



## Integrated Management – Case Studies

Workshop convenor(s): Helen Fast

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### *Integrated Management in Hudson Bay*

*Key indicators of change and variability will provide the background necessary to make effective policy, management and governance decisions by all levels of government. Direct coupling between physical scientists and stakeholders in the [Hudson Bay] communities, and elsewhere, will ensure integrated management decisions are based on policy relevant science. ([Fortier et al., p. 40](#)).*

### **A Vision**

The Oceans Act was passed in 1997. In 2000 over 150 people came together to discuss and evaluate the merits of applying integrated management planning to the Hudson Bay region. The workshop concluded with strong support for a coordinated planning effort ([Fast et al., 2001](#); [Cobb et al., 2001](#)). A subsequent tour of nine arctic communities confirmed that coastal residents supported the development of a management plan for Hudson Bay ([Fisheries and Oceans Canada 2001](#)). The Hudson Bay Ocean Working Group was formed in 2001. It has been meeting bi-annually since that time. Participation ranges from 20-30 people, and includes representatives from federal, provincial and territorial agencies as well as co-management bodies, Nunavut wildlife boards and community residents.

The Hudson Bay Ocean Working Group plan includes a statement of purpose, terms of reference and objectives. Its purpose is to develop an integrated management plan for Hudson Bay to promote stewardship by all interested parties. The focus is on the western coastal area, recognizing linkages to the rest of the Hudson Bay ecosystem. Objectives are consistent with findings from the workshop in 2000. They are:

- to foster stewardship and sustainable resource development including mining, tourism, and hydro-elective development;
- to inform and educate interested parties concerning the mandate and activities of the Hudson Bay Working Group;
- to address issues and specific concerns relating to wildlife and the environment within an IM framework;
- to broaden the base of our perspective through the use of traditional knowledge; and
- to identify and explore research interests and priorities for the Hudson Bay WG.

Primary management functions undertaken by the working group include a) influencing decision-makers by promoting WG discussions with decision-makers as appropriate; b) sharing information; and c) focusing on specific community-identified research priorities. The wide-ranging representation of its members ensures that WG discussions are shared widely across agencies and geographic areas. Similarly, the array of members ensures that a great deal of information is pooled at the meetings. Holding meetings in the coastal communities provides members and citizens with the opportunity

to identify local research priorities.

While acknowledging linkages to the rest of the Bay, the choice of ‘boundary’ for this Working Group is pragmatic and for now manageable. Travel times and related costs from one side of the Bay to the other are prohibitive. Nonetheless, no one is excluded. Anyone who shares an interest in the long-term well-being of the Hudson Bay is welcome. In the meantime, information is shared to the extent that is possible to do so. A place at the table is reserved for the Environmental Committee of Sanikiluaq.

## **Significance**

Hudson Bay is the second-largest inland sea in the world, with a surface area in excess of 1 million km<sup>2</sup>. Its watershed extends from the Rocky Mountains to Quebec, and from Baffin Island to the northern United States. The Hudson Bay Lowlands contain the second largest peat accumulation in the world. Rivers flowing into Hudson and James Bay carry 30 per cent of the total flow of Canada’s river systems. Population estimates include 60 species of fish, ringed seal, bearded seal, beluga whales, and bowhead whales. This water body is a major migration pathway and provides breeding grounds for several million lesser snow geese and hundreds of thousands of Canada geese. Numerous other waterfowl species use the coastal areas.

A major study of the Hudson Bay/James Bay Bioregion Program was initiated in 1992. Partners included the Canadian Arctic Resources Committee (CARC), the Environmental Committee of Sanikiluaq, and the Rawson Academy of Aquatic Science ([Fleming et al. 1997](#)). This was an independent effort to apply an ecosystems approach to the Hudson Bay/James Bay region. The goal of the program was to provide a source of independent expertise on the impacts of resource development projects in Quebec, Manitoba and Ontario. By 1991 approximately 40-50 billion dollars had been spent on, or committed to, hydroelectric development on these rivers. Billions more had been invested in land uses including forestry and mining in the Hudson Bay drainage basin. Impacts on Hudson Bay had not been assessed.

## **Issues**

Environmental changes and current resource development activities are impacting Hudson Bay. Other development activities are planned. These include the following.

- Impacts of climate change are being felt most severely in the arctic. Food supply, travel, health, and infrastructure are already being impacted.
- Demands for economic development are growing.
- Hudson Bay coastal communities have some of the fastest growing populations in Canada. Demands for housing and economic development led to approval by DIAND in October 2003 of a \$500K pre-feasibility study for a 1200km all-weather coastal road to the Western Hudson Bay estimated to cost \$2B.
- Major hydro-electric developments are being considered in the short, medium and long term by Manitoba, Ontario and Quebec.
- Southern watersheds are heavily impacted by agriculture and other development. Their rivers flow north into Hudson Bay carrying unmeasured quantities of land-based sources of pollution.

## **Outcomes**

Some key outcomes of the work to date include the following:

- Formation of a sister IM group in Sanikiluaq, NU: Nunavut Hudson Bay Inter-Agency Working Group. This IM group is independent of the federal government.
- An independent proposal to form an Indigenous Knowledge Holders' Association resulted from TEK discussions. This Association will be independent of the federal government.
- A IQ (TEK) protocol has been developed to guide use of IQ for management decision making.
- The HBOWG is a partner in two major academic networks. The OMRN (Oceans Management Research Network) and the NCE (Network Centre of Excellence) ArcticNet. These relationships leverage significant cash and in-kind support from other sources.
- Working relationships have been developed with a broad cross-section of resource users. The mutual respect and understanding that has developed will facilitate planning and consultations necessary to ease implementation of needed economic development in the years ahead.

## *References*

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## *Case study author(s)*

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