

People and the Beaufort Sea

PLAIN LANGUAGE SUMMARY

of the

Beaufort Sea Ecosystem Overview and Assessment Report
Volume Two: Ecological and Human Use Assessment



INTRODUCTION

The Beaufort Sea Large Ocean Management Area or **LOMA** has a sub-Arctic climate and is situated off the coast of northern Alaska, and the Western Arctic region of Canada. On this western side Canada is still trying to work out with the United States the location of the border. The eastern side of the LOMA is suggested that it includes the Amundsen Gulf and the McClure Strait. To the south it is suggested to include the Mackenzie estuary and Delta. The northern parts of the LOMA would be Canada's boundary lines. It is important to point out that the LOMA includes fresh, coastal and marine waters. This follows the European approach to watershed management and recognizes the links between fresh waters and oceans.

Land Claims

When one thinks about the Beaufort Sea LOMA it is important to consider the complex and overlapping land claims agreements in northern Canada. All land claim agreements are protected by the constitution. Through the Oceans Act and the Oceans Action Plan the federal government made a commitment to Inuit and First Nations that guarantees their involvement and participation in decision making. The job of Fisheries and Oceans Canada is to include Inuit and First Nations in ocean management processes.

For the Beaufort Sea LOMA the Inuvialuit Final Agreement is the most relevant land claim. The Beaufort Sea LOMA will include and overlap the Inuvialuit Settlement Region as well as be affected by parts of the watershed in the Gwich'in Settlement Area. It will also be influenced by land claims in the Nunavut and Yukon Territories.

Governance of the Beaufort Sea LOMA

Integrated management planning for the Beaufort Sea LOMA will happen through the Beaufort Sea Regional Coordination Committee (high level inter-governmental committee) and the Beaufort Sea Partnership that will include community and stakeholders for this area. The Inuvialuit Final Agreement (IFA) and the Oceans Action Plan set the framework for the RCC and BSP. The Inuvialuit will participate in the Regional Committee and the Beaufort Sea Partnership through the Inuvialuit Regional Corporation and the Inuvialuit Game Council.

Inuvialuit Regional Corporation: Reflects the corporate interests of the Inuvialuit people, including management and ownership of Inuvialuit Lands.

Inuvialuit Game Council: Represents the Inuvialuit interest in wildlife.

Some of the other joint management bodies that make important decisions within the LOMA are the Fisheries Joint Management Committee, the Environmental Impact

Review Board and the Wildlife Management Advisory Committees for the Northwest Territories and the Yukon North Slope.

Ocean Uses in the Beaufort Sea LOMA

Natural Resources (Renewable resources)

Subsistence fishing, sport and commercial fishing, and harvesting of fresh water, coastal and marine resources are permitted uses of the ocean. This is supported by the Inuvialuit Final Agreement and other land claim agreements.

Tourism

At this time, tourism activities in the LOMA are focused on sport fishing and hunting as well as ecological tourism (animals and the land) and cultural tourism (visiting another culture). These activities presently provide significant economic income to communities in the north. For ecosystem conservation some land and waters might need to be set aside. These special management areas are areas that will be able to offer water-based ecotourism. Ecotourism needs a relatively natural coastal and marine environment.



Transportation

There are many different types of transportation in the LOMA. Some of these are coastal and ice roads, planes flying, and the use of all terrain vehicles in winter. Currently, there are no restrictions on the construction and operation of ice roads. For all terrain and track vehicles there is no restriction of travel along rivers, lakes and coasts. From all this winter transport there are risk of spills, contamination and accidents.



During the ice free season there is a lot of boating and shipping. There is even a public right away for navigation of vessels and cruise ships through the Beaufort Sea LOMA. Marine shipping and transportation happens in the Mackenzie River and along Arctic coasts for re-supplying communities, as well as for Gas and Oil development. With all this boating traffic the chance of oil and ballast water spills could significantly affect the area. There is also a growing interest to consider the coastal waters as international

straits, with rights for navigation and shipping. This means that those boats might not have to follow Canadian laws and rules.

Oil and Gas Exploration and Development (Non renewable resources)

Oil and natural gas exploration and development will require extensive seismic activity and drilling in coastal and offshore areas. The construction of gathering pipelines and also main supply lines will have to be built in numerous river and stream crossings. This will mean extensive impact, at least in the construction phase of such projects.



Gravel and Sand

Extensive gravel and sand extraction will be required to support the development and expansion of communities, roads and the construction demands from Oil and Gas development. In the past, many of these materials for the construction of offshore platforms were extracted close to the construction sites. This created some artificial islands and pits in the Mackenzie Delta. So far these still have not been returned to normal.

Environmental Conditions

The Oceans Policy Framework commits Canada to manage most activities in a way that does not harm marine and coastal ecosystems, while encouraging multiple uses of ocean spaces and resources. There is a lot of economic development being planned for the Beaufort Sea area. At the same time, climate and contaminant impacts are increasing. So it is important to provide early information to federal and territorial government departments about changes in the environment.

