

COASTAL ACTIVITIES IN ATLANTIC CANADA

Roundtable and Presentations

ACZISC Meeting #53

Date: Wednesday and Thursday, 23-24 January 2008

Location: Best Western Hotel, Charlottetown, Prince Edward Island

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PLEASE NOTE: "Coastal Activities in Atlantic Canada" is a subset of the Minutes of ACZISC Meeting #53, held on 23-24 January 2008 in Halifax, Nova Scotia.

To download the Minutes and Coastal Activity reports of previous ACZISC meetings, access the ACZISC website at <http://aczisc.dal.ca/docs.htm>.

COASTAL ACTIVITIES IN ATLANTIC CANADA

PRESENTATIONS

The following presentations (available online at aczisc.dal.ca/docs.htm#ACZISC) were made:

- **GeoConnections - A Brief Overview** by Tony Turner, GeoConnections Program, Natural Resources Canada
- **Update on COINAtlantic - the Coastal and Ocean Information Network for Atlantic Canada** by Paul Boudreau, ACZISC Secretariat
- **Watershed Planning and Management - Implementation on Prince Edward Island** by Bruce Raymond, PEI Department of Environment, Energy and Forestry
- **Coastal Zone Disaster Management Decision Support System** by Mike Pearson, GeoNet Technologies and Tim Webster, Applied Geomatics Research Group, College of Geographic Sciences - see <http://www.geonet-tech.com> for additional information, including animations.

ROUNDTABLE REVIEW OF COASTAL ACTIVITIES and UPDATES ON ACZISC RELATED PROGRAMS

FISHERIES AND OCEANS CANADA: John Legault, DFO Gulf Region, Oceans and Science Branch, reported the following:

- **Ecological Risk Assessment:** An assessment of risks to socio-economic-cultural ecosystem dependencies will be included in the ecological risk assessment of the Northumberland Strait. The DPSIR (driver, pressure, state, impact, response) model for conducting integrated environmental assessments and reporting on the state of the environment is being adopted. A diagram of the model is available at www.unep.org/dewa/assessments/ecosystems/water/vitalwater/12.htm#13.
- **Coastal Tools Development:** The proposal submitted to GeoConnections for funding to develop a web-based application to facilitate watershed and ecosystem risk analysis was unsuccessful. Nonetheless, efforts are continuing to develop the application. A contract has been let for the 1st phase of this project, *i.e.* problem formulation and risk characterization using available geospatial data, local knowledge and expert assessments.
- **Ecologically and Biologically Significant Areas:** The Science Branch has completed its identification of Ecologically and Biologically Significant Areas (EBSAa) in the offshore of the Gulf of St. Lawrence. Efforts will now be directed to the identification of coastal or nearshore EBSAs. Areas of interest for potential MPAs will be identified. The process includes the documentation of conservation objectives which is a general statement of the ecological or biological features that should be protected. The Oceans and Science Branch is working with fisheries management personnel to meet the objectives.

Tim Hall, DFO Maritimes Region, Oceans and Habitat Branch, reported the following:

- Major Projects Management Office: The focus of the Office is to coordinate federal environmental impact assessments (EIAs), led by NRCan. As part of a recent Memorandum to Cabinet from NRCan, Oceans and Habitat received funding for 3 new positions on 1 April 2008: two environmental assessor positions and one aboriginal consultation position.
- Eastern Scotian Shelf Integrated Management: ESSIM is moving ahead with action planning. The focus is on spatial analysis of significant areas of the Scotian Shelf. Both the fishing industry and the NGO community are participating in identifying areas that may contribute to the national network of MPAs or areas that require special management measures. A meeting of the ESSIM Stakeholder Advisory Council (SAC) will be held in the near future to update them on progress in approval of the action plan and on the next steps.
- Tidal Power: DFO Science will be holding a Science review of available information on the potential effects of tidal power developments in the Minas Basin. DFO Science has been participating in the Strategic Environmental Assessment (SEA) with the provinces of NS and NB.
- Health of the Oceans: Funding has been received. The focus over the next 4 years will be on MPAs and the Gulf of Maine.
- Ecosystem-Based Management: DFO Maritimes is presently preparing a document outlining how it intends to fully implement EBM in the Region. Because this is part of a national process, it is critical to ensure consistent approaches with all participants in the ICOM process. Vocabulary will be one component.
- Regional Manager Positions: A competition has been initiated for the Regional Manager positions for both Oceans and Coastal Management, and Habitat Management.

