

# Managing a Multi-Sectoral Ocean



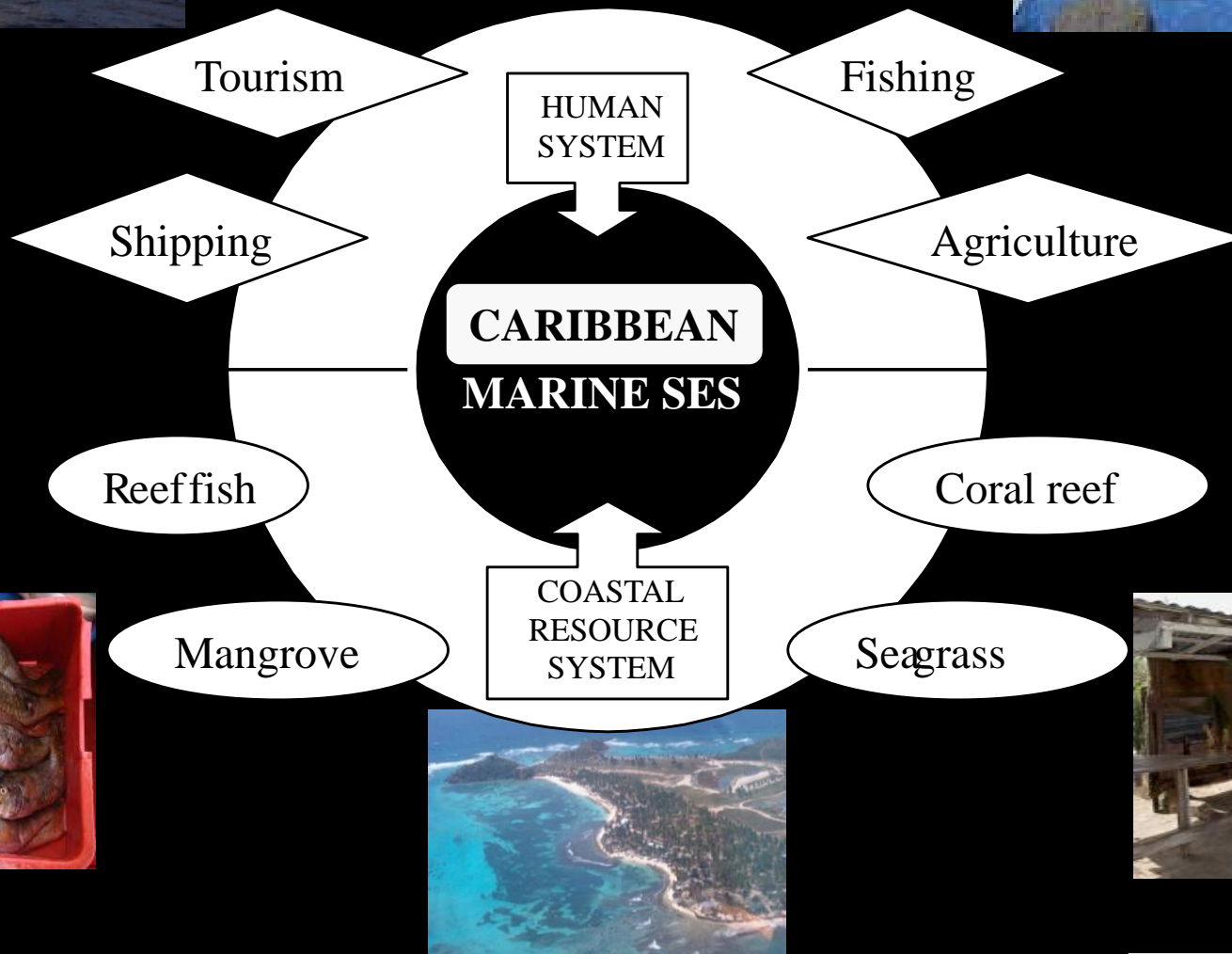
