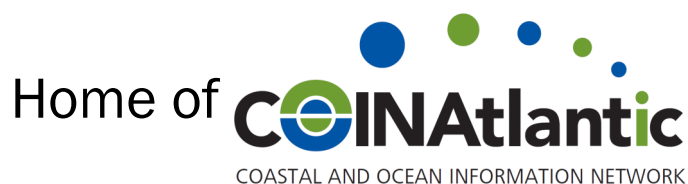




2010-2011 ANNUAL REPORT



ACZISC Secretariat

Dalhousie University
6414 Coburg Road, P.O. Box 15000,
Halifax, Nova Scotia B3H 4R2 CANADA
Tel 902-494-7162
Fax 902-494-1334
Email aczisc@dal.ca
Website www.coinatlantic.ca



Andrew Sherin, Director (front, right)
Alexi Westcott, Project Officer (front, left)
Jennifer Barr, Finance Officer (centre)
Paul Boudreau, COINAtlantic Project Manager (back)

The ACZISC 2010-2011 Annual Report is available in PDF format on the ACZISC website www.coinatlantic.ca and in hard-copy from the ACZISC Secretariat—email aczisc@dal.ca

20 July 2011

To the Members of the ACZISC and the ACZISC Association:

It is with pleasure that the ACZISC Secretariat presents the ACZISC 2010-2011 Annual Report. I would like to highlight a number of items in the report:

- This year has seen an unprecedented transition in the Secretariat. After 18 years of exemplary service to the members of the ACZISC, Michael Butler and Claudette Le-Blanc have retired from the Secretariat. I joined as the new Director on 4 January 2011 and Alexi Westcott, the new Project Officer joined 7 September 2010. Alexi and I will endeavor to fill Mike and Claudette's big shoes.
- The ACZISC Secretariat played a prominent role in the organization of the 2010 Coastal Zone Canada Conference hosted by the Government of Prince Edward Island in Charlottetown 26-28 July 2010. In addition to Mike and Claudette on the Program Committee, Paul Boudreau lead a workshop entitled 'Information Management for Integrated Coastal and Ocean Management' and gave a presentation entitled 'Finding common ground on a term to facilitate improved management in a large diverse area of the earth's surface: the coastalshed'.
- A process to develop a new strategic plan for the ACZISC was started at the January 2011 meeting of the ACZISC in St. John's, NL. A document flowing out of that meeting that describes the issues in coastal and ocean management that provides the context for the ACZISC strategic plan was developed. It appears as Appendix II.
- By year end, development work on the new integrated website for the ACZISC was almost complete and the development site was available for members to review and comment on. Coinatlantic.ca becomes the web presence for the ACZISC that integrates and modernizes the separate aczisc.dal.ca and coinatlantic.ca websites .
- The COINAtlantic Geocontent Generator (CGG) was developed and released to enable easy development of metadata that is easily indexed by Internet search engines e.g. Google. Also delivered by year end was a library of polygon templates for watersheds, estuaries and coastalsheds for Atlantic Canada that CGG users can access and chose the polygon that most appropriately describes the geographic extent of their information.
- Not to be overlooked was our move to 6414 Coburg Road from Ocean House on Le-Marchant Street. The 'new' old house on the Dalhousie Campus is shared with the International Ocean Institute and the Institute for Research in Materials. It has been attractively renovated with both boardroom and classroom space. Please come and visit us in our new offices.

Finally, a hearty thank you to the Members of the ACZISC and the ACZISC Association for their continued support.

Sincerely,



Andrew Sherin
Director, ACZISC Secretariat



ACZISC 2010-2011 Annual Report

TABLE OF CONTENTS

The ACZISC	5
The ACZISC Mission	5
The ACZISC Strategies (2008-2012)	5
Operational Context	5
Operating Structure.....	6
The Committee	6
ACZISC Association	7
ACZISC Advisory Committee	7
ACZISC Secretariat	8
Financial Report	9
Activities in 2010-2011	12
Newsletter	12
Website	13
COINAtlantic	13
Meetings / Presentations	15
ICOM Working Group	16
Ocean Observatory System (OOS) Inventory	17
Coastal Zone Canada 2010	17
OCN-Canada Policy Briefs	18
Atlantic Ecosystem Initiatives	18
A Marine and Coastal Rights Registry (Marine Cadastre) Task Team	19
Developing the new ACZISC Strategic Plan (2012-2016)	19
Presentations and exhibitions	20
APPENDIX I - ACZISC Membership—March 2011	21
APPENDIX II - ACZISC Strategic Plan: Issues	25

THE ACZISC

The ACZISC celebrated its 19th anniversary in January 2011. The Committee was established in 1992, following the recommendation of the participants of a Workshop organized by the Council of Maritime Premiers and held in Amherst, Nova Scotia.

The ACZISC Mission

To promote, facilitate, and influence information management, policies and programs that enhance integrated coastal and ocean management (ICOM) in Atlantic Canada.

The ACZISC Strategies (2008-2012)

- Provide a conduit to access, exchange and disseminate geospatial and other information and data;
- Advocate the implementation of ICOM in Atlantic Canada;
- Capitalize on collaborative opportunities involving ICOM, and geomatics in support of ICOM; and
- Maximize the viability and relevance of the ACZISC.

Operational Context

Coastal and ocean resources and activities make significant contributions to the economies of the Atlantic Provinces. The ACZISC website has a number of references to economic studies. The most recent completed for Nova Scotia for 2006 estimated direct and indirect impact of the ocean sector to be 15.5 % of the GDP, 10.2 % of the income and 13.9 % of the employment.

The coastal zone encompasses a multitude of activities and the management of its resources overlaps several jurisdictions involving many stakeholders. Canada's Ocean Strategy defined to the following sectors as participants in an integrated management process: federal authorities, provincial, territorial and regional authorities, aboriginal organizations and communities, industry and resource users, non-governmental organizations, community groups and the academic, science and research communities.