Gerard Costello, Canadian Hydrographic Service - Atlantic, reported the following:

- CHS is continuing to conduct multibeam bathymetric surveys in a number of locations including: northern Labrador, southern Newfoundland and the Bay of Fundy.
- Mapping is being done in Northern Labrador for a new navigation route, to include the shoreline. Nine navigational charts will be produced over the next two years.
- Seabed mapping and water column acoustics will be produced for Cape Freels, NL. Mapping to identify cod spawning grounds in Placentia Bay may be carried out.
- This summer will be the 3rd year that multibeam data and water column backscatter data is collected in the Bay of Fundy, in collaboration with the GSC Atlantic. The data is being used for various applications.
- Seabed mapping is being done of the Minas Basin to assist with the design of the proposed tidal energy project.
- More ecosystem mapping is being carried out in support of DFO's initiatives. The area west of Pictou Island was done for the ecosystem overview of the Northumberland Strait.
- Chart revisory surveys will be conducted in Atlantic Canada this summer.
- A new traffic separation scheme for Chedabucto Bay to the Strait of Canso will soon be established. This will be in place in the Shipping Act on 1 May.
- CHS will be hiring 4-6 hydrographers.
- CHS is getting four new ships: three fishing trawlers and a replacement for the Hudson. All will be equipped with hull-mounted multibeam sonar.

- DFO bought back its rights from Nautical Data International for the distribution of CHS electronic charts and data in March 2007. Policies are being formulated by CHS HQ in Ottawa with regard to the delivery of digital data.
- The UN Law of the Sea project is being managed jointly by NRCan and CHS. Mapping activities are planned for both the eastern and western Arctic.

Geoff Coughlan, DFO NL Region, Oceans and Habitat Management Branch, reported the following:

- The Branch is involved with two Large Ocean Management Areas (LOMAs): Placentia Bay/Grand Banks and the Gulf of St. Lawrence.
- Placentia Bay/Grand Banks LOMA:
 - Ecologically and Biologically Significant Areas (EBSAs) and conservation objectives have been identified for the LOMA.
 - Risk/threat assessment for EBSAs and conservation objectives is being undertaken. Areas of interest for potential MPAs will be identified.
 - A contract has been awarded to investigate the social, cultural and economic (SCE) components of the LOMA to contribute to the development of SCE objectives.
 - The first stakeholder-based LOMA committee meeting was held on 11 December 2007. The committee is chaired by Wayne Follett, the DFO Regional Director General.
 - Two Coastal Management Area (CMA) plans will have CMA committee endorsement by the end of March: Coast of Bays and Placentia Bay.
- Gulf of St. Lawrence:
 - DFO NL contributes to overall Gulf-wide efforts regarding EBSAs, conservation objectives and social, cultural and economic objectives.
 - The Department continues to work with CMAs in the Northern Peninsula and Port au Port/Bay St. George and in partnership with ACAP Humber Arm in Bay St. George.
 - Efforts are being made to establish a western NL federal/provincial working group for the Gulf of St. Lawrence Integrated Management (GoSLIM).
- Marine Protected Areas: Management plans have been prepared for Eastport and Gilbert Bay. Scientific monitoring is ongoing: for lobster in Eastport and cod in Gilbert Bay. DFO Oceans is implementing a formal Service Level Agreement with DFO Conservation and Protection for MPA enforcement.
- Coral Conservation Centre of Expertise: DFO NL Oceans have submitted a proposal to house this Centre.
- Community-based Coastal Resource Inventory: In partnership with the Nunatsiavut government, a CCRI is being conducted for Northern Labrador. Traditional Ecological Knowledge will be collected this winter in two communities in Phase one. This CCRI will conclude the CCRI series for the Province.
- FFAW Stewardship Project: DFO is working with the Fish, Food and Allied Workers Union for the delivery of a Fisheries Stewardship Project for the Province's fish harvesters. This will contribute to the ability of the fishery sector to participate effectively in coastal and ocean management processes. This is an extension of a pilot project in Placentia Bay.

ENVIRONMENT CANADA: Anthony Pouw, Environmental Emergencies, reported the following:

- eMap: The web-based mapping system provides a variety of information for use by environmental emergencies officers, coastal zone management teams, law enforcement agents, national security agencies and others. eMap currently features nearly 400 layers of geographic information. It is being continuously updated to ensure the information is both relevant and current.
- Environmental Emergency Management System or E2MS: The Environmental Emergencies program is developing E2MS, a national system that capitalizes on the interoperable geographic data layers available via the CGDI. E2MS is being developed as an information-management decision-making tool. Using the CGDI will provide all emergency-response organizations with a 'common operating picture' of an incident. This project is ongoing. Details are available at www.geoconnections.org/en/aboutGeo/successStories/id=1117.
- Labrador Shoreline Classification: The Environmental Emergencies program is considering a project to develop a shoreline classification for Labrador to complete the classification for Atlantic Canada. This would involve collecting shoreline video and other valuable data from which the shoreline classification can be developed.

