

**Transboundary watershed and coastal management in  
North America and Europe,  
for Hudson Bay and  
the Rhone and Po River watersheds and coasts.**

Magdalena K Muir  
Research Associate, Arctic Institute of North America  
June 25, 2002

Managing Shared Waters 2002 Conference  
Hamilton, Canada

Executive summary

Combination of approaches required to address transboundary watershed and coastal management in North America and Europe.

Contrast between highly developed and utilized watersheds and coastal regions in Europe, and relatively pristine Hudson Bay watershed and bay.

Regulatory complexity in all jurisdictions. However, contrast "top down" and "bottom up" approaches for North America and Europe.

International context

UNEP, through Regional Seas initiative and other programmes, developed the Integrated Coastal Area Management (ICAM)

UNEP Freshwater Programme developed Integrated River Basin Management

In 1997, UNEP joint venture for Integrated Coastal Area and River Basin Management (ICARM)

Led to Conceptual Framework and Planning Guidelines for ICARM.

Europe

European Water Framework Directive and other directives and policies provide context for integrated watershed and coastal management

Intent and requirements of WF Directive, and complimentary ICZM polices and water quality directives

EU directives and policies implemented nationally, along with national and regional initiatives

Difficulties and possible impediments to implementation in various countries  
Rhône River and Po River

Geographical extent of Rhône River (Switzerland and France, Mediterranean Sea) and Po River (Italy, Adriatic Sea)

Regulation of Po and Rhône Rivers on European, national, regional basis,  
and as a "water basin"

Economic impacts and environmental challenges for the Rhône River and Po River watershed and coastal region  
- heavily utilized by agriculture and industry  
- densely populated in watershed and coastal region

North America

North American transboundary and interprovincial watersheds

No consistent North America approach to watersheds, though excellent regional and transboundary initiatives

Adequate Canadian legislation to provide framework for watershed and coastal management

Complex federal, provincial, territorial, Inuit, and First Nation arrangements for or affecting watersheds and coasts

Hudson Bay watershed

Geographical extent of the watershed and the bay (internal sea)

National and regional regulation of watershed and internal sea

Unique role of Inuit and First Nations for the watershed and internal sea

Economic impacts and environmental challenges including  
- climate change  
- transboundary contaminants  
- hydroelectric development  
- land based impacts  
- proposed water diversions

## **Abstract (revised)**

### **Transboundary watershed and coastal management in North America and Europe, examining the Hudson Bay, and the Rhone and Po River watersheds and adjacent coasts.**

#### Challenge:

To understand and integrate transboundary watershed and coastal management in North America and Europe, and to learn from the differing approaches in the regions.

#### Description:

Integrated watershed and coastal management is developing for North America and European watersheds and adjacent coastal regions. The European Community has recently approved a water directive that incorporates a watershed approach and includes a coastal component, while further initiatives have been proposed for coastal management. The Rhone River drains multiple jurisdictions, and is heavily used by adjacent populations and agricultural and industrial concerns. The Rhone River flows into the Mediterranean Sea, with significant wildlife reserves, populations, and industries located in the estuary. The Po River is Italy's longest river, flowing through agricultural and heavily industrialized regions, and entering the Adriatic Sea. As a result, management of the Rhone and Po River watersheds and adjacent coastal regions is a pressing concern.

In contrast, while the Hudson Bay watershed drains a significant portion of the continent, the drainage basin is not densely populated. Up to now, its waters have primarily been impacted by hydroelectric development, though alterations and flow reversals have been proposed for rivers located in the United States and draining into the watershed. The Hudson Bay watershed is subject to different regional land claims agreements which recognize water rights, transfer riparian and coastal lands, and establish joint management structures for lands, wildlife, and fresh and marine waters. Integrated management approaches are developing for portions of the Hudson Bay watershed which incorporate extensive local and governmental cooperation, and will consider future uses, alterations and environmental impacts on the watershed.

#### Application:

The presentation will be of interest to parties involved in integrated watershed and coastal management in Hudson Bay watershed and Europe. The differing institutional frameworks, and economic instruments will be of interest to parties involved in watershed and coastal management in other regions of North America and the world.

#### Capacity Needs:

The presentation will address and compare transboundary institutional and participatory frameworks for the Hudson Bay and Rhone River watersheds and adjacent coastal regions. This includes North America, Canadian and regional framework for the Hudson Bay watershed and the inland sea contained within the bay; and European and national institutional frameworks for the Rhone and Po River watersheds and adjacent coastal regions. Each watershed and adjacent coastal region has a governmental and regulatory framework. However, there are useful analogies and comparisons between the different framework and approaches. Given the transboundary nature of the watershed, each framework incorporates several approaches to local consultation and participation, and the use of economic and legal instruments.

Key words: transboundary, watersheds, coasts, management, Hudson Bay, Rhone River, Po River