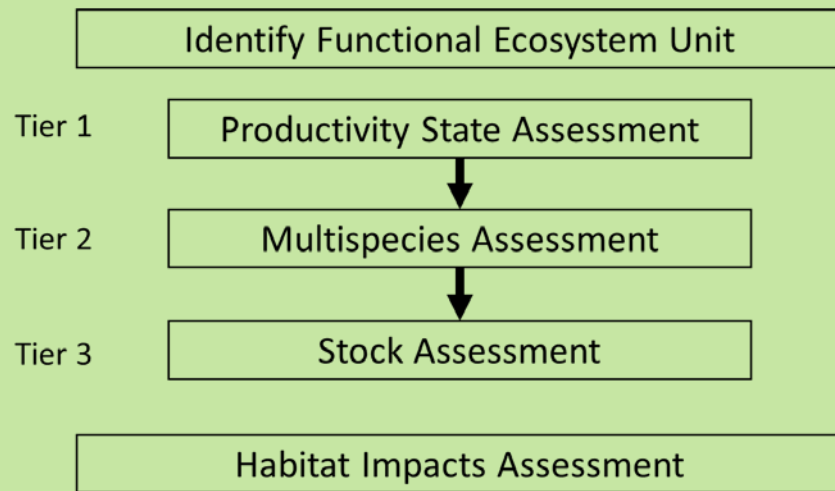
- It is a **guiding set of ideas and principles** to implement an Ecosystem Approach to Fisheries (EAF)
- It lays out an **organizing framework**.
- It includes **both** Science and Management.
- It is **pragmatic**.
- It is **modular**.

Core premises

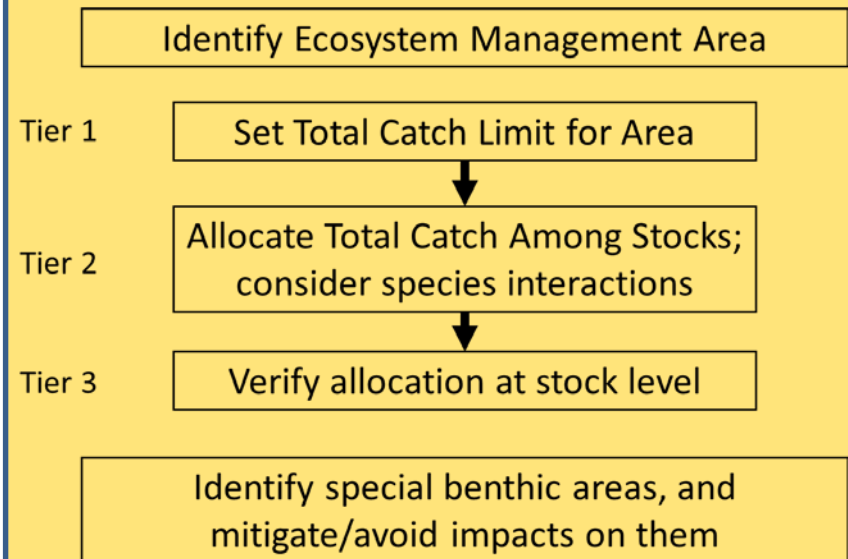
- objective-driven
- long-term ecosystem sustainability
- place-based framework
- trade-offs explicitly addressed