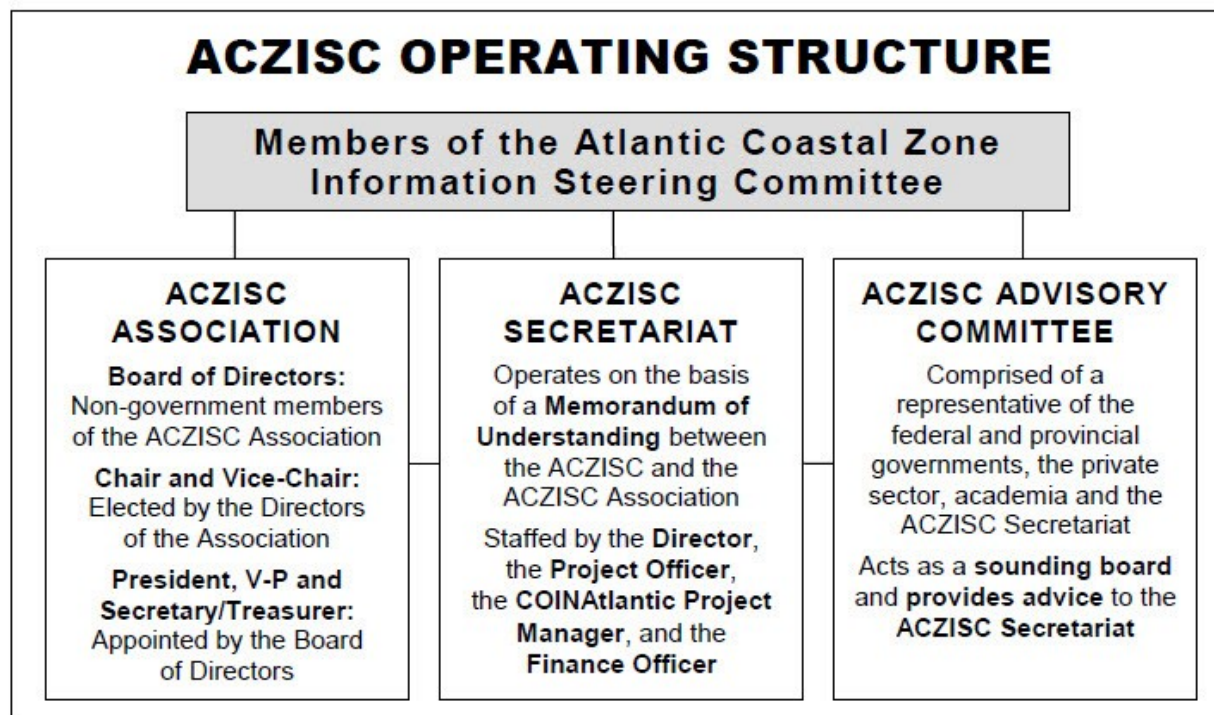
In Atlantic Canada, the coastal land-water interface is exposed increasingly to a wide variety of physical, biological and chemical stresses that threaten the region's economic, social and ecological sustainability. Intergovernmental and interagency cooperation is essential for managing the coastal and ocean resources as is the accessibility of information to support management functions.

"Solid, objective, and accessible information is essential to identify and respond to the quickening pace and complexity of environmental change, in Canada and globally."
2010 Fall Report of the Commissioner of the Environment and Sustainable Development



OPERATING STRUCTURE

The ACZISC Operating Structure consists of four major components: the Atlantic Coastal Zone Information Steering Committee made up of members from federal and provincial departments and agencies, non-governmental organizations, industry associations and academia, the ACZISC Association and its Board of Directors, incorporated under the Societies Act of Nova Scotia and the employer of the Secretariat, the ACZISC Advisory Committee, which is a subcommittee of the ACZISC that provides advice to the Secretariat and the ACZISC Secretariat.



The Committee

Membership in the ACZISC is inter-agency, multi-sectoral, and multi-disciplinary. ACZISC members represent governments and organizations which have a mandate for and can contribute to the development, coordination and implementation of ICOM. This includes policy, mechanisms and tools to facilitate access by practitioners to relevant data and information. The ACZISC functions as a 'horizontal mechanism' to implement its mandate.

“Complex, cross-cutting issues will continue to challenge public servants to work together across vertical lines to offer coherent, relevant solutions to those they serve.”
Using Horizontal Tools to Work Across Boundaries: Lessons Learned and Signposts for Success, Canadian Centre for Management Development, http://www.cspc-efpc.gc.ca/pbp/pub/pdfs/P106_e.pdf

In 2010-2011, membership included the four Atlantic Provinces, eleven federal departments and agencies, non-governmental organizations, community organizations, academics and the private sector. A detailed list of members as of March 2011 is included in Appendix I.

ACZISC Association

In November 2003, the ACZISC Association was established to act as the legal entity for the ACZISC. The Association is registered as a not-for-profit organization under the Nova Scotia Societies Act. The objects of the Association are:

1. To encourage and support the sustainable use of coastal and marine resources in Atlantic Canada through integrated coastal zone management;
2. To promote, facilitate and influence information management, policies and programs for the purpose of enhancing integrated coastal zone management in Atlantic Canada;
3. To develop, provide and support public education programs concerning the ocean and coastal environment and its importance as a critical component of global environmental systems;
4. To strengthen the expertise and capacity in the oceans and coastal zone sectors of government, and private and non-governmental organizations in Atlantic Canada;
5. To develop, provide and support technical assistance projects, training programs, policy advice and consulting resources for professionals engaged in the oceans and coastal zone sectors;
6. All other activities which are ancillary to the objects of the Society.

Membership in the Association is open to anyone supporting the objects of the Association. The ACZISC Association Board of Directors is composed of non-government members of the ACZISC Committee. The list of the Directors for 2010-2011 is included in Appendix I.

Meetings of the Board of Directors were held on 5 May 2010, 2 November 2010 and 18 January 2011. The 5th Annual General Meeting of the Association was held on 12 May 2010, also in Dartmouth, Nova Scotia. The 6th Annual General Meeting is planned for 5 October 2011.

ACZISC Advisory Committee

The Advisory Committee was established in 1995 to provide advice on issues related to: the effective administration and operation of the Secretariat and ACZISC; the identification and acquisition of funding for the Secretariat and ACZISC programs; and the comprehensiveness of ACZISC membership.

The members of the ACZISC Advisory Committee are: Justin Huston, Chair (provincial representative); Grant Gardner (academic representative); Tim Hall (federal representative); Brent Rowley (private sector representative); and Michael Butler (ACZISC Secretariat). The Secretariat communicates with the Advisory Committee on an as-needed basis. The Advisory Committee did not feel the need to meet in 2010-2011.



ACZISC Secretariat

The ACZISC Secretariat operates on the basis of a **Memorandum of Understanding** between the ACZISC Committee and the ACZISC Association. The primary **function, roles and responsibilities** of the Secretariat are:

- to function as the executing agency for all the decisions of the ACZISC and its bodies and the Association and its Board of Directors;
- to convene the meetings of the ACZISC and its bodies; and
- to deliver products as determined by the ACZISC.

The offices of the ACZISC Secretariat are located on the campus of Dalhousie University. For the first part of 2010-2011 the offices were in **Ocean House** at 1226 LeMarchant Street in Halifax, Nova Scotia. In February of 2011, the offices of the Secretariat were moved to a newly renovated house that had been the Maritime School of Social Work at 6414 Coburg Road. The offices are shared with the International Ocean Institute and the Institute of Research in Materials. The Secretariat consists of a half-time Director (Michael Butler until 4 Jan 2011, Andrew Sherin from 4 Jan 2011 to present), a full time Project Officer (Claudette LeBlanc until 7 October 2011, Alexi Westcott from 7 September 2011 to present), a part time Finance Officer (Jennifer Barr), and the COINAtlantic Project Manager (Paul Boudreau).

This annual report would not be complete without recognition of the contributions Michael Butler and Claudette LeBlanc have made to the success and longevity of the ACZISC. They have been a sustaining force since the ACZISC's inception following the 1992 seminal workshop held in Amherst by the Council of Maritime Premiers. Michael has provided inspiring leadership and good humor. Two major accomplishments on his watch have been the formation of the Coastal Zone Canada Association and its series of Coastal Zone Canada conferences and the realization of COINAtlantic, the Coastal and Ocean Information Network, first discussed as a concept in 1988. Claudette in her own right has been the organizer of 61 ACZISC meetings that brought members and guests together, the author of 154 monthly Coastal Update e-newsletters, widely praised as one of the best coastal and ocean newsletters available and the chief force behind the ACZISC's first significant accomplishment, the Atlantic Coastal Zone Database Directory published in its 1st Edition in October of 1992 and subsequent versions both hardcopy and electronic.

