



A DFO Framework for Applying an Ecosystem Approach to Management

Strategic Directions Committee
July 28, 2011



Purpose

To provide regional context and content to inform the development of a National Ecosystem Approach to Management (EAM)

Outline:

1. Context and drivers for EAM
2. Overview of existing DFO activities and initiatives that support an EAM
3. Overview of key elements in national EAM deck for SOC (June 21, 2011)
4. Key considerations and possible approaches for the development and implementation of EAM
5. Questions for discussion and next steps



Context

- Work is underway nationally to define a Departmental framework for EAM
- There is currently a lack of common understanding of the terminology
- Numerous programs in DFO are moving towards an EAM and these existing approaches may inform an EAM framework for DFO
- Efforts to ensure coordination among regional programs and existing EAM approaches have just begun (e.g., through the Sustainable Fisheries Framework, Oceans initiatives).
- Development of a national EAM framework requires consideration of the different drivers and operational needs of the various programs.
- Requires a better understanding of where we are now with respect to EAM in relation to where we see ourselves in the future



Context

Terminology

DFO has no consistent agreed upon definition or framework to guide its implementation

Oceans

- Uses both “*Ecosystem-Based Management*” (EBM) and interprets these as an “integrated or holistic approach to resource management that aims to maintain an entire ecosystem in a healthy, productive and resilient condition”

Fisheries Management

- Uses the term “*Ecosystem Approach to Management*” (EAM) as a broadening of a more specific management focus (i.e., fisheries) to include the consideration of some additional ecosystem characteristics.

Stakeholders

- Have other definitions/expectations



Key Drivers

- **Departmental**

- New Program Activity Architecture (PAA) - Strategic Outcomes
- Sustainable Fisheries Framework – “provides the foundation of an ecosystem-based and precautionary approach”
- Oceans Strategy, Oceans Action Plan
 - Emphasizing an ecosystem approach, including ecosystem management
- Habitat Policy Renewal – supports concepts of ecosystem approach
- SARA allows for multi-species or an ecosystem approach in developing recovery strategies

- **Other Federal Departments**

- Federal Sustainable Development Strategy – “recognizing principles of sustainable development, as well as the precautionary and ecosystem approach”
- Parks Canada – EAM is the conceptual approach for the protection of park ecosystems
- Environment Canada – “ecosystem approach is one of five guiding principles”

- **International**

- Convention on Biological Diversity – “the ecosystem approach is the primary framework for action...”
- UN General Assembly resolution – urging the incorporation of “an ecosystem approach to fisheries management and biodiversity considerations”
- FAO - Code of Conduct for Responsible Fisheries – implemented through an ecosystems approach to fisheries and aquaculture

- **Provincial Approaches** – work is currently underway (5 year implementation plan)



Existing Approach to EAM-Related Work

Current scope and approaches to EAM vary

- Fisheries
 - Manages effects of select activities (fisheries and aquaculture)
 - Operationally focused
- Oceans
 - Establishes broader framework for ocean management, considers all activities
 - Defines broader ecosystem values (Integrated Management)
 - Coordinates and informs the management of multiple activities
 - Responsible for the establishment and management of MPAs
- Habitat
 - Mostly focused spatially on site-specific development projects but cumulative effects assessment are broader
- Science
 - Ecosystem initiatives



Existing EAM-Related Work: Fisheries

- DFO policies and strategies are already in place that begin to address EAM for fisheries management
 - Sustainable Fisheries Framework
 - Sensitive Benthic Areas Policy
 - Precautionary Approach
 - Forage Species Policy
 - Draft Bycatch Policy
 - Draft Stock Rebuilding Policy
 - Wild Salmon Policy
 - Safeguards salmon genetic diversity, maintains habitat and ecosystem integrity
 - Sustainable Fish and Seafood
 - MSC certification process
 - Groundfish Integration
 - EAM approach with respect to the impacts on non-directed species



Existing EAM-Related Work: Oceans

- Canada/BC MPA Network Strategy
 - Inter-govt collaboration to coordinate establishment of marine protected areas
 - Coastal planning and integrated oceans management planning
- Integrated Management Processes (e.g., PNCIMA)
 - Multi-sectoral, multi-stakeholder LOMA management
- Cold-Water Coral and Sponge Conservation Strategy
 - Integrates cold-water coral and sponges conservation into ongoing DFO activities and programs (e.g., MPAs, IM planning processes, and fisheries)



Existing EAM-Related Work: Habitat

– Habitat Renewal Policy

- Adopting an ecosystem approach
- Cumulative Effects
- Habitat compensation moving towards ecosystem approach



Existing EAM-Related Work: Science

Ecosystem Status and Trends Reporting

- Pacific Region State of the Ocean reports; Oceans/HOTO State of the LOMA reporting; National Ecosystem Status and Trends Reporting; PICES Ecosystem Status Report

Strait of Georgia Ecosystem Research Initiative

- Ecosystem studies and management of human interactions in the SoG; development of tools and approaches for other LOMAs/ecosystems