Larry Hildebrand, Sustainable Communities and Ecosystems, reported the following:

- The Global Forum on Oceans, Coasts and Islands: Established in 2001, the Global Forum is comprised of ocean leaders from governments, NGOs, international and intergovernmental organizations, the private sector and scientific groups who are working together to advance the global oceans agenda. The Global Forum fosters cross-sectoral dialogue on ocean issues, and advocates for oceans at the highest political levels and taking an ecosystem-based and integrated approach to oceans governance at national, regional and global levels, including treating the water system - from freshwater, to coasts, to oceans - as the interlinked system that it is. In late 2006, the Global Forum began a strategic planning effort to chart strategic activities which could be undertaken to advance the global oceans agenda over the next ten-year period. Fifteen Working Groups have been formed to consider and produce policy recommendations on various dimensions of coastal and ocean management. ([Larry Hildebrand is a member of three of these Working Groups.]) The results of their deliberations will be presented at the 4th Global Conference on Oceans, Coasts and Islands, scheduled for 7-11 April 2008 in Hanoi, Vietnam - www.globaloceans.org/index.html.
- NB Coastal Joint Action Group (NBC-JAG): The NB Coastal Joint Action Group (NBC-JAG) is a team of diverse non-government and government stakeholders who address issues which impact the sustainability of coastal communities of New Brunswick. Its statement of purpose is to collect and provide information and data where needed, discuss solutions and actions related to identified priority issues, and identify human and financial resources to accomplish results. Membership includes federal (EC, DFO Gulf and Maritimes, CFIA); provincial (NB Agriculture and Aquaculture, Environment, Fisheries, Health) and ENGOs from both the Gulf and Fundy coasts - www.ecwinc.org/Programs/Coastal/C4.htm.
- Environment Canada's Process for Renewal of the Atlantic Ecosystem Initiative: The Atlantic Ecosystem Initiative (AEI) is comprised of community- and ecosystem-based coastal coalitions supported through EC's Atlantic Office. The partnerships which EC supports financially, technically and through networking include the 16

ACAP (Atlantic Coastal Action Program) groups, the Bay of Fundy Ecosystem Partnership, the Southern Gulf of St. Lawrence Coalition on Sustainability, the Gulf of Maine Council and several other related initiatives (e.g., Collaborative Environmental Planning Initiative-Bras d'Or). 2008 is the last year of a 5-year funding profile for the AEI and planning has begun to assess progress and plan for a future phase of the Ecosystem Initiative. In order to inform both the ecosystem needs and geographic areas of focus for the coming phase, it is necessary to have an overview assessment of the Atlantic ecosystems, including their biophysical and socio-economic conditions, ecologically important areas, areas subject to industrial activity and impact, and existing governance approaches. This process will be greatly informed by the existing data sources identified through ACZISC and potentially supported through COINAtlantic.

PUBLIC SECURITY CANADA: Gordon Lavoie, Emergency Management and National Security, reported the following:

- PSC coordinates and supports the efforts of federal organizations to ensure national security. PSC also works with other levels of government, first responders, community groups, the private sector and other nations.
- The Department is working closely with the PEI government on coastal issues of concern to the Island.
- Gordon will discuss the possibility of PSC membership in the ACZISC with his colleagues.

GOVERNMENT OF PRINCE EDWARD ISLAND: Larry Avery, Office of Public Safety, PEI Department of Communities, Cultural Affairs and Labour, reported the following:

- PEI Agriculture and Forestry are planning to collect lidar data for the entire land area of the Island. It is anticipated that the data collection will start this spring.
- Data collection would be tied to real-time data from tide gauges. It is hoped that the federal government will put in place the additional gauges required to provide good coverage for the entire Island.
- The data would be used to establish a baseline. Applications include 911 and civic addressing.
- A presentation on the project was made to the ACZISC in May 2005 - aczisc.dal.ca/pei-cc.pdf.

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR: Patrick Shea, NL Department of Fisheries and Aquaculture, reported the following:

- A first ICOM issues scan was completed on 31 October 2007. The project scope was the five Coastal Management Areas (CMA) in Newfoundland and Labrador and the ACAP site in the Corner Brook - Humber Valley region. Issues covered in the scan included: land use planning; land and marine infrastructure; climate change; marine environmental quality; aquaculture; sewage, ocean dumping and oil spill risk; and resource user conflicts.
- A second issues scan has been initiated by the Department of Fisheries and Aquaculture (December 2007 - 31 March 2008). This scan will cover the eastern portion of the Placentia Bay Integrated Management CMA – east and north – and will include St. Anthony in Newfoundland and all of coastal Labrador.
- Recognition of ACAP Humber Arm as a CMA by Environment Canada and DFO would add to federal agency linkages and cooperation which is needed to