The members of the ACZISC and the ACZISC Association and the whole ICOM community in Atlantic Canada owe Mike and Claudette a heart felt depth of gratitude for their perseverance and sound leadership.

Paul Boudreau provided effective leadership to the COINAtlantic Project as Project Manager during the year. He is in this role through a special arrangement with the Department of Fisheries and Oceans, Maritimes Region. This arrangement has been supported by other ACZISC members. Early in the new year (May 2011), Paul announced that he would be retiring from the public service and as COINAtlantic Project Manager in January 2012. The Secretariat is analyzing its available skill sets and internal resources and will make recommendations on the staffing resources necessary to continue development of COINAtlantic to the ACZISC and the ACZISC Association in the fall of 2010-2011.

FINANCIAL REPORT

Peverill & Associates Incorporated

INDEPENDENT AUDITOR'S REPORT

To the Members of:
ACZISC Association

We have audited the accompanying financial statements of ACZISC Association which comprise the statement of financial position as at March 31, 2011 and the statements of operations and equity, and cash flow statement for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian generally accepted accounting principles and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

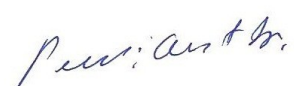
Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

Opinion

In our opinion, these financial statements present fairly, in all material respects, the financial position of ACZISC Association as at March 31, 2011 and its financial performance and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.



Bedford, Nova Scotia
September 14, 2011

CHARTERED ACCOUNTANTS

~ Founded in 1988 ~

Wardour Centre Suite 301, 15 Dartmouth Road, Bedford, Nova Scotia B4A 3X6
Phone: (902) 468-9634 Fax: (902) 468-9635 Toll Free: 1-877-901-9634

1.





Peverill & Associates Incorporated

ACZISC Association
STATEMENT OF FINANCIAL POSITION
AS AT MARCH 31, 2011

	<u>2011</u>	<u>2010</u>
ASSETS		
CURRENT		
Cash	\$ 88,183	\$ 15,168
Accounts Receivable	24,900	64,518
Prepaid expenses and sundry assets	<u>322</u>	<u>322</u>
	<u>113,405</u>	<u>80,008</u>
INCORPORATION FEES	<u>582</u>	<u>582</u>
	<u>\$ 113,987</u>	<u>\$ 80,590</u>
LIABILITIES		
CURRENT		
Accounts Payable and Accrued Liabilities	\$ <u>32,311</u>	\$ <u>15,029</u>
MEMBERS' EQUITY		
CONTRIBUTED SURPLUS	37,642	37,642
MEMBERS' EQUITY	<u>44,034</u>	<u>27,919</u>
	<u>81,676</u>	<u>65,561</u>
	<u>\$ 113,987</u>	<u>\$ 80,590</u>

APPROVED ON BEHALF OF THE BOARD:

 Director
 Director

Peverill & Associates Incorporated

ACZISC Association
STATEMENT OF OPERATIONS
FOR THE YEAR ENDED MARCH 31, 2011

	<u>2011</u>	<u>2010</u>
REVENUE		
Nova Scotia Revenue	\$ 20,000	\$ 20,000
Newfoundland Revenue	10,000	6,600
Prince Edward Island Revenue	5,000	5,000
Federal Departments Revenue	86,028	79,995
Contract Revenue	101,018	111,445
Interest	<u>38</u>	<u>-</u>
TOTAL REVENUE	222,084	223,040
OPERATING EXPENSES		
Contract expenses	42,820	48,335
Insurance	1,100	1,100
Interest and Bank Charges	220	345
Meeting expenses	738	1,034
Memberships	28	28
Office Expenses	3,744	1,550
Other Operating Expenses	660	2,261
Professional Fees	1,598	-
Salaries and Wages	142,922	158,230
Telephone	2,132	1,391
Travel Expenses	<u>10,007</u>	<u>13,640</u>
	<u>205,969</u>	<u>227,914</u>
NET INCOME (LOSS)	16,115	(4,874)
MEMBERS' EQUITY, beginning of year	<u>27,919</u>	<u>32,793</u>
MEMBERS' EQUITY, end of year	<u>\$ 44,034</u>	<u>\$ 27,919</u>



ACTIVITIES IN 2010-2011

The activities for 2010-2011 are organized by strategy.

Provide a conduit to access, exchange and disseminate geospatial and other information and data;

- **Newsletter**

The Coastal Update e-newsletter contains brief items related to ICOM, geomatics and coastal mapping, with links and/or contacts for further information. These items relate to projects and programs; manuals, reports, proceedings; research and development activities; and conferences, workshops and other events.

In 2010-2011, the ACZISC Coastal Update was prepared and emailed each month, except for one July/ August edition, by the Secretariat to ACZISC members and to more than 5,500 associates. In 2010 the duty of completion of the Coastal Update changed hands from Claudette Leblanc to Alexi Westcott.

Approximately 60% of the recipients are from Canada and the remainder are from approximately 70 countries worldwide. The distribution list is composed of personnel from all sectors, including: governments at the federal, provincial/territorial/state and local levels; academia; First Nations; the private sector; students and teachers; NGOs; foundations; associations; the media; and international organizations.

The Coastal Update, including subscriber feedback, is posted at <http://coinalantic.ca/index.php/aczisc-coastal-update-e-newsletter>. There are plans for reader surveys in 2011-2012.

Subscriber Feedback

"Although not a coastal management specialist – my interest stems from representing the maritime sector (users) – I have found your newsletter fascinating and stimulating. There is always something of interest and relevance, and I have recommended it to several colleagues. Please carry on"

- John Hepburn, Secretary with Maritime Plymouth, Plymouth, UK

"I value the ACZISC Coastal Update e-newsletter very much as it encapsulates so many research and action threads that I have no capacity to follow by any other means."

- Irene Novaczek, Director, Institute of Island Studies, University of Prince Edward Island, PEI, Canada

"Your newsletter is the best I receive and it's really informative. Well done."

- Mike Phillips, Professor, Faculty of Applied Design and Engineering, Swansea Metropolitan University

"Thank you for producing such a timely and important newsletter!"

- Dawn Wright, Professor, Department of Geosciences, Oregon State University

• Website

The new ACZISC website - <http://coinatlantic.ca> – was launched in 2011. Planning for the new website was initiated in 2009 to provide a one-stop online location to support the information needs of ICOM practitioners. Website development began in the fall of 2010 using the open source Content Management System *Joomla*.

The name of the ACZISC's new website is 'COINAtlantic', which is meant to be a hub for Coastal and Ocean Information in Atlantic Canada. COINAtlantic is the on-line presence of the ACZISC, which includes the new website; the search utility; the geocontent generator; and social media tools for promoting discussion.

