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# Outline of presentation

- Ecology Action Centre – Why are we here?
- Nova Scotia's coasts – an ecological and economic asset
- Threats facing Nova Scotia's coasts
- Integrated coastal planning and management
- Specific questions about impact of this project on coastal and marine systems



# Ecology Action Centre



- Largest and most active environmental organization in the province
- Established in 1971, the EAC has spent 35 years working towards a healthier, more sustainable Nova Scotia
- Supported by 1100 members and 25 staff
- Provide a voice for the environment, and for Nova Scotians
- Initial focus included composting, energy conservation, and recycling



# Coastal Issues Committee



Promote coastal management and sustainable coastal development in Nova Scotia

Current focus includes:

- Coastal development
- Coastal planning
- Habitat protection
- Salt marsh and tidal river restoration
- Climate change impacts
- Public access and connection to the coast

# EAC and Keltic proposal

The Ecology Action Centre (EAC) received funding from the Canadian Environmental Assessment Agency (CEAA) to help ensure public participation in the environmental assessment process

# Our roles and activities

- Participate in all public forums held under the provincial assessment process.
- Review the proponent's environmental impacts statement and the comprehensive study report provide comments and ask questions
- Provide information to the public about the environmental assessment process
- Develop other activities as needed and requested by the public

# Nova Scotia's coasts

- Over 7500 kilometres of salt water coastline
- Diversity of features (salt marshes, beaches, cliffs, mudflats, lagoons, harbours, estuaries)
- Transition zone between land and sea – extremely productive biologically
- Coastal impacts can't be isolated. far inland and out to sea, and up and down the coastline.

# Coastal Functions and Values

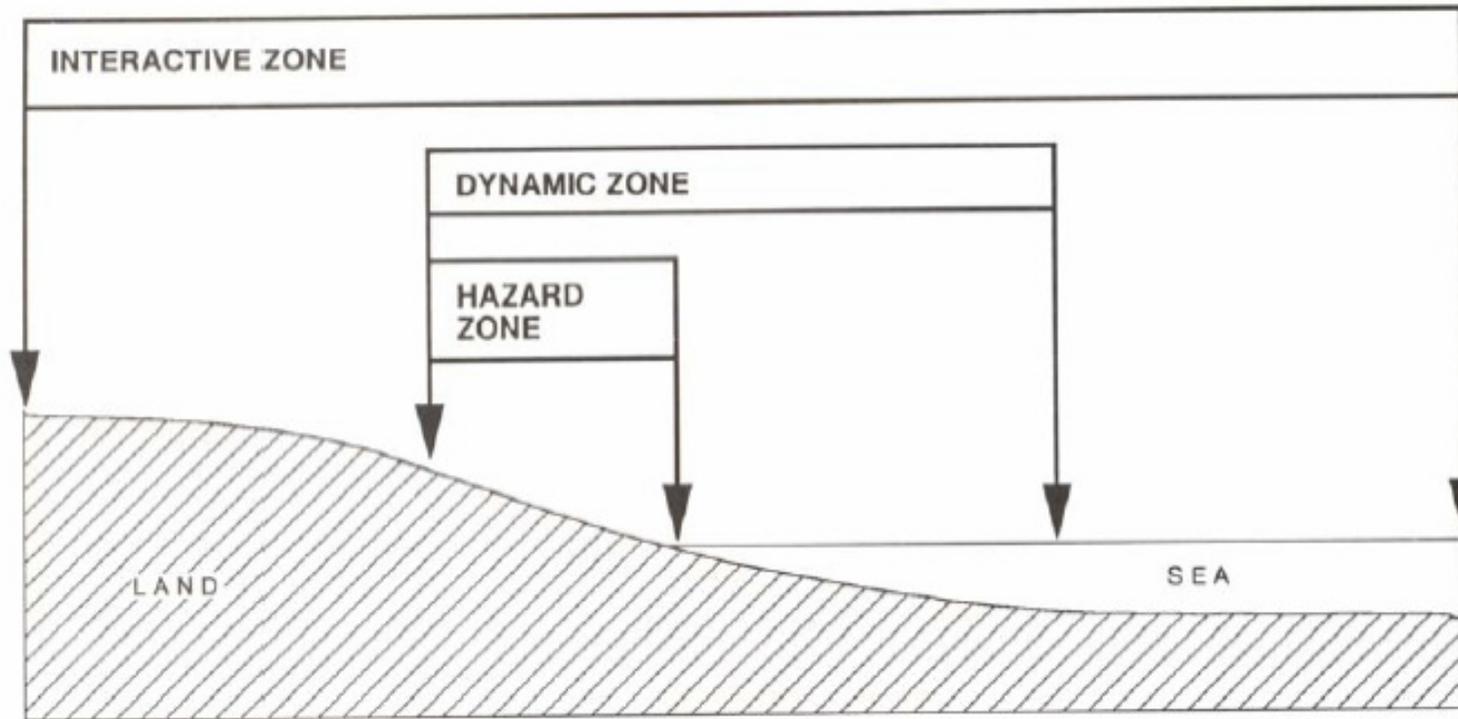
Nova Scotia's coasts are a natural, economic, cultural, social and built asset