The NAFO Roadmap: The basics

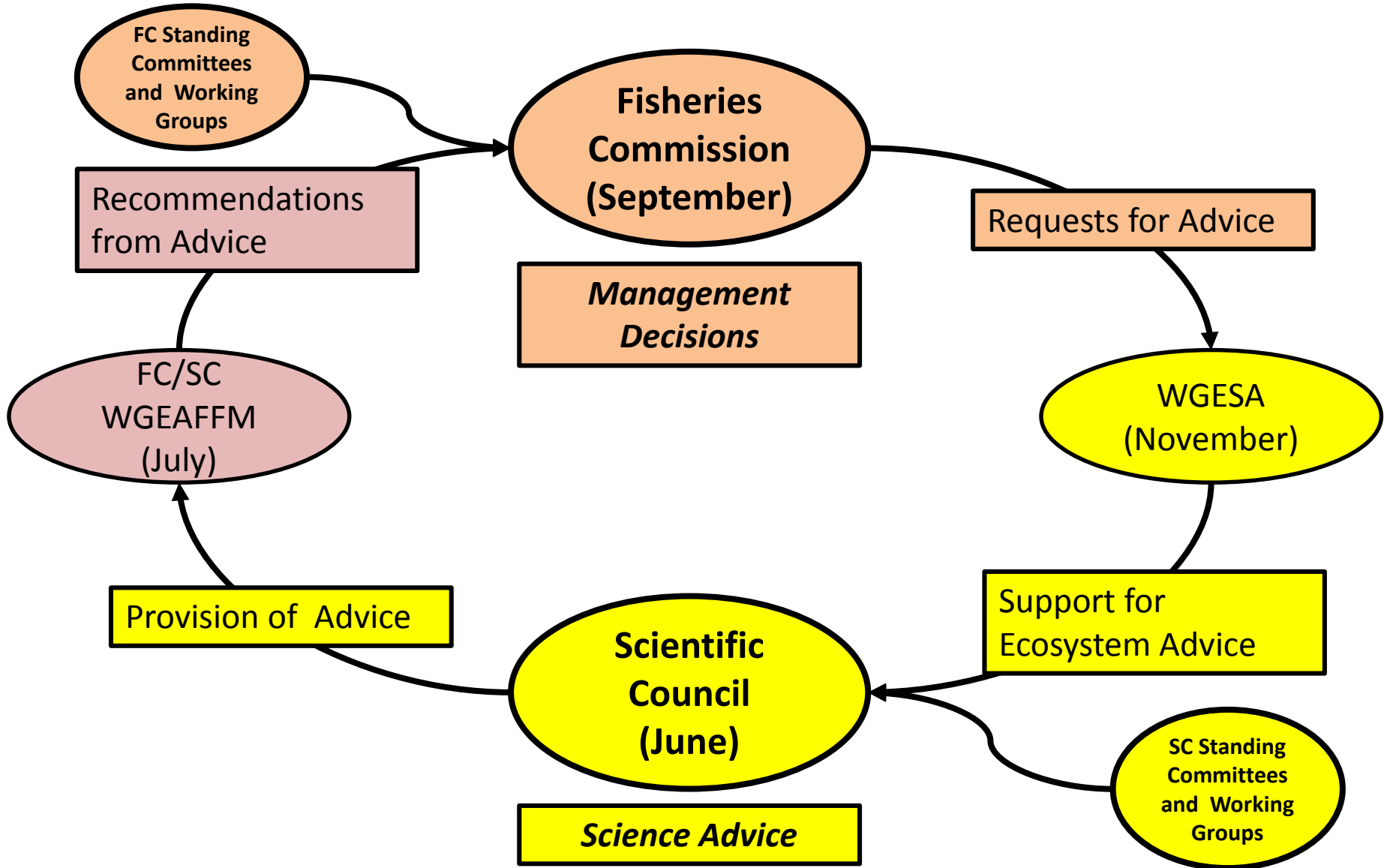
Conceptual Structure



What does it boil down to?