- implement Canada's Oceans Strategy.
- Areas of focus for the Provincial Coastal and Ocean Network (PCON) include: marine tourism and ecotourism policy development by the Department of Tourism; support of private sector technology initiatives by Innovation, Trade and Rural Development; and implementing Rural Lens training for government by the Rural Secretariat of the Executive Council. Rural Lens will standardize the way departments look at the impacts of policies and programs on rural areas.
- Re the New England Governors - Eastern Canadian Premiers (NEG-ECP) Oceans Working Committee, the Department of Fisheries and Aquaculture has hired a staff person to assist the Eastern Canadian Premiers. Communications through the Atlantic Council of Fisheries and Aquaculture Ministers may provide a good starting point for ECP coordination in the near future.
- Fish harvesters in Placentia Bay are concerned with industrialization. A committee has been established to identify 'best practices'.

The following notes were provided by Tammy Keats, NL Department of Environment and Conservation:

- The Department continues to co-lead PCON and policy development. It is active in climate change projects and environmental assessment issues, aquatic invasive species and marine biodiversity.
- Environment and Conservation is working with the Department of Finance to update the study entitled "Estimating the Value of the Marine, Coastal and Oceans Resources of Newfoundland and Labrador", published in 2002.
- The Department and the Public Infrastructure Engineering Vulnerability Committee (PIEVC) of Engineers Canada are overseeing a project in Placentia, a town at sea level in Placentia Bay.
 - The town is protected from the ocean by a breakwater and backside wall. These structures and the Dunville highway are being studied to determine if they can withstand predicted changes in climate due to global warming and, in particular, increased storm surges, sea level rise and heavy rainfall events.
 - The contractor completing the work includes AMEC, MUN and Cameron Consulting (Halifax).
 - The assessment will be completed by the end of March 2008.
 - PIEVC is working with provincial governments and municipalities across Canada on a series pilot projects/case studies to test their assessment protocol. The protocol promises to be an important tool in efforts to adapt to climate change.

HEALTH CANADA: Jane Macdonald, Healthy Environments and Consumer Safety, reported the following:

- A Working Group has been established to study the effect of arsenic exposure on human health in Nova Scotia. It will include a member of the provincial/federal advisory group on mine tailings.
- The consumption of mussels and its impact on human health will be discussed at ACZISC Meeting #54 (14-15 May 2008 in St. John's).

PARKS CANADA: Rob Thompson, Atlantic Service Centre, reported the following with regard to National Marine Conservation Areas (NMCAs):

- Canada's system of NMCAs protects and presents representative areas of the country's distinct oceanic and Great Lakes environments. NMCAs include the seabed, the water above it and any species which occur there. They may also take in wetlands, estuaries, islands and other coastal lands.
- Nationally, the current priority is on establishing two NMCAs on the west coast - the Gulf Islands area (Southern Strait of Georgia) and the Gwaii Hannas area. A feasibility study is under way in the Strait area, and an interim management plan is under way for Gwaii Hannas.
- The other priority area is the Great Lakes. The creation of the Lake Superior NMCA, the largest freshwater marine protected area in the world, was announced in October. The NMCA will have an area of about 10,000 km² and will include the lakebed, islands and north shorelands within the NMCA boundaries - www.pc.gc.ca/agen/super/index_E.asp.
- Planning is under way for a feasibility study with regard to establishing an NMCA in Lancaster Sound. Funds were sourced for this study from the last federal budget where this initiative was specifically identified as part of the Government's northern agenda.
- In the east, the feasibility study for a NMCA around the Îles de la Madeleine in the Gulf of St. Lawrence is progressing slowly.
- There have been expressions of local interest in establishing an NMCA in the Burgeo region on the south coast of Newfoundland, in an area called the South Coast Fjords. The local Parks Canada contact is Jeff Anderson, Field Unit Superintendent – tel 709-458-3550. He is based in Gros Morne National Park.
- The 2003 federal budget identified the creation of 5 NMCAs. This does not include Lancaster Sound. Planning and negotiations are underway for four of these. Parks Canada is continually assessing its capacities and resources as it moves forward. Any decision on a 5th NMCA study would be announced by the Minister.

