The Ecosystem Approach to Management - Discussions in the International Community

Submitted by: Canada
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Discussions in the International Community

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APEC Workshop on Ecosystem-based Management
Vancouver
May 28-29, 2009

Introduction

• Not a scientist, fisheries manager or oceans specialist. Views of a policy maker – “integrator” …

• Representative of Canada in many multilateral fora
  – commitments in relation to the ecosystem approach to fisheries are part of the commitment to better fisheries and oceans governance, healthy oceans ecosystems and biodiversity protection

• Co-Chair, UN Informal Consultative process on Oceans and the Law of the sea (UN-ICP) on “Ecosystems Approaches to Oceans”, June 2006, New York
  – 101 States, 24 IGOs and other bodies and 16 NGOs
Context

- International commitment to action and implementation “From Words to Action”
  - Includes making progress on implementing Ecosystem Based Management (EBM) – for fisheries and for broader oceans health and biodiversity protection

- Broad political commitment exists to the concept of ecosystem approach
  - Key to solving the problems of degradation of oceans health and depletion of fisheries resources

- If there are differences or uncertainties about it, it is on the “how”.

- Conceptual clarification of components underway to enable implementation
  - Many meetings over last few years to build common understanding and tools

Role of UN-ICP

- UN Review of UNFA implementation: States declined to make much specific commitment to implement building blocks to EBM, as concepts deemed to be “unclear”.
  - States’ in 2006: “We don’t know enough to get started or implement”

- Not “new”. Much has been written by scientists and fish managers, but not “mainstreamed” into policy or management
  - Too often a confused debate about the implications of EBM for management and governance, especially as relates role of sectoral management

- 2006 ICP goal: “demystify” the concept
  - States agreed on shared views on the concept, and needs
  - Examples examined in developed and developing countries, and regionally
**ICP Agreed Elements**

- No universal "definition". Applies differently in different contexts, but agreement among UN members, in general on what it should entail:
  - protect ecosystem structure and functioning
  - applies to geographic specific areas, zones of varying scales
  - based on ecological criteria
  - emphasizes interactions
  - based on understanding of cumulative aspects of activities
  - takes into account factors outside management areas/activities
  - minimize adverse impacts of activities
  - risk based and precautionary
  - based on best available science from all sources
  - needs to balance diverse societal objectives
  - needs integrated approaches to manage multiple activities
  - ecological, social, cultural, economic, and technical aspects

**ICP: Agreed Elements**

- Can implement through:
  - including in national policies and plans
  - better marine scientific research and filling critical knowledge gaps
  - improved legal, institutional, policy frameworks
  - understanding emerging issues (climate interactions, underwater noise)
  - more effective RFMOs/ international cooperation/institutional cooperation
  - more effective role for multilateral institutions
  - broader range of tools, including area-based planning and tools
  - identification and engagement of stakeholders
  - assessments and management of all activities affecting marine environment
  - increased capacity building
  - identification and management of, ecosystem health, sensitive areas, ecosystem monitoring
  - raising public awareness
ICP: Threats to Marine Ecosystems

- ICP agreed that States need to address activities and pressures that lead to adverse impacts on marine ecosystems, including, *inter alia*:
  - land-based pollution
  - over fishing
  - IUU fishing
  - by-catch of threatened species
  - sea-based pollution
  - dumping
  - physical destruction and degradation of habitats, vulnerable marine ecosystems
  - introduction of invasive species

- Need to address root causes of these threats, not symptoms
  - includes legislation, regulation, policies and incentives
  - from watershed to high seas

ICP: Summary points of note:

- Not about managing ecosystems but about managing human activities with impacts on ecosystems. Not ecosystem manipulation

- Don’t need to know it all to get started. Cannot hide behind things we don’t know but rather start with what we have and adapt management with improved information and understanding

- The less we know (knowledge gaps or due to the small size of planning scales), the more precautionary one needs to be. Ecosystem approach goes hand in hand with the Precautionary Approach to fisheries management.