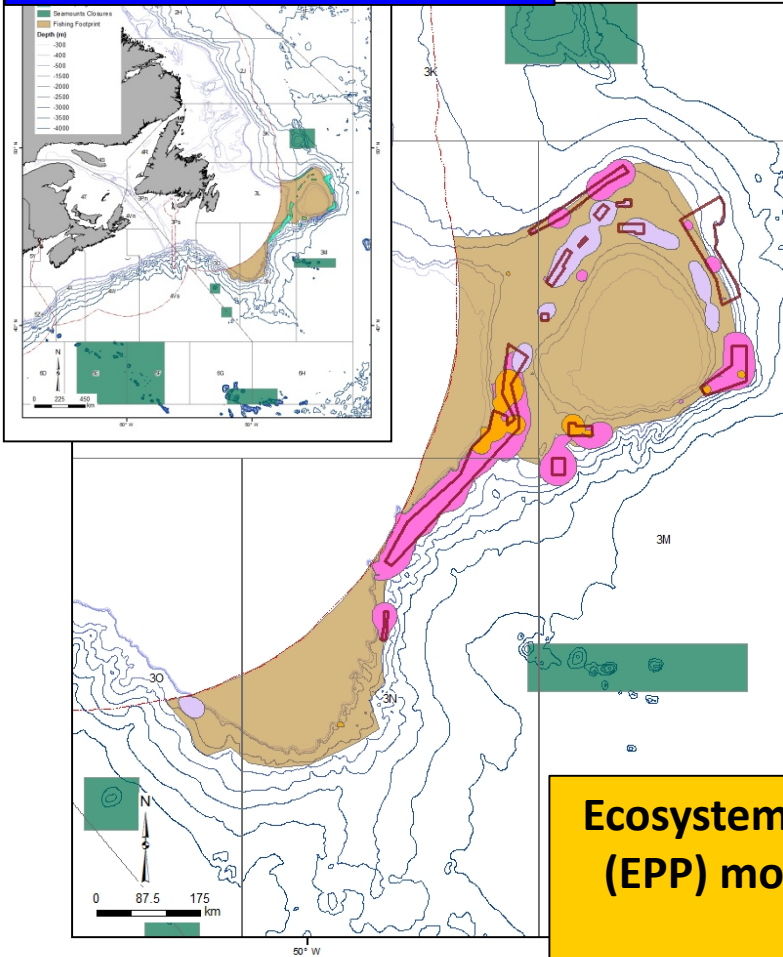


NAFO (Ecosystem) Advisory Cycle

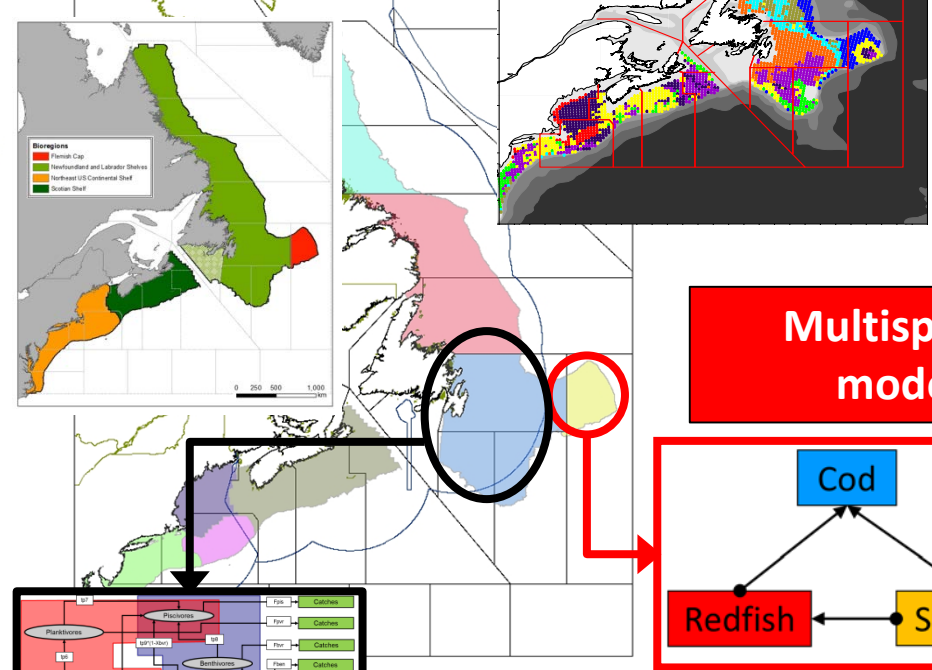


Roadmap implementation: some examples

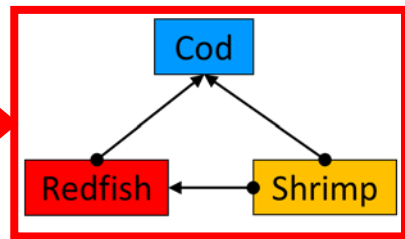
NAFO Fishing Footprint, Seamounts closures, and VME protection areas



