# Ocean and Coastal Governance: Networking and Informatics


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# Outline

- Ocean Governance requires information – no one government/agency can manage it all
  - Needed for decisions and actions
  - Needed to communicate with others
- What is information?
  - text, data, images, maps, etc.
- Examples of Online tools
  - COINAtlantic (http://coinatlantic.ca)
  - Social Media (Facebook, Twitter, etc.)
- Technology helps – but Nations and agencies must work together for effective Coastal and Ocean Governance

# Ocean Governance

- You can't manage what you don't know
- No one person can manage all of the information
- Information management technology can help support Oceans Governance
- Requires two-way flow of information
- Technology is not sufficient – agencies and individuals must work together to access the required information

# 2010 Fall Report of the Canadian Federal Commissioner of the Environment and Sustainable Development

"Solid, objective, and accessible information is essential to identify and respond to the quickening pace and complexity of environmental change, in Canada and globally."

http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201012_e_34435.html

# Information

- Text – reports, documents, e-mails, pdf
- Photographs – hard copy, digital
- Maps – hard copy, on-line, GoogleEarth
- Social Media – facebook, blogs, tweets
- Other??


Yuxi
玉溪
GUANGXI
GUANGDONG
Jieya
揭阳
Guigang
贵港市
Nanning
南宁
Guangzhou
广州
Hong Kong
香港
Qinzhou
钦州
Chongzuo
崇左市
tp. Thái Nguyên
Maoming
茂名
Hanoi
Zhanjiang
湛江
Hai Phong
Haikou
海口
Laos
HAINAN
tp. Vinh
Sanya
三亚
Vientiane
ວຽງຈັນ
UDON THANI
SAKON NAKHON
KHON KAEN
tp. Huế
Da Nang
UBON RATCHATHANI
Vietnam
Krong Siem Reap
tp. Pleiku
tp. Quy Nhơn
The Importance of Information

