

SLGO

St. Lawrence
Global Observatory® .ca



SLGO's role regarding data management

**MEOPAR Data Management Workshop
Montreal, March 2014**

SLGO is a corporation created in 2005 that consist in an **information infrastructure** (data portal), online since 2008.

Its mission:

"To promote and facilitate access, dissemination and exchange of electronic data and information about the St. Lawrence system.

How?

By fostering a networking of data producers.

Why?

To meet their needs and those of their clients, to improve knowledge and to assist decision making."



SLGO's strength:

Its members, their expertises, the pooling of information and 8 years of experience.

Target territory: St. Lawrence river, estuary, gulf and watersheds



SLGO's services to its members :

- ➔ **Expertise services in enhanced application development, Web data dissemination and sharing.**
- ➔ **Data integration and access to information resources on SLGO's portal.**
- ➔ **...to answer members and community needs:**
Particularly, by offering an integrated access to best quality data possible, in appropriate time, in order to support best decision-making regarding:

- Security
- Health
- Conservation
- Energy

- Climate
- Commercial navigation
- Natural Resources
- Education



ACTIVE MEMBERS

Université du Québec à Rimouski



Université Laval



Institut National de la Recherche Scientifique



Pêches et Océans Canada



Pêches et Océans
Canada

Fisheries and Oceans
Canada

Environnement Canada



Environnement
Canada

Environment
Canada

Université du Québec à Montréal



Parcs Canada



Parcs
Canada

Parks
Canada

Université du Québec à Trois-Rivières



Ministère de l'Agriculture,
des Pêcheries et de
l'Alimentation du Québec

Agriculture, Pêcheries
et Alimentation



Ministère du Développement durable,
Environnement, Faune et Parcs
Secteur Faune

Développement durable,
Environnement,
Faune et Parcs



INDUSTRIALS

Port de Montréal



ASSOCIATE MEMBERS

Stratégies Saint-Laurent



Centre Interdisciplinaire de
Développement en Cartographie
des Océans



Technopole maritime
du Québec



Centre de recherche sur les milieux
Insulaires et maritimes (CERMIM)



Regroupement des organismes
de bassins versants du Québec



Réseau d'observation de mammifères marins



Association maritime du Québec - AMQ



Centre de recherche sur
les biotechnologies marines - CRBM



Institut maritime du Québec



OBSERVERS

Agence spatiale
canadienne - ASC



Agence spatiale
canadienne Canadian Space
Agency

Développement
économique Canada - DEC



Développement
économique Canada
pour les régions du Québec

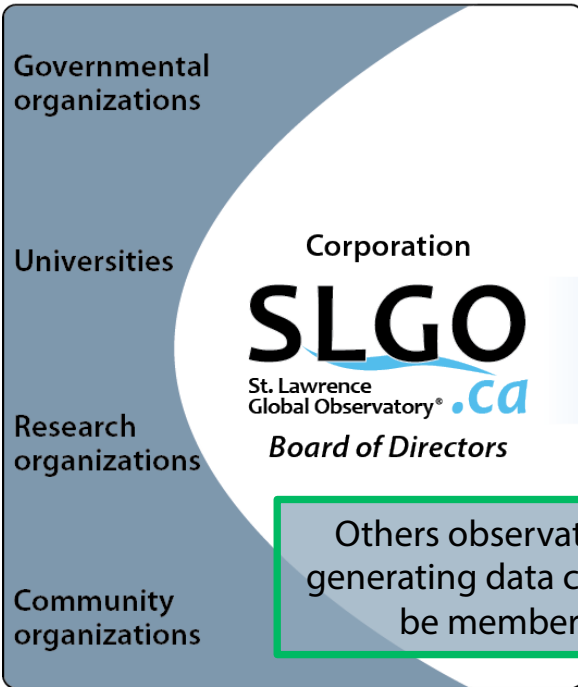
Finances et Économie - MFE

Finances
et Économie



Collaborative Model (Developed in 2005)

MEMBERSHIP



Information Technologies
Web Development

Data
Information
Knowledge
▶ access

Data users

Decision makers

Industry

Innovating companies

Strategic networks

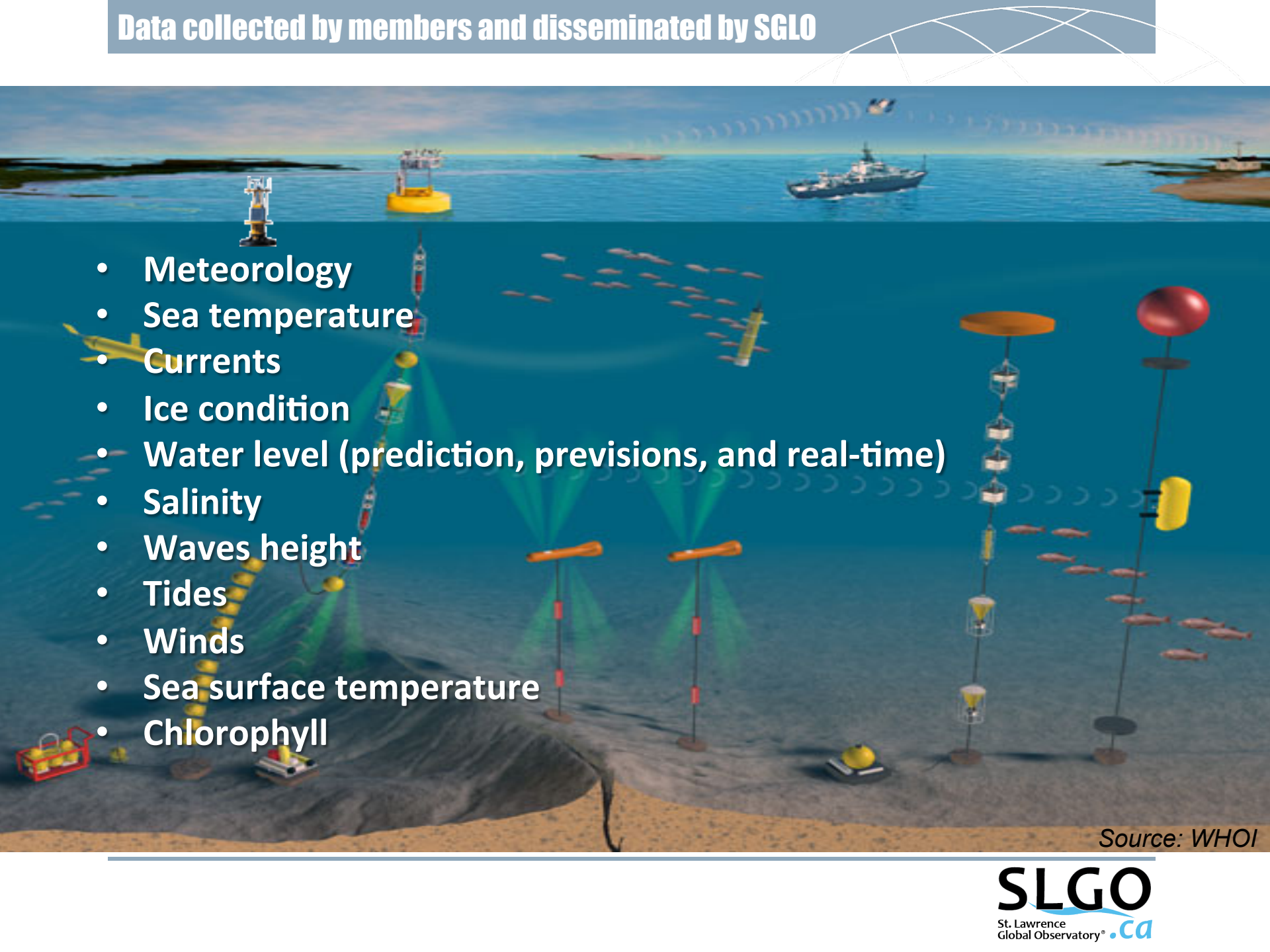
Collective means, infrastructures,
information and expertises
of member organizations

Efficiency
Savings
Value-added

Socio-economic benefits
Development
Visibility and exposure



Membership fees
+
haddock financed data disseminating projects
=
Not enough

- 
- Meteorology
 - Sea temperature
 - Currents
 - Ice condition
 - Water level (prediction, previsions, and real-time)
 - Salinity
 - Waves height
 - Tides
 - Winds
 - Sea surface temperature
 - Chlorophyll

Source: WHOI



- **Scientific community**
- **Decision makers (governments, departments, managers...)**
- **Industries (commercial navigation, fisheries, aquaculture)**
- **Canadian Coast guard (SAR)**
- **Engineering firms (ex: for environmental assessment)**
- **University teachers and graduated student**
- **General public.**

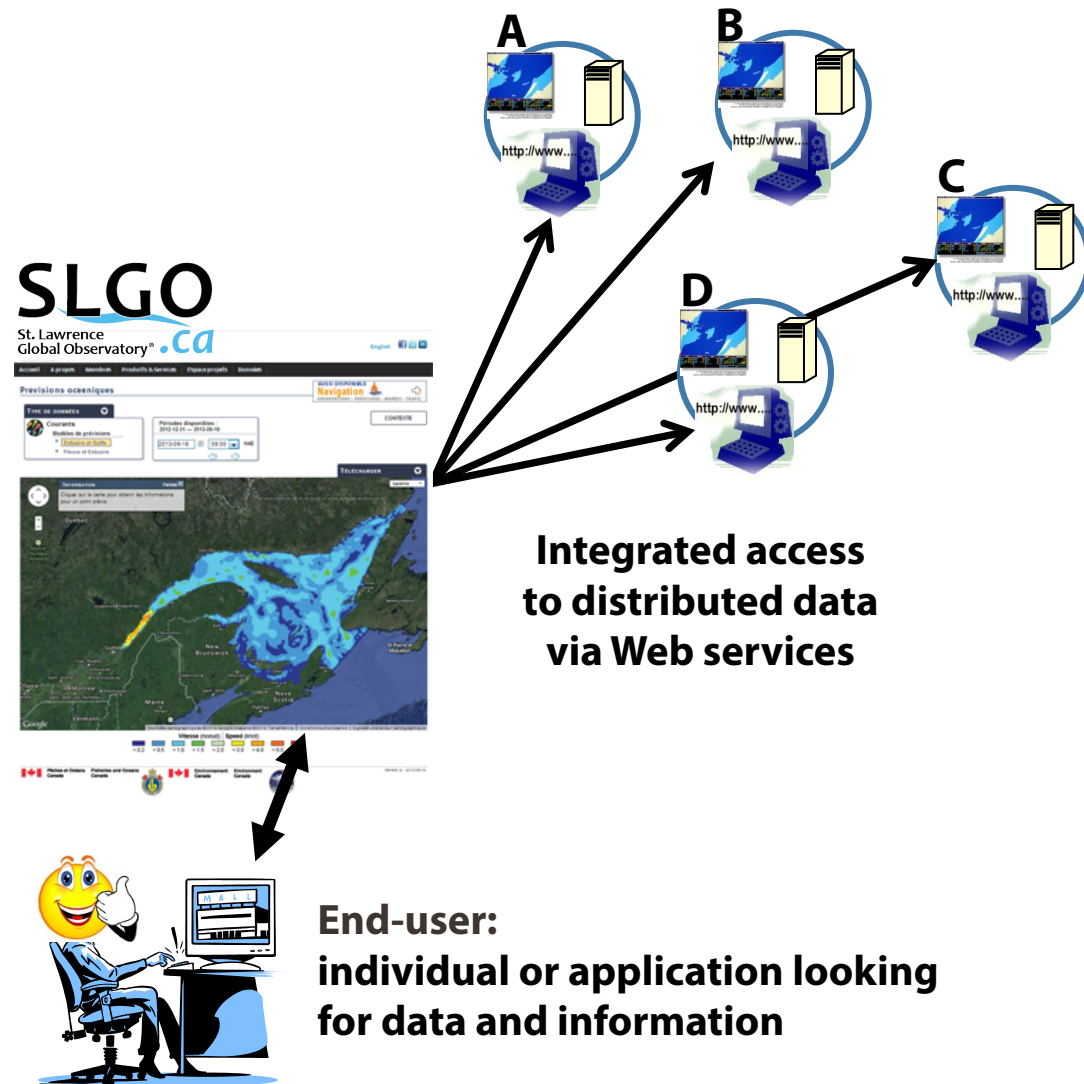
How works the pooling of the IT heritage at SLGO ?



