

A GAP ANALYSIS OF COASTAL EROSION IN ATLANTIC CANADA AND QUEBEC

ISSUES

Ability to predict the future

- Future impacts are misunderstood (impacts of less or varying amounts of sea-ice, sea level rise (for Happy Valley-Goose Bay, NL, issues related to falling relative sea level) , storm variability, related factors interacting with coastal development.
- Need for ongoing impact science (documentation of past and ongoing erosion rates)
- Collection and analysis of key baseline information – region/site specific
 - Could include: nearshore sediment availability, nearshore sediment transport, high resolution mapping particularly elevation, historic storm climatology, historic erosion rates, shoreline and landform classification, land-use classification
- Identification and long-term continuous monitoring of key indicators of change/impacts – region/site specific
 - Could include: vertical land movements, sea-level, sea ice, storm frequency and intensity, erosion/deposition, land-use/development

Policy implementation

- Coastal policies are not implemented or non existent
- Some activities are not covered by an Environmental Impact Assessment, like development on a private property for example. Also, absence of municipal jurisdiction is an issue, for example NL has large areas of Crown Land: most activities do require at least submission of an EI statement or registration of proposed undertaking, but the absence of municipal jurisdiction is an issue
- EIA federal and EIA provincial not the same and not triggered the same way
- Identification and/or definition of jurisdictional boundaries/overlaps (i.e. who is responsible?)
- Identification of who and how policies may be enforced
- Definition of critical terms (e.g. what is defined as the “High water mark”)

Information exchange

- Educate developers, real estate, home owners, insurance companies, municipal officials, etc... about coastal change and potential risks along a stretch of coastline.
- Need compilation and accessibility to archival or legacy data

- Many potential users are unaware that useful data exists
- Data must be presented or communicated in appropriate format
- Some maps do not have a short text summary of what map is showing (i.e. total erosion of ## metres since 1950, average erosion rate of xx metres/year). Also, there is a need for detailed maps showing rates of erosion.
- Need for the appropriate tools to integrate scientific insights into the planning process. (GIS and data layers, graphic images of relevant information of those without GIS capabilities.
- Guidelines for and definition of the planning process (re coastal erosion)

Information Content

- Need for data on areas where the shoreline composition is less prone to erosion and/or less populated because if this area is to be developed, there will not be enough data to plan accordingly.
- There is a need for better understanding of/ and comprehensive reports with literature that links all components of erosion in the same report. For example, the link between lost species and habitat by coastal squeeze and the economic impacts.
- Need to understand the impacts of hard armouring of the shore, changes in sediment transport and/or availability, changes to downshore coastal landform, changes/impacts to downshore coastal habitat, changes/impacts in species abundance or health

Gap analysis for each province

New Brunswick

- The coastal policy does not consider fluctuating sea levels and shoreline geology. In some areas erosion is not a problem, yet they have the same setback limits as more vulnerable regions.
- Lack of emergency measures plans for communities (municipal and non-municipal areas)
- Policy implementation
- The Environmental Impact Assessment does not apply to wetlands under 2 hectares, and most wetlands are now fragmented due to development.

Prince Edward Island

- Historical artefacts are being lost to the sea.
- Lack of emergency plans to respond to storm surges
- Necessity for consideration of tourism-related issues

- Regional data gaps – more work needed in southeastern Kings County and throughout Prince County west of Summerside

Nova Scotia

- In Nova Scotia, 95 % of coastal land is privately owned. There is a need for integrated coastal management planning and harmonization between legislative processes within the three levels of government.
- Need for emergency plans to respond to storm surges

Newfoundland and Labrador

- Lack of emergency plans to respond to storm surges
- Regional data gaps in mapping
- Coastal policy currently under development
- Lack of municipal plans for some communities
- Lack of integrated coastal management
- Specific issues related to differing coastal & sea-ice regimes throughout province
- Limited information for Labrador

Gaspésie / Magdalen Islands

- The large scale impacts of protection structures are not considered in integrated management plans and provoke problems of increased importance. Sand replenishment on several kilometres of beach is presently menaced by large span coastal protection works on the bay des chaleur coastline.
- Residential construction permits are still granted and development projects are planned in areas vulnerable to erosion and flooding. These zones are not well identified and coastal processes are misunderstood by users and local decision makers.
- In the actual socio-economic context, communities and governments are unarmed facing this complex situation. There is not enough awareness raising in communities.