- **"There is a role for modernized sectoral management (fisheries). It is necessary – although not sufficient – for good integrated management (IM) of oceans space (see next 2 slides)"**

- If there are fundamental root problems to solve then no amount of EBM or IM is going to work. EBM is not a silver bullet to fisheries management issues (e.g., fishing overcapacity)
Sources of Confusion and Conflict in Understanding

- ICP clarified Ecosystems approaches to oceans …Broad topic
  - ENGOs and environmental interests may often have this image in mind when talking of “ecosystem approaches”
    - wish to discuss in non-sectoral fora (CBD, UN)
    - see sectoral management as antithetical to ecosystem-based approaches
    - favour “prohibitions” or no-activity areas (MPAs, moratoria)
    - searching for new governance arrangement/ criticize sectoral management for not managing broader threats (ROMOs versus RFMOs?)
  - Focus on Integrated Management across sectors
    - MPAs only 1 tool among many
    - domestic examples in developed and developing states
    - and some regional examples of international cooperation
  - Needs common understanding of oceans health and ecological limits for planning, baselines and indicators, and decisions on management targets and implementation
    - Hard enough to do in national waters – very hard in high seas
    - Who convenes? How to jointly determine? What decision making tables? Legislative basis?
    - Not just science
  - Need new legal tools to force cooperation? (i.e., with MPAs in high seas?)

Sources of Confusion and Conflict in Understanding

- Versus Ecosystem Approach to Fisheries
  - If Integrated Management is the Oceans “table”, then Ecosystem-sensitive sectors are the “legs” or pillars that hold the table up
    - Fisheries, shipping, mining, etc have to deliver their part
  - Or preferably think of need for common foundations of legal and other authorities, and common assessments and planning parameters
  - As well, common goals and objectives as planning parameters, to anchor delivery through well managed activities
    - Fisheries, shipping, mining, etc have to deliver their part
    - Involves many players, and needs deliberative processes
Healthy ecosystems and reduced biodiversity loss

Integrated Management mechanisms, tools, institutional cooperation etc

Fishing

Knowledge

Global norms

MSM standards

Incentives

Compliance

Monitoring

Oil & Gas

Shipping

MSR

Security & safety

Other

Other

Common goals and objectives

(ecological, economic, social)

Integrated knowledge, common baseline assessments (MEQ), risk assessment, indicators etc,

Existing and new legal and regulatory frameworks (e.g., UNCLOS, UNFA, others)

Sources of Confusion and Conflict in Understanding

- **Ecosystem Approach to Fisheries thus essential to EBM, not in conflict with it**
  1. Understanding external influences on fisheries (climate, pollution, other sectors...) for planning purposes
  2. Understanding ecosystem interactions (predator-prey/forage species etc)
  3. Understanding the impacts of fishing on ecosystems (non-target species, vulnerable ecosystems, habitats...)
  4. Managing risks

- **1,3, especially, provide opportunities for accounting for inter-sectoral influences, integrated assessments, multi-stakeholder processes etc, even in fishing**

- **Fishing credibility gap: have not even managed single species well, in EEZs or especially in high seas**
  - Lack of information, overfishing, IUU fishing
  - Not sufficiently precautionary
  - Root problems not solved
  - EAF likely means less fishing – is there political will to be more precautionary?

- **Thus many players (e.g., some ENGOs, public?) not willing to leave this to fisheries or fisheries fora to manage**
  - Fisheries part of solution (EEZs and RFMOs) but must implement!
  - Otherwise debate will drift to less fishing friendly fora (CBD, UN) and tools (MPAs)
Sources of Confusion and Conflict in Understanding

• Broadening the concept beyond science...

• ICP, FAO etc agreed that ecosystem approach to oceans or fisheries is not just an "ecological" concept

• Scientists and managers often co-opt the concept ...
  – Argue for more science and data to understand and model ecosystem influences and to better understand and model the structure and functioning of ecosystems
  – To understand ecological limits of fisheries or oceans areas

• However ecosystem-based management is about managing human activities. ICP agreed that communities are considered part of the ecosystem
  – need to understand influences and manage the structure and functioning of human ecosystems (communities)
  – Need mechanisms for collective decision making to understand limits, decide "best use" of oceans space, and set targets for activities

