



Marine Spatial Data Infrastructure





What is an MSDI – Context for applications

- A Marine Spatial Data Infrastructure (MSDI) is an element of an SDI that focuses on the governance, standards, Information and Communication Technology (ICT) of marine input and content.
- The MSDI concept is gaining wider appreciation due to the variety of data types combined for efficient analysis. Solutions apply to spatial planning, environmental management and emergency response, etc.
- It requires generic data storage for wide access and applications as opposed to product or purpose specific storage.
- An MSDI is an infrastructure that promotes interoperability of data at all levels.



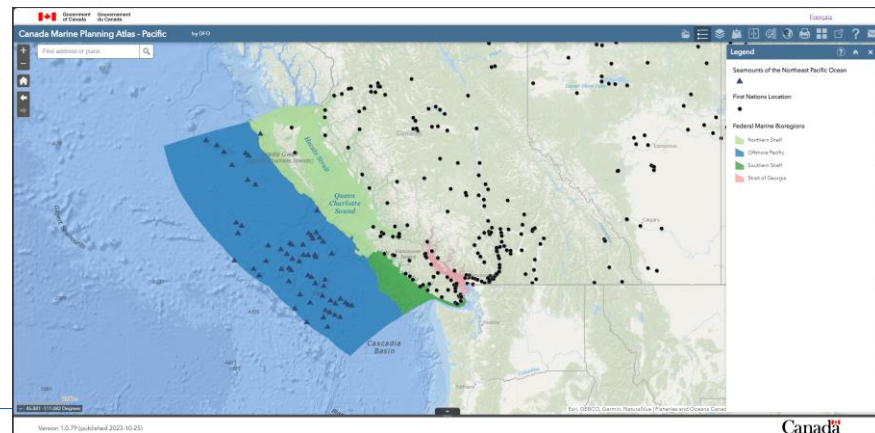
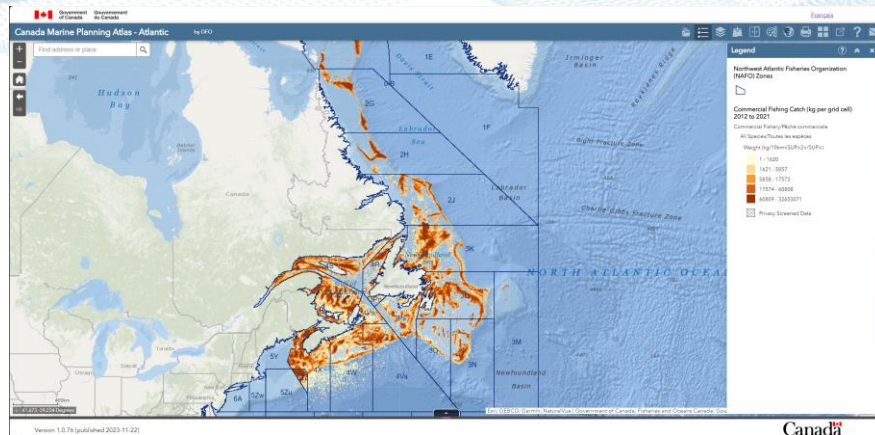
What we do

- The Department of Fisheries and Oceans Canada's (DFO) MSDI provides a department-wide Geographic Information System (GIS) solution for customized, value added and decision-making applications.
- The Canadian MSDI has four main objectives:
 - Enabling data discovery of marine geospatial datasets by being able to visualize location and content
 - Ensuring accurate and complete description of the metadata in a standardized format compliant to all applicable standards within the Government of Canada
 - Providing data visualization and querying mechanisms
 - Populating web application with metadata and data



Canada Marine Planning Atlas

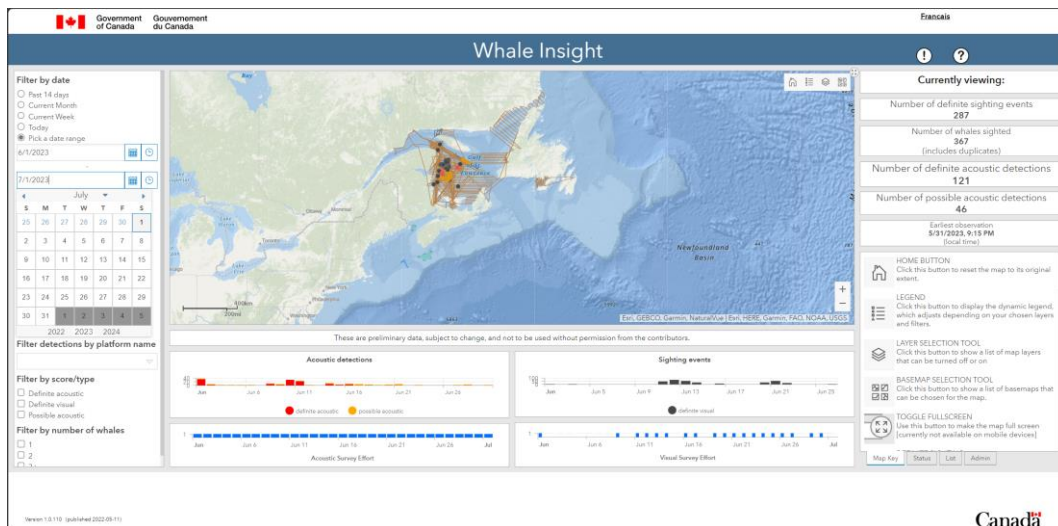
- Areas:
 - Atlantic coast and Pacific coast
- Goals:
 - Increase transparency of decision making
 - Aid in conflict resolution/consultation
 - Identify information gaps
 - Advance reconciliation with Indigenous groups
- Accessibility:
 - Available to the public





Whale Insight

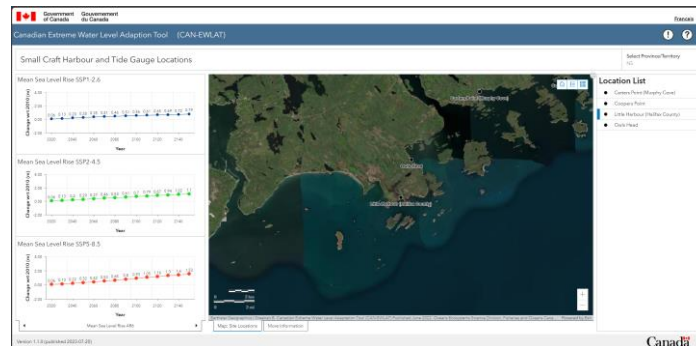
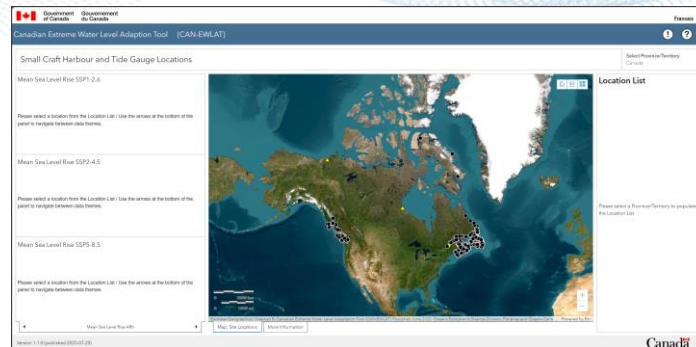
- Designed to communicate latest right whale observations and survey results to scientific, regulatory and industrial sectors
- Will inform more effective, dynamic planning of research and conservation activities.
- Available to the public on May 17, 2022





Canadian - Extreme Water Level Adaptation Tool (CAN-EWLAT):

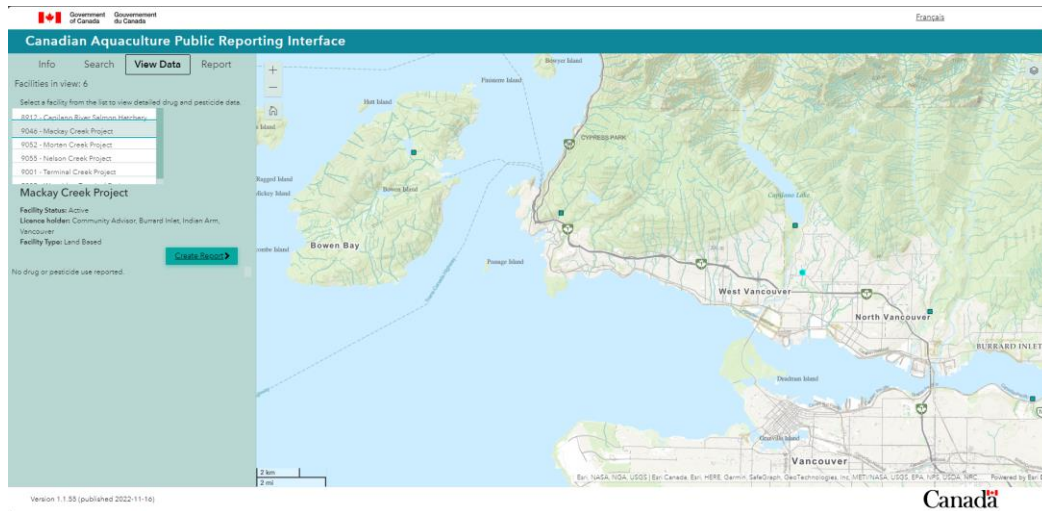
- Two products:
 - height allowance, wave climate
- Leverages CHS's Continuous Vertical Datum for Canadian Waters Model
- Data:
 - Small craft harbours locations, tide gauges, sea level rise predictions, reference water levels, wave heights prediction
- Accessibility:
 - Available to the public