In a gouvernance model

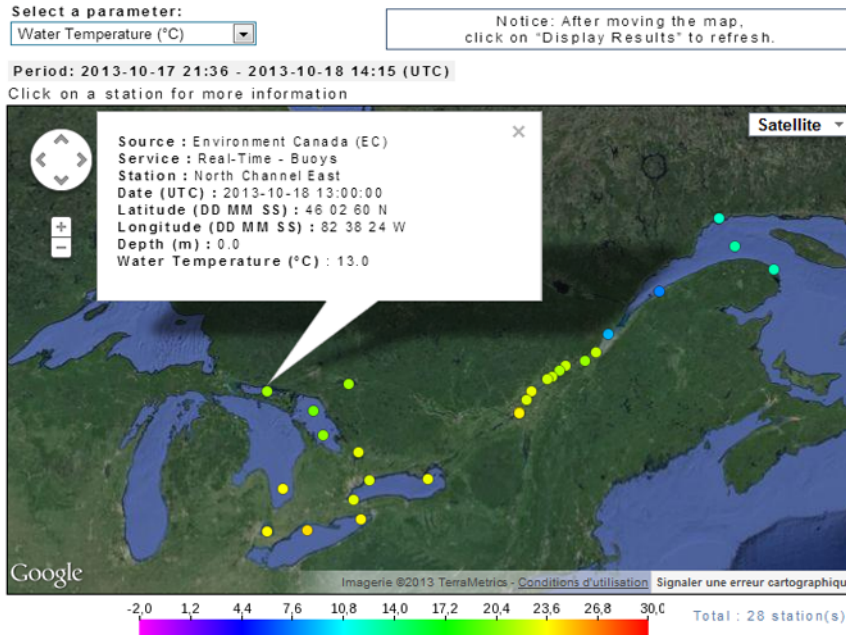
- interoperability
- common standards
(data exchange protocols, metadata, security, etc.)
- common values :
 - respect of mandates, jurisdictions and technological choices
 - collaboration
 - Efficiency
 - Respect of intellectual property
- quality data, products and services
- secure architecture
- Increased value of information assets

