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An Introduction to Marine Spatial Planning

Atlantic Planners Institute 2019 Conference

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- Why MSP for Newfoundland and Labrador
  - NL Coastal and Ocean Context
  - NL Coastal and Ocean Policy and Planning Context
  - Local Drivers for MSP (ex. Issues Scan Issues, MPA Network and Aquaculture Expansion)

MSP in a Nutshell

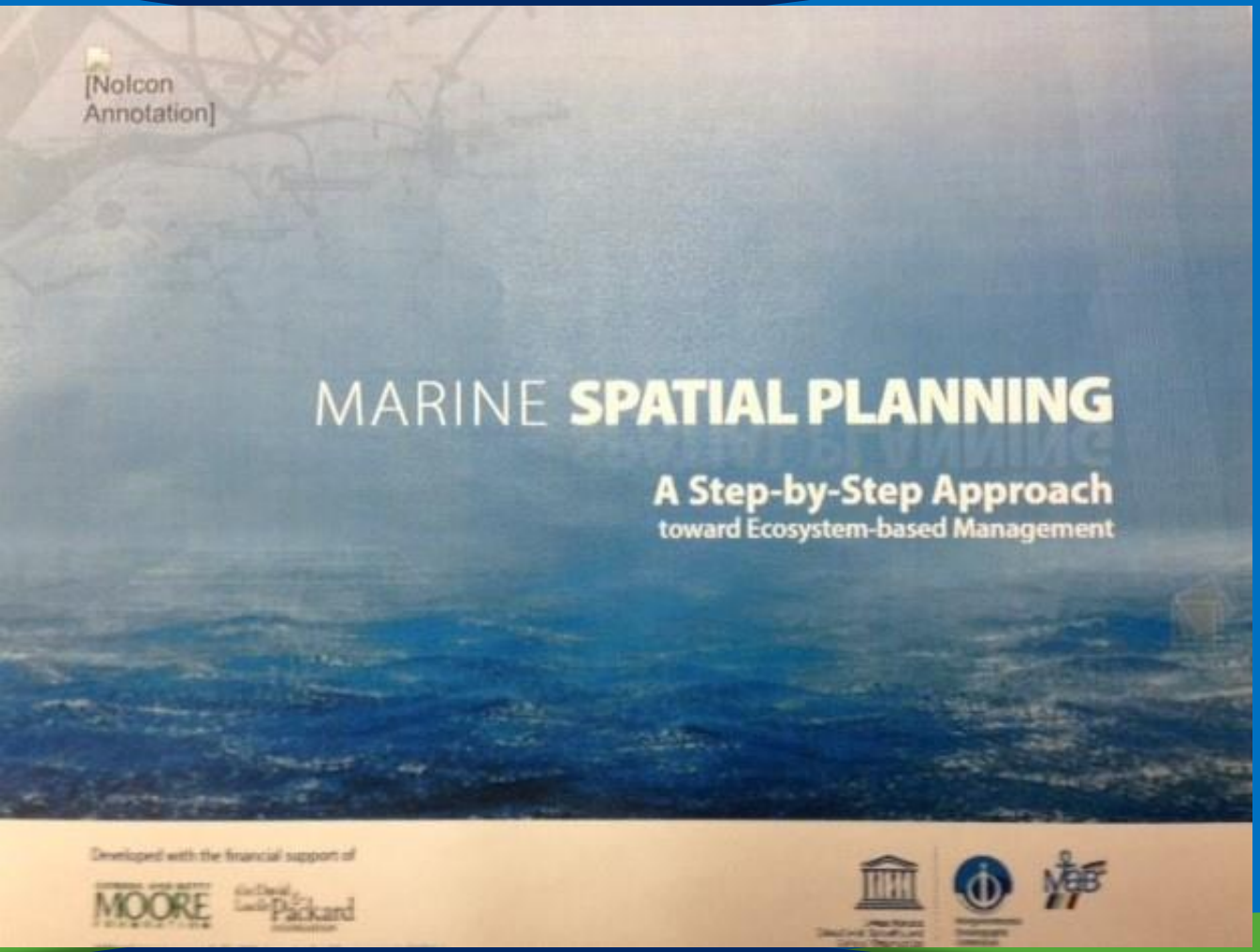
Five minute video developed by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

MSP Background - Definition

"Generally, MSP is seen as an integrative process to cope with the increasing demand for maritime space from traditional and emerging sectors while preserving the proper functioning of the marine ecosystems. They key feature of MSP is its functional character i.e. integration of various sectors, societal needs, values and goals. MSP represents a move from traditional single sector planning to a more integrated approach to the planning of the sea."

