

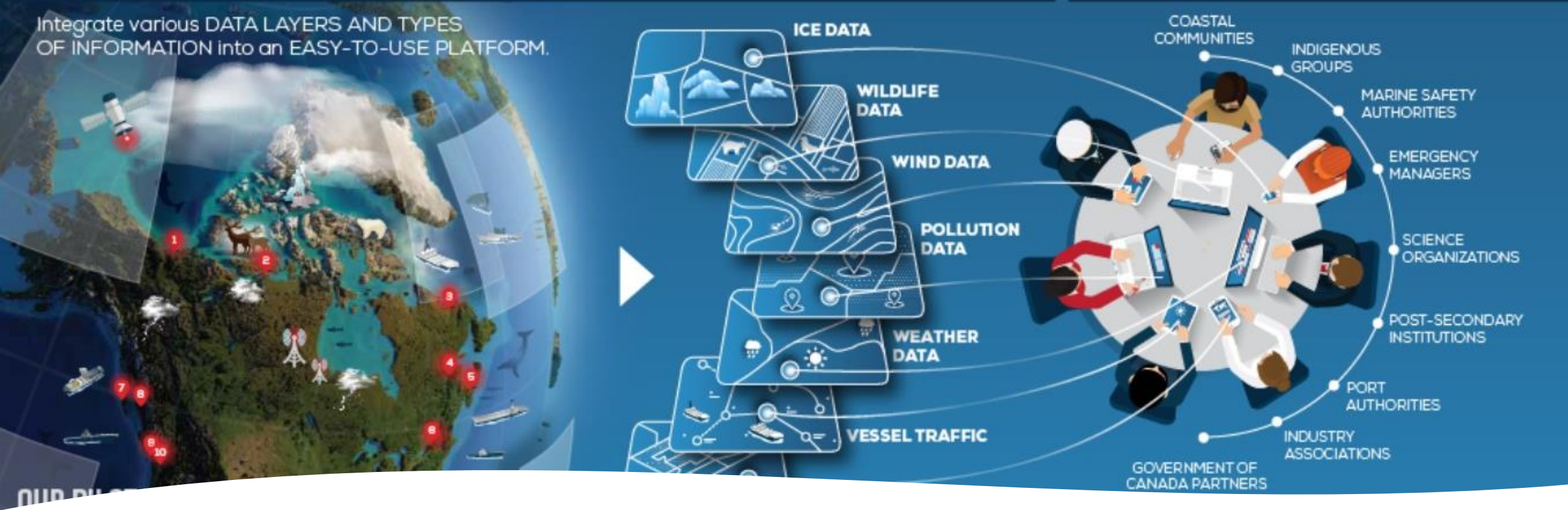
Canadian Marine Shipping Risk Forum – 24 Oct 2022

Enhanced Maritime Situational Awareness (EMSA)

