



ACLS · AATC

**THE ASSOCIATION OF CANADA LANDS
SURVEYORS**

2013-2014 ANNUAL REPORT



Photo by: Tim Janzen

December 11th, 2014

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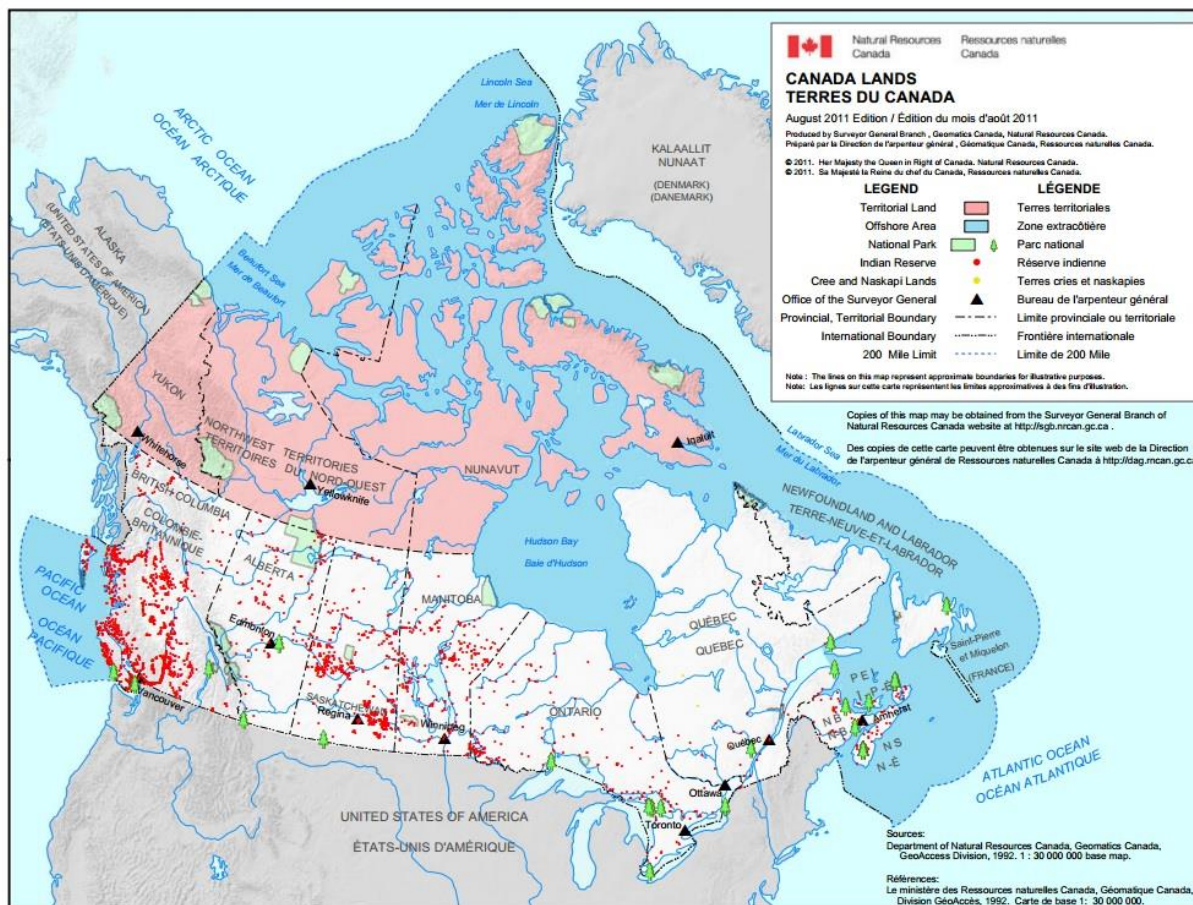
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ASSOCIATION OF CANADA LANDS SURVEYORS ANNUAL REPORT

FOR THE YEAR ENDING ON MAY 14th, 2014

INTRODUCTION

The Association of Canada Lands Surveyors (ACLS) is a national self-regulating professional association. It has over 625 members located across Canada (and the world), who have expertise in surveying, photogrammetry, remote sensing, geodesy, hydrography and land information systems. Licensed Canada Lands Surveyors (CLS) are the only ones authorized by the Canada Lands Surveyors' Act to perform cadastral (legal) surveying on Canada Lands, which include Aboriginal Lands (specified in Canada Lands Surveys Act), National Parks, all lands in the three territories and the offshore portion that is not under provincial jurisdiction.