- Habitat, nursery, breeding and feeding areas for marine and terrestrial species
- Buffer zones, water filtration, erosion control
- Protect settlements and other infrastructure from storm surges and flooding
- Economic development including tourism
- Recreation and leisure
- Culture and heritage
- Basis of inshore fishery
- Infrastructure for fishery, transportation, tourism, shipping

# Valuing the coast

- \$1.27 billion dollar tourism industry – largely to visit scenic coastal landscapes, beaches, maritime heritage
- 95% of hotels and other accommodations are within 30 km of the coast
- Combined total value of agriculture, aquaculture and fisheries industries to the economy of Nova Scotia's rural and coastal communities is about \$2 billion.
- In 2002, \$774 million worth of fish were landed in Nova Scotia
- Aquaculture product sales exceeded \$40 million in 2003.
- 28% of the population of Nova Scotia lives in rural harbour communities;
- 14% of the provincial labour force is employed in industries that make use of wharves or benefit significantly from harbours;
- Nearly 70% of Nova Scotia's \$5.7 billion in exports is generated by industries that are predominantly rural-coastal based and rely on a rural-based labour force. The two largest export industries, non-metallic mining and mineral fuels and fisheries, represent 45% of overall exports
- In developed areas, proximity to the waterfront adds approximately 28 per cent to the value of the real estate.

# Coasts as dynamic systems



Source: Department of Environment. 1993. Coastal Planning and Management: A Review

# Coasts as interconnected dynamic systems

- The coast represents the area where land and sea meet. This area constantly changes. There are parts of the coast that have clearly defined interactions between the land and sea such as beaches, coastal marshes and dune systems.

Other parts of the coast are less clearly defined but equally as important. One of the most important of these features is rivers, delivering fresh water and sediment to the coastal environment.

Connected to rivers, inland watersheds extend far from the coast yet are vital for the health of the coast

# Threats to coasts

- Unplanned and poorly regulated development
- New industries and activities
- Pollution (land and sea-based)
- Disruption of natural coastal processes leading to loss of resiliency
- Regulatory and Jurisdictional overlap and gaps

# Impacts of unplanned coastal development

- Alteration and loss of coastal habitats
- increased erosion, sedimentation and pollution;
- Changes in vegetation cover
- Deteriorating water quality
- Loss of traditional public access to the coast;
- Rising land prices and property taxes;
- Displacement of traditional coastal activities and livelihoods;
- and shifting demographics of coastal communities.
- CUMMULATIVE IMPACTS

# Climate Change Impacts

- Nova Scotia's coasts extremely vulnerable to impacts of climate change
- Sea level rise – 70 cm by 2100
- Increased frequency and intensity of storm surges
- Extreme weather events (storms)
- Accelerated coastal erosion
- Changes in sea ice

# Economic Consequences poorly planned coastal development

- Province-wide flooding and other coastal damage cost \$27 million NOT covered by insurance. (2004 Nova Scotia Standing Committee on Economic Development)
- Projected to increase a result of climate change impacts
- Cost will be borne largely by municipalities

# Need for Integrated coastal planning

- Coherent approach to coastal development
- Take into account many competing values (ecological, economic, social, cultural) and uses
- Pro-active rather than reactive coastal management
- Minimizes disruption of natural coastal processes
- Consider cumulative long term impact of heavy industrial projects

# Questions about this project

## Coastal planning and development

- Is this type of project the best use of valuable coastal assets?
- Why hasn't the EA included a full analysis of the total values of this coastal system in its relatively undisturbed state?

# Questions

## Wetlands

- Approximately 124 hectares of wetlands lost or altered by this project, including brackish ponds, shallow marshes, swamps
- Loss of habitat for waterfowl species – merganser, ring necked ducks
- Loss of functions – water filtration, sediment control, groundwater recharge
- How is this consistent with provincial Wetlands Designation Policy?  
i. e avoid altering or disruption wetlands?
- What measures have they taken to avoid this damage?
- When can we expect a detailed compensation plans considering area lost, type of wetlands, and functions?

## Isaac River dam

- Impact on full life cycle of Atlantic Salmon?
- Impact on other commercial and recreational species?
- Impact on hydrological cycle, flooding, drought, water quality, sedimentation and erosion?

## Marginal wharf

- Impacts on fish habitat, lobster nursery areas?
- Impact on currents and water circulation. Will it further accelerate coastal erosion?

## Navigation

- Impacts on shorebirds, feeding, nesting and foraging, especially roseate terns

# Climate change

- How will the facilities and infrastructure be affected by climate change impacts? (sea level rise, increase risk of coastal flooding, extreme weather, increased erosion)
- How will it contribute to worsening impacts of climate change? i.e erosion

# Recommendation

- In light of the of the cumulative threats to Nova Scotia coasts and the high costs of poorly planned coastal development, the Ecology Action Centre feels that all municipalities and the province should adopt an integrated coastal planning policy before proceeding with further large scale coastal industrial developments