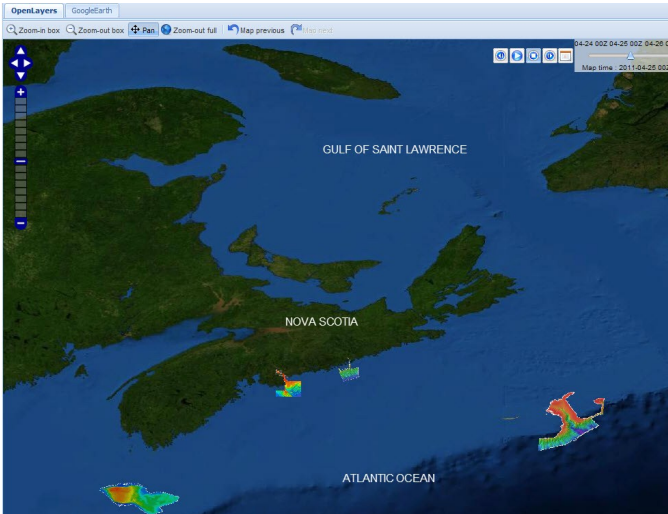


The website includes: information about the ACZISC and COINAtlantic; six new theme pages which provide users with summary information and links on topical issues; ACZISC meeting minutes and presentations; the Coastal Update e-newsletter; annual reports; conference listings; World Oceans Day events in Atlantic Canada; and links to other ICOM-related resources.

• COINAtlantic

In 2010-2011, Paul Boudreau continued as COINAtlantic Project Manager. The COINatlan-

tic Management Committee met 6 times during the year.



The year began with an important workshop to evaluate the future direction of development for geospatial searching of the internet for COINAtlantic. The 1/2 day workshop held on 21 April 2010 reviewed COINAtlantic progress to date, considered the present status of approaches to metadata management and looked at existing Internet search capabilities. The workshop recommended that the new COINAtlantic strategy for searching for online geospatial information must make use of the most effective Internet search technology. Accordingly, the Google search tools were

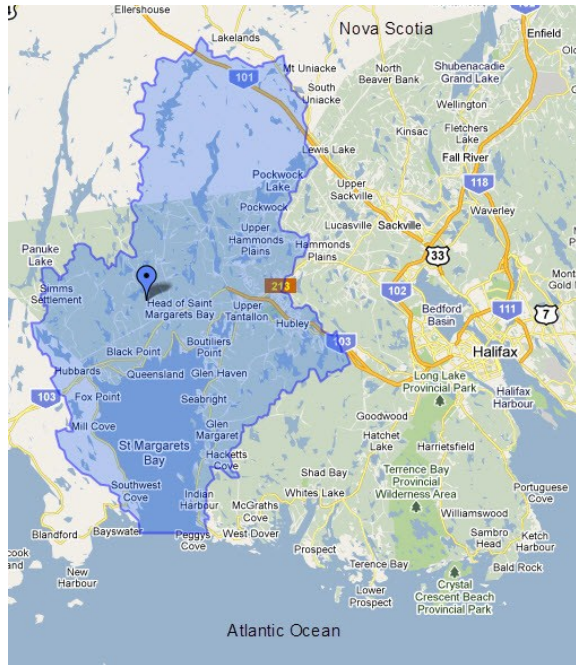
selected as the most appropriate for the next phase of COINAtlantic. The new strategy includes the ongoing development and implementation of a number of key components:

1. The publication of geospatial information as WMS and KML formatted images
2. The preparation of online text-based metadata that is searchable by the Google search engine
3. A COINAtlantic Search Utility (CSU) that can:
 - extract the internet address(es) for WMS and KML services from the metadata,
 - overlay WMS and KML images using standard internet browsers, and
 - produce and output products that allow users to share the map images that are created

The new strategy was implemented during the year through two initiatives.

Through our relationship with the Northeast Coastal and Ocean Data Partnership and with the support of the Massachusetts Ocean Partnership, ASA Science built a prototype of a Search Utility to explore the use of Google Search technology to discover and access ocean data. The application (<http://staging.asascience.com/OGCSearch-OL/>) demonstrated that such data can be found and accessed in a single web client. It also demonstrated that there is a huge range in how standards are implemented and that not all services work as expected.

To ease the development of online text-based metadata that is searchable by Internet search engines, Version 1 of the COINAtlantic Geocontent Generator (CGG) was developed and released. The web-based tool simplifies the production of KML metadata files that describe an organization, project, publication, data or information. The application embeds a KML polygon that circumscribes the geography related to the organization, etc. and makes the file easily indexed by the Google search engine. With the release of the CGG, 125 polygon templates of watersheds and coastal sheds for Atlantic Canada were made available as a library of KML polygons that a user of the CGG could choose to delineate the geography



of their entry.

To encourage data providers to develop and maintain data and information services that meet international standards discoverable and accessible on the Internet, several meetings were held with data providers over the year to gauge their plans for these services and provide assistance to the development of these services where appropriate. During the year, the ACZISC Secretariat met with Canada Nova Scotia Off-shore Petroleum Board (CNSOPB), Geological Survey of Canada (GSC) Atlantic and several times with Environment Canada.

In 2011-2012 it is planned to release enhanced versions of the Search Utility and the Geocontent Generator and continue to encourage data providers to develop and maintain services.

Advocate the implementation of ICOM in Atlantic Canada;

• Meetings / Presentations

As in previous years, three ACZISC meetings were held in 2010-2011 in the Atlantic provincial capitals by rotation. The meetings were attended by members and by associates from various sectors, including government departments and agencies, NGOs, academia, community groups and the private sector, and by university students. The ACZISC meetings were held in Halifax, NS on 12-13 May 2010; in Charlottetown, PEI on 7 October 2010; and in St. John's, NL on 26-27 January 2011.



The Minutes of ACZISC meetings and the Coastal Activities reports, based on the roundtable components of ACZISC meetings, are a valuable information resource for ICOM and geomatics personnel. In addition to being made available to meeting participants, the



minutes and coastal activities reports are available via the ACZISC website at <http://coinatlantic.ca>.

ACZISC meetings include focused presentations with discussions on topics relevant to ICOM, geomatics and coastal mapping. The presentations made in 2010-2011 are posted on the ACZISC website at <http://coinatlantic.ca/index.php/meeting-minutes-and-other-reports>. The presentations / presenters are displayed in table 1 below.

MEETING	TOPIC	PRESENTER
ACZISC Meeting #62 26-27 January 2011, St. John's	Coral and Sponge Conservation in Canada	Jason Simms, Fisheries and Oceans Canada, NL
	Coastal and Ocean Management Strategy and Policy Framework for Newfoundland and Labrador: An Update	Nicole Hynes, NL Department of Fisheries and Aquaculture.
ACZISC Meeting #61 7 October 2010, Charlottetown	Agriculture Best Management Practices (BMPs) in Atlantic Canada	Rollin Andrew, Agriculture and Agri-Food Canada
	The Watershed Management Program in PEI	Sean Ledgerwood, PEI Dept of Environment, Energy and Forestry
	Public Perceptions of the Coast: Feedback on the State of the NS Coast Report	Sean Weseloh McKeane, NS Fisheries and Aquaculture
ACZISC Meeting #60 12-13 May 2010, Dartmouth	State of the Gulf of Maine	Jay Walmsley, Fisheries and Oceans Canada
	Changing Climate in Atlantic Canada and Upcoming Regional Adaptation Collaborative Projects	Gary Lines, Environment Canada
	Stuck in the Mud: Tales of the Petitcodiac	Gary Bugden, Fisheries and Oceans Canada
	Oceans Planning and Management: The need for an Integrated Coastal and Marine Information System	Darren Williams, Fisheries and Oceans Canada

Table 2: Presentations and presenters at ACZISC Meetings in 2010-2011.