Canada Lands Surveyors are the experts in boundary surveys and spatial positioning and are very knowledgeable of property rights systems. They provide:

- Advice and consultation on surveying, boundary matters, mapping, land registration issues, land information systems, photogrammetric surveys, hydrographic surveys, remote sensing applications and implementation of geographic information systems
- Property surveys, land descriptions and construction surveys

- General advice and consultation on land administration and land management matters.

The CLS is the key player in the Canada Lands Surveys System which provides the framework for the identification, documentation, registration and protection of land interests which impacts economic growth, social and cultural preservation and environmental protection by:

- Providing certainty and stability
- Increasing investment in property and resource exploration
- Increasing access to capital
- Improving land markets
- Providing a base for taxation aiding self-sufficiency
- Reducing disputes
- Increasing employment opportunities
- Supporting self-governance
- Assisting in environmental management and protection
- Aiding land use planning and control
- Security of Land Tenure.

ACLS COUNCIL

The leadership of the Association is provided by a Council which is a mix of elected and appointed individuals from across the country. The ACLS Council for the 2013-2014 term was formed by the following people:

POSITION	NAME	HOME
President	Estelle Moisan	Québec City, Québec
Past President	Ivan Royan	Kamloops, British Columbia
Vice President	Gord Stark	Winnipeg, Manitoba
3 rd Year Councillor	Anne Cole	Sudbury, Ontario
2 nd Year Councillor	Joe Iles	Whitehorse, Yukon
1 st Year Councillor	Tania Bigstone	Dartmouth, Nova Scotia
Appointed by Minister	Geoffrey Connolly	Cornwall, Prince Edward Island
Appointed by Minister	Zakary Hargrove	Clearview, New Brunswick
Surveyor General	Peter Sullivan	Edmonton, Alberta



On the left, Gord Stark, President for year 2014-2015, presenting appreciation certificate to outgoing Past President, Ivan Royan

Council's priorities in the last year were the following:

- Add more and more distance learning courses on the new GeoEd portal for ACLS members and other surveyors across Canada.
- Update the CLS candidate study material.
- Continue to improve the MyCLSS electronic checklist to enhance its functionality and improve the user experience.
- Review the legislation to improve the ACLS Complaints and Discipline process.
- Providing input to the Surveyor General Branch (SGB) of Natural Resources Canada in drafting of the updated National Standards for surveys on Canada Lands.
- Submission to obtain international accreditation of the ACLS Hydrographic Surveying Certification Program.
- Working with Surveyor General Branch to review necessary requirements to move toward digital plan submission.

STAFF

The Association of Canada Lands Surveyors staff is composed of 4 full time employees and one part time contractual position led by Jean-Claude Tétreault, CLS, a.-g., MBA, Executive Director and Registrar.



The Executive Director, Jean-Claude Tétreault

MEMBERSHIP, COMMISSIONS, LICENCES AND PERMITS

1. MEMBERSHIP

On May 24th, 2014 the Association membership stood at a total of 625, which included 486 regular members, 6 honorary life members, 79 retired members, 4 associate members, 49 student members, and 1 honorary member.

Since the year 2000, the Association's membership increased on average at a rate of 2.1% per year up to 2010. In 2011 and 2012, membership numbers reached a plateau and since 2013, totals are declining slightly, indicating that the demography issue faced by most of the profession for the last 10 years is now affecting the ACLS.

2. COMMISSIONS

7 new commissions were presented since June 21st, 2013.

3. LICENCES AND PERMITS

On May 14th, 2014, 372 ACLS regular members held a valid licence to practice, and 173 firms held a valid permit.

4. CANDIDATES

19 individuals were admitted as new candidates for a Canada Lands Surveyors Commission between June 21nd, 2013 and May 14th, 2014. At present there are 117 CLS candidates registered with the ACLS Board of Examiners.

COMMITTEES AND TASK FORCES

In addition to its statutory committees who manage critical tasks such as entry to the profession and our complaints and discipline process, the ACLS counts on 12 committees of volunteers who perform the bulk of the work for the Association in respect to liaising with Aboriginal organisation, education, offshore management, standards, and public awareness to name a few.