GOVERNMENT OF NOVA SCOTIA: Justin Huston, NS Department of Fisheries and Aquaculture, reported the following:

- **Proposed Coastal Management Framework (CMF):** The process to establish a CMF for NS is progressing well. The November Speech from the Throne committed the Government to having a coastal management framework in place within two years. Timing and content is not certain at this time. There will be more to report at the ACZISC meeting in May.
- **Era of Strategies:** In addition to the proposed CMF, a number of related provincial strategies are under development. The Provincial Oceans Network (PON) is working to ensure maximized coastal linkages and alignment.
 - Energy Strategy and Climate Change Action Plan - www.gov.ns.ca/energy/AbsPage.aspx?id=1235&siteid=1&lang=1.
 - Strategy for Forests, Minerals, Parks and Biodiversity - www.gov.ns.ca/natr/voluntary_planning.asp.
 - Water Resources Management Strategy - www.gov.ns.ca/enla/water/WaterStrategyHow.asp.
- **Gulf of Maine Council Ecosystem Indicator Project (ESIP):** ESIP is advancing its work on developing a suite of ecosystem indicators for the Gulf of Maine region. Work is underway to identify 3-4 key indicators for these theme areas: Fisheries

and Aquaculture; Climate Change; Contaminants; Coastal Development; Eutrophication; and Aquatic Habitats. See www.gulfofmaine.org/esip/ for details.

- Marine Affairs Program Intern to explore coastal setback policies: Chris Burbridge (MMM '08) will be working with the PON Secretariat this spring to conduct research on coastal setback policies and how they might be applied in Nova Scotia. For more information, email Chris at ch677066@dal.ca.

The following was reported on behalf of Colin MacDonald, Service Nova Scotia and Municipal Relations with regard to GeoNOVA:

- Work is underway on enhancing the NS Geographic Catalogue (metadata holdings).
- A new mobile GIS project is being implemented.
- GeoNOVA is working with a number of partners to submit Letters of Interest in response to GeoConnections announcement of funding opportunities.
- Work is ongoing on enhancing the Atlas of Nova Scotia application.

ATLANTIC PROVINCES COUNCIL ON THE SCIENCES / ATLANTIC VETERINARY

COLLEGE: John Burka, Atlantic Veterinary College (AVC), University of Prince Edward Island, reported the following:

- APICS Aquaculture and Biology Student Conferences: The events are scheduled for 7-9 March 2008 in St. John's, NL.
- Centre for Aquatic Health Sciences (CAHS): A research development effort in finfish research is being led by Dr. Larry Hammell. With over \$2.1 million in funding from Atlantic Innovation Fund (AIF) and \$2.5 million in matching funding from producers and pharmaceutical manufacturers, the AVC Centre for Aquatic Health Sciences (AVC-CAHS) has developed the research infrastructure for carrying out large scale randomized controlled trials and production studies – primarily in the Bay of Fundy and in Newfoundland.
- Lobster Sciences Centre: The AVC Lobster Science Centre will receive up to \$2.3 million over five years from ACOA for a research project that aims to develop a greater understanding of the life cycle of the lobster, including health, moulting and reproduction. The project will focus on the wild lobster fishery in southwestern Nova Scotia and the Northumberland Strait.
- Invasive Species Research: Research into invasive aquatic species is taking place at the University in different forms. Dr. Jeff Davidson's shellfish research group and Dr. Russell Kerr, Canada Research Chair in Marine Natural Products in UPEI's faculty of science, are working on a project in association with the PEI Aquaculture Alliance which recently received funding via ACOA's Atlantic Innovation Fund. Through this project UPEI researchers will work to provide insight on sustainable and efficient methods of managing tunicates and their impact on the mussel industry. Goals of this research project include: improving detection and characterization methods, identifying active compounds to prevent invasive species proliferation, and developing and implementing mitigation measures. Dr. Kerr, along with Dr. Syd Withers, will also lead a team of researchers within UPEI's department of chemistry in collecting marine invertebrates and algae from the waters in Atlantic Canada and generating a library of semi-purified fractions which will be used to locate a tunicate anti-fouling bioactive compound. Once a compound is adequately evaluated, the UPEI research team will collaborate with Nautilus Biosciences to find efficient and sustainable production methods. Dr.

Pedro Quijon of UPEI's biology department works in close collaboration with colleagues at the AVC shellfish lab to study the range and interactions of the European green crab in Island waters.

- American Fisheries Society – Fish Health Section Annual Meeting: The Meeting will take place on 9-12 July 2008 in Charlottetown - www.upei.ca/FHS-AFS2008/.
- Aquaculture Canada 2008 Conference: The Conference is scheduled for 11-14 May 2008 in Saint John, NB - www.aquacultureassociation.ca/ac08/index.html.

Mike Butler noted that Grant Gardner is preparing a presentation, with the assistance of APICS members, on the coastal and marine research related to Atlantic Canada that is carried out by researchers based at APICS member institutions. This will be presented at the next ACZISC meeting.