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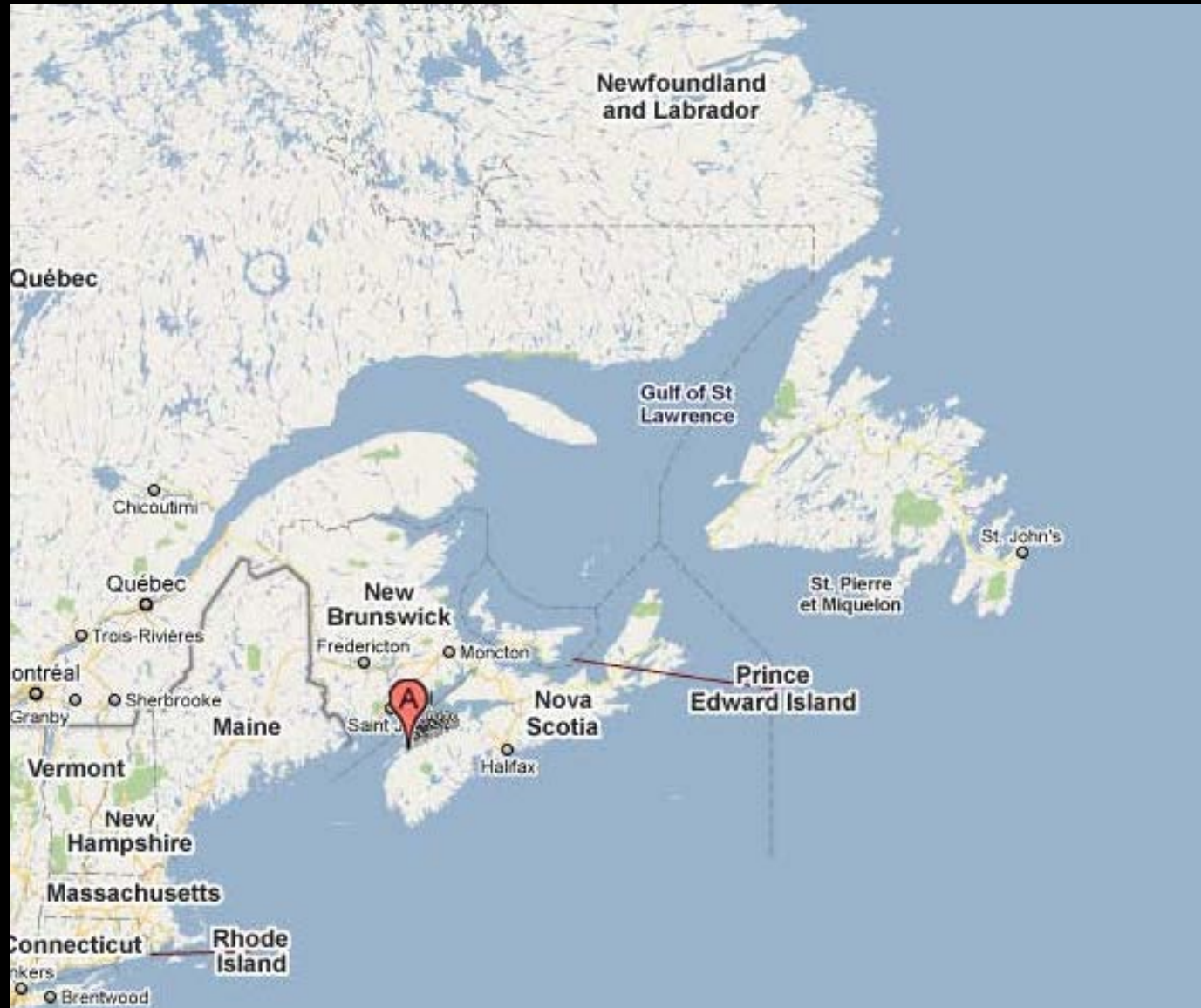
IIFET 2016: Aberdeen Scotland