Data producers and systems





St. Lawrence Observation Network



Pêches et Océans
Canada

Fisheries and Oceans
Canada

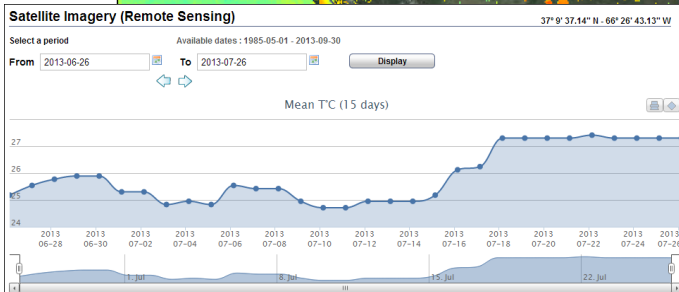
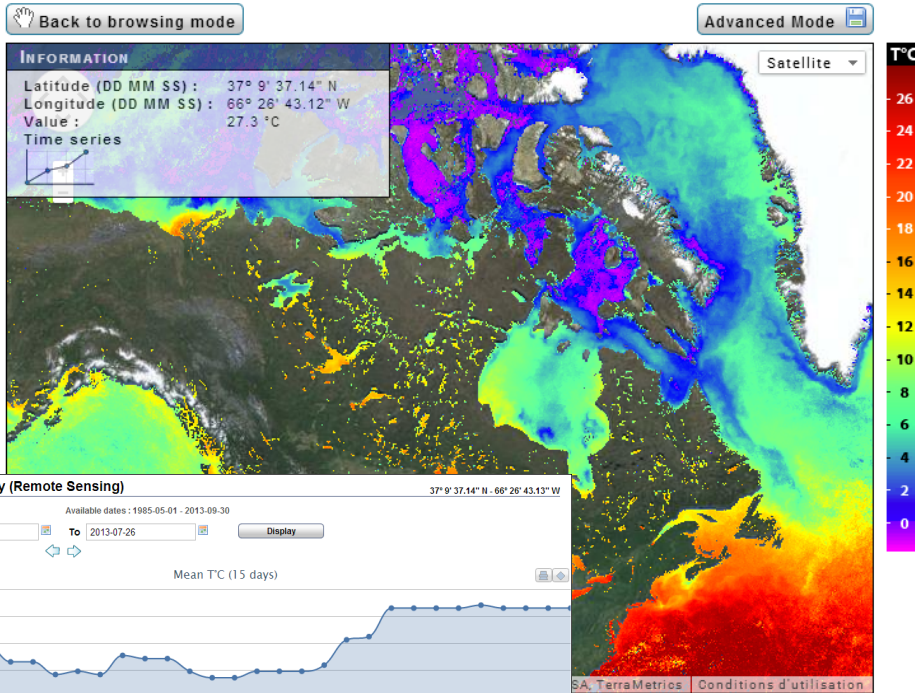
- Multi-partner collaborative initiative (government and academic)
- Network of stations (buoys, tide gauges, meteorological stations, thermograph...)
- Real-time and archived data (x,y,z,t)
- Various output (map, graph, table)
- On-Line: <http://SLGO.ca>

Satellite Imagery (Remote Sensing)

ⓘ

Available dates: 1985-05-01 - 2013-09-30

Mean T°C • 2013-07-26 • 15 days



- Satellite Imagery–Sea Surface Temperature-SST
- National Coverage
- Various Output Format
- On-Line: <http://SLGO.ca>

Data Extraction Advanced Mode

Step 1: Define a period

Data Types:

Available dates: 1985-05-01 - 2013-09-30

Start Date(s):

Periods:

Step 2: Select a region of interest

Spatial References:

Area:

long. min. lat. min. long. max. lat. max.
 -159.765625 31.025136245 -40.234375 76.509252372

Format:

Step 3: Define Image Properties

Projection:

epsg:

Maximum Size (pixels): Width Height

File Type:

Quality:

Display: min max





Title:

Overlay: Land mask Coast lines Palette

Grid:

Ocean Forecasts

DATA TYPE



-  **Currents**
Surface current speed and direction forecasts for the St. Lawrence River, Estuary and Gulf
-  **Water Level**
Water level for the St. Lawrence River Channel between Montreal and Saint-Joseph-de-la-Rive
-  **Ice (seasonal)**
Sea ice concentration & thickness for the Estuary & Gulf of St. Lawrence
-  **Water Temperature**
Sea surface temperature for the Estuary & Gulf of St. Lawrence