• Need buy-in, so all players will join up in manage risks
  – Needs to be win-win, not threatening to oceans users

Key Activities Improving Ecosystem Approaches

• Fishing: not a whole new model – build on what we have
  • But need to see as a broad approach, in order for appropriate institutional capacity improvements
    – Reduce fishing effort to reduce impact on ecosystems (overcapacity/over fishing/IUU )
    – Recovery plans for depleted fisheries
    – Adapt market-based approaches to diverse circumstances, cultures
    – More effective RFMOs including better implement ecosystem approaches (information, selective fishing, and vulnerable areas protection)
    – FAO International Plans of Action on bycatch reduction: National Plans of Action to reduce bycatch of Seabirds, Sharks (and also capacity/IUU)
    – Selective fishing: FAO guidelines on other species e.g., sea-turtles (trade restrictions?)
    – Protection of vulnerable marine ecosystems – UNGA Resolution 2006
      • RFMO standards, interim measures for new RFMOs, flag state controls outside RFMOs, criteria for identifying vulnerable areas, oceans zoning, inventories of vulnerable areas (FAO, 2006)
    – New focus on deep seas fisheries and guidelines for management (FAO)
    – FAO guidelines on MPAs for fisheries, and understanding socio-economics
    – Ecolabelling marshalling the power of buyers and consumers
Key Activities Improving Ecosystem Approaches

• Integrated management; needs inclusive processes for multi-sector planning
  – Build the foundations for common planning parameters
  – Build processes to determine common objectives
• Needs understanding of cumulative impacts and interactions among activities
  – Total impacts are not likely equal to the “sum of the parts” operating independently
• Concept of “tipping points” is becoming more important
• Marginal changes in an activity cause large “non-marginal” impacts due to cumulative stressors exceeding critical thresholds, often hard to recover previous state without huge sacrifice
  – Very important when add climate change into the mix
  – If can’t control climate in SR, need to control the other stressors

Key Activities Improving Ecosystem Approaches

• Application of EBM and IM Approaches through...
  – National policies, Regional Seas Programmes, Regional processes (e.g., APEC?)
• Improved Fisheries management
  – FAO, RFMOs, national policies
• Identifying & Conserving Sensitive Areas
  – Criteria development (Canada), Bio-geographic regions/zones (Mexico, Portugal –October, 2007), adopted CBD CoP, application workshop Sept 2009, Canada
  – Global Reporting & Assessment of the Marine Environment (GRAME) Sept 2009
  – UN Resolution 61/105, FAO Deep Seas Guidelines
• International Dialogue/Commitments
  – Protected Areas (e.g., CBD work on Protected Areas, High Seas MPAs?)
  – Governance and Integrated Management in Areas Beyond national Jurisdiction (UN, Global Oceans Forum)
Banish Myths regarding ecosystem-based management

- Reading “homework” (see handout)
  - Steve Murawski: *10 myths concerning ecosystem approaches to marine resource management*

- Two mentioned here explicitly:
  - #8: a complex model of species interactions among all components of an ecosystem is necessary to guide EBM
    - It is not that complicated: adaptive management is a key approach of ecosystem-based management
  - #10: use of marine protected areas is synonymous with EAM
    - It is also not that simple. This approach deprives of appropriate foundations and institution building

Conclusions

- **We know enough to get started** -- build on traditional approaches as additional information available
- **Manage for risks of cumulative interactions**
- **Ecosystem approaches for fisheries** -- implement, or issues will migrate from fisheries governance & fora
- **Ecosystem approaches for integrated management of Oceans** -- legal and other enablers?
  - **Impediments are technical**…
    - need science and Management to step up and be very clear -- nationally and in high seas -- about what is missing, and priority needs
  - **Impediments are political**…
    - taking into account cumulative risks and need for precaution, likely means a lower activity in all sectors than would otherwise have been -- including fisheries
    - At same time may be more costly to implement than standard approaches

- **In summary, how to build the appropriate buy-in in industry and government for the difficult decisions EBM can entail** -- political support for precautionary planning?
  - How to build the building blocks?
  - How to build the cultural change?
  - How to build in appropriate inclusive stakeholder processes?