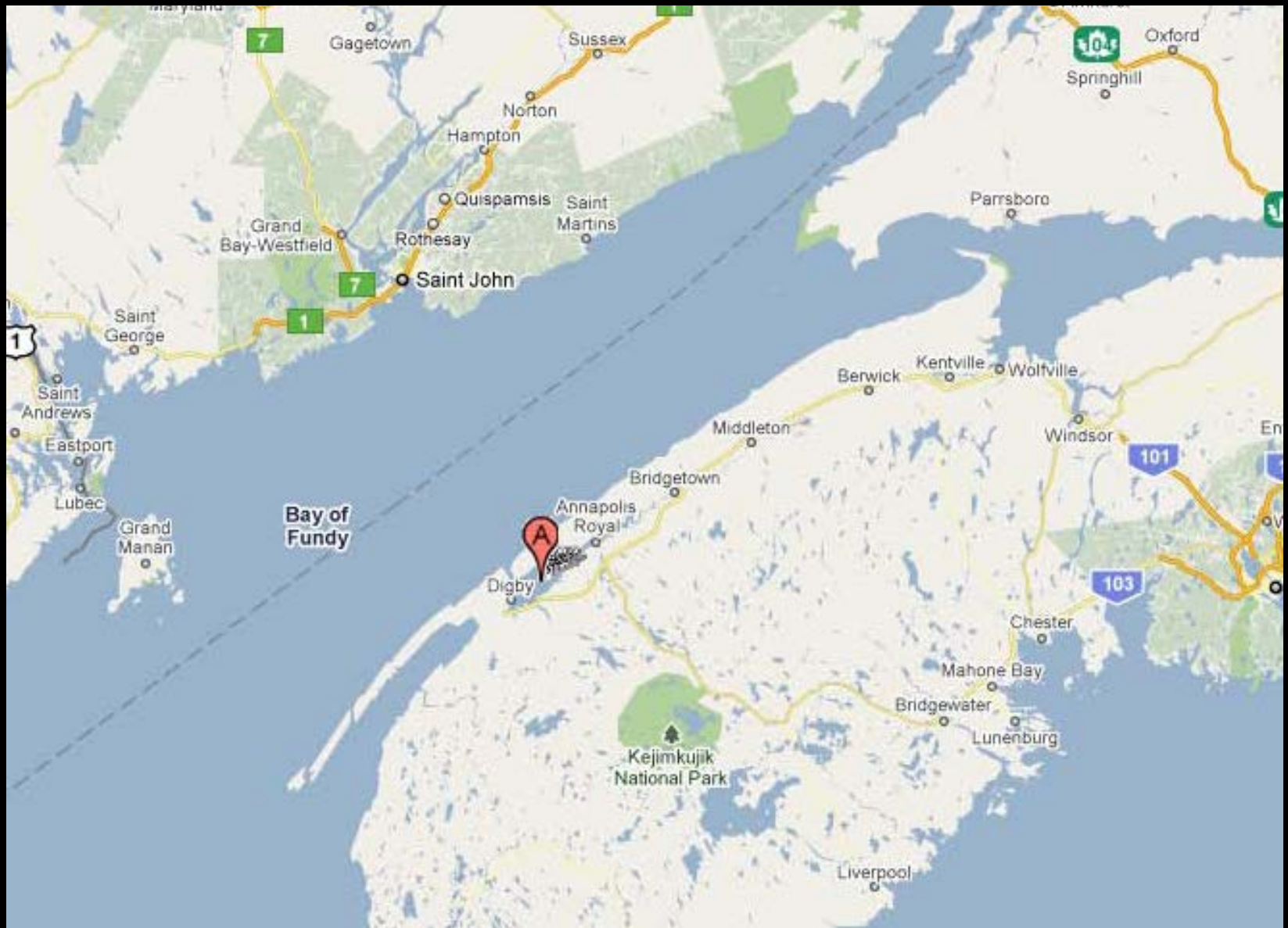
# Multi-Sectoral Systems



# A Multi-Sectoral Ocean on a Local Scale



# A Multi-Sectoral Ocean on a Local Scale



# A Multi-Sectoral Ocean on a Local Scale



# Ecosystem-Based Management

- FAO: “strives to balance diverse societal objectives, by taking account of the knowledge and uncertainties of biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach... within ecologically meaningful boundaries.”
- Looks at interactions of resource uses with ecosystems, communities and the socioeconomic environment (humans integral to the system).