The EMSA partnership and use of AIS

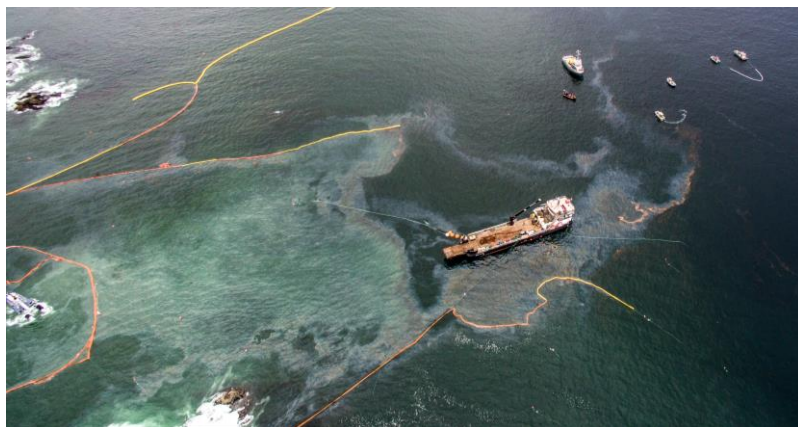
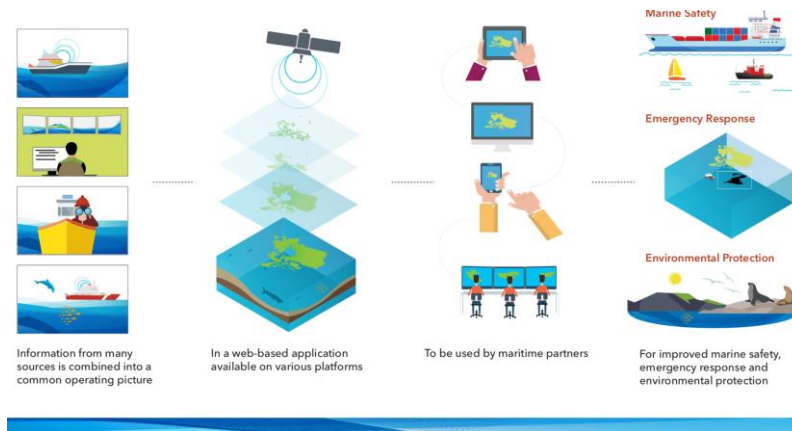
Kelly Larkin, Transport Canada
Regional Program Manager (Pacific)
Olivia Hall, Program Advisor (Pacific)

Integrate various DATA LAYERS AND TYPES OF INFORMATION into an EASY-TO-USE PLATFORM.



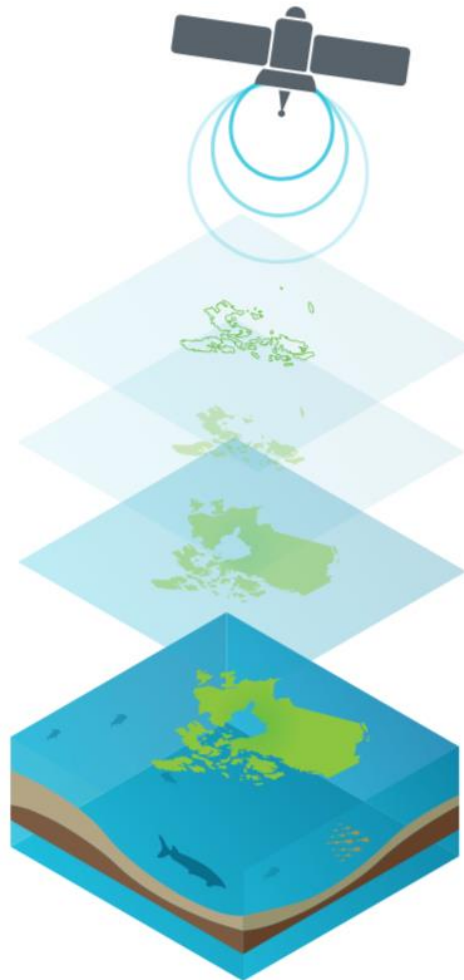
Today's Passage Plan

- EMSA background
- Partnership with Indigenous Peoples
- How AIS is employed in EMSA
- Demo of key functions that employ AIS

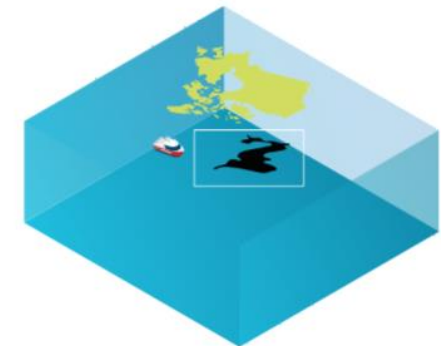


Enhanced Maritime Situational Awareness (EMSA) and the Collaborative Situational Awareness Portal (CSAP)

Enhanced Maritime Situational Awareness (EMSA)



Emergency Response



Environmental Protection



Information from many sources is combined into a common operating picture

In a web-based application available on various platforms

To be used by maritime partners

For improved marine safety, emergency response and environmental protection

Key factors: Partnership

- Visits to home communities – meet people, appreciate their challenges and requirements
- All key decisions made together
 - Pilot host selection, including approval of the selection process itself
 - Contractor selection – Fujitsu Consulting (Canada) Inc.
 - TC Staff support and co-facilitate
- Transparency and openness – discuss challenges and difficult topics
- Work through pain and anger from Canada's colonial past - need to grieve



Key Factors: Design

- **System design and security**
 - **Most data open-source, but all users have secure spaces for data**
 - **OCAP** principles a fundamental requirement of EMSA
- Constantly evolving “**agile**” project, driven by operational requirements of **local and regional communities**
- Expanding to provide **platform for collaboration**
 - **Shared governance** in areas of common interest
 - **Common Operating Picture (COP)** for marine safety and environmental monitoring and protection
 - Support to other **OPP projects** (PVM, Places of Refuge)
 - **Adopted by CCG** for work with Indigenous and coastal community partners

2022-10-25



Agile design and Working Groups

To-do discussion list:

Description: This column will include all requests from pilot project partners

Items delivery dates explanations

Users would like to be able to incorporate EPIRB feed into the EMSA system

Enhance the phones and small devices UI display

North Atlantic Right Whale (NARW) closure zones daily grid update

NARW Email Scraping for NavWarns

+ Add a card

2022-10-25

Meeting Agenda

14357 - Exporting historical data from feed

14358 - Exporting internal records

12638 - Make regular data sources work with Time Machine

14173 - Allow user to define grid size - Dashboard enhancement

14276 - Support colour from field

NetCDF support

+ Add a card

Prioritized collaboratively:

Description: We will prioritize items from the to-do column into this one based on a collaborative discussion

Priorities criteria

14185 - Add option to enter grids in data sources

13779 - Dashboard enhancements

13511 - Add ability to manage resources in a collection

13493 - Add ability to add conditional values in Forms

+ Add a card

Ready for Fujitsu

Description: items that are planned for subrelease but are not yet worked on.

13755 - "Agile" means adaptable by design

- Maintains relevance to emerging requirements
- Emphasis on local requirements, while supporting collaboration with other partners and colleagues
- Indigenous, federal and provincial/territorial/local governments, Ports, Pilots, marine science/academia, marine industry)
- Working groups (with some **humour mixed-in!**)
- Weekly system update working group
- Future recommendations (Governance) working group

12213 - In...

12418 - Add to ed...

Import

Character set: Unicode

Language: Default - English (Canada)