Water Quality

One of the areas that researchers are looking at is the interactions of fresh water, brackish water and marine water. Information on sea ice, salt levels and temperature are commonly measured in surveys and population assessments conducted by Fisheries and Oceans Canada and other departments.

Sewage Treatment

Sewage treatment methods for some communities in the Beaufort Sea LOMA are in need of some attention. Larger communities have built lagoons. But the bacteria that clean things up have a hard time working in this cold environment. The lagoons, then fill up quickly and are constantly in danger of breaking and leaking into surface water. With expansion of local communities, better methods of water treatment will have to be considered and controlled.



Ecological and Biologically Significant Species

Ecological and biologically significant species are species that play an important role in local food chains. Certain animals and plants are chosen because in some way they play a more important role. These species will be constantly monitored to see the effects of economic development, climate change and contaminants. Management decisions can then be made to protect and conserve these species.

Ringed Seal Populations

Seals are good indicators of how healthy the ecosystem is. This is because they are close to the top of the food chain, and are a valued subsistence resource for the Inuvialuit. Oil exploration activities in the late winter and early spring could affect seal populations because this is when seals are mating, giving birth and raising their young.

Lower levels of the food chain

Ice algae and bacteria at the bottom of the food chain will be good indicators. They will be the first ones to be affected by changes in climate, fresh and marine waters, ice conditions and nutrient changes.

Arctic Cod

Arctic cod are found in much of the marine waters of the Canadian north. The high numbers of cod and all the animals that eat it show how important it is.



Long Range Transport of Pollutants

Today's modern science can not predict the trends that are happening with climate change. Winds and oceans currents that are shifting are what carry many of the contaminants that are being transported to the Canadian Arctic. Airborne mercury is generated by the burning of fossil fuels. This mercury that is mostly being carried in from the south is affecting plants and animals of the Canadian arctic.

Conclusions and Recommendations

Recommendations from science and government will be necessary to make decisions about economic development in the Beaufort Sea LOMA. There is currently little research and information on the Beaufort Sea as a whole. The research that is available focuses on the Mackenzie Delta and the Southeast Beaufort Sea. This includes the areas of the proposed Oil and Gas development as well as designated conservation areas.

Generally there is a need to incorporate local and traditional knowledge in all monitoring and research as well as communication. This will be very helpful to monitor, and communicate any increased risks that might happen in the contaminants and the pollutants in fish and marine mammals. This will be of great interest because of many of these animals are traditional country foods. More involvement from local communities could help in sharing ways to deal with climate change, building practices, subsistence wildlife harvesting and wildlife management.

Governance

Inter-government cooperation will be required to make the best choices about the direction of future development in the Beaufort Sea LOMA. The sharing of information and knowledge will be enhanced by the support of the Beaufort Sea Partnership and the Regional Coordination Committee.

Suggestions

It is also suggested that the Beaufort Sea Partnership and Regional Committee Secretariat be formed with following functions.

- Secretariat be coordinated and staffed by Fisheries and Oceans Canada
- Become the library of information on existing and proposed economic development and governmental action within the LOMA.
- Could be a good contact point with representatives for members of the Regional Coordination Committee

Identification of Priority Areas and Actions Needed

Short Term 1 year- April 2006 to March 2007

Governance

- Establish the Beaufort Sea Partnership and Regional Committee. Decide on what its goals structures and rules are.
- Establish the Secretariat with agreed ways of communication between it and the Partnership and Regional Committee.
- Identification for commitment and participation in Secretariat as well as funding for department.

Important issues

- Achieve inter-government cooperation on ecosystem overview, socio economic assessment and conclude these reports.

- Determine economic, social and cultural objectives.
- Achieve inter governmental cooperation on issues such as economic development, biodiversity and conservation, climate change, contaminants and pollutants, and oil spills.

Medium Term 2-5 years

Governance

- Conclude the integrated management plan for the LOMA
- Review the Beaufort Sea Partnership and Regional Committee on as mandates structure and rules and membership
- Have goals and indicators and objectives set out for inter-governmental cooperation.

Important issues

- Determine environmental objectives.
- Conduct assessment on goals and indicators for economic social and environmental objectives.
- Long term scientific research is put in place to address gaps in research knowledge and impending threats.

Long term 5 + years

Governance

- Independent review of success of governance to see if it met its goals for the Ocean Action Plan as well as economic, social and environmental objectives.
- Review success of integrated management plan in responding to changes in climate, contaminants and pollutants, biodiversity and conservation as well as ongoing impacts of economic activities.

Important issues

- Independent review and assessment of success and state of the Beaufort Sea LOMA based on Ocean Action Plan as well as economic and environmental objectives.
- Assessment of status and changes of ecosystem since first assessment.
- Conclude further socio-economic assessment focusing on changes since first assessment.