European MSP Platform

MSP Background - Definition



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MSP Background - Definition

- Coastal and Marine Spatial Planning
- Marine Spatial Planning
- Maritime Spatial Planning

- *Marine spatial planning is a* ***public process*** *of* ***analyzing and allocating the spatial and temporal distribution of human activities*** *in marine areas* ***to achieve ecological, economic, and social objectives that usually have been specified through a political process.***

Characteristics of marine spatial planning include ecosystem-based, area-based, integrated, adaptive, strategic and participatory

UNESCO - Intergovernmental Oceanographic Commission
Marine Spatial Planning Initiative

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MSP Background – Linkages

- *"...MSP is not a substitute for integrated coastal zone management (ICZM) or integrated marine and coastal area management (IMCAM), but rather builds on these important approaches and the policies that support them – including efforts to establish marine protected areas (MPAs)..."*

Secretariat of the Convention on Biological Diversity

MSP Background – Linkages

- *"Most development and activities taking place in the marine environment also have an onshore component or implication. Alignment between marine and terrestrial planning is important and should be achieved through consistency of policy guidance, plans and decisions.*

  European MSP Platform

- *Understanding and accommodating land-sea interactions (LSI) are critical to the successful delivery of maritime spatial planning and integrated management at the coast…The inclusion of LSI in the (EU) MSP Directive recognises that effective maritime spatial planning cannot take place unless consideration is given to the interface between terrestrial and marine environments.*

  European Commission Environ. Website

MSP Background – International

- *"...Marine spatial planning (MSP) is increasingly becoming an important framework for ocean governance and is being developed in many countries around the world....Many of the overarching international conventions, treaties and laws recognise the need to consider human pressures in the marine environment through an integrated, ecosystem approach to management of maritime activities..."*

Secretariat of the Convention on Biological Diversity

- We'll look at examples under MSP benefits

MSP Background - Process

1) Identifying need and establishing authority

2) Obtaining financial support

3) Organizing the process through pre-planning

4) Organizing stakeholder participation

5)Defining and analyzing existing conditions

MSP Background - Process

6) Defining and analyzing future conditions

7) Preparing and approving the spatial management plan

8) Implementing and enforcing the spatial management plan

9) Monitoring and evaluating performance

10) Adapting the marine spatial management process

MSP Background - Benefits

Ecological/ Environmental Benefits	Identification of biological and ecological important areas
	Biodiversity objectives incorporated into planned decision-making
	Identification and reduction of conflicts between human use and nature
	Allocation of space for biodiversity and nature conservation
	Establish context for planning a network of marine protected areas
	Identification and reduction of the cumulative effects of human activities on marine ecosystems
Economics Benefits	Greater certainty of access to desirable areas for new private sector investments, frequently amortized over 20-30 years
	Identification of compatible uses within the same area of development
	Reduction of conflicts between incompatible uses
	Improved capacity to plan for new and changing human activities, including emerging technologies and their associated effects
	Better safety during operation of human activities
	Promotion of the efficient use of resources and space
	Streamlining and transparency in permit and licensing procedures
Social Benefits	Improved opportunities for community and citizen participation
	Identification of impacts of decisions on the allocation of ocean space (e.g., closure areas for certain uses, protected areas) for communities and economies onshore (e.g., employment, distribution of income)"
	Identification and improved protection of cultural heritage
	Identification and preservation of social and spiritual values related to ocean use (e.g., the ocean as an open space)

Table 2. Examples of benefits of MSP

MSP Background - Benefits

Blau, B. and L. Green. 2015. Assessing the impact of a new approach to ocean management: Evidence to date from five ocean plans. Marine Policy Vol 56. Pp 1-8.

"This paper examined five case studies in depth (Massachusetts, Rhode Island, the Great Barrier Reef Marine Park, Norway and Belgium) and surveyed others to see whether ocean plans have delivered on their promises of economic development, environmental stewardship and social cohesion. The preliminary evidence suggests that they have done so."

MSP Background - Benefits

59 Ocean Plans 26 completed and in force as of 2014

Economic benefits

- $310 million in new economic value (wind development in R.I and Belgium)
- Permitting easier
  - R.I one year versus 5 years
  - Netherlands North Sea permit costs down 2/3
  - German North Sea reduced conflicts and eased permitting
  - Massachusetts submarine cable project approved 1-2 years faster

- Existing economic value retained
  - Great Barrier Reef $1.5 billion in tourism, R.I fisherman $500-$750K from Cox's Ledge. Nearly all fishing grounds protected from development (Norway and Belgium)

MSP Background - Benefits

Ecological Benefits

- Each plan expanded marine protection
  - Norway banned oil and gas activity in Lofoten Islands spawning and habitat areas
  - Norway move of shipping lanes reduced tanker accident risk by over 20% and spill volumes by 15-30%
  - Massachusetts protected 1565 of 2145 square miles of state waters (70%) from major development
  - R.I protected 792 of 1467 square miles of state waters (54%) from major development
  - Great Barrier Reef created new 38,000 square mile no take MPA network. A commercial fish species increased 57-75% and juvenile recruitment increased within 30km of reserves.

MSP Background - Benefits

Social Benefits

- Increased fisherman participation and reduced tension with developers (Massachusetts and R.I.)
- Increased interaction between competing stakeholders (USA, Australia and the Netherlands) and input incorporated into plans (GBR, R.I. and Massachusetts).
- Native peoples actively involved in planning (GBR, R.I. and Massachusetts).

MSP Background – Geospatial Data

Importance of Space and Time

"*Some areas of the ocean are more important than others – both ecologically and economically…Successful marine management needs planners and managers who understand how to work with the spatial and temporal diversity of the sea. Understanding these spatial and temporal distributions and mapping them is an important part of MSP.*" UNESCO MSP Guide

"*Spatial analysis lies at the heart of MSP and is surpassed in importance only by stakeholder participation.*" Kostantinos and Delevaux (2015)

Kostantinos, A. S. and J. Delevaux. 2015. Data requirements and tools to operationalize marine spatial planning in the United States. Ocean and Coastal Management. 116 (2015) pp. 214-223.

MSP Background – Geospatial Data

SeaPlan. 2016. Creating and Using Data Portals To Support Ocean Planning. Challenges and Best Practices from the Northeast United States and Elsewhere.

"As more ocean plans are developed and adopted around the world, the importance of accessible, up-to-date spatial data in the planning process has become increasingly apparent. Many ocean planning efforts in the United States and Canada rely on a companion data portal–a curated catalog of spatial datasets characterizing the ocean uses and natural resources considered as part of ocean planning and management decision-making…"

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MSP Background – Geospatial Data

SeaPlan. 2016. Creating and Using Data Portals To Support Ocean Planning. Challenges and Best Practices from the Northeast United States and Elsewhere.

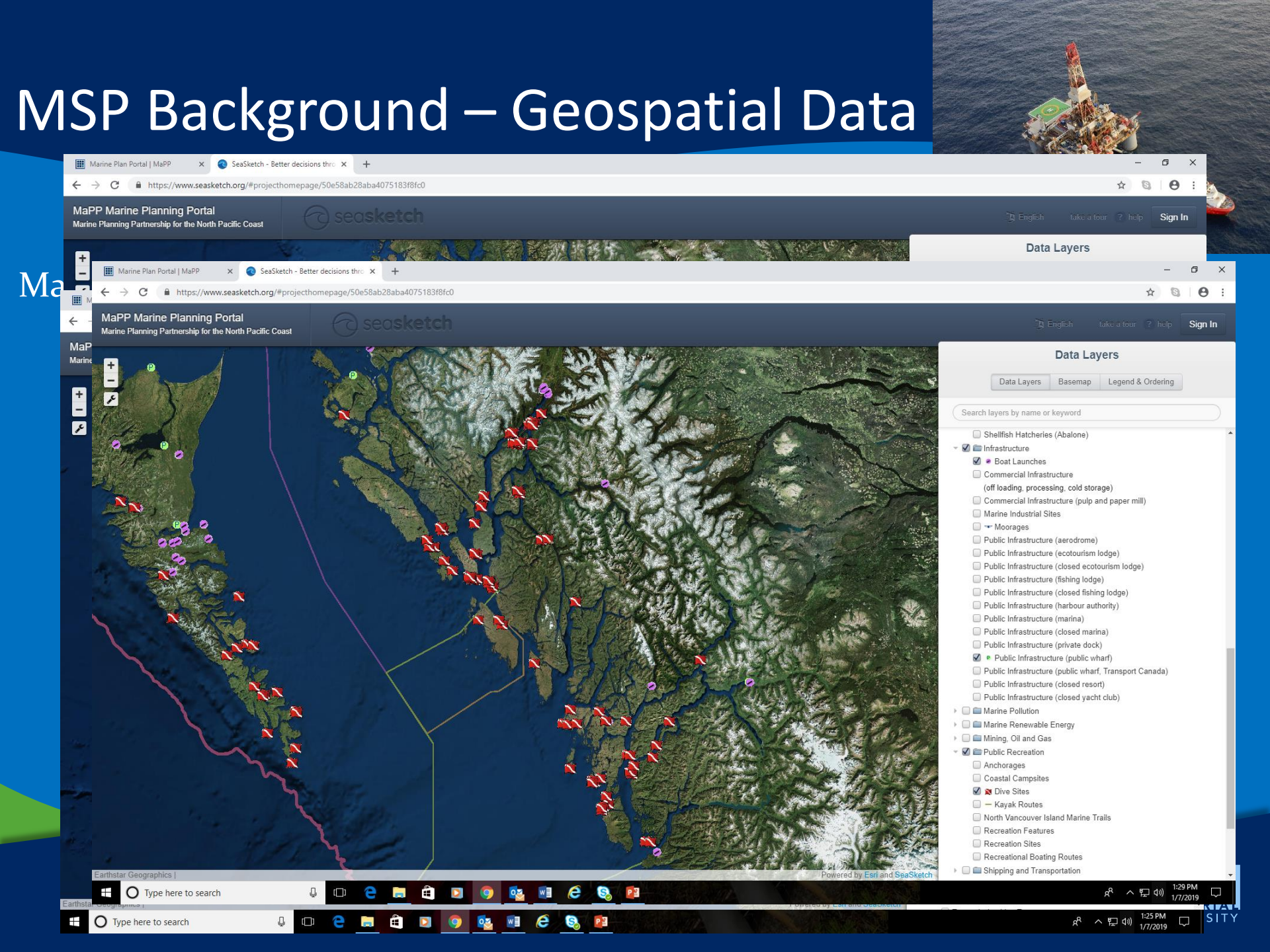
"This enables planners, managers, and stakeholders to access common sets of sector-specific, place-based information that help to visualize spatial relationships (e.g., overlap) among various uses and the marine environment and analyze potential interactions (e.g., synergies or conflicts) among those uses and natural resources. This data accessibility also enhances the transparency of the planning process, arguably an essential factor for its overall success."

MSP Background – Geospatial Data

Marine Plan Partnership Data Portal

- *"The MaPP marine plan portal, using the SeaSketch application, is a sophisticated planning tool that allows users to look at many different data layers together to learn more about the MaPP study area. The portal has more than 250 data layers including administrative boundaries, species, habitats and marine uses.*
- *The portal is called a "decision-support tool" because it displays information that is used to support, or inform, discussions and decisions related to the implementation of marine spatial plans. These discussions include ways to avoid spatial conflicts between marine uses and activities, and how to maintain the ecological integrity of marine ecosystems."*

MSP Background – Geospatial Data



Why MSP for NL?