• ICOM Working Group

The work of the ICOM Working Group of the ACZISC, that started in 2009-2010 to develop a web portal to better support ICOM Initiatives and State of the Environment Reporting in

Atlantic Canada, was continued in 2010-2011 with a workshop held 21 April 2010 to Finalize the Information Content of the 'New Integrated' ACZISC / COINAtlantic Website or the ICOM Information 'hub'. The workshop recommended that the new site be rebranded COINAtlantic, but that the ACZISC figure prominently within the site. The new website would point to thematic information related to ICOM and consistent with ACZISC priorities. These themes are to be reviewed annually. The workshop also made a recommendation of Joomla as the Content Management System for the new website.

Capitalize on collaborative opportunities involving ICOM, and geomatics in support of ICOM;

- **Ocean Observatory System (OOS) Inventory**

In collaboration with the Ocean Science and Technology Partnership (OSTP), the ACZISC Secretariat participated in the project team of the OOS Inventory through Interpretation Resources Consulting Inc of Amherst NS. The project was sponsored by the OSTP, the Department of Fisheries and Oceans (DFO) and the Canadian Space Agency. The inventory found 74 locations in Atlantic Canada where respondents were operating an observing system. The projects final report recommended national coordination through the development a national OOS sector strategy led by DFO; the evaluation of potential benefits to government

[The Canadian Summit on Oceans, Coast and the Great Lakes], "the Plan of Action, and the Council would ensure that Canada reassumes its leadership role in the effective stewardship of the Arctic, Pacific and Atlantic Oceans and coasts, and the Great Lakes."

operations and industry to guide future OOS investments for efficiency and productivity; the development of strategies, standards, and plans to improve the sustainability of OOS; encourage the integration of satellite observations in OOS; and expand Canada's market share for OOS technology through efforts coordinated by the Department of Foreign Affairs & International Trade and Industry Canada.

- **Coastal Zone Canada 2010**



The 9th Biennial Conference of the Coastal Zone Canada Association was held in Charlottetown, Prince Edward Island on 25-29 July 2010 with the theme Healthy Oceans - Strong Coastal Communities: Time for Action. The ACZISC Secretariat was very active in the organizing of the conference through participation in the Program Committee and organizing workshops which are reported on elsewhere in this report.

The Conference Declaration CALL-

ING ALL CANADIANS TO HEAL OUR COASTS AND OCEANS, noted that the pace of improvement in coastal and ocean management in Canada has slowed while at the same time the “pace at which challenges to those environments has grown is increasing steadily.” The declaration called upon governments in Canada to convene a Canadian Summit on Oceans, Coast and the Great Lakes led by First Ministers. The Summit is charged with developing a **Plan of Action** and establishing a Canadian Council for Oceans, Coasts and the Great Lakes, analogous to the National Ocean Council in the USA, to ensure that the plan of action is carried out.

• OCN-Canada Policy Briefs

The ACZISC joined with 8 other organizations with mandates related to research and the monitoring of oceans and coastal policy initiatives to form The Oceans and Coasts Network Canada (OCN Canada), a network of networks. OCN Canada is intended to enable groups to work more closely together by establishing greater communication among and across the Network membership and achieving an enhanced unity of purpose and direction.

Initially launched by the Ocean Management Research Network in November of 2010, the OCN-Canada Policy Briefs Program, now a joint initiative by all participating members of the OCN-Canada, is intended to address fundamental policy issues. The policy briefs reflect the knowledge and views of their author(s) and not any one network.

Volume 1; Round 1 of the OCN-Canada Policy Briefs was published for January – April 2011 and contained two papers both relevant to Atlantic Canada.

• Atlantic Ecosystem Initiatives

The ACZISC engaged in three projects in 2010-2011 under Environment Canada’s [Atlantic Ecosystems Initiative](#). The Initiative supported the Coastal Update Newsletter with an emphasis on reporting on research for social and environmental indicators. The Initiative also supported ACZISC meetings, meeting products and the initiation of the revision of the ACZISC Strategic Plan. The third project supported COINAtlantic development and the integration of the ACZISC and COINAtlantic websites into the ICOM information hub.



• State of the Scotian Shelf

The Department of Fisheries and Oceans (DFO) and the ACZISC entered into an arrangement to host State of the Scotian Shelf Reporting within the [coinatlantic.ca](#) website. The Director, ACZISC Secretariat participates in the Steering Committee and reviews draft theme papers. Four theme papers have been completed including the overview paper, *The Scotian*

Shelf in Context, *At Risk Species* under the Biodiversity theme, *Trophic Structure* under the Productivity theme and *Ocean Noise* under the Marine Quality theme. Other papers have been identified and are under development and will be made available on the coinatlantic.ca website in 2011-2012.

- **A Marine and Coastal Rights Registry (Marine Cadastre) Task Team**

A Marine and Coastal Registry (Marine Cadastre) Task Team was established to prepare a business case for securing long term commitment for investment in the development of a national marine and coastal rights management regime for Canada.

The Team is co-chaired by the Surveyor General's Branch (SGB) of Natural Resources Canada and the Department of Fisheries and Oceans (DFO). Paul Boudreau of the ACZISC Secretariat and Dr. Sue Nichols from the University of New Brunswick are members along with other staff from SGB and DFO.

The team organized a workshop on 11 May 2010 to determine the importance of information on marine rights, restrictions and responsibilities to potential users and to validate the strategic direction for the development of the registry developed by the team. As part of Coastal Zone Canada 2010, the team organized a ½ day workshop SCOPING A MARINE AND COASTAL RIGHTS REGISTRY FOR CANADA: NEEDS AND PRIORITIES on 28 July 2010. The workshop provided an opportunity to discuss the marine cadastre concept and potential issues. In particular the First Nations participant expressed concerns about any development of a rights registry that could impact on their rights. The pace of development for the marine and coastal rights registry has been slow since the workshop. The Secretariat will attempt to revive interest in moving the project forward in the new year.

Maximize the viability and relevance of the ACZISC.

- **Developing the new ACZISC Strategic Plan (2012-2016)**

The Strategic Plan for the ACZISC developed in 2002 and revised in 2008 needed review and possible revision before the end of fiscal 2011-2012. The transition in staffing within the Secretariat provided an opportunity to revisit the Committee's strategic direction and provide the new Secretariat with a mandate. To better ensure participation by as many members as possible and since there was a year before the present Strategic Plan lapsed, a process that divided the planning process across several meetings was developed. The plan for the plan is described in the Table 2 below. An issues document (see Appendix II) and some member consultations were completed before year end.