From row: 1

Separator Options

Fixed width

Tab Comma Semicolon

Merge delimiters Trim spaces

Other Options

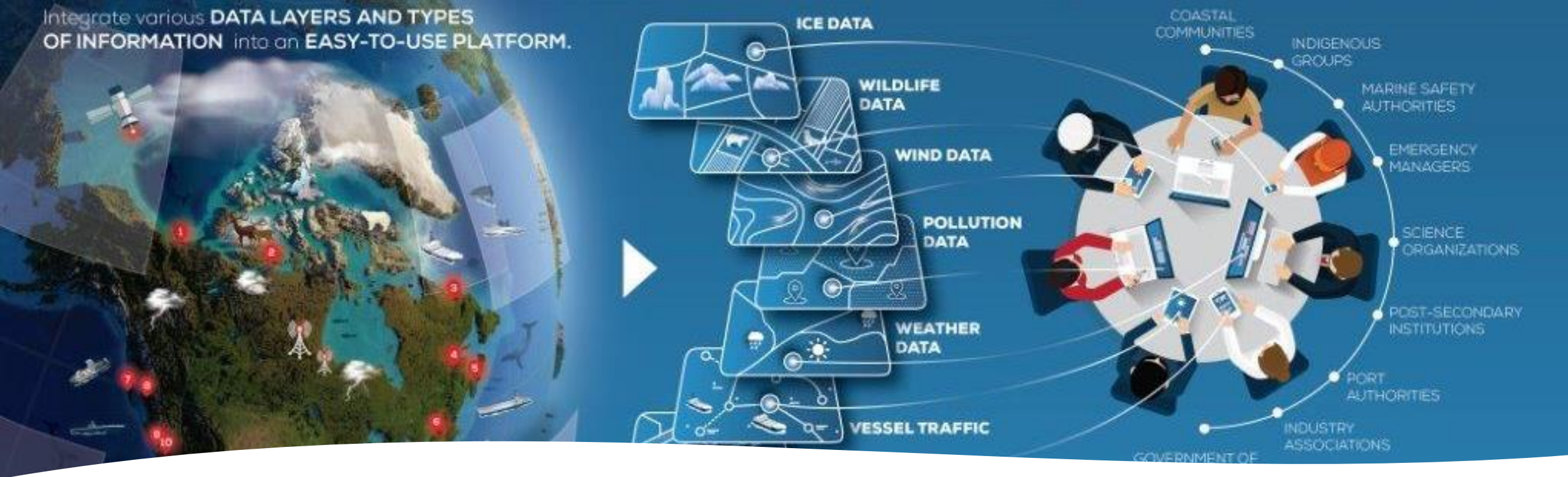
Format quoted field as text

Fields

Column type: Standard

+ Add a card

Integrate various **DATA LAYERS AND TYPES OF INFORMATION** into an **EASY-TO-USE PLATFORM**.