NL Coastal and Ocean Context

- Traditional activities - Fisheries and shipping
- Offshore oil and gas production since 1997 with ongoing exploration
- Coastal tourism and recreation growing
- Potential offshore wind project on the west coast (Beothuck Energy)
- Aquaculture established with interest in expansion
- Productive marine ecosystem but decline in resources (past groundfish, present shellfish), aquatic invasive species
- User conflicts and need for environmental conservation/protection (MPA network development)
- Province (via stakeholder input) has identified a number of priority coastal and ocean issues

Why MSP for N

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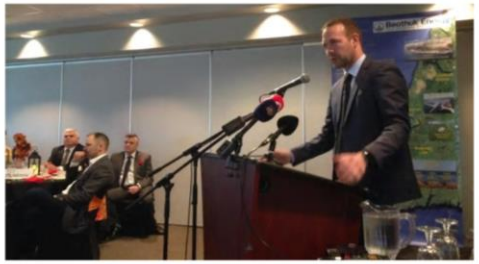
Nfld. & Labrador

Wind farm investors optimistic about Newfoundland west coast

Danish backers make 1st trip to Stephenville area

Gavin Simms · CBC News · Posted: Nov 01, 2016 1:15 PM NT | Last Updated: November 1, 2016



Lars Thaaning Pedersen, CEO Copenhagen Infrastructure Partners, tells a Corner Brook business group about his company's plans for wind energy projects on the province's west coast. (Gavin Simms/CBC)

European wind farm investors say they are optimistic about upcoming projects on Newfoundland's west coast.

Executives from Copenhagen Infrastructure Partners (CIP) made their first trip to the island this week.

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Oil exploration should not be allowed in marine refuges: WWF Canada

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Northern cod stocks show steep decline in once plentiful fishing areas

The Canadian Press

Published: Mar 23, 2018 at 4:26 a.m.

Updated: Oct 24, 2018 at 3:35 p.m.

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Nfld. & Labrador

Mussel farming reaching new depths in Notre Dame Bay

CBC News · Posted: Aug 05, 2013 6:49 AM NT | Last Updated: August 5, 2013

NorAtlantic Processors is hoping research from the DFO will show that farming mussels in deep water produces healthy mussels. (CBC)

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Lewisporte celebrates marina expansion

The Central Voice

Published: Sep 29, 2017 at 11:29 p.m.

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Lewisporte is now home to the largest marina in Atlantic Canada with 250 berths and plans for more in the future (over 300). The $1.5 million marina expansion began in December of 2013 and the finishing touches were made this week. Look to the Pilot print edition on Aug. 13 for coverage of the event and online at www.lportepilot.ca.

Top Stories

Local

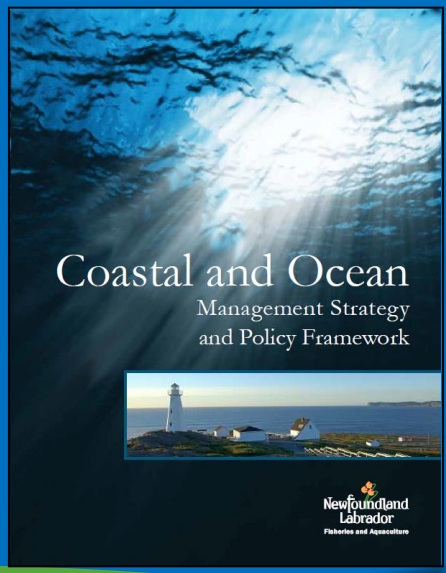
1. Fogo Island residents want traditional dialysis unit in the area; tired of travelling to Gander for treatment — 44 views
2. If you can't clear snow and ice from your property, you need to find someone who can, lawyers say — 17 views
3. Cabot Ford Lincoln, president to pay $90K in fines — 13 views
4. A look at back at Central, N.L.'s headline makers for 2018

Policy and Planning Context

At the provincial level, the Government of Newfoundland and Labrador's Coastal and Ocean Management Strategy and Policy Framework recognizes the need for integrated approaches, the use of mapping and geospatial technology and identifies specific goals and objectives to work collaboratively to bring together coastal and ocean data and information.