CERTIFICATION OF HYDROGRAPHIC SURVEYORS

The fall 2014 Report of the Commissioner of the Environment and Sustainable Development concluded that there is: *“a significant gap in the area of surveying and charting—a foundational requirement of safe navigation. While some surveys and charts are improved each season in the Arctic, many higher-risk areas remain inadequately surveyed and charted, and capacity to conduct this work is limited”*.



Hydrographers preparing a ROV (remotely operated vehicle) for a survey (photo provided by Fugro)

No doubt, that the Canadian Hydrographic Service (CHS) of the Department of Fisheries and Oceans will have to depend on private industry to help in the survey and charting of the high-risk areas of the Arctic. The ACLS has been aware of a need for increased capacity in the field of hydrography for a long time and has been working on building a program for the certification of hydrographic surveyors since 2002 which, once implemented, will assure CHS that industry contractors have the competencies to fulfill their obligations to the benefit of all Canadians.

After many years of gathering support from learning institutions, government and industry, the ACLS provided a submission to the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) in January 2014 for accreditation of the ACLS program under the international standards. Many countries have established hydrographer certification schemes and recently Australia's Spatial Sciences and Surveying Institute (SSSI) earned the first accredited hydrographer certification program. The ACLS was represented at the April IBSC meeting in Tokyo, Japan, to defend its certification model.

Internationally, countries with marine interests have continued to develop accredited training programs for hydrographic surveyors whereas Canada, a nation with one of the most extensive, navigable inland waterways, coastal and offshore areas; a nation that has played a significant role in the International Hydrographic Organization (IHO) and in promoting the United Nations Convention on the Law of the Sea (UNCLOS), has not.

Hydrographic certification is necessary in order to:

- Provide a formally recognized and structured career path for hydrographic surveyors particularly for those in the private sector.
- Establish an expectation of expertise and competency.
- Provide a catalyst to encourage Canadian academia to seek international accreditation of their hydrographic training programs.
- Reduce the risk associated with unqualified and inexperienced persons providing hydrographic services to the public.
- Accommodate the increased level of responsibility bestowed upon hydrographic surveyors.
- Increase the availability of qualified services in the private sector.

The ACLS, being a national, bi-lingual, self-regulated, non-governmental, professional organization, which holds jurisdiction over offshore Canada Lands and has the capacity to provide an effective administrative and regulatory framework to support a national certification model.

Unfortunately, the ACLS program did not obtain international accreditation but the IBSC did encourage the ACLS to go ahead with implementing the program and provided very constructive feedback to improve it. A special ACLS task force is looking into the details for implementation. We will re-submit our application for accreditation when IBSC feedback has been addressed.

TOWARDS INTEGRATED LAND MANAGEMENT FOR SUSTAINABLE ECONOMIC DEVELOPMENT ON FIRST NATIONS LANDS

“Enhancing the value of Aboriginal assets through the identification of economic development opportunities, leveraging partnerships, management of community assets, and modernizing lands management.”

(Federal Framework for Aboriginal Economic Development)

This year the Surveyor General Branch of Natural Resources Canada made public a report entitled: “Parcel Fabric Renewal; Towards a community-based, cost effective, and timely land development framework”. The report lists 14 recommendations to support First Nations moving

towards integrated land management regimes that include robust and integrated land survey, land use planning and land registration systems.

The ACLS Aboriginal Liaison Committee carefully reviewed the report and generally agrees with the recommendations. Our members are highly trained and interact daily with Aboriginal communities in the provision of land survey services and the professional support essential to address a wide variety of land management issues. ACLS is committed to collaborating with NRCan and all participants in the land development process towards a modernized and effective system that supports sustainable economic development of Aboriginal Lands.



A survey technician at Challenger Geomatics setting up a total station (photo provided by Challenger Geomatics)

The ACLS recognizes that the success in development and implementation of Integrated Land Management processes on Aboriginal Lands will be contingent on adequate funding and appropriate technical capacity. We will look for opportunities to play a leadership role in encouraging and supporting realization of the recommendations of the SGB report.

CONTINUING PROFESSIONAL DEVELOPMENT

The ACLS has introduced mandatory Continuing Professional Development (CPD) on January 1, 2011 to fulfill its role of making sure that its members are current in their knowledge and skills in their particular fields.

Recognizing the geographically diverse nature of our membership, the ACLS is enhancing the delivery of CPD through Distance Learning (DL) initiatives. This includes DL courses offered through partnership with sister associations, academic institutions and through the GeoEd portal.