*National Parks consist of 12% of the land cover in Canada.*

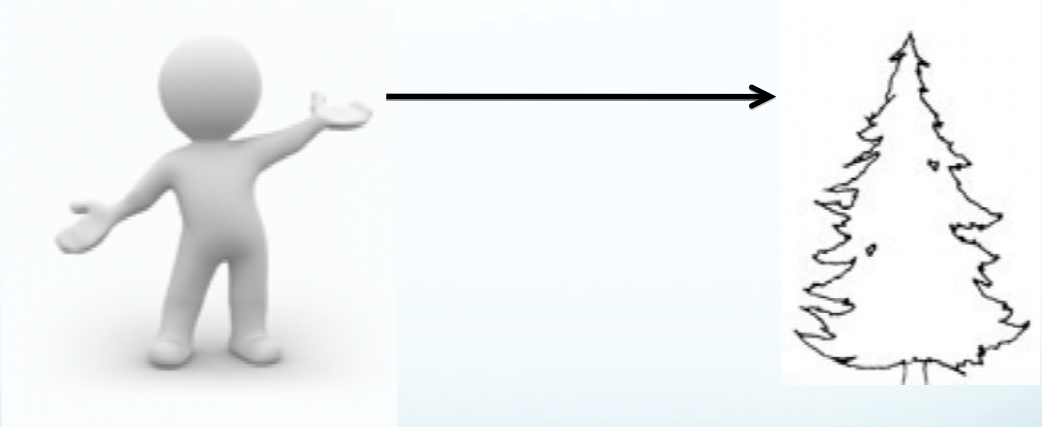

North ★ Pole
Norwegian Sea
Norway
Polar Ice
Greenland Sea
UK
Russia
Arctic Ocean
Quttinirpaaq
Kalaallit Nunaat
(Grønland)
(Denmark)
Iceland
Bering Strait
Alaska
(USA)
Ivvavik
Aulavik
Vuntut
Baffin Bay
Scale
300 0 300 600 900 km
atlas.gc.ca
Tuktut Nogait
Sirmilik
Auyuittuq
Davis Strait
Yukon
Kluane
Nunavut
Northwest Territories
Nahanni
Ukkusiksalik
Labrador Sea
Atlantic Ocean
Pacific
Ungava Bay
Newfoundland and Labrador
Torngat Mountains
Wood Buffalo
British Columbia
Hudson Bay
Gwaii Haanas
Alberta
Saskatchewan
Wapusk
Terra Nova
Gros Morne
Jasper
Elk Island
Manitoba
Mingan Archipelago
Glacier
Mount Revelstoke
Banff
Prince Albert
James Bay
Quebec