NATIONAL DEFENCE: Flemming Rasmussen, MARLANT Formation Environment, reported the following:

- A 3rd revision to the MARLANT Maritime Operations Area Management Plan is underway. The key focus areas are re-organizing data queries to reflect seasonal/monthly results, editing the text-based pop-up amplifying data to a more succinct product, and including a Performance Indicator/Performance Measurement component.
- Work on Training Area Management Plans for land-based properties is progressing well. The current move is to formally integrate the operational staff with the longer range sustainable development teams and concurrently incorporate the operational guidance (primarily issued in Range Standing Orders) with the Training Area Management Plans.
- Effort in the Marine Mammal/Reptile area is largely on two fronts. MARLANT is revising its ad hoc Marine Mammal identification training and the Navy as a whole continues to liaise with other navies and the scientific community to hone Marine Mammal mitigation efforts, specifically in the area of sonar.
- The Canadian Navy continues to make contributions world-wide. Many would have seen the news coverage in October 2007 of HMCS TORONTO assisting victims of an earthquake in the Red Sea. HMCS CHARLOTTETOWN is presently operating in the Arabian Sea.

BAY OF FUNDY ECOSYSTEM PARTNERSHIP: Peter Wells, BoFEP and IOI-Canada, reported the following:

- The Bay of Fundy Ecosystem Partnership (BoFEP) started informally as a result of concerns about ecological and habitat changes being observed in the upper Bay of Fundy, especially on the mud flats which are important for migratory shorebirds. This led to a Fundy Science Workshop in 1996, the first of the BoFEP series.
- BoFEP was formally inaugurated as a multi-partner organization in 1997. Its purpose is to create, share and use knowledge about the Bay of Fundy. BoFEP is funded primarily by EC; other groups provide funds for specific projects and activities, e.g., DFO for salmon fact sheets and the Minas Basin Working Group. The BoFEP Secretariat is located at the Acadia Centre for Estuarine Research, Acadia University in Wolfville, NS.
- BoFEP has a collaborative agreement with the Gulf of Maine Council on the Marine Environment (GOMC), and has conducted numerous joint projects.

- BoFEP has 3 major programs – Communication, Workshops, and Working Groups:
 - Communication includes the website, the Fundy Issues Fact Sheet Series (27 to date), and the Fundy Tidings e-newsletter.
 - There have been seven workshops to date. The 8th BoFEP Science Workshop is planned for late May 2009, in Wolfville. The theme is “Resource Development and Its Implications in the Bay of Fundy and Gulf of Maine”.
 - There currently are eleven active working groups: Biosphere Reserve; Corophium and Mudflat Ecology; Eelgrass; Eutrophication and Nutrients; Fundy Informatics; Marine Energy; Minas Basin; Outreach; Salt Marsh and Restricted Tidal Systems; Stress and Cumulative Effects; and Sublittoral Ecology and Habitat Conservation.
- The Biosphere Reserve WG has been successful in its efforts to have the Fundy Biosphere Reserve listed in the UNESCO World Network of Biosphere Reserves. Biosphere Reserves are areas of terrestrial and coastal ecosystems which aim to promote solutions to reconcile biodiversity conservation and sustainable resource use - www.unesco.org/mab/BRs/new_BRs2007.shtml.
- The Fundy Informatics WG is currently working on two projects: one on the use and impact/influence of grey literature of intergovernmental organizations, funded by SHHRC, and the other on the Fundy Information Collaboratory (FIC), led by Dr. Elaine Toms, Director, Centre for Management Informatics, Dalhousie University. The project has produced a prototype search engine for Fundy literature (see docs.informatics.management.dal.ca/bofep/). FIC will eventually be GIS-based and will permit detailed searches and retrieval of information pertaining to selected issues and sites in the Bay of Fundy, e.g., the Minas Channel and potential tidal energy projects.
- The Bay of Fundy Ecosystem Partnership (BoFEP) website - www.bofep.org - has more detailed information on people, activities, products, and upcoming events.

NATURAL RESOURCES CANADA: Bob Taylor, Geological Survey of Canada - Atlantic, reported the following:

- Geoscience for Oceans Management Program: In the Bay of Fundy, multibeam bathymetric mapping with CHS will continue in the summer of 2008. The focus will be on the New Brunswick coast: repetitive surveys of the dredge spoil site in the Saint John Harbour; investigating sediment transport on bedforms off Margareville; and working closely with UNB in conducting nearshore surveys in Southwest NB. Also where possible, the airborne Lidar surveys completed by the College of Geographic Sciences will be merged with the multibeam bathymetry for the NS shore. The GSCA contact is Russ Parrott – tel 902-426-7059.
- Seabed surveys were completed in offshore Labrador to evaluate geohazards and constraints to the potential development of offshore gas deposits. Work is presently focused on seabed conditions and processes on the Makkovik Bank discovery region and on potential transport pipeline routes to shore (e.g., Cape Harrison) or south. The GSCA contact is Gary Sonnichsen – tel 902-426-4850.
- The GSC Impact sheets - Nova Scotia's Coastlines; Mapping Placentia Bay (Newfoundland); and Historical Gold Mines - are available online at gsc.nrcan.gc.ca/org/atlantic/factsheets_e.php
- Enhancing Resilience in a Changing Climate Program: The coastal vulnerability study of the Halifax Regional Municipality includes analysis of different flood scenarios using airborne Lidar collected in 2007. The results of the analysis will be