Timing	Activity	Responsibility
Jan. 2011 St. John's	What are the key issues / challenges / opportunities and the emerging issues impacting coastal and ocean management in the next five years? Which are most important to ACZISC members? Where can the ACZISC have the greatest impact?	ACZISC
Between Jan and May 2011	Stakeholder consultations / Develop draft priorities	Secretariat
May 2011 Fred- ericton	Review of issues, etc., discuss, amend and approve draft pri- orities / What are the ACZISC's strengths and weaknesses? What opportunities can the ACZISC benefit from? What threats does the ACZISC need to prepare for?	ACZISC
Between May and Oct. 2011	Develop draft strategies	Secretariat
Oct. 2011 Hal- fax	Discuss, amend, approve draft strategies	ACZISC
Between Oct. 2011 and Jan. 2012	Develop draft Action Plans	Secretariat
Jan. 2012 Char- lottetown	Discuss, amend, approve draft Action Plans	ACZISC
Jan. 2012 on- wards	Begin the implementation of the plan	Secretariat
Each Jan 2013 - 2016	Review (not redo) the Strategic Plan	ACZISC

Table 2: The Plan for the Plan

- **Presentations and exhibitions**
- Coastal Zone Canada Conference 2010:
 1. Finding common ground on a term to facilitate improved management in a large diverse area of the earth's surface: the coastalshed, Paul Boudreau, ACZISC Secretariat
 2. Workshop: Topic: INFORMATION MANAGEMENT FOR INTEGRATED COASTAL AND OCEAN MANAGEMENT. Convenor: Paul Boudreau, ACZISC Secretariat.
- Ecology Action Centre Coastal Issues Committee September monthly meeting, presentation on ACZISC and COINAtlantic.
- CPAWS "Dare To Be Deep" Canada Oceans Tour 2010, poster display.
- Halifax World Oceans Day Celebration and media launch
- Seminar Presentation for the Faculty of Computer Science Meeting the Billion URL Challenge of the Coastal / Ocean Manager

APPENDIX I

ACZISC Membership—March 2011

Rollin Andrew, Regional Director, Atlantic Region
Agri-Environment Services Branch
Agriculture and Agri-Food Canada
440 University Avenue, Charlottetown, PEI C1A 4N6
Tel 902-566-7315 - rollin.andrew@agr.gc.ca

Science Atlantic
Attention: Lois Whitehead, Executive Director
1390 LeMarchant Street, PO Box 15000
Halifax, NS B3H 3P9
Tel 902-494-3421 - apics@dal.ca

William Blight, Regional Manager
Real Property Geomatics Services
Public Works and Government Services Canada
PO Box 2247, Halifax, NS B3J 3C9
Tel 902-496-5160 - william.blight@pwgsc.gc.ca

Robert Capozzi, Coastal and Marine Planner
NB Department of Environment
PO Box 6000 Fredericton, NB E3B 5H1
Tel 506-453-8946 - robert.capozzi@gnb.ca

Norval Collins, Director, ACZISC Association
President, CEF Consultants
630 Larry Uteck Blvd., Suite 205,
Halifax, NS B3M 0G4
Tel 902-425-4802 - ncollins@cefconsultants.ns.ca

Roland Cormier, Director, Oceans and Habitat
Division, Oceans and Science Branch
Fisheries and Oceans Canada, Gulf Region
PO Box 5030, Moncton, NB E1C 9B6
Tel 506-851-3338 - roland.cormier@dfo-mpo.gc.ca

Geoff Coughlan, Senior Biologist, Oceans, Habitat and
Species at Risk Branch, **Fisheries and Oceans Canada,**
Newfoundland and Labrador Region
PO Box 5667, St. John's, NL A1C 5X1
Tel 709-772-3469 - geoff.coughlan@dfo-mpo.gc.ca
Alternate for Ray Finn

Brad Fay, Director, ACZISC Association and
Ocean Science and Technology Partnership
Associate & Geomatics Consultant
Interpretation Resources Inc.
c/o 3 Elizabeth Drive, Halifax, NS B3N 1S2
Tel 902-477-0946 - bfay@eastlink.ca

Ray Finn, Regional Director, Oceans, Habitat and Spe-
cies at Risk Branch, **Fisheries and Oceans**
Canada, Newfoundland and Labrador Region
PO Box 5667, St. John's, NL A1C 5X1
Tel 709-772-2442 - ray.finn@dfo-mpo.gc.ca

Sgt Gary Frail
Royal Canadian Mounted Police
PO Box 2286, Halifax, NS B3J 3E1

Tel 902-458-2237 (pager) - gary.frail@rcmp-grc.gc.ca

Chantal Gagnon, Executive Director, **Southern**
Gulf of St. Lawrence Coalition on Sustainability
Université de Moncton, Campus de Shippagan
047B Pavillion Irène Léger
218, boul. J.-D.-Gauthier, Shippagan, NB E8S 1P6
Tel 902-242-3032 - coord@coalition-sgsl.ca

Richard Gallant, Deputy Minister
PEI Department of Fisheries, Aquaculture
and Rural Development
PO Box 1180, Montague, PE C0A 1R0
Tel 902-838-0983 - rkgallant@gov.pe.ca

Grant Gardner, Director, ACZISC Association and
Coastal Zone Canada Association (CZCA)
Associate Vice-President (Academic), Memorial Uni-
versity of Newfoundland, St. John's, NL A1B 3X7
Tel 709-864-3259 - ggardner@mun.ca

Carol Lee Giffin, Formation Safety and Environment
Officer, **Formation Safety and Environment**
Maritime Forces Atlantic, National Defence
PO Box 99000 Stn Forces, Halifax, NS B3K 5X5
Tel 902-427-0550 (ext. 6881) - giffin.cl@forces.gc.ca

Randy Gillespie, Director, ACZISC Association
Director, Applied Research,
School of Ocean Technology, Marine Institute
PO Box 4920, St. John's, NL A1C 5R3
Tel 709-778-0764 - randy.gillespie@mi.mun.ca

Michel Goguen, Director of Hydrography
Canadian Hydrographic Service - Atlantic
Fisheries and Oceans Canada
Bedford Institute of Oceanography
PO Box 1006, Dartmouth, NS B2Y 4A2
Tel 902-426-3497 - Michel.Goguen@dfo-mpo.gc.ca

Leslie Grattan, Newfoundland and Labrador Envi-
ronmental Industry Association
90 O'Leary Avenue, 1st floor, St. John's, NL A1B 2C7
Tel 709-739-8176 - lgrattan@nl.rogers.com

Tim Hall, Regional Manager, Oceans and Coastal Man-
agement, Oceans, Habitat and Species at Risk Branch,
Fisheries and Oceans Canada, Maritimes Region,
Bedford Institute of Oceanography
PO Box 1006, Dartmouth, NS B2Y 4A2
Tel 902-426-4116 - tim.hall@dfo-mpo.gc.ca

Matthew Hardy, Oceans and Habitat Management
Biologist, Oceans and Habitat Division
Fisheries and Oceans Canada, Gulf Region
PO Box 5030, Moncton, NB E1C 9B6
Tel 506-851-2278 - matthew.hardy@dfo-mpo.gc.ca



ACZISC Membership—March 2011 (cont'd)

Russell Henry, Senior Policy Advisor, Policy and Planning, **NB Department of Agriculture and Aquaculture** and **NB Department of Fisheries**
PO Box 6000, Fredericton, NB E3B 5H1
Tel 506-457-6922 - russell.henry@gnb.ca