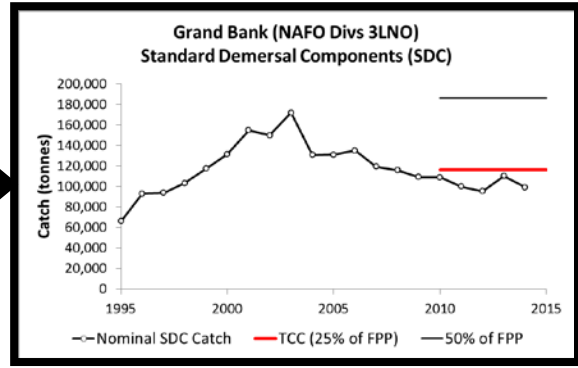
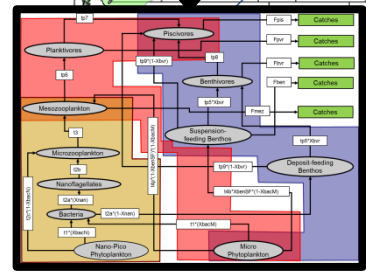
Spatial scales for Ecosystem Management



Multispecies modelling



Ecosystem Production Potential (EPP) models & Guidelines for Total Catch Ceilings



NAFO: Outputs and Objectives

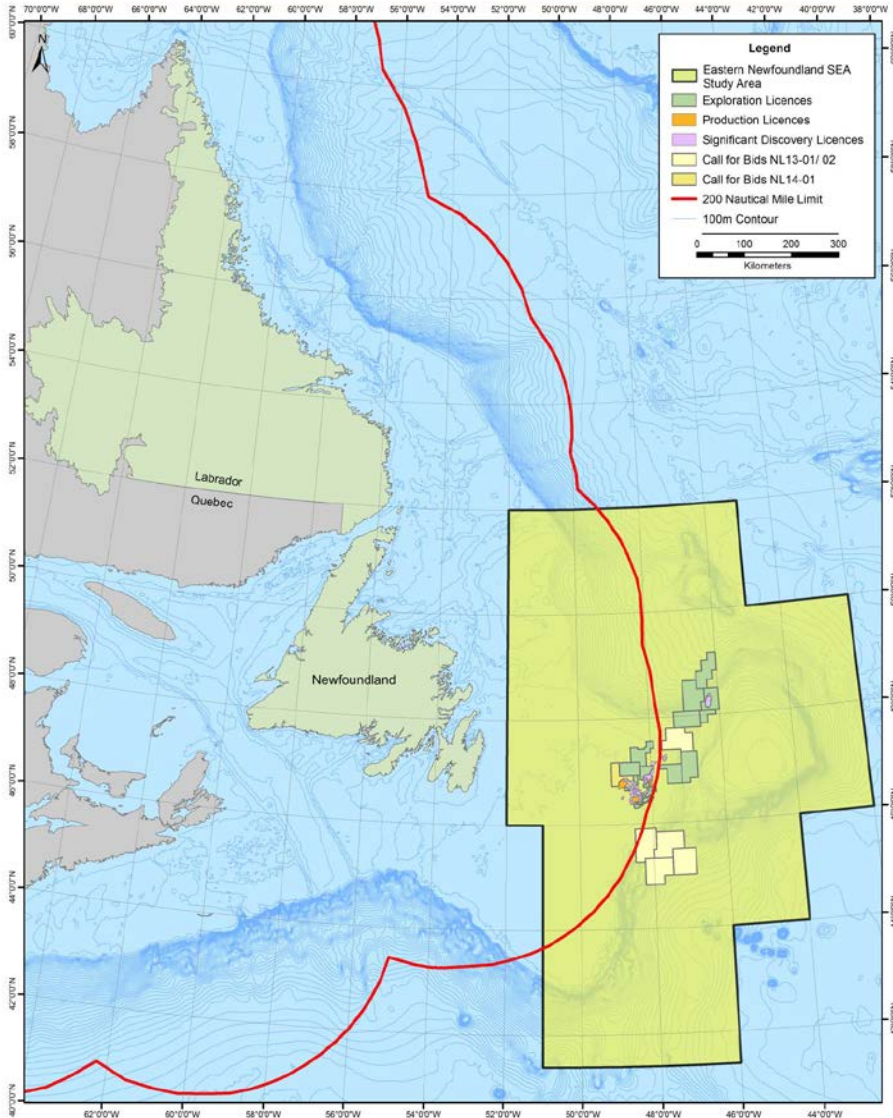
From the Preamble of the Amended NAFO Convention