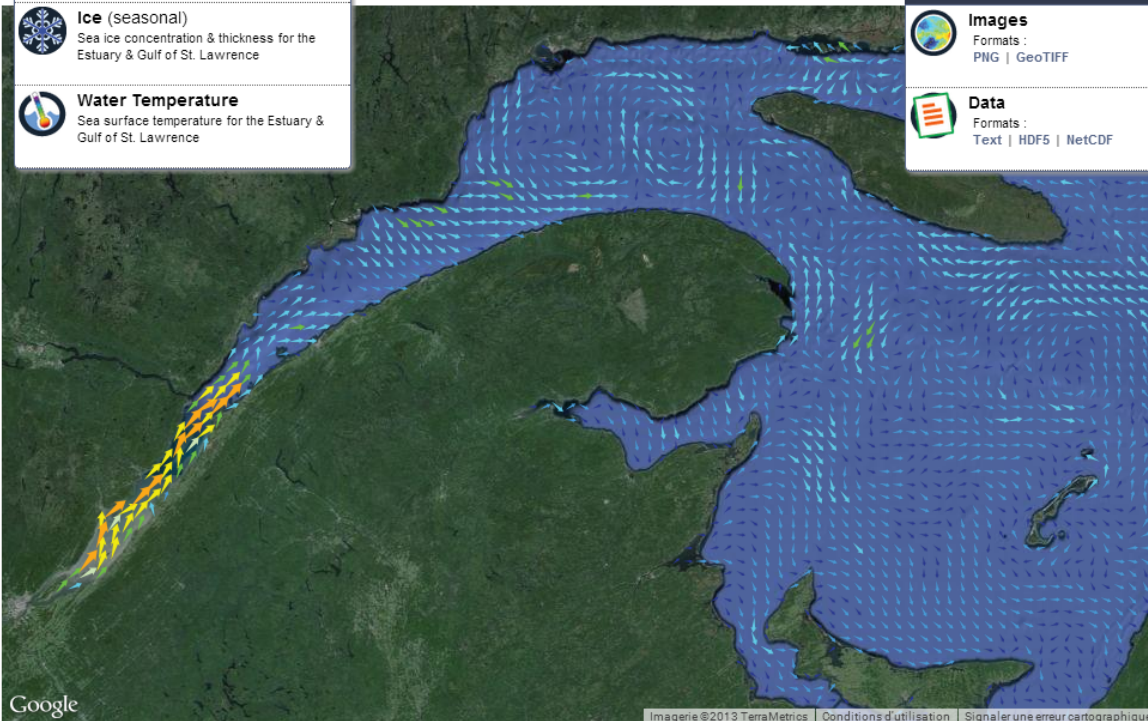
Available Periods:
2012-12-31 — 2013-10-19

2013-10-19 11:00 EDT

CONTEXT


DOWNLOAD

-  **Images**
Formats : PNG | GeoTIFF
-  **Data**
Formats : Text | HDF5 | NetCDF




Vitesse (noeud) | Speed (knot)


< 0.2	< 0.5	< 1.0	< 1.5	< 2.0	< 3.0	< 4.0	< 5.0	≥ 5.0
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Fisheries and Oceans Canada



Pêches et Océans Canada



Environment Canada



Environnement Canada

- Operational oceanography
- Hourly forecasts: sea ice, surface currents
- Inter-institutional collaboration
- On-line at **http://SLGO.ca/**

Physical oceanographic datas, but also biological data

BIODIVERSITÉ

Selectionner une source de données

<p>ALGUES</p> <p>À venir</p>	<p>INVERTÉBRÉS</p> <p>À venir</p>	<p>MAMMIFÈRES MARINS</p> <p>À venir</p>
<p>OISEAUX</p> <ul style="list-style-type: none"> ▪ SCF-BIOMQ 	<p>POISSONS</p> <ul style="list-style-type: none"> ▪ PASL-MDDEFP-RSI ▪ MDDEFP-UQTR-Lampisilis ▪ PASL-MDDEFP-RIPE ▪ MPO-Missions de recherche ▪ MPO-Pêches sentinelles 	<p>REPTILES</p> <p>À venir</p>

Know disseminating datas from NGOs and from crowdsourcing tools on SLGO's site (marine mammals and capelin observation)

Biodiversité

Source de données Oiseaux • EC - Colonies d'oiseaux marins ?