Don Hogan, Senior Regional Advocacy Officer
Policy Advocacy and Coordination Program
Atlantic Canada Opportunities Agency
PO Box 1060, Station C, St John's, NL A1C 5M5
Tel 709-772-2954 - don.hogan@acoa-apeca.gc.ca

Justin Huston, Coastal Zone Coordinator
NS Department of Fisheries and Aquaculture
PO Box 2223, Halifax, NS B3J 3C4
Tel 902-424-2996 - hustonje@gov.ns.ca

Nicole Hynes, Resource Planning Supervisor
Sustainable Fisheries and Oceans Policy
NL Department of Fisheries and Aquaculture
PO Box 8700, St. John's, NL A1B 4J6
Tel 709-729-1140 - nicolehynes@gov.nl.ca

Ed Light, Manager, GeoNOVA Program
Information Management Services
Service Nova Scotia and Municipal Relations
PO Box 1523, Halifax, NS B3J 2Y3
Tel 902-424-0173 - lighted@gov.ns.ca

Albert MacDonald, Director
Municipal and Land Use Planning Secretariat
PEI Department of Finance and Municipal Affairs
PO Box 2000, Charlottetown, PE C1A 7N8
Tel 902-368-5582 - afmacdonald@gov.pe.ca

Brian McShane, Innovation Officer, Policy, Analysis and Intelligence Branch, **Industry Canada**
PO Box 8950, St John's, NL A1B 3R9
Tel 709-772-6602 - mcshane.brian@ic.gc.ca

John Oliver, Environmental Compliance Specialist
Regulatory Affairs, Energy Policy
NL Department of Natural Resources
PO Box 8700, St. John's, NL A1B 2A1
Tel 709-729-2365 - johnoliver@gov.nl.ca

Jackie Olsen, Director, **Strategic Integration and Partnerships, Environment Canada, Atlantic Region**
45 Alderney Drive, 16th floor, Dartmouth, NS B2Y 2N6
Tel 902-426-0628 - jackie.olsen@ec.gc.ca

Kathryn Parlee, Ecosystem Advisor,
Strategic Integration and Partnerships, Environment Canada, Atlantic Region
45 Alderney Drive, 15th Floor,
Dartmouth, NS B2Y 2N6
Tel 902-426-1719 - kathryn.parlee@ec.gc.ca

Kyle Penney, Environment Officer, **Formation Safety and Environment, Maritime Forces Atlantic, National Defence**

PO Box 99000 Stn Forces, Halifax, NS B3K 5X5
Tel 902-721-8622 - kyle.penney@forces.gc.ca
Alternate for Carol Lee Giffin

Bobbi Rees, Policy, Planning and Research Analyst, Sustainable Fisheries and Oceans Policy
NL Department of Fisheries and Aquaculture
PO Box 8700, St. John's, NL A1B 4J6
Tel 709-729-0650 - BobbiRees@gov.nl.ca
Alternate for Nicole Hynes

Brent Rowley, Chair, **ACZISC Association**
President, EIT Group
1592 Queen Street, Halifax, NS B3J 2J1
Tel 902-420-1435 - browley@eitgroup.com

Nicole Rowsell, Senior Policy, Planning and Research Analyst, Policy and Planning
NL Department of Environment and Conservation
PO Box 8700, St. John's, NL A1B 4J6
Tel 729-1589 - nicolerowsell@gov.nl.ca

Bob Taylor, Coastal Geomorphologist
Geological Survey of Canada - Atlantic Natural Resources Canada
Bedford Institute of Oceanography
PO Box 1006, Dartmouth, NS B2Y 4A2
Tel 902-426-7736 - botaylor@nrcan.gc.ca

Eric Theriault, Advisor, Environmental Affairs
Canada - Nova Scotia Offshore Petroleum Board
1791 Barrington Street, Halifax, NS B3J 3K9
Tel 902-496-0742 - etheriault@cnsopb.ns.ca

Rob Thompson, Director
Atlantic Service Centre, **Parks Canada**
1869 Upper Water Street, Halifax, NS B3J 1S9
Tel 902-426-3445 - rob.thompson@pc.gc.ca

LCdr Bob Thwaites, **Canadian Forces Maritime Warfare Centre, National Defence**
PO Box 99000 Stn Forces, Halifax, NS B3K 5X5
Tel 902-721-1906 - bob.thwaites@forces.gc.ca

Jane Tims, Manager, Integrated Planning
Sustainable Planning Branch
NB Department of Environment
PO Box 6000, Fredericton, NB E3B 5H1
Tel 506-457-4846 - jane.tims@gnb.ca

Peter Wells, **Bay of Fundy Ecosystem Partnership (BoFEP)** Senior Research Fellow, IOI-Canada
6414 Coburg Road, PO Box 15000
Halifax, NS B3H 4R2
Tel 902-237-0600 - oceans2@ns.sympatico.ca

Louise White, Regional Health Risk Assessor and Toxicology Specialist, **Safe Environments Programme, Health Canada**
1505 Barrington Street, Halifax, NS B3J 3Y6
Tel 902-426-0984 - louise_white@hc-sc.gc.ca

Atlantic Coastal Zone Information Steering Committee

ACZISC Secretariat

Andrew G. (Andy) Sherin

Director
ACZISC Secretariat
Dalhousie University
6414 Coburg Road, PO Box 15000
Halifax, NS B3H 4R2
Tel 902-494- 6184
Fax 902-494-1334
Email a.sherin@dal.ca

Alexi (Baccardax) Westcott

Project Officer
ACZISC Secretariat
Dalhousie University
6414 Coburg Road, PO Box 15000
Halifax, NS B3H 4R2
Tel 902-494-7162
Fax 902-494-1334
Email ACZISC@dal.ca

Paul Boudreau

COINAtlantic Project Manager
ACZISC Secretariat
Dalhousie University
6414 Coburg Road, PO Box 15000
Halifax, NS B3H 4R2
Tel 902-494-7452
Fax 902-494-1334
Email COINAtlantic@dal.ca

Jennifer Barr

Finance Officer
ACZISC Secretariat
Dalhousie University
6414 Coburg Road, PO Box 15000
Halifax, NS B3H 4R2
Tel 902-494-1980
Fax 902-494-1334
Email jennifer.barr@dal.ca

ACZISC Advisory Committee

Academia Representative:

Grant Gardner
Associate Vice-President (Academic)
Memorial University
St. John's, NL A1B 3X7
Tel 709-864-3259
Email ggardner@mun.ca

Provincial Government Representative:

Justin Huston, **Chair**
Coastal Zone Coordinator
NS Department of Fisheries and Aquaculture
PO Box 2223
Halifax, NS B3J 3C4
Tel 902-424-2996
Email hustonje@gov.ns.ca

Federal Government Representative:

Tim Hall, Regional Manager, Oceans and Coastal
Management, Oceans, Habitat and Species at Risk
Branch, Fisheries and Oceans Canada, Maritimes
Region, Bedford Institute of Oceanography
PO Box 1006, Dartmouth, NS B2Y 4A2
Tel 902-426-4116 - tim.hall@dfo-mpo.gc.ca

Secretariat Representative:

Andrew G. (Andy) Sherin
Director
ACZISC Secretariat
Dalhousie University
6414 Coburg Road, PO Box 15000
Halifax, NS B3H 4R2
Tel 902-494- 6184
Fax 902-494-1334
Email a.sherin@dal.ca

Private Sector Representative:

Brent Rowley
82 Greenwood Ave.
Timberlea, NS B3T 1E8
Tel 902-420-1435
Fax 902-982-4859
Email browley@eitgroup.com



ACZISC Association

Board of Directors

Norval Collins

President, CEF Consultants
630 Larry Uteck Blvd., Suite 205,
Halifax, NS B3M 0G4
Tel 902-425-4802
Fax 902-425-4807
Email ncollins@cefconsultants.ns.ca

Brad Fay

Associate & Geomatics Consultant
Interpretation Resources Inc.
c/o 3 Elizabeth Drive
Halifax, NS B3N 1S2
Tel 902-477-0946
Email bfay@eastlink.ca

Grant Gardner, Vice Chair of Board

Associate Vice-President (Academic)
Memorial University
St. John's, NL A1B 3X7
Tel 709-864-3259
Fax 709-864-2074
Email ggardner@mun.ca

Randy Gillespie

Director, Centre for Applied Ocean Technology
Fisheries and Marine Institute
Memorial University
PO Box 4920
St. John's, NL A1C 5R3
Tel 709-778-0764
Fax 709-778-0793
Email randy.gillespie@mi.mun.ca

Brent Rowley, Chair of Board

President, EIT Group
82 Greenwood Ave.
Timberlea, NS B3T 1E8
Tel 902-420-1435
Fax 902-982-4859
Email browley@eitgroup.com

Executive Officers

Michael Butler, President

Dalhousie University
6414 Coburg Road, PO Box 15000
Halifax, NS B3H 4R2
Tel 902-494-1977
Fax 902-494-1334
Email michael.butler@dal.ca

Claudette LeBlanc, Vice President

Dalhousie University
6414 Coburg Road, PO Box 15000
Halifax, NS B3H 4R2
Tel 902-494-1980
Fax 902-494-1334
Email leblancc@ca.inter.net

Jennifer Barr, Secretary/Treasurer

Finance Officer, ACZISC Secretariat
Dalhousie University
6414 Coburg Road, PO Box 15000
Halifax, NS B3H 4R2
Tel 902-494-1980
Fax 902-494-1334
Email jennifer.barr@dal.ca

APPENDIX II

ACZISC Strategic Plan Issues

Presented to the ACZISC May 2011

This issues document follows the driving forces-pressures-state-impacts-response (DPSIR) framework – See the Gulf of Maine Council’s State of the Environment for some background on this framework: <http://www.gulfofmaine.org/state-of-the-gulf/framework.html>. It summarizes the discussion held at ACZISC Meeting #62 held in St. John’s NL on 26-27 January 2011. Special thanks goes to the members of our discussion kick-off panel, David Wells, Don Hogan and Ratana Chuenpagdee.

Driving Forces

Coastal economic changes – expanding aquaculture, transition from ground-fish fisheries to shellfish, ecotourism, and coastal industrialization (e.g. support for offshore petroleum exploration and production, LNG transshipping, coastal mining, and mineral processing)

Coastal population demographics – increasing use of the coastal zone for seasonal, personal and recreational use, coastal rural depopulation, increasing coastal urbanization, reduced employment opportunities in coastal rural communities.

Global economic growth reliant on fossil fuels including increasing global demand for energy and food

Pressures

Competing needs and interests

All coastal and ocean spaces have several to many uses and users. Most uses are subject to some level of regulation. Many uses also are subject to norms of use often defined informally by user communities. Not all uses are compatible with other uses. Regulations and norms that govern one type of use may not be compatible with regulations and norms governing another type of use. In addition uses of space in the watershed can have impacts on the coast and ocean, e.g. agricultural and forestry practices, urbanization, etc. Local, national and international non-governmental organizations often promote the use of ocean space for conservation and ecosystem services purposes which can compete with other uses.

The perspective taken by users of coastal and ocean space and adjacent watersheds is reflective of the values held by the users and user communities i.e. precautionary approaches vs economic growth.

Keeping up with rapid change

Change due to climate change

A changing climate and the increased concentration of the greenhouse gases in the atmosphere are generating environmental change including rising sea level, increased intensity and frequency of storms, increasing ocean temperatures and acidity, etc.

Change due to economic growth



Search for oil and gas including exploration, discovery and development and transportation (i.e. pipelines, tankers)

renewable energy development including electricity generation from tides and waves and the transmission of electricity from hydroelectric generation through marine cables.

Expanding aquaculture industry both spatially and range of species farmed.

Industrial fishing over time has spurred a transition in species abundances and composition of wild fish fisheries stocks, i.e. fewer ground fish available and increased shellfish.

Greater use of the coastal zone for recreation, ecotourism, urbanization and industrialization (e.g. support for offshore petroleum exploration and production, LNG transshipping, coastal mining, and mineral processing)

Pollution from point and non-point terrestrial and marine sources including contaminants, spills, and nutrients. Marine debris especially plastics are becoming ubiquitous. New studies suggest fine particle plastics could be a vector for contaminants.

State

The environment of the coastal and marine zone in Atlantic Canada is in a state of change. As most of these changes are unprecedented in the history of Atlantic Canada, it is difficult to have confidence in our understanding of the present state of the coastal and marine areas, the rate of change and the future outcomes of such change.

Impacts

Decreased resiliency of ecosystems and reduced capacity of ecosystem services

Habitat destruction and reduced biodiversity and productivity

Increased risks to human health and recreational opportunities from decreased coastal water quality

Increased costs / risks for marine infrastructure / coastal communities

Economic benefits from increased activity in multiple marine sectors

Increased challenges to realize economic and social benefits without negative environmental impact

Responses

Information Management / Improved Communication

2010 Fall Report of the Federal Commissioner of the Environment and Sustainable Development: "Solid, objective, and accessible information is essential to identify and respond to the **quicken pace and complexity** of environmental change, in Canada and globally."

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

- Improve the level of understanding of the information needs of policy makers, scientists and the general public and meet those needs.
- Improve the level of knowledge of activities within organizations both within the same organization and more widely. Create opportunities for collaboration – such as within

geospatial areas of common interest. The Internet provides an opportunity to work better with the information and policies we already have.

- Improve the understanding and communication of ecosystem services. The Ocean Project reported “the public values the oceans for their recreational and emotional aspects, but their understanding of why we need the oceans is superficial.”

Integrated Coastal and Ocean Management

The *Oceans Act* and **Canada’s Ocean Strategy** have been adopted at least at the federal level. Provincial coastal and ocean strategies are under development. The fundamental issue is how to make Integrated Coastal and Ocean Management a reality.

Factors affecting realization:

- Legislation and policy and related frameworks and legislation i.e. Species at Risk, Marine Protected Area Framework, Marine Cadastre, Marine Spatial Planning, Protected Areas
- Easy access to information sources and existing data and information
- Improved integration of physical, biological and social sciences
- Entrenchment of perspectives, consultation has been unsatisfactory to some stakeholders
- Greater awareness in industry of environmental stewardship
- Governance issues and jurisdictional clarity, which level is most appropriate and or capable to govern, i.e. using the subsidiarity principle.