Forillon
(FR)
Cape Breton Highlands
Pacific Rim
Yoho
Kootenay
Kouchibouguac
PEI
Prince Edward Island
Ocean
Gulf Islands
Waterton Lakes
Riding Mountain
Saguenay–St Lawrence
Fundy
NB
NS
Grasslands
Ontario
La Mauricie
Kejimkujik
United States of America
Pukaskwa
Georgian Bay Islands
Lake Superior
Fathom Five
Bruce Peninsula
St Lawrence Islands
Lake Michigan
Lake Huron
Lake Ontario
Lake Erie
Point Pelee
Canada's National Parks
National Parks / National Park Reserves
National Marine Conservation Areas
NS = Nova Scotia
NB = New Brunswick
PEI = Prince Edward Island
© 2007. Her Majesty the Queen in Right of Canada, Natural Resources Canada.

National Parks consist of 12% of the land cover in Canada.

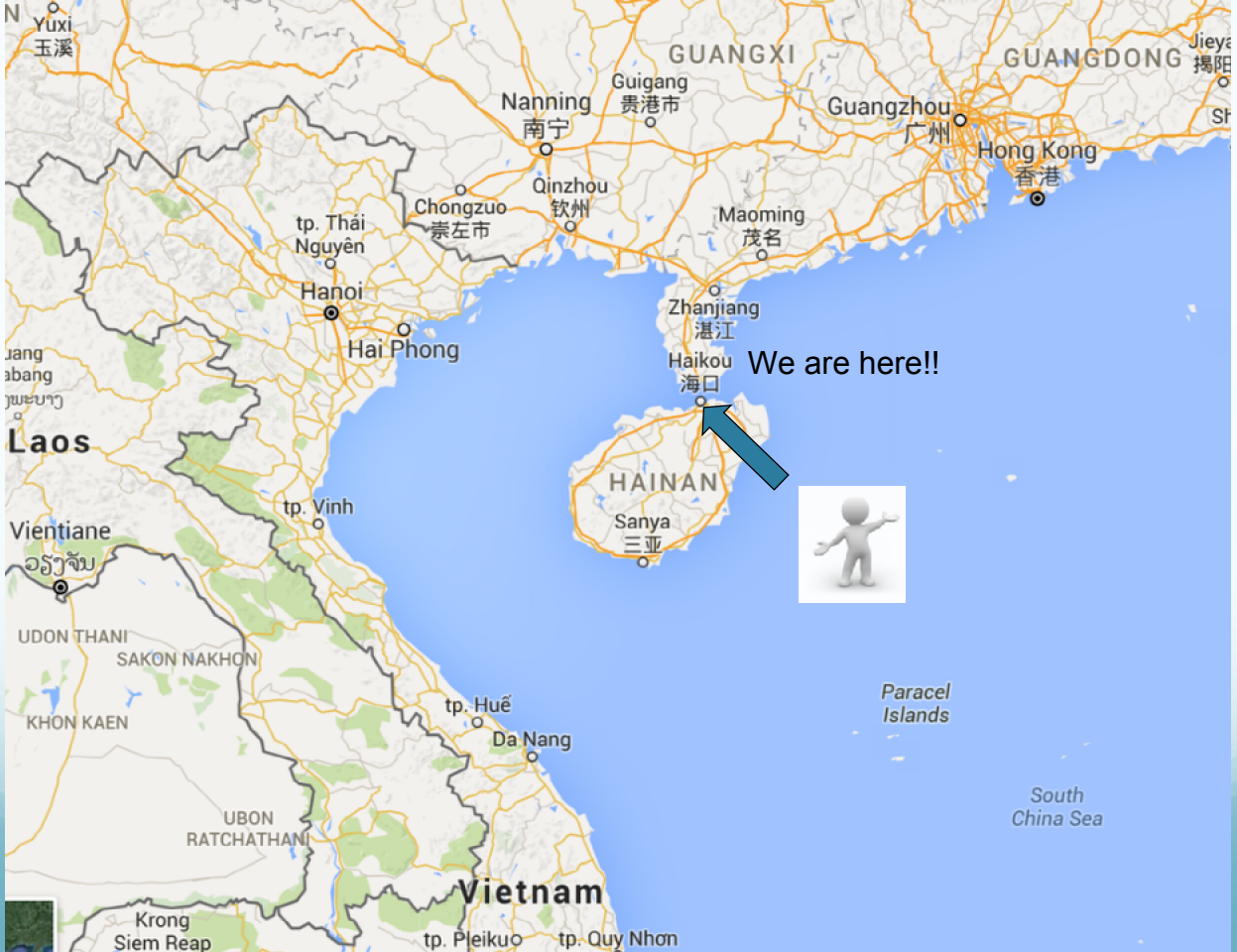
Apple vs.