# Integrated Ocean Management

- De Young et al.: “to manage multiple (competing) uses of a certain designated area ... This involves managing multiple stakeholders (e.g., local communities, industries) as well as interactions among people and ecosystems, and among multiple levels of government.”
- Chua et al. (2006): “an internationally accepted approach for achieving sustainable development of the coasts and oceans”



# Marine Spatial Planning

- For planning the spatial distribution of human uses of oceans, e.g. often to resolve conflicts among uses by separating them into spatial zones
- Ocean zoning can be implemented at very different scales:
  - Nationally (China's 'marine functional zoning')
  - Sub-nationally (Great Barrier Reef Marine Park in Australia)
  - Locally (in the small community of Soufriere, St. Lucia)



# IOM, MSP and EBM: Similarities

- Well-defined ocean areas (preferably ecosystems)
- 'Integrated' holistic approach to management of human uses
- IOM is rooted in EBM and can draw on MSP (included in IOM)
- Multiple ocean uses, typically with conflicting values
- Spatial allocation & conflict resolution
- Require suitable governance structure & tool-kit
- Systems-oriented approach to governance

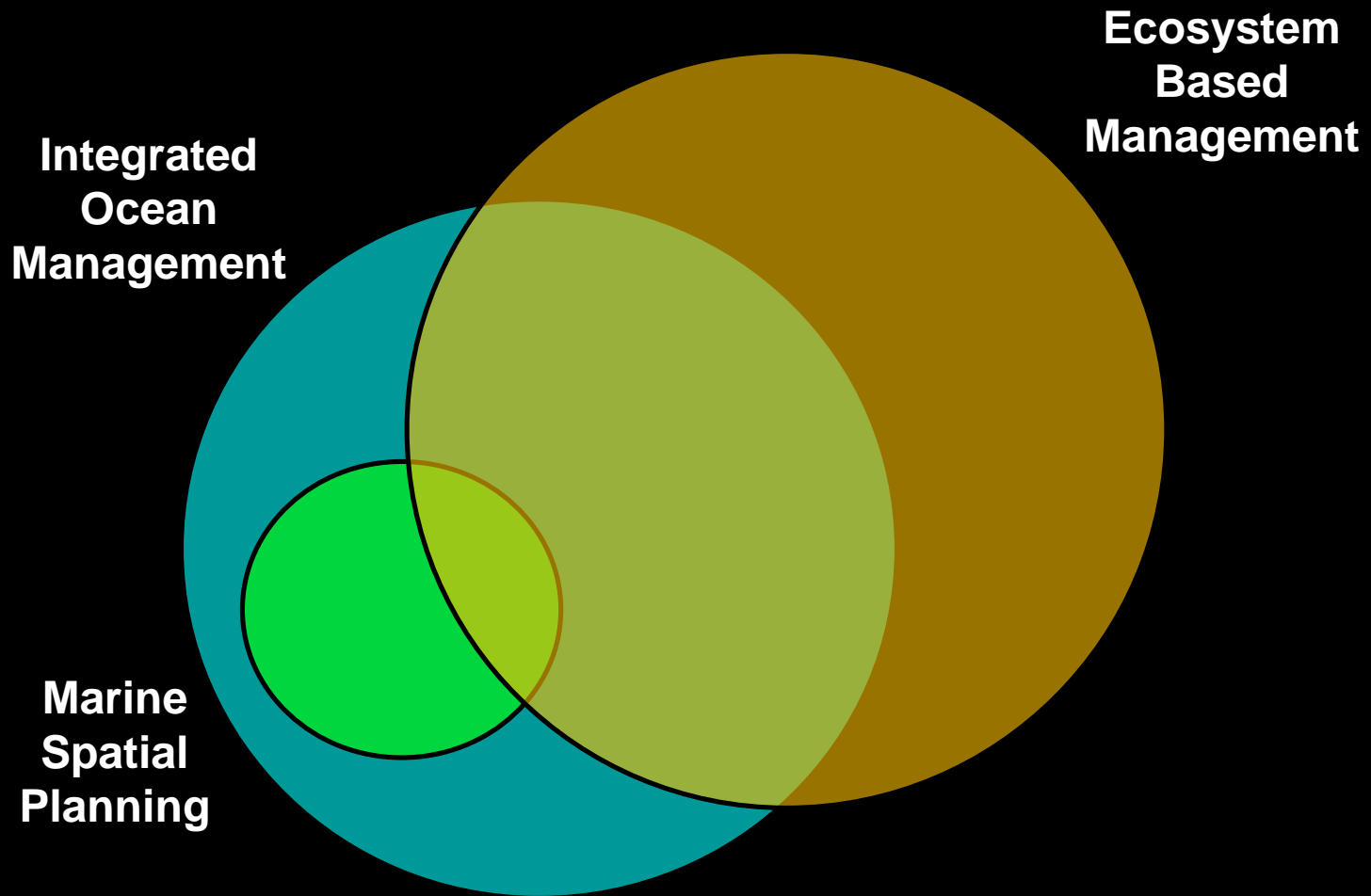


# IOM, MSP and EBM: Differences

- IOM is rooted in 'management' thinking, reflecting an organizational approach (processes, institutions);
- EBM is rooted in ecosystem thinking, focused on interactions of ecological & social (human) components;
- MSP is rooted in spatial analysis techniques such as GIS, zoning, etc.
- EBM is applied in single sectors (e.g. fisheries), while IOM & MSP are always involving management of multiple uses in multi-sectoral context.



# Integrated Multi-Sectoral Frameworks



# 1. Values

Intergenerational respect

Importance of place

Valuing community

Building consensus

Food security

Respect for human rights

Healthy & safe ecosystems and communities

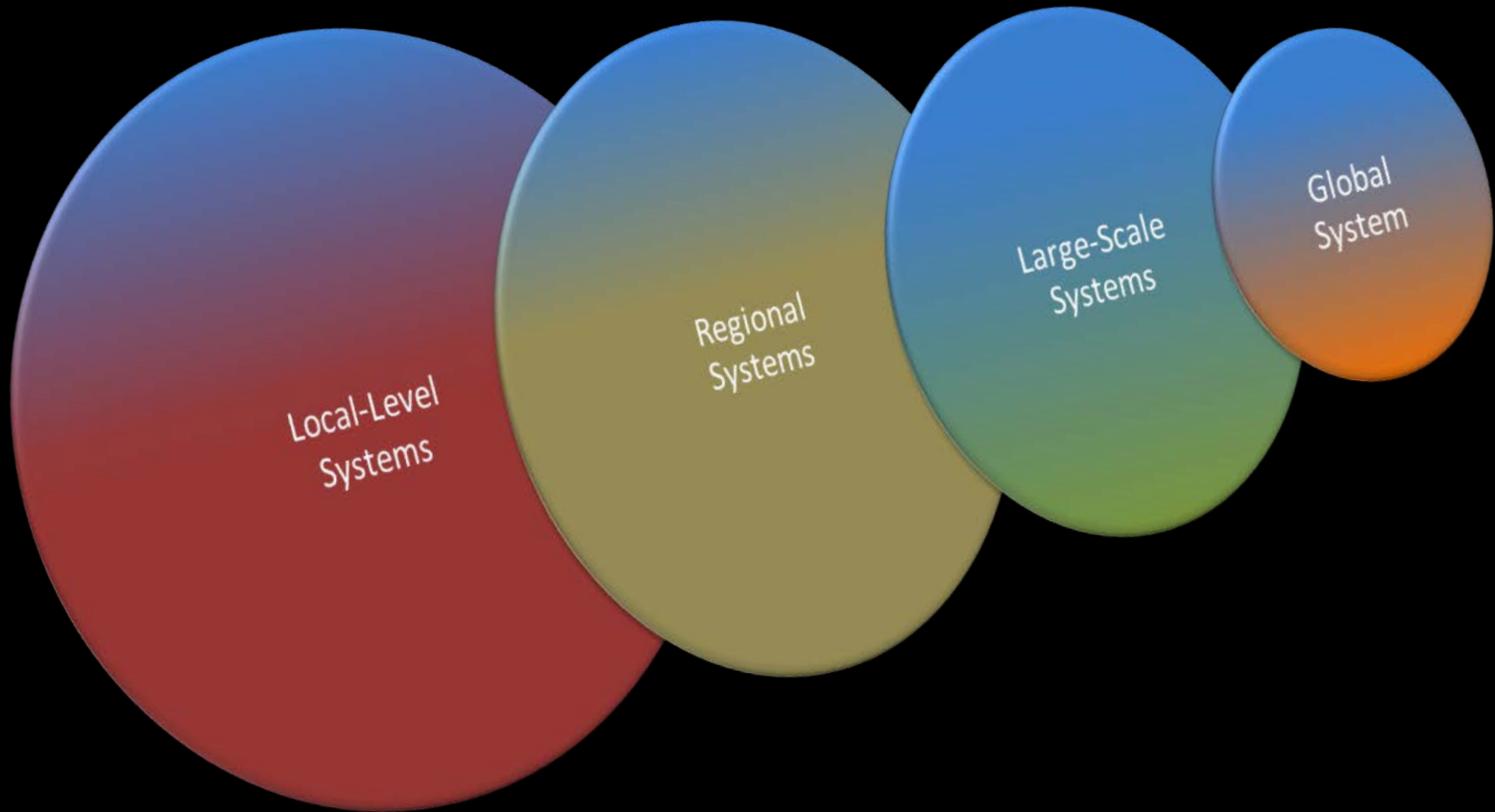
Ecological sustainability

Resilience & diversity

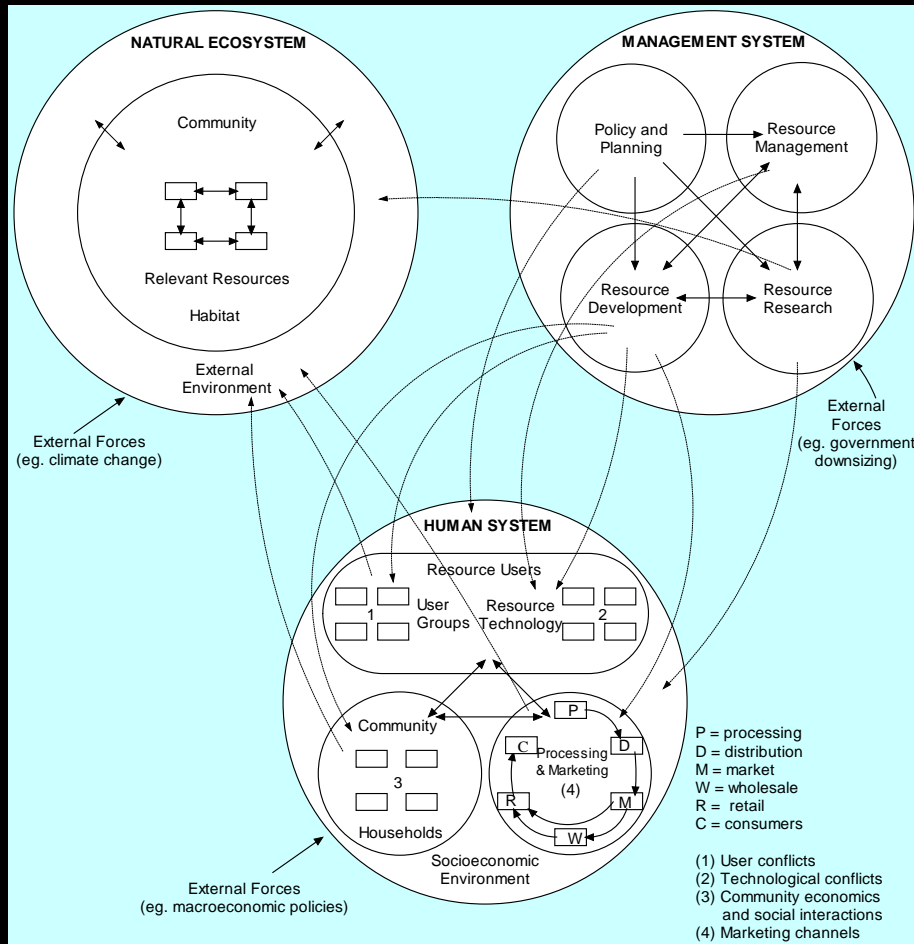
# 2. Goals



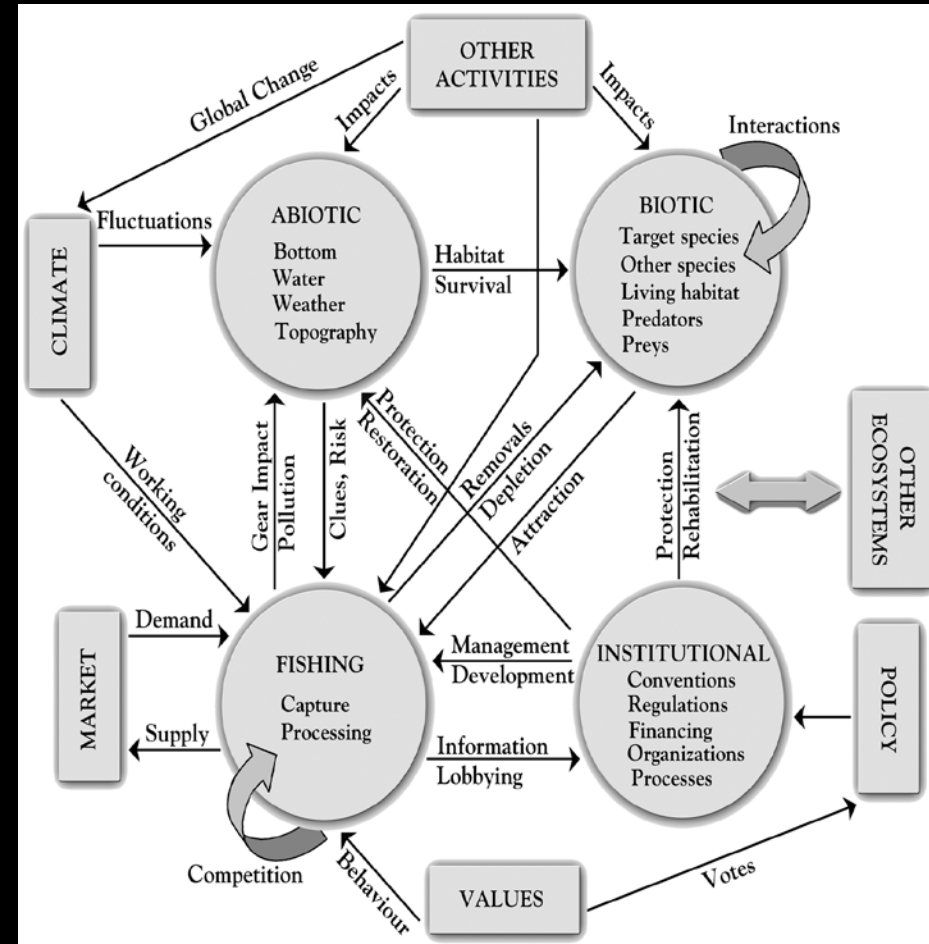
# 3. Scales



# 4. Systems

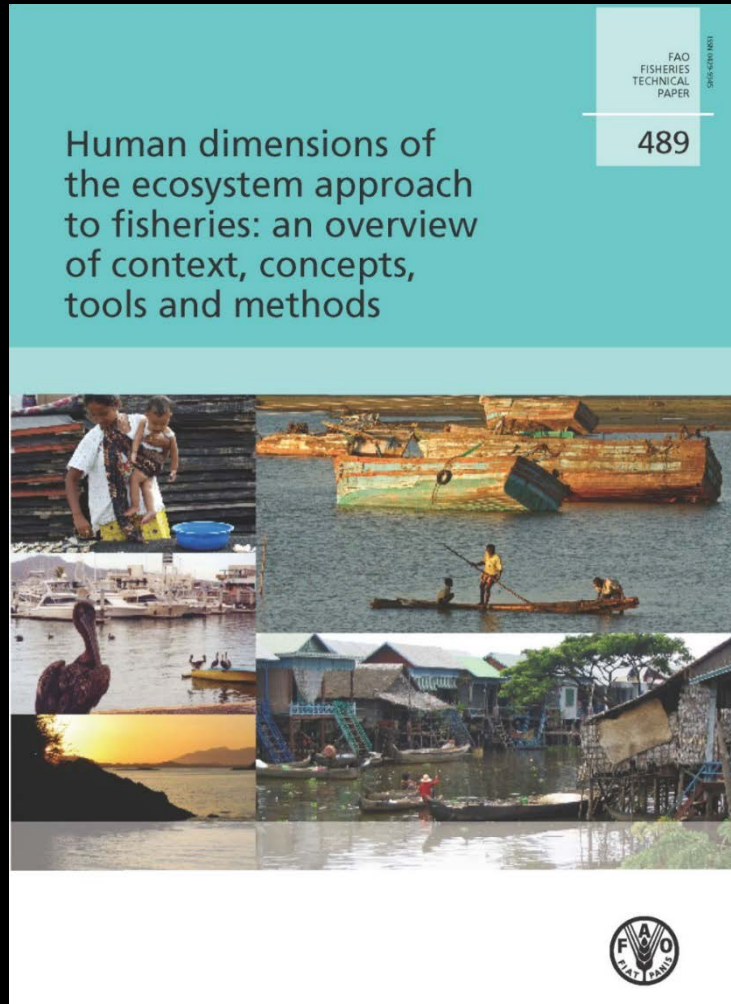


Source: Charles (2001)



Source: Garcia et al. (2003)

# 5. Human Dimensions



## *Valuing Ecosystems*

- Use Values
- Non-use & Existence Values

## *Benefits and Costs*

- Ecosystem health, etc.
- Direct costs & indirect costs
- Distributional Impacts

# Fisheries in a Multi-Sectoral Ocean

- Integrated frameworks may help fisheries deal with other sectors' externalities, and improve governance by streamlining decisions.
- But integrated frameworks may help competing economic sectors seek compromise from fisheries & shift rights arrangements. Could add new bureaucracy, draw funds away from fishery management.
- Can the fishery sector adjust to fisheries management becoming nested within an integrated management regime? Can integrated frameworks replace or complement single-sector management?
- How does the balance of costs and benefits compare with fishery-focused management? What changes in institutions are needed for efficiency in both fisheries management and ocean governance?



# Two Win-Win Illustrations

(1) Eastport, Newfoundland - Charles and Wilson (2009)

- Fishers safeguarded lobster fishery by stopping fishing in closed areas, saw benefits of this, worked with government for official MPA.

(2) Shiretoko Peninsula (Hokkaido, Japan) - Makino et al. (2009)

- “coordination among the wide range of sectors involved” to create a Multiple Use Integrated Marine Management Plan
- “The approach was ...to place [fisher] activities at the core of the management scheme... That is, fisheries co-management... was expanded to ecosystem-based management.”

See [www.CommunityConservation.Net](http://www.CommunityConservation.Net) for further examples



# Conclusions

- Integrated ocean governance frameworks can enhance economic efficiency of ocean uses (by conflict resolution, spatial planning).
- Should best operate as an over-arching multi-sectoral framework.
- There are multiple scales (community to LME) and levels (municipal to multi-national). Don't forget the local scale: has great potential to be an efficient scale to meet multi-sectoral management needs.
- Remember that both integrated ocean governance and fisheries management are crucially people-oriented!