Ecological Risk Assessment for the Effects of Fishing

- support in decision-making processes under Sensitive Benthic Areas policy

PICES (North Pacific Marine Science Organization)

- Working groups; reports
- FUTURE (Forecasting and Understanding Trends, Uncertainty and Responses of North Pacific Marine Ecosystems) Scientific Program

Comparative Analysis of Marine Ecosystems

- Scientific production models as tools to examine factors (e.g., fisheries) influencing marine productivity across levels of aggregation, ecosystems and drivers
- Models to explore combined effects of fishing and climate on indicator trends



Differences in DFO terminology –NHQ SOC Deck

	EBM	EAM
Geographic scope	Ecosystem as a whole	Management/activity
Process and mandate	Identify principal ecosystem threats & determine how they can be minimized (broad mandate)	Identify threats related to management focus and consider some additional threats (sector-based mandate)
Governance	Needs an overarching forum that coordinates decision-making to achieve objectives	Decision-making lies with each management sector. Objectives only achieved if sectors voluntarily collaborate and share information



Proposed EAM Definition - NHQ SOC Deck

An Ecosystem Approach to Management

- Is an adaptive approach to managing human activities that is specific geographically,
- Takes into account ecosystem knowledge and uncertainties,
- Considers multiple external influences, and
- Seeks to ensure the coexistence of healthy ecosystems and human activities



Operational Requirements - NHQ SOC Deck

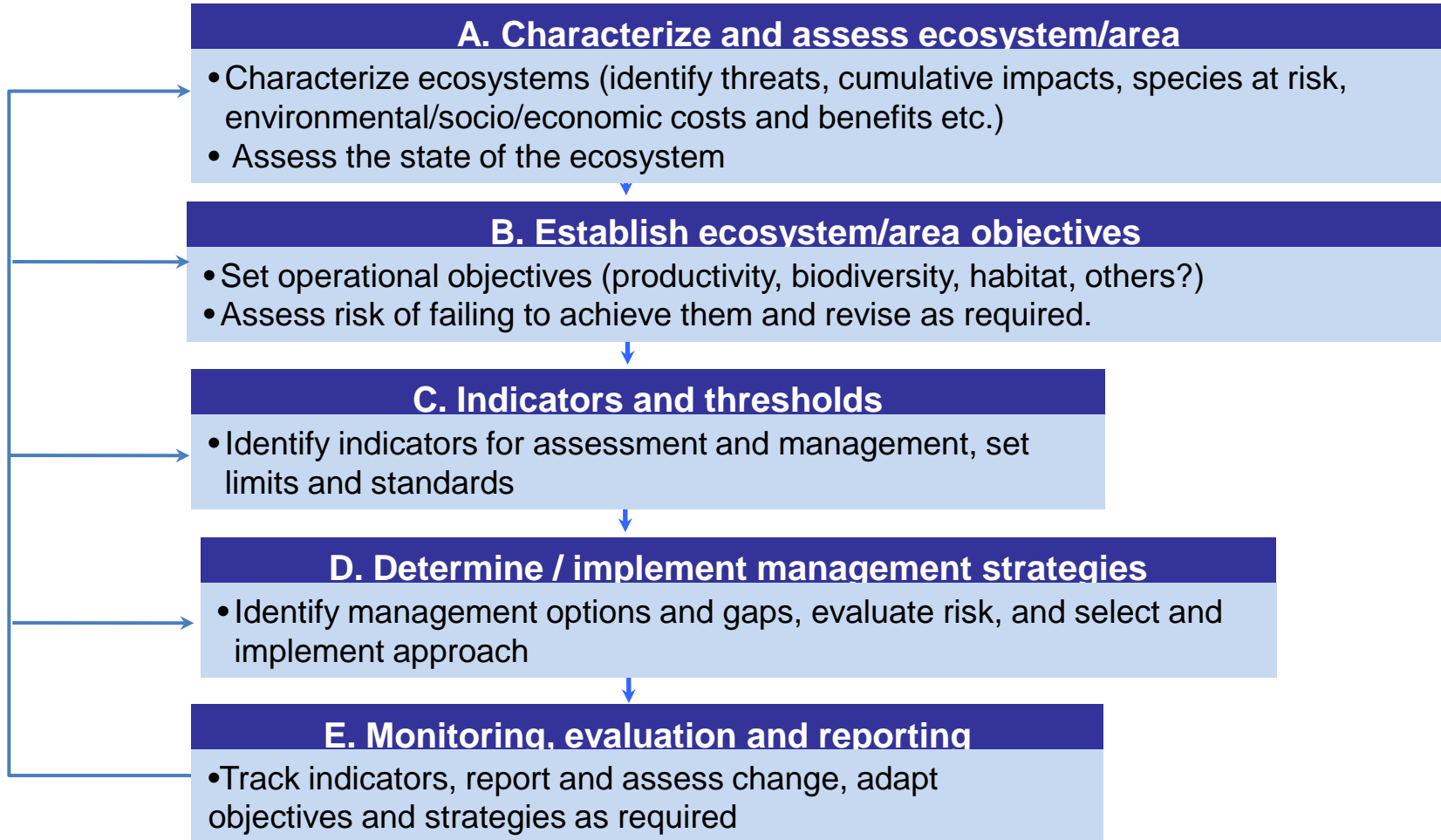
Proposed Operational Requirements include:

- ✓ For select ecosystem areas identify main ecosystem features and threats
- ✓ Take the features and threats into account when making management decisions
- ✓ Take into account the entire footprint of the managed activity
- ✓ Manage competing interests between sectors within the Department and establish a process for their resolution
- ✓ Collaborate with others (F/P/T/M, partners, stakeholders etc) to work towards the alignment of management objectives with broader ecosystem goals
- ✓ Incorporation of policies, strategies and projects already in place



Implementation Process - NHQ SOC Deck

Proposed Implementation Process:





Considerations for EAM

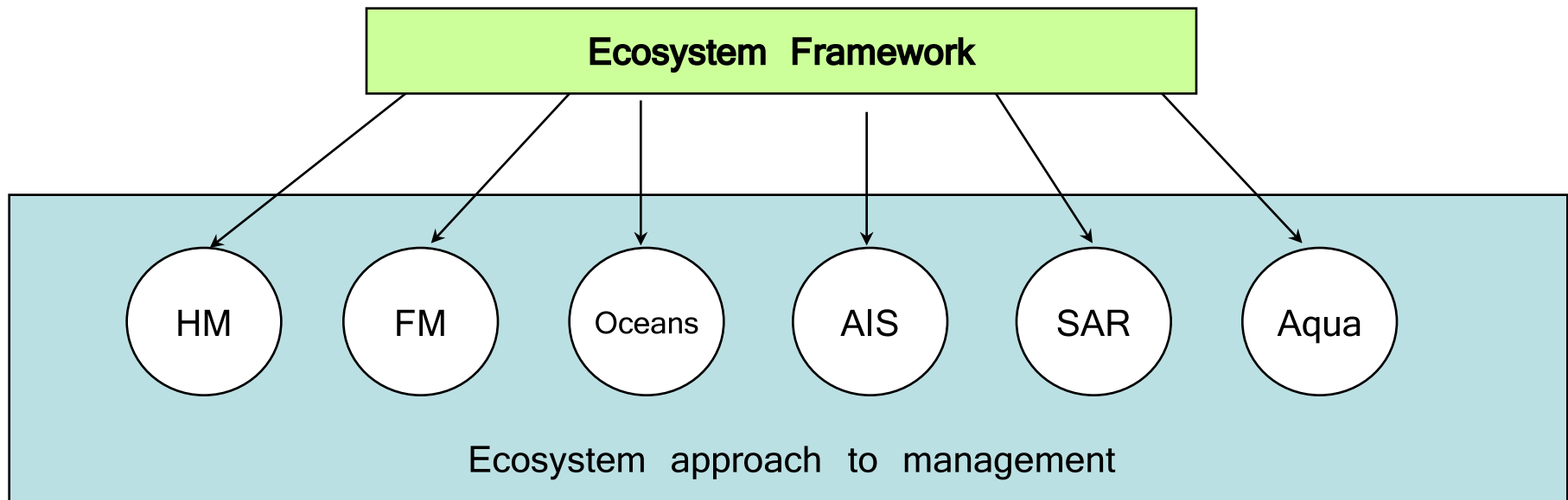
How can existing DFO programs achieve EAM?

1. Integrated Management or LOMAs
 - Could we allow others to bring in their mandates through IM under Oceans?
 - What are the gaps under this approach?
2. Sustainable Fisheries Framework (SFF)
 - Identify gaps in the SFF and add new components to achieve a Departmental EAM
 - Integration of current SFF policies (e.g., inclusion of SBA into bycatch policy needed) and evaluation of cumulative effects
3. Wild Salmon Policy
 - Does WSP form the basis for a Departmental EAM?



Considerations for EAM

DFO operational requirements of an EAM





Key Questions for Discussion

1. Is our EAM DFO-specific or will other agencies be incorporated (e.g., Parks Canada, EC)? Is the EAM both aquatic and terrestrial? If so, how do we integrate with other govt agencies?
2. Does DFO develop an EAM or do we focus on developing the products and tools to take into an EAM or Integrated Management process (e.g., PNCIMA, MPAs, NMCA)?
3. What are the critical DFO needs for an EAM?
 - Policy integration and aligning of management objectives between programs?
 - Refocus of program activities away from regulatory based activities
 - Science based ecosystem based assessment framework
4. Does Science have the capability to provide advice to managers on the conservation objectives on biodiversity, habitat and ecosystem form and function? Where are the gaps and how does Science need to address these?
5. Given imminent financial and resource limitations, what approach should DFO take in implementing EAM, if any at all?



Proposed Next Steps

1. Establish a process for regional-NHQ communication regarding EAM initiative and activities – to inform development of a National EAM
 - Identify a regional EAM lead to work with NHQ
 - Establish a regional EAM working group
2. Analyse how current DFO approaches align with EAM
3. Identify regional program needs for EAM