GeoEd is a collaborative program that seeks to include all provincial and federal surveying associations in Canada to promote accessible continuing professional development. The initiative was conceived and developed by the ACLS for the benefit of all surveyors in Canada. ACLS continues to maintain the portal in what will hopefully become a cooperative effort to

share resources and expertise towards the development of national learning. Other surveying associations and a private business have joined GeoEd as registered providers.

The GeoEd portal is currently comprised of on-line courses on a variety of topics that are available at a click of the mouse. The following are courses were added this year:

- *E5 Webinar* on creating files according to the Digital Spatial File Specifications as stated in Appendix E5 - General Instructions for Surveys presented by SGB.
- *An Exploration of Websites Useful to the BC Land Surveyor and other Land Related Professionals* presented by the Association of British Columbia Land Surveyors.
- *Understanding Indigenous Issues and Building Respectful Relationships with First Nations* presented by Robert Harding, BA, BSW, MSW, PhD, RSW; and, Gwen Point, BEd, MEd, EdD (cand.) from the University of Fraser Valley.
- *The Land Surveyor as an Expert Witness* presented by Four Point Learning.

The above courses consist of live, interactive webinars, but most courses are fully self-study with recorded video and other digital materials. Surveyors are able to sign up for any of the 12 courses and complete it at their leisure.



Continuing Professional Development for Canada's Professional Surveyors

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INFORMATION

Home

GeoEd is a place where surveyors across Canada can connect about CPD opportunities, whether by participating on the [forum](#) or watching them through GeoEd.

If you're interested in CPD opportunities in your area, please see [here](#) and search by your province to see what's coming up, or see our [calendar of events!](#)

Here are the latest CPD Updates:

[Expert Witness Course](#)

Screenshot of the front page of GeoEd

GeoEd is well on its way to be the tool that surveyors across Canada will use to make educational opportunities as easy and accessible as possible. Please visit GeoEd at: www.geoed.ca.

PLAN REVIEW CHECKLIST

The MyCLSS website which contains the ACLS electronic plan review checklist has been in operation since August 1st, 2011. The use of the system is mandatory for ACLS licence holders in the performance of surveys on Canada Lands and private lands in the three territories.

The MyCLSS website includes on-line tools for requesting survey instructions, completing a customized checklist for most Survey Documents that are prepared for submission to the Surveyor General and updating of contact information for use by the ACLS and the Surveyor General Branch. The MyCLSS website also has links to all the common sites that would typically be used during the course of preparing a Survey Document for submission to the Surveyor General, making it a convenient single resource site for Canada Lands Surveyors and their staff.



GPS unit collecting data to determine the position of a survey monument (photo provided by Challenger Geomatics)

This system simplifies and streamlines the submission and review process for CLS plans and provides the Association with more effective tools to support their quality control activities and practice review processes. SGB studies have shown that the MyCLSS system decreased the number of rejected plans significantly and reduced the average time required to register a survey plan by half.

Since the new National Survey Standards for the Survey on Canada Lands will be implemented soon, we have been busy preparing the MyCLSS system to deal with the new survey document types. The SGB staff prepared a list of 23 survey document types and the ACLS staff drafted a list of 263 new checklist items in both languages to be inserted into the system. The next phase will be modifying MyCLSS to allow for digital submission of survey documents. We expect this to happen in 2015.

To access the website please visit www.myclss.ca

DAVID THOMPSON NATIONAL GEOMATICS AWARDS

The Association of Canada Lands Surveyors and Professional Surveyors Canada are proud to announce the winners of the seventh annual David Thompson Awards! The awards were presented during the National Surveyors' Conference in St. Andrews By-the-Sea on May 13, 2014.

The David Thompson National Geomatics Awards are presented for excellence in the profession of surveying in three categories:

- “*Innovation in Geomatics*” recognizes a project that involved the most innovation, such as using never or seldom used technology to solve a survey problem.
- “*Contribution to Society*” recognizes a project that has the most positive impact on society, such as important involvement in new infrastructure in Third World countries, major contribution in cases of natural disasters, or technological transfer or capacity building in less fortunate communities.
- “*Challenging Applications in Cadastral Surveying*” recognizes a project that applied cadastral surveying methods and technology to solve the most challenging technical problem.

Innovation in Geomatics



In the category *Innovation in Geomatics*, the winner was Adam Brash from Focus for the project entitled “Focus Journey Management”. This innovