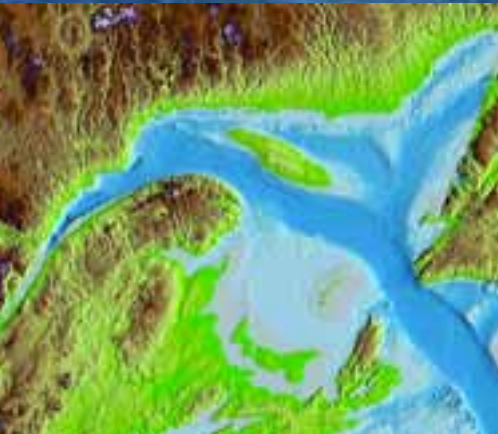




Ecosystem-Based Management in Canada's Marine Environment



What is Ecosystem-Based Management?

Ecosystem-Based Management (EBM) is the management of human activities so that marine ecosystems, their structure (e.g. biological diversity), function (e.g. productivity) and overall environmental quality (e.g. water and habitat quality), are not compromised and are maintained at appropriate temporal and spatial scales.

Canada's EBM Approach

Canada's *Oceans Act* states that "conservation, based on an ecosystem approach, is of fundamental importance to maintaining biological diversity and productivity in the marine environment". An ecosystem approach to management is also a key guiding principle for implementing integrated oceans management and preserving the health of the oceans under Canada's Oceans Strategy and Oceans Action Plan.

EBM recognizes that human activities must be managed in consideration of the interrelationships between organisms, their habitats and the physical environment, based on the best science available. This approach should focus on the pertinent factors and drivers contributing to and affecting the biodiversity, productivity, water quality and habitat quality of the marine environment. The following outlines how EBM is being implemented in Canada's Integrated Management areas.

1. IDENTIFY ECOREGIONS

- Delineate marine ecological regions. These regions are based on scientific criteria to ensure that management areas include ecosystem-scale features, patterns and trends.
- Utilize ecoregions as the foundation to define Large Oceans Management Areas (LOMA) and on a local scale Coastal Management Areas (CMA), for which integrated oceans management plans will be developed.

2. UNDERSTAND THE ECOSYSTEM

- Assemble the best available scientific, local and Traditional Ecological Knowledge, to understand how the ecosystem works, including natural variability, within the management area.
- Report on the status and trends of the marine ecosystem.

3. ASSESS THE STATE OF THE ECOSYSTEM

- Identify and evaluate the ecological impacts of human activities including cumulative impacts of activities as well as climate change.
- Identify and map ecologically and biologically significant areas (e.g. fish spawning grounds, corals) and areas of concern (e.g. polluted sites, degraded habitats).
- Provide recommendations to decision-makers for priority actions and areas.

4. MANAGE HUMAN ACTIVITIES

- Utilize the Integrated Management process to establish appropriate governance mechanisms to deal with all users, managers and regulators of the area.
- Establish ecosystem objectives (EOs) to maintain biodiversity, productivity, water quality and habitat quality in a given ecological region. This will include setting specific targets to guide oceans management decisions (e.g. reducing contaminant levels, maintaining a set number of whales in a given population).
- Identify and apply conservation tools, such as designating marine protected areas, to provide protection for significant areas.
- Select and monitor ecological indicators to ensure that EOs are being met. Monitoring activities may involve the participation of scientists, Aboriginal peoples, ocean users, non-government organizations, coastal communities and others.

ADAPTIVE MANAGEMENT

To be effective, Ecosystem-Based Management must be adaptive and include a feedback mechanism. The assessment of current knowledge and gaps will help to provide decision-makers with feedback on the effectiveness of their management actions and will better inform future decisions domestically and internationally.



For more information, please visit the following website:
<http://www.dfo-mpo.gc.ca/canwaters-eauxcan/>



Canada's Marine Ecoregions

ECOREGIONS

ARCTIC

- Hudson Complex
- Arctic Basin
- Lancaster Sound
- Baffin Bay
- High Arctic Archipelago
- Beaufort-Amundsen-Viscount-Melville-Queen Maud

ATLANTIC

- Gulf of St. Lawrence-Eastern Scotian Shelf
- Western Scotian Shelf-Gulf of Maine
- Northern Grand Banks-Southern Labrador
- Southern Grand Banks-South Newfoundland
- Labrador Sea
- Northern Labrador
- Gulf Stream

PACIFIC

- Southern Shelf-West Coast of Vancouver Island
- Northern Shelf
- Strait of Georgia
- Offshore and Subdivisions
 - a. Transition zone
 - b. Alaska Gyre
 - c. California Gyre

Note: Pacific Offshore subdivisions boundaries fluctuate over time.

Canadian Exclusive Economic Zone (EEZ) 200nm Limit
 Note: Ecoregions extend beyond the EEZ