

Biosphere Reserves: A Practitioner's Panel

Bras d'Or Lake Biosphere Reserve Association

Question 1

What needs to be 'integrated' in environmental and resource management (e.g., forms of knowledge, values, cultural norms, cross-boundary jurisdictions/policy, etc.)?

Make use of both traditional and scientific knowledge in compiling measures of ecosystem health, function and management

Ecosystem Goals

Ex. Improve or maintain healthy watershed & estuarine ecosystems and communities

Ecosystem Objectives

Ex. Aesthetics, Cleanliness, Safety, Diversity, Productivity, Integrity, Resilience

Ecosystem Health Indicators

Ex. Measure proximity to objectives. Derived from indicators research, State of the Environment reports, meta-analysis, mapping exercises & monitoring programs

Relate indicators to valued ecosystem components, human activities and societal issues

Integrated Resource Management

Relevant to community issues & concerns

- * Relevant to Organization Objectives
- * Accurate data & information
- * (Traditional Ecological Knowledge, Local Ecological Knowledge, Scientific & GeoSpatial)
- * Make use of Comparative & Historical data
- * Education component
- * Capacity for on-going Monitoring

Question 2

What are the opportunities for and challenges of integrated resource management in your region?

- * Better monitoring of the health of the ecosystem
- * More resources for research & education on the natural history & dynamics of the ecosystem
- * Heightened interest & commitment to preservation of biodiversity and conservation of resources
- * Maintenance of valued ecosystem components, goods & services to people and the rest of nature
- * Better balance of short term needs and long term goals of people for this world class ecosystem and its communities

Question 3

What are the challenges of integrated resource management in your region?

Geospatial Information...

- * Map and model products used in the planning process must be of a type and quality suitable for area-based zoning of human uses and activities.
- * Develop a data schema that is feasible, so that partners can do analysis from the desk during the planning phase without having to go repeatedly into the field
- * Often the land areas of Mi'kmaq Reserves appear blanked out or partially obscured on published map products. (Some map products, and the data on which they are based may be obtained upon request from individual Band)
- * There is no meta database available for geospatial data or maps of Mi'kmaq lands around the Bras d'Or estuary.

Geospatial Information (Continued...)

Much of the most relevant and accurate geospatial data for the watershed, especially the freshwater resources, is collected for and held by members of the corporate sector. This type of information is difficult to access, but may be available upon request if it does not compromise competitiveness. It may come at a price.

- * The capacity to assemble geospatial data and produce map products is not uniform across the communities and agencies of the Bras d'Or ecosystem. For example, the Cape Breton Regional Municipality (<20% of the watershed area) maintains much more detailed and current map products than the other counties and First Nations. This is a large area with very few people, a small tax base and patchy facilities.

Geospatial Information (Continued...)

Base maps must be fully standardized for use in ILM: unequivocal shoreline, outer watershed boundary, planning unit boundaries, sub-watershed boundaries and place names. Topography and bathymetry should also be universal.

- * Modeling: Key processes of land-ocean interactions, habitat change and ecological connectivity in the Bras d'Or ecosystem is still at an early, primitive stage. Part of the limitation to the development of decision support tools for environmental planning in the Bras d'Or is the need for geospatial data of sufficient accuracy and temporal-spatial extent to support the validation of predictive models of ecosystem processes.
- * Both technical and social considerations can present challenges, particularly with private and cross-jurisdictional issues. Clear authority is beneficial, as is early stakeholder involvement.

Other challenges...

First Nation Participation – Involvement limited
Jurisdiction – Federal, Provincial, Municipal governments
Public misconceptions about land management

Question 4

What are the current and potential roles of your Biosphere? How do they relate to the above?

- * Currently waiting on official designation
 - * (expected in July, 2011)
- * Efforts are now focused on what the Biosphere wants to achieve in its first two years:
 - * Programming development, development of a communication plan, social media campaign, capacity building, engaging communities, planning a two-day festival celebrating the designation, highlighting our culture and biodiversity
 - * Community-based mapping workshop currently being organized for this summer

Programming Development:

Develop inventory of action groups in watershed
Create linkages, determine what role they play
Identify information gaps

- * Facilitate co-operation between government, industry, scientific and civic/voluntary organizations
 - Develop strategy for 'shoreline health' in the face of climate change
- * Identify the economic, social and cultural values (goods and services) of the Bras d'Or Lake ecosystem to the people of Cape Breton Island.
 - Engaging public in environmental, cultural, economic evaluative exercises
 - Identify and develop evaluation tools and procedures
- * Promote marketing of sustainable economic growth of ecologically sustainable tourism in the Bras d'Or Lake BR.
 - Strengthen linkages with Tourism business sector
- * Continue the process of developing an Atlas of the Bras d'Or Lake BR ecosystem.
 - Enabling community to observe and systematically record ecological attributes
 - Identify gaps in existing catalogued data

How does the Bras d'Or Biosphere Reserve relate to the listed opportunities of IRM?

Working closely with CEPI

Management plan for the Bras d'Or will be launched July, 2011

- * Research Opportunities
 - Continued research/monitoring opportunities – Ex. Bras d'Or Institute and Unama'ki Institute for Natural Resources
 - Graduate Studies
- * Programming Development Initiatives
 - Community Engagement and Education
 - Networking within watershed
 - Identifying cultural, ecological and economic values
 - Opportunity for economic growth

How does the Bras d'Or Biosphere Reserve relate to the listed challenges of IRM?

- * Geospatial requirements: Highlighted above
- * Public misconceptions:
 - Addressing the issue
 - Education at every opportunity
 - Eventually moving past the issue

Questions or Comments?