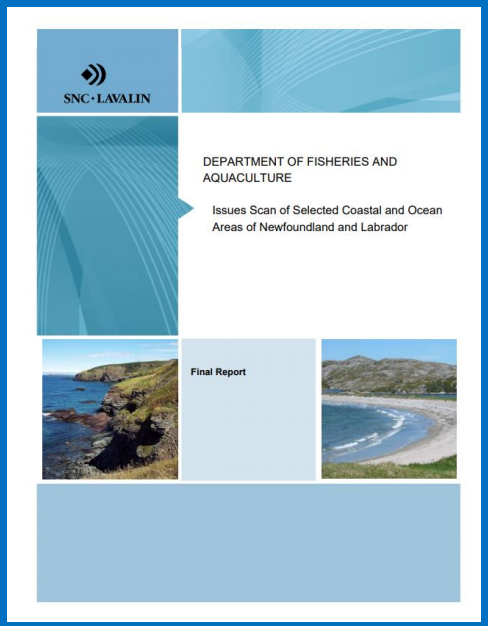
The document also specifically refers to the need for "*greater coordination of marine activities*" and "*effective planning*" as a means to achieve a balance between environmental and economic sustainability.

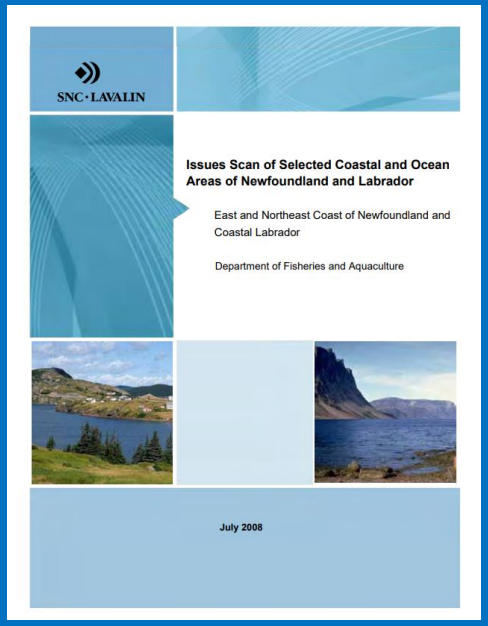
"Policy development will focus on areas of jurisdiction of Gov of NL"



Policy and Planning Context

PART II – POLICY FRAMEWORK	
Priority Issues:	**Strategic Objectives:**
Healthy Marine Environments	• Coastal ecosystems, particularly areas of significant ecological importance, are protected, maintained, and restored where possible. • Coastal activities and development do not result in irreversible damage or harm coastal and ocean areas and resources. • Coastal water quality allows for ecosystem functioning and sustainable human use.
Social, Cultural and Economic Sustainability	• Social and cultural values associated with coastal and ocean areas are appreciated, conserved and maintained for future generations. • Sustainable economic opportunities pertaining to coastal and ocean areas and resource use are supported.
Coastal Land Use	• The impact of land use activities on the coastal and ocean environment is better addressed through comprehensive coastal land use initiatives.
Competing Needs and Interests	• Conflicts pertaining to coastal and ocean areas and resource use are mitigated and avoided through enhanced consultation and communication efforts.
Coastal and Marine Infrastructure	• Coastal and marine infrastructure needs are identified and addressed through collaborative efforts.
Climate Change	• The effects of climate change on the coastal and ocean environment, including implications to livelihoods, coastal structures, and coastal activities, are better understood through enhanced research and awareness. • Coastal communities and marine industries are more resilient to the impacts of climate change by recognizing vulnerabilities and strengthening the ability to adapt.