presented at the Atlantic Climate Change workshop scheduled for 4-5 March 2008 in Halifax - www.esans.ca/events.html#climate. The GSCA contact is Don Forbes – tel 902-426-7737.

- A report on the impacts of post-tropical storm Noel on the Atlantic coast of NS has been completed. It will be released on COASTWEB at gsc.nrcan.gc.ca/coast/index_e.php. The GSCA contact is Bob Taylor – tel 902-426-7736.
- A broader examination of sediment supply and transport along the north shore of PEI is ongoing as part of a PhD study with the University of Guelph by Gavin Manson, GSCA.
- Earth Science Sector Support of the GeoBase Program: The GeoBase Steering Committee and Natural Resources Canada have announced the launch of a new generation of satellite orthoimagery on the GeoBase website at www.geobase.ca/geobase/en/data/imagery/imr/description.html. The new SPOT 4 and 5 derived orthoimagery improves upon the resolution of the GeoBase Landsat 7 satellite orthoimagery. 5000 images will be acquired between 2005 and 2010. The first 1000 have been released.

Tony Turner, GeoConnections Secretariat, reported the following:

- The GeoConnections thematic program areas are public health, public safety and security, the environment and sustainable development, and Aboriginal matters. GeoConnections aims to enhance the discovery of, access to, and visualization and sharing of geospatial data and information to support decision making in these thematic areas.
- The 5-year \$60 million GeoConnections program will end on 31 March 2010. The focus for the next two years will be on:
 - Improving information management to support regional environmental assessments: GeoConnections is working with the environmental assessment community to develop this capacity. This will include developing a national information systems portal as well as 3 regional demonstration pilot studies. It is anticipated that at least one regional site will be oceans-based. A workshop will be held in February to discuss technical issues associated with this initiative.
 - Improving geospatial information management to support integrated land / watershed / oceans planning: This will include funding 5 regional pilot studies. These planned pilot projects are part of a national Integrated Land Management (ILM) Network initiative, coordinated by EC. 12 February 2008 is the deadline for submitting Stage 1 proposals (10 pages). It is hoped that at least one pilot project will relate to oceans. Tony requested that the Secretariat distribute the AO to members.
- Ongoing projects funded by GeoConnections in Atlantic Canada include an environmental attribute screening tool being developed by the NS Department of Environment and Labour (just under way) and a water resources mapping portal being developed by the NL Department of Environment and Conservation.
- GeoConnections has issued its final Integrated Announcement of Opportunity (IAO) for projects that address specific issues within one or more of the other three priority areas: public health, public safety and security, and matters of importance to Aboriginal people. Under this AO, proponents may apply for support for strategic planning, capacity building, user needs assessments, thematic data, data standards, regional atlases, and geospatial decision-support systems. 1 February is the deadline for letters of intent.

OCEAN SCIENCE AND TECHNOLOGY PARTNERSHIP: Brad Fay, Interpretation Resources Inc, reported the following:

- Brad represents the ACZISC on the OSTP Board of Directors.
- The OSTP is a not-for-profit organization developed with support from Canada's Ocean Action Plan and with funding from the National Research Council, Industrial Research Assistance Program (NRC-IRAP). It is described as a Network of Networks in that its membership is comprised of groups or associations.
- The current members and organizations represented on its Board of Directors are: Aerospace and Defence Industries Association of Nova Scotia, Halifax, NS; Atlantic Coastal Zone Information Steering Committee (ACZISC), Halifax, NS; CCMC, St. John's, NL; COIN Pacific, Victoria, BC; Oceans Advance, St. John's, NL; Oceans Management Research Network (OMRN), Ocean Technology and Geomatics Working Group, Fredericton, NB; and Technopole Maritime du Québec (TMQ), Rimouski, Québec.
- Since its incorporation in 2005, the OSTP has undertaken a number of projects:
 - Conducted a pan-Canada series of workshops in support of its project Report;
 - Completed the report entitled "Prosperity Through Smart Ocean Management - Enabling Canada's Ocean Economic Future Through a new Ocean Science and Technology for Canada - www.ostp-psto.ca/Reports.asp
 - Facilitated contracting for a major marketing study on Global Markets for Ocean Observing Systems; and
 - Compiled an Oceans Directory of Information on Canadian suppliers of oceans-related research and technology solutions.
- The OSTP Board of Directors is currently reviewing its mandate with a view toward adopting a more focused mandate.
- Additional information can be obtained on the OSTP Website at www.ostp-psto.ca or by contacting Brad Fay at bfay@hfx.eastlink.ca.