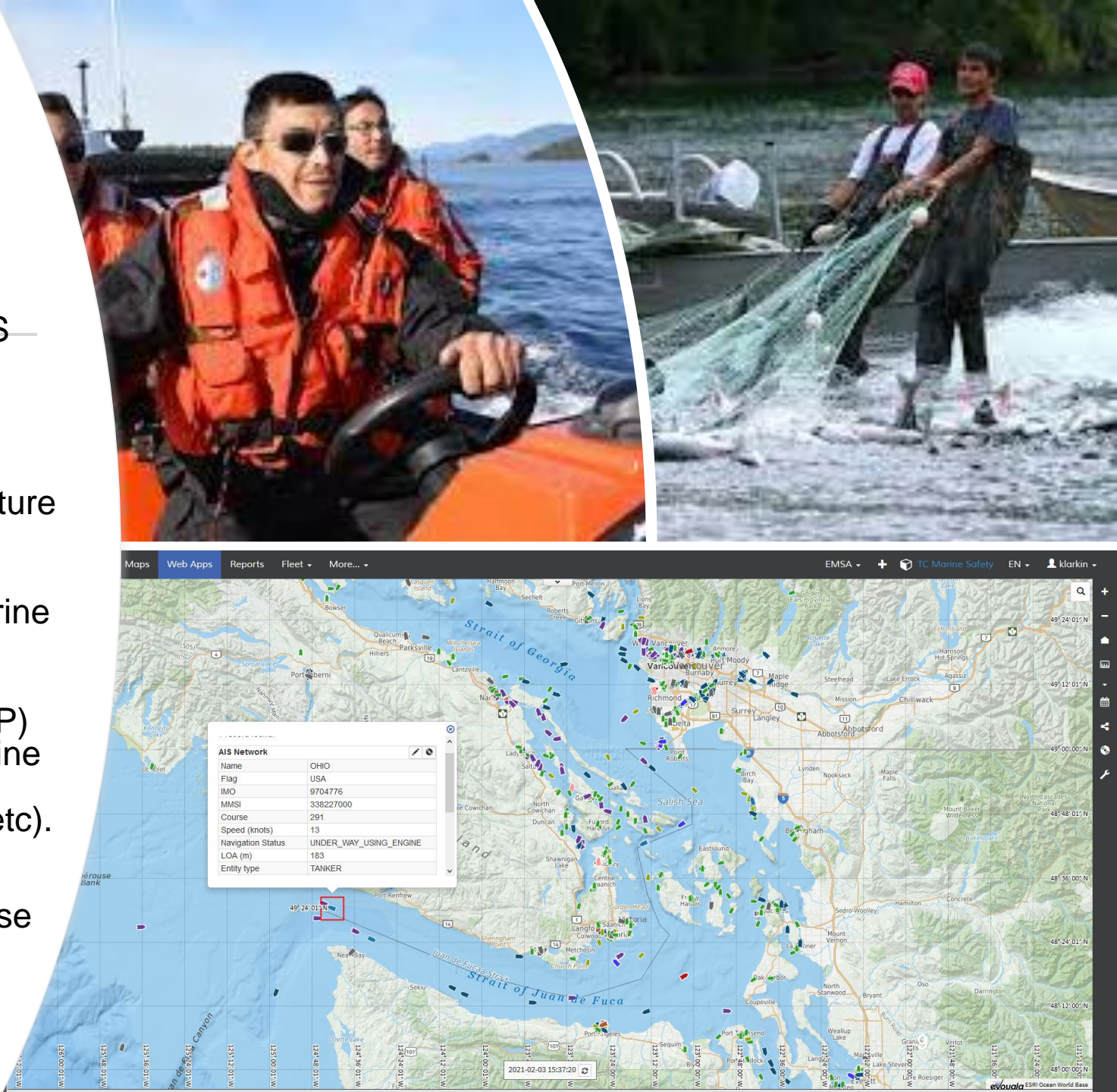


Expanding as platform for collaboration

- **Shared governance** in areas of common interest
- **Common Operating Picture** for marine safety and environmental monitoring and protection
 - Support to marine response exercises
 - Support to marine occurrence notification - TBC
- Support to other **OPP projects**
 - PVM, Places of Refuge
- **Adopted by CCG** for work with Indigenous and coastal community partners

EMSA and AIS

- Marine shipping data is a fused presentation of:
 - Canadian Coast Guard (CCG) terrestrial AIS data
 - ExactEarth satellite AIS data
- Purpose: to provide the most comprehensive picture of vessel traffic information to Indigenous and coastal communities for:
 - **Marine safety** (own mariners and other marine shipping), environmental monitoring and protection, and
 - Provide a **common operating picture (COP)** for use in collaborative management of marine incidents and occurrences (SAR, spill response, Places of Refuge management, etc).
- Canadian Coast Guard has adopted EMSA for use with Indigenous and coastal communities.



IMO Position on AIS data dissemination



Maritime security - AIS ship data

At its seventy-ninth session, in December 2004, the **Maritime Safety Committee (MSC)** agreed that, in relation to the issue of freely available automatic information system (AIS)-generated ship data on the world-wide web, the publication on the world-wide web or elsewhere of AIS data transmitted by ships could be detrimental to the safety and security of ships and port facilities and was undermining the efforts of the Organization and its Member States to enhance the safety of navigation and security in the international maritime transport sector.

The Committee condemned the regrettable publication on the world-wide web, or elsewhere, of AIS data transmitted by ships and urged Member Governments, subject to the provisions of their national laws, to discourage those who make available AIS data to others for publication on the world-wide web, or elsewhere from doing so.

In addition, the Committee condemned those who irresponsibly publish AIS data transmitted by ships on the world-wide web, or elsewhere, particularly if they offer services to the shipping and port industries.

Reference: <https://www.imo.org/en/OurWork/Safety/Pages/AIS.aspx>



The Future of EMSA

- **Collaborative governance** of project and system
 - Core: 13 Indigenous partners plus TC/CCG
- **Steady-state** with other opportunities for funding
- **Continuous evolution** of technology
 - Expanded data sources (public and local) with **enhanced, relevant and accessible functionality**
 - Artificial intelligence – advanced processing of repetitive functions
- **Strengthened relationships** with partners and other colleagues
- **New opportunities** for shared governance of marine activities