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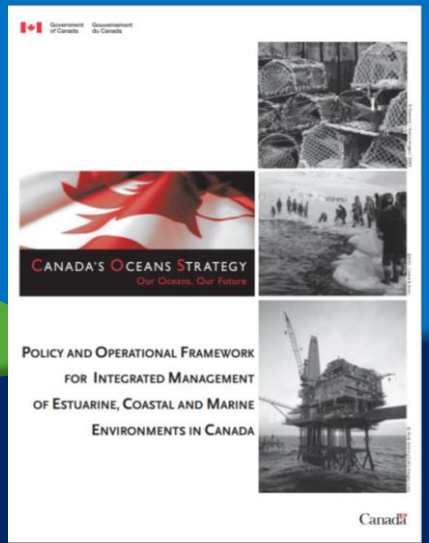
Policy and Planning Context

At the federal level, Canada's Oceans Act and Canada's Oceans Strategy provide Fisheries and Oceans Canada with the authority to undertake MSP.

> *"IM is a comprehensive way of planning and managing human activities so that they do not conflict with one another, and so that all factors are considered for the conservation and sustainable use of marine resources and shared use of ocean space"(p.7).*
>
> *"Spatial and temporal understanding of the human activities is also required to address issues of multiple and conflicting use and aid in the application of ocean-use planning and zoning tools" (p.27).*



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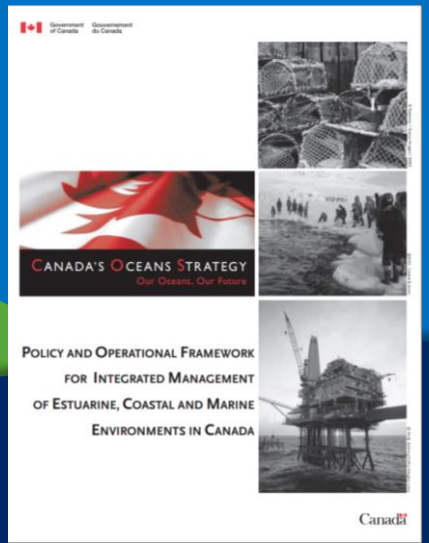
Policy and Planning Context

- *"These conflicts may still arise even though the objective in the first place of IM is to proactively plan for ocean space use so that conflict is avoided and ecosystem integrity is ensured." (p.28)*
- *"The plan will be tailored to the environmental setting and the suite of existing and proposed ocean uses; take into account the specific polices, plans and legislation that apply in the area; and may be presented as a series of recommended management actions directed toward specific ocean uses; or may be presented as a zone identifying areas of preferred ocean use…" (p. 29)*



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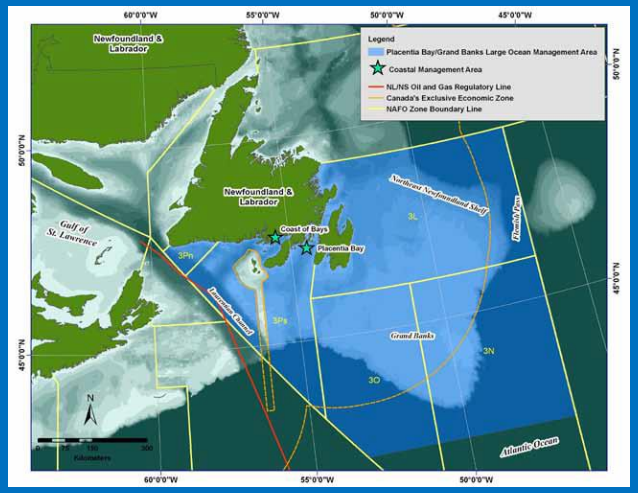
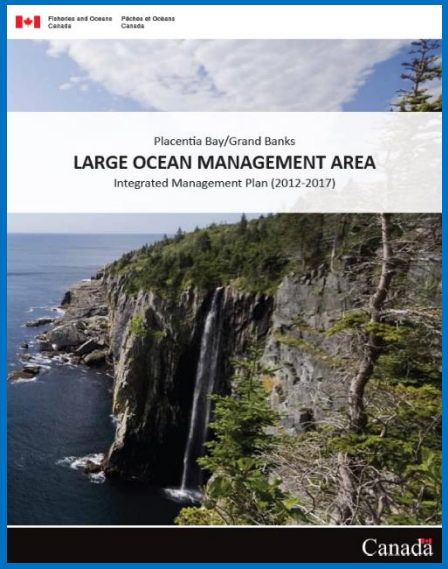
Policy and Planning Context