EIT GROUP: Brent Rowley reported that EITNL (Bob Leeman) was part of a multi-firm project team led by CCMC that developed SmartBay, the information portal for Placentia Bay, NL (www.SmartBay.ca). The system features a variety of data and information sources, including real-time marine meteorological and hydrographic information, various web-mapping applications (using Autodesk MapGuide, MapServer, Chameleon) and OGC-compliant web mapping services. Efforts are being made to identify funding to sustain the system.

CCMC: The following notes were provided by Randy Gillespie, CCMC:

- Ocean Innovation 2008 - World Summit, Ocean Observing Systems: CCMC will be hosting its 6th Ocean Innovation Conference and Exhibition on 19-22 October 2008 at the Delta Hotel and Convention Centre in St. John's, NL. The Conference Chair is Dr. Philip Bogden, CEO Gulf of Maine Ocean Observing System (GoMOOS) and Acting Director, SURA Coastal Ocean Observing and Prediction (SCOOP) Program. Speakers from Canada, the US, Australia and Turkey have already been confirmed. The Conference agenda includes a wide range of issues related to OOS operations (technologies, robustness, liability), interoperability (standards and protocols), sustainability (financing, business models) and governance (policy). Planning is underway for a full-day workshop focusing on standards and interoperability of ocean observing systems - www.oceaninnovation.ca.
- SmartBay - The Placentia Bay Demonstration Project: Technology Solutions for

Integrated Management (Code name: SmartBay) is an initiative of DFO under the Oceans Action Plan. This project is demonstrating how better access to information leads to better decisions at all levels. The web portal (www.smartbay.ca), developed using open source software to OGC standards, provides simple access to a broad range of real time and static information in support of ICOM.

- Marine Institute, School of Ocean Technology: The Marine Institute of Memorial University received support from the Government of Newfoundland and Labrador in the 2007/08 budget to establish a new School of Ocean Technology. The School will work in close cooperation with industry to develop training and applied R&D initiatives in 4 key areas: ocean instrumentation, ocean mapping, underwater vehicles and ocean observing systems. For more information, email Dwight Howse, Head, School of Ocean Technology (dwight.howse@mi.mun.ca).

ATLANTIC CANADA OPPORTUNITIES AGENCY: The following notes were provided by Don Hogan, ACOA:

- SmartBay technology demonstration project: ACOA NL has completed an assessment of the SmartBay project funded under the federal government's Ocean Action Plan (now defunct). SmartBay is a tool for integrated oceans management. It created a public/private partnership model to serve the needs of the marine community and stimulated innovation in the ocean technology sector. CCMC has prepared a plan to continue (and expand on) the current project beyond 31 March 2008, once OAP funding is used up.
- The following oceans/coastal zone related technology projects have been awarded funding under Round 5 of the Atlantic Innovation Fund (AIF):
 - Software Defined Acoustics and Development of an Underwater Vehicle: Marport Deep Sea Technologies (St. John's) will develop sophisticated sonar devices for use with unmanned underwater vehicles. The project will develop acoustic products to assist underwater ocean observation for energy, defence, mining and ocean science markets. With total estimated costs of \$5.3 million, this project will receive up to \$2.2 million over two and a half years.
 - Remote Aerial Vehicle for Environmental Monitoring (RAVEN II): Dr. Siu O'Young of Memorial University's Faculty of Engineering will lead a team that will continue work with Provincial Aerospace Limited to develop collision avoidance systems for small unmanned aerial vehicles. With total estimated costs of \$5 million, this project will receive up to \$3 million over four years.
 - Project Neptune - Development of a Design of Ocean Subsurface Profiling Instrument: METOCEAN Data Systems (Dartmouth) will research and develop a new ocean subsurface profiling instrument that can be launched from planes or helicopters and used in a variety of fields from oceanography to weather forecasting. With total estimated costs of \$2 million, this project will receive up to \$1.3 million over a three-year period.
- Tool for Managing Watershed Quality: The Centre of Geographic Science (Middleton) at the Nova Scotia Community College will lead a project team of researchers and private sector partners to develop and commercialize a suite of technology products, processes and services for the environmental assessment and management of watershed quality. With total estimated costs of \$5 million, this project will receive up to \$3 million over a five-year period.