vs.

# EGOCENTRIC



People see things relative to where they are in geographic space.


Yuxi
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贵港市
Guangzhou
广州
Hong Kong
香港
Qinzhou
钦州
Chongzuo
崇左市
Maoming
茂名
tp. Thái Nguyên
Hanoi
Hai Phong
Zhanjiang
湛江
Haikou
海口
We are here!!
Laos
HAINAN
Sanya
三亚
tp. Vinh
Vientiane
ວຽງຈັນ
UDON THANI
SAKON NAKHON
KHON KAEN
tp. Huế
Da Nang
Paracel Islands
South China Sea
UBON RATCHATHANI
Vietnam
Krong Siem Reap
tp. Pleiku
tp. Quy Nhơn

# Summary

Information management & flow depends on:

- Presentation (map, text, etc.)
- Audience
- Language (cultural, technical, etc)

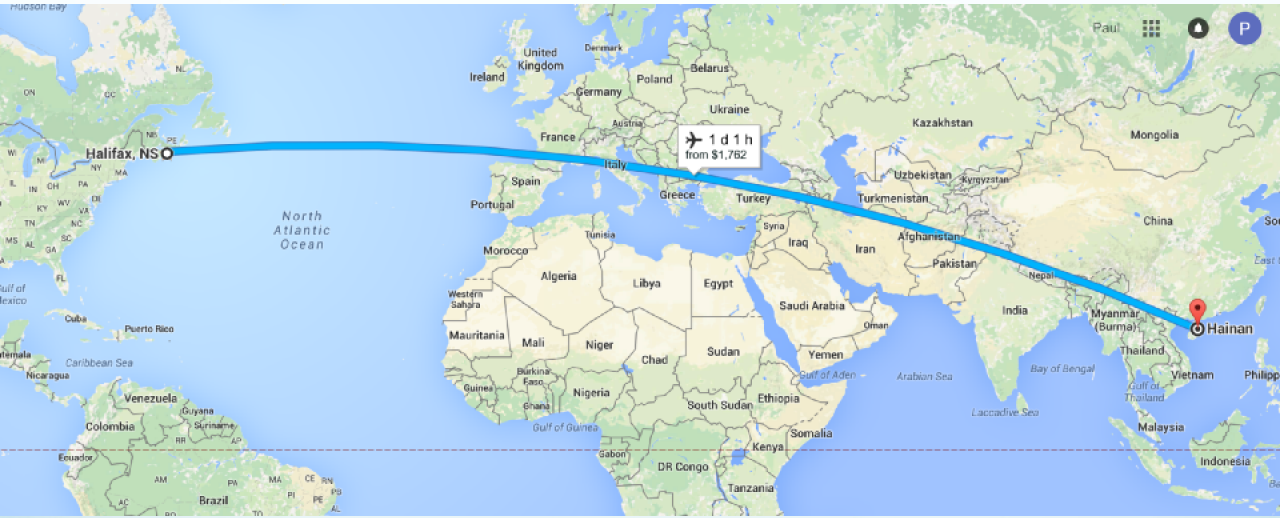
THIS REQUIRES WORK TO BE SUCCESSFUL

# Spatial Information

- Hard copy maps
- Geographic Information Systems (GIS)
- GPS
- MapQuest
- GoogleEarth/GoogleMaps
- COINAtlantic

# How can Spatial Information help your ocean governance?

1. Describe your organization
2. Education others
3. Improved decision-making & Planning
4. Represent geographic jurisdiction


Halifax, NS
1 d 1 h
from $1,762
Hainan
North Atlantic Ocean
Caribbean Sea
Gulf of Guinea
Arabian Sea
Bay of Bengal
Laccadive Sea
Gulf of Aden
Gulf of Thailand
United Kingdom
Ireland
Denmark
Belarus
Poland
Germany
Ukraine
France
Austria
Italy
Spain
Portugal
Greece
Turkey
Kazakhstan
Mongolia
Uzbekistan
Kyrgyzstan
Turkmenistan
China
Syria
Iraq
Iran
Afghanistan
Pakistan
Nepal
India
Myanmar (Burma)
Thailand
Vietnam
Malaysia
Indonesia
Morocco
Tunisia
Algeria
Libya
Egypt
Western Sahara
Mauritania
Mali
Niger
Chad
Sudan
Saudi Arabia
Oman
Yemen
Nigeria
Burkina Faso
Guinea
Ghana
South Sudan
Ethiopia
Somalia
Kenya
Gabon
DR Congo
Tanzania
Cuba
Puerto Rico
Nicaragua
Venezuela
Guyana
Suriname
Colombia
Ecuador
Brazil


US Dept of State Geographer
Image Landsat
© 2015 Google
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Google earth

2. Education others
3. Improve Decision-making & planning

Applications

# Avon River, Nova Scotia 1966


Reprinted from: http://www.facebook.com/group.php?gid=12202985330

# *Avon River, Nova Scotia 1992*

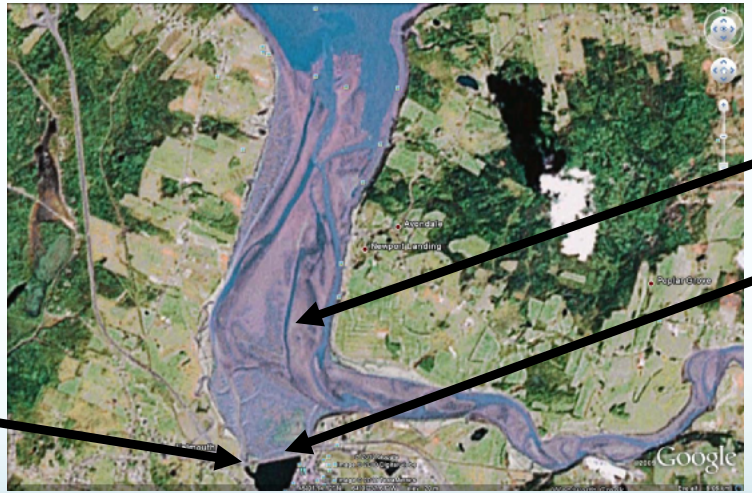
Mud
"New Land"

Location of
site visit
June 19, 2015

Highway

Reprinted from: http://www.facebook.com/group.php?gid=12202985330

# *Avon River, Nova Scotia 2010*




http://maps.google.com/maps?ll=45.00832,-64.127621&z=13&t=h&hl=en

# Network – COINAtlantic http://coinatlantic.ca

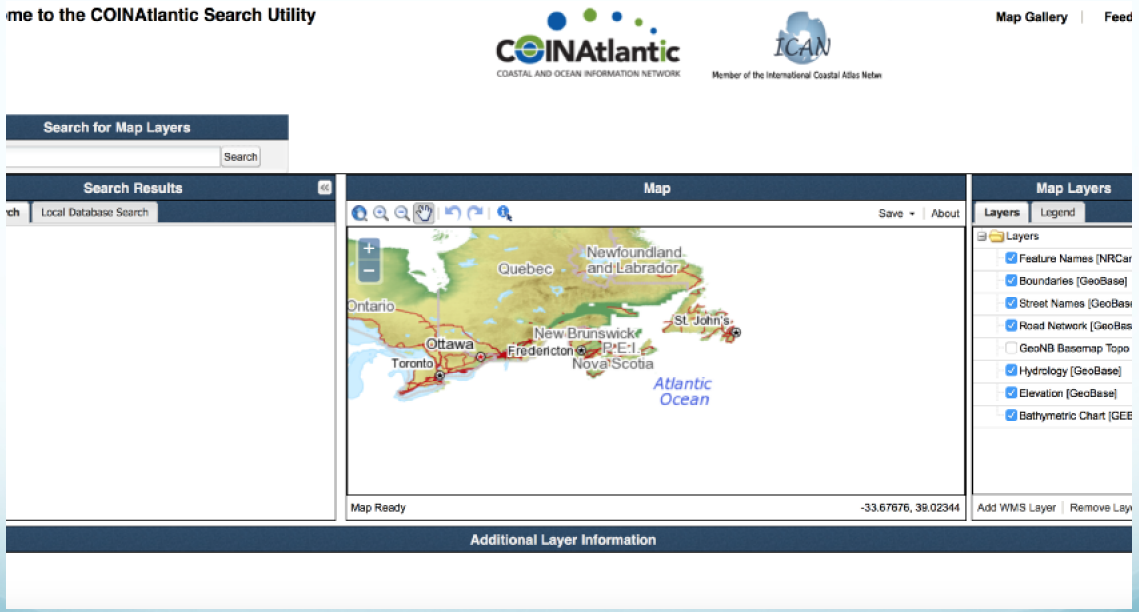
- COINAtlantic Search Utility (CSU)
  - http://coinatlantic.tools/csu/
- COINAtlantic Geocontent Generator (CGG)
  - http://coinatlantic.tools/cgg/
- Data Accessibility Self-Assessment Tool (CDAST)
  - http://coinatlantic.tools/cdast/

# Tools

- Create and publish geospatial information
- Search, find and look at on-line geospatial information
- Share and collaborate using geospatial information for ocean governance

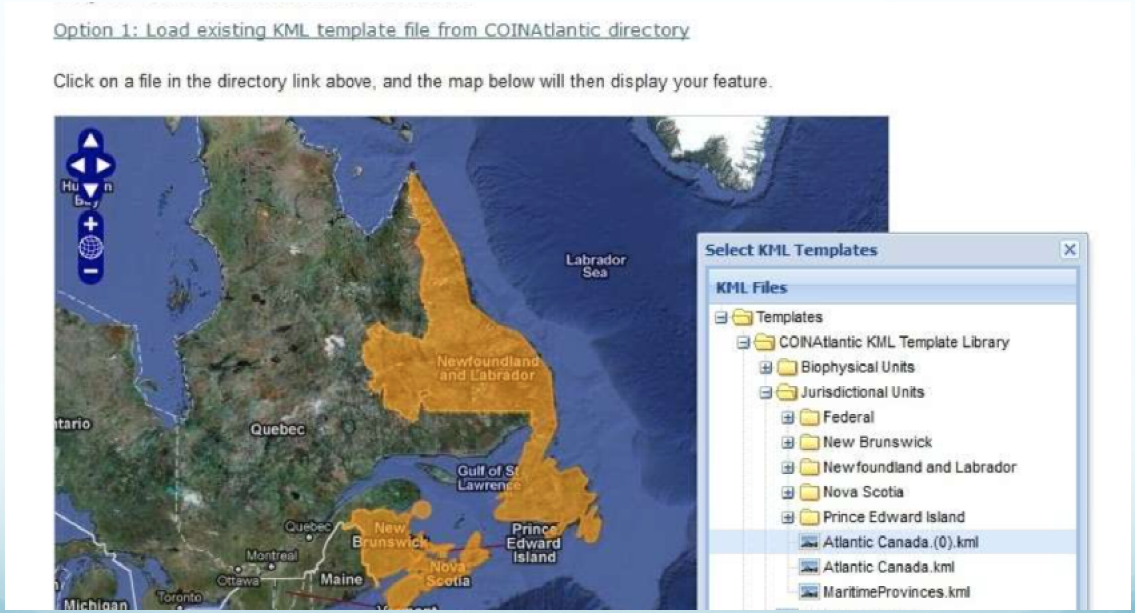
http://coinatlantic.tools/csu/gallery.php

# COINAtlantic Search Utility (CSU)




http://coinatlantic.toolsCSU/

# COINAtlantic Geocontent Generator (CGG)




http://coinatlantic.tools/CGG/

# Data Accessibility Self-Assessment Tool (CDAST)

**Principle 11: Evaluation**
Periodic evaluation by user groups

5 - A regular program of evaluation is in place.

3 - Ad hoc evaluation is in place.

1 - Crisis based evaluation is conducted.

0 - No evaluation.

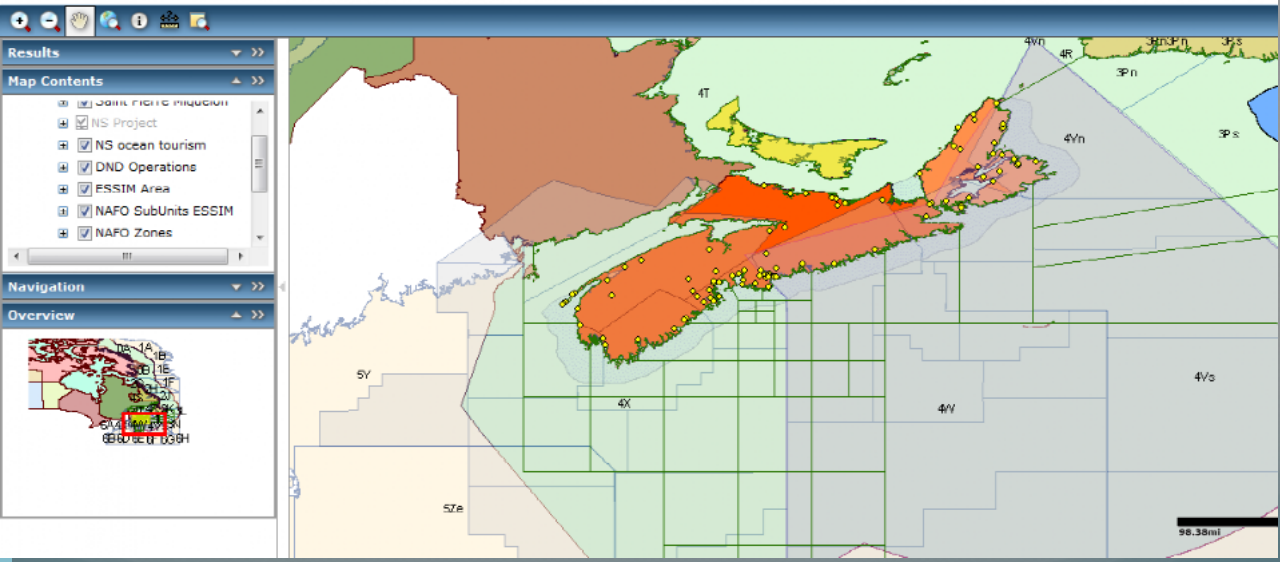

http://coinatlantic.tools/cdast/

# Represent geographic jurisdiction – on water

Applications

COINAtlantic

Chedabucto Bay, Nova Scotia:- Marine Cadastre



# SlideShare upload

- Publically accessible file
- can be E-mailed
- viewed on cell-phone

http://www.slideshare.net/

**Search slideshare for**
**"Networking and Informatics"** or
**"Paul Boudreau"**

1. Education and awareness

# Egocentric

Humans visually compare distance of objects in relation to themselves, Relative distance- distances between observer and object