"...The Placentia Bay/Grand Banks Large Ocean Management Area IM Plan is presented as a multi-year, strategic level plan for the IM of policies, programs, plans, measures and activities in or affecting the PB/GB LOMA..."





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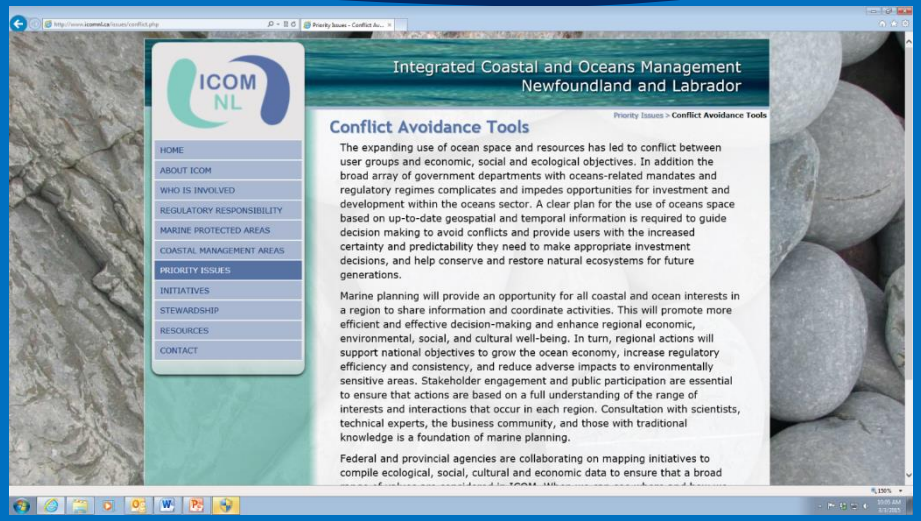
Policy and Planning Context



"The expanding use of ocean space and resources has led to conflict between user groups and economic, social and ecological objectives…A clear plan for the use of oceans space based on up-to-date geospatial and temporal information is required to guide decision making to avoid conflicts and provide users with the increased certainty and predictability they need to make appropriate investment decisions, and help conserve and restore natural ecosystems for future generations…".

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Drivers for NL MSP

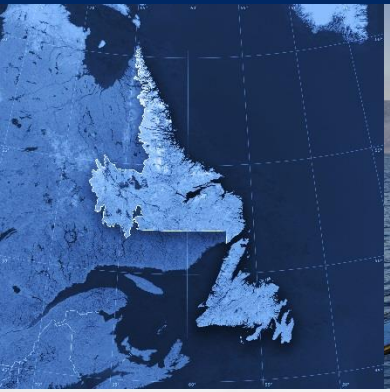
An additional ROCOM priority, the establishment of a network of marine protected areas (MPAs) in the NL Shelves Bioregion (to meet Canada's commitments under the Convention on Biological Diversity), will require extensive geospatial capacity and engagement to identify and analyze the relationship between areas of high conservation value and high socio-economic value.

Priority NL Coastal and Ocean Issues

Expanding Aquaculture (example)

Case Has Been Made for NL MSP

- Together policy, plans and priorities indicate a requirement to undertake Marine Spatial Planning approaches in Newfoundland and Labrador.
- Operationalize strategic level policy, plans and priorities through MSP
- Existing user conflicts, aquaculture expansion, offshore wind development and MPA network planning are classic drivers for MSP.
- If we don't proceed, NL will be at a competitive disadvantage compared to other jurisdictions using MSP that provide benefits that support sustainable economic development.









Thank You

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