Canadian Aquaculture Public Reporting Interface (CAPRI)

- Support transparency and public reporting of aquaculture activities
- Phase 1 – completed and available to the public
- Phase 2 – nearing completion (new data and functionality added)

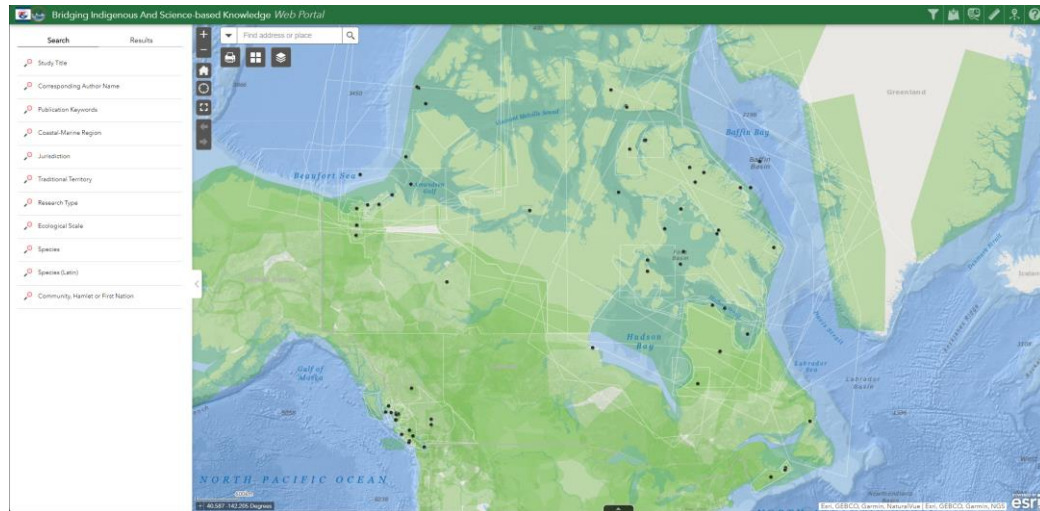




Bridging Indigenous and Science-based Knowledge Web Portal (BIAS-K)

This web portal makes accessible key information from published case studies across Canada related to environmental research, monitoring, and management. The goal of the web portal is threefold:

- Amplify research;
- Foster awareness; and
- Strengthen partnerships.





Planning for Integrated Environmental Response (PIER) Field Data Collection:

- Field applications supporting Planning for Integrated Environmental Response
- Powered by ESRI Survey123
- Near-real time viewing, analysis and export of spatially referenced data collected by multiple field users simultaneously.
- Availability: Available to DFO research scientists to use in the field.

11:27
Chrome
PIER Data Collector - Vegetation

English(en)

User Name
u1pier

Date
Monday, March 21, 2022

UTC Time
3:24 PM

Province *
Nova Scotia

County
Halifax

GPS Coordinates
44.601°N 63.506°W

Click Here To Test

✓

11:28
Chrome
PIER Data Collector - Vegetation

Substrate Type *
Mixed

Substrate Percent Cover (%)
50

Vegetation Type
Vegetation Type 1
Palmaria palmata

Vegetation Type 1 Presence/Absence
Present-1

Vegetation Type 1 Percent Cover (%)
50

1 of 1

Total Percent Cover (%)
100

Summary
Substrate Type: mixed;
Substrate Percent Cover: 50%;
Vegetation Species: palmaria_palmata;

✓



Questions ?

For more information, please see our recent [publication](#)

For any questions, please contact the MSDI team:

DFO.MSDI-IDS.MPO@dfo-mpo.gc.ca