We also try to place our location when we see a map, therefore when have an information booth up with a large map, people will be drawn in to place themselves and then they can be attached with information

# Egocentric – cont.

students come to us having been "exposed to a broad range of information daily ... [and that so] far our educational system has failed to take seriously and to adequately respond to the fact that so much of this information is in visual form" (Hill, 2004, p. 108).

- 1960s and 1970s information was based on writing

- The future of education is moving towards a marriage between writing and visuals – such as maps

# Summary

- Use maps to:
  - educate,
  - engage,
  - facilitate planning,
  - clarify jurisdiction,
  - etc.
- Many on line sources of information:
  - GoogleMaps
  - GoogleEarth
  - etc.

# Information Access

- You can't do it alone
- Modern technology can help
- Technology is not enough
- Agencies and individuals need to participate
- Oceans Governance requires two-way flow of information

# Web 1.0

Hyperlinks between webpages began with the release of the WWW to the public in 1993:

- Static pages with infrequent changes
  - Daily, weekly or monthly
- One way flow of information
  - Prepared by a single author
  - Viewed by others
- Communication through e-mail addresses

http://en.wikipedia.org/wiki/Web_2.0

# Web 2.0

The term **Web 2.0** is associated with web applications that facilitate:

- participatory information sharing
- interoperability,
- user-centered design
- collaborative

http://en.wikipedia.org/wiki/Web_2.0

# Web 2.0

- Constantly changing information
  - By-the-minute, hourly
- Two way flow of information
  - The author contributes information
  - The participants contribute information
- Multi-person Communication
  - Blogs
  - Comments
  - Questions
  - Contributions
  - Posts
  - etc., etc., etc.

# Web 2.0 Tools

- Wikipedia: http://www.wikipedia.org/
- Facebook: https://www.facebook.com/
  - "Speak Up for the Blue" – Andrew Lewin
- Twitter: http://twitter.com/
  - Elizabeth de Santo, Assistant Professor of Environmental Studies at Franklin & Marshall College - Lancaster, Pennsylvania
- Blogs
- Etc., etc., etc.

http://en.wikipedia.org/wiki/Web_2.0

# Web 3.0 – The Future???

- Semantic Web
  - http://en.wikipedia.org/wiki/Semantic_Web
- personalization
- "the computer is generating new information", rather than humans

# Technology Helps – but People Network

- **Atlantic Coastal Zone Information Steering Committee (ACZISC)** example:
  - Federal Departments
    - Fisheries & Natural Resources
    - Coast Guard
    - Environment
    - Defense
  - Provincial Departments (N.S., N.B., P.E.I. & N.&L.)
    - Fisheries
    - Environment
  - NGO
  - University
  - Private Sector

# ACZISC Networking Products

- Monthly Coastal Newsletters
  - http://coinatlantic.ca/index.php/aczisc-coastal-update-e-newsletter
- COINAtlantic Tools
- State of the Environment Reporting
- Unaligned Networking Hub
- Several Face-to-Face meetings annually

# ASEAN + 1

- China-ASEAN Academy on Ocean Law and Governance
  - Face-to-Face meeting
  - Potential Alumni network
  - Future courses
- Please send your mobile-phone video to someone outside this room
  - Child/Parent
  - Supervisor
  - Colleague
- ?????????

# Information for Oceans Governance

- **You can't manage** what you don't know
- **No one person** can manage all of the information
- Information management **technology can help** support Ocean Governance
- **Technology is not sufficient** – agencies and individuals must work together to access the required information – e.g., Coastal and Oceans Networks.

# Thanks!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- http://internationaloceaninstitute.dal.ca/SRF.htm