- RECOGNIZING the ***economic and social benefits*** deriving from the sustainable use of fishery resources.
- DESIRING to promote the ***long term conservation and sustainable use of the fishery resources*** of the Northwest Atlantic.
- COMMITTED to apply an ecosystem approach to fisheries management in the Northwest Atlantic that includes ***safeguarding the marine environment, conserving its marine biodiversity, minimizing the risk of long term or irreversible adverse effects of fishing activities, and taking account of the relationship between all components of the ecosystem.***

Objectives (*my wording*)

- Derive economic and social benefits from the sustainable use of fisheries resources.
- Promote long term conservation of fisheries resources.
- Safeguard the marine environment.
- Conserve marine biodiversity.
- Prevent or minimize long term/irreversible adverse effects of fishing.
- Maintain and/or restore ecosystem structure and function.

Challenges and Conflicts



Challenges

- Continue implementing the Roadmap into management
- Limited resources and science capacity
- Resistance to changes by some CPs
- Coordination and compatibility with coastal states and other international organizations

Conflicts

- Oil and gas (realized and potential)
 - Seismic surveys
 - Spills
- Deep sea mining (potential)
 - Smothering
 - Habitat destruction

The way forward

The value of an Ecosystem Approach

- Promotes a **full and sustainable** utilization of **all** resources and services ecosystems generate.
- Provides a framework that can allow avoiding, or minimizing conflicts across sectors and jurisdictions.

What does lay ahead? (realistic and aspirational)

- Continue working towards a full implementation of the Roadmap within NAFO for identified shelf ecosystem units (shifting science emphasis towards multispecies interactions).
- Promote development and implementation of compatible and coordinated approaches within Canada and other coastal states.
- Identify and delineate functional ecosystems in Areas Beyond National Jurisdiction (ABNJs) (e.g. oceanic realm within the NAFO Convention Area).
- Create/expand legal frameworks to coordinate the work of sector-oriented international bodies (e.g. International Seabed Authority, RFMOs) to allow effective integrated management for identified ecosystems in ABNJs.
- Generate a platform for building a broader EBM approach for Functional Ecosystem Units in ABNJs.

Acknowledgements:

Everyone and their dogs!!!

Members of:

- NAFO SC WG on Ecosystem Science and Assessment
- NAFO Scientific Council
- NAFO Secretariat
- NAFO SC-FC WG on the Ecosystem Approach Framework to Fisheries Management
- DFO staff at NAFC, St. John's NL
- DFO ERI-NEREUS program
- DFO IGS and SPERA programs
- Research and management agencies in USA, Spain, Portugal, UK, Norway, Russia, and more..
- Many others I know I am forgetting... Sorry!!!

Especially guilty ones are:

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- Javier Murillo
- Mar Sacau
- Christopher Barrio-Froján
- Vonda Wareham
- Neil Ollerhead
- Neil Campbell
- Tony Thompson

Just to name a few...

THE END