Type de données	Année	Espèce
Nombre d'oiseaux nicheurs ▼	Au dernier inventaire ▼	Cormoran à aigrettes ▼

Information

Année: 2008

Colonie: Bonaventure (Bonaventure-Paspébiac)

Latitude: 48.0172

Longitude: -65.4676

Espèce: [Cormoran à aigrettes](#)

Référence: SCF 2008

Dernier inventaire: Oui

Nombre d'oiseaux: 568

© Jean-François Rall, SCF

Légende

- > 1000
- > 100 et ≤ 1000
- > 10 et ≤ 100
- > 0 et ≤ 10
- 0

Map data ©2014 Google, INEGI Imagery ©2014 TerraMetrics, Terms of Use, Report a map error

Référence: Ministère de l'Environnement du Canada. Observations d'oiseaux marins. Observatoire global de Saint-Laurent (<http://OGSL.ca>). Consulté le 2014-03-20

[Télécharger](#)

⇒ Needs

- For a national, higher political will to fund data dissemination.
- Common standards for data management and data access.
- **Need for an effective national strategy and governance structure to maximize benefits of investments :**
 - To date, the various OOS activities represent isolated, regional, and often technology driven projects.
 - No national framework exists for developing long term, coordinated objectives and for sharing expertise.
 - This fragmented approach decreases the potential value, at a national level, of the investments made and it decreases Canada's potential effectiveness at the international level.
 - Canada has a rich opportunity to use its unique regional differences to maximize its OOS capabilities and expertise,
 - but** to truly capitalize on this requires national coordination, *leadership*, and accountability.

⇒ Needs

To measure and communicate benefits of OOS:

- To obtain long-term continuing political, financial, and user support there is a need for all of the OOS efforts to focus more on who the end users are, what do they require, and how well the systems contribute to tangible added value.
- Canada needs to move beyond the published lists of possible benefits and now start to track real economic, environmental, and social benefits.



Issues

- Data availability from research center and scientific
- Reluctance to share and disseminate data
- Metadata not described nor catalogued
- No quality control on data
- Absence of standard
- Time and money from data producers and scientific to provide data to SLGO for dissemination
- Resources in members organization to implement Web services to access data.



Opportunities

- To Increase SLGO's membership base in order to maximize the achievement of it's goal.
- To increase knowledge of the existence and availability of Canadian Ocean's data.
- Partnership with other Canadian or US observatories ?
- Partnership in initiative like the Galway statement to join data acquisition and sharing effort across the Atlantic ocean.



Not yet, but working on it...



Thanks for your attention

ANY QUESTIONS?

<http://slgo.ca> | info@ogsl.ca

HOME ABOUT DATA PARTNERS CONTACT US

Canadian Oceans Observation System
COOS
SCOO
Système canadien d'observation des océans
CANADIAN OCEANS OBSERVATION SYSTEM - COOS • SYSTÈME CANADIEN D'OBSERVATION DES OcéANS - SCOO

Home

Observatories

- " Smart Bay
- " CoinAtlantic
- " SLGO
- " GLOS
- " Venus
- " Neptune

Canadian Oceans Observation System - COOS



A map of Canada with several locations marked with pins and labels: Venus (west coast), Neptune (west coast), SLGO (Atlantic coast), CoinAtlantic (Atlantic coast), SmartBay (Atlantic coast), GLOS (Atlantic coast), and Ocean Tracking Network (Atlantic coast). The word 'CANADA' is written across the center of the map. A large 'DRAFT 2012' watermark is overlaid on the map.

Canadian OOS study summary

Recommended Future OOS Industry Development Activities

The analysis of the survey results has shown a number of key OOS activities that should be undertaken for the sector.

- 1. Initiate National Coordination**
- 2. Utilize Innovation for Efficiency and Productivity:** A plan to evaluate potential benefits to government operations and industry should be carried out. This evaluation can be a guide to future OOS investments for efficiency and productivity to be able to make the best decisions for Canada's oceans and Great Lakes.
- 3. Improve OOS sustainability:** An initiative to assist OOS with the development of strategies, standards, and plans to improve their sustainability is required.
- 4. Encourage Integration of Satellite Observations in OOS**
- 5. Utilize Innovation for Export:** Canada should carry out efforts with industry to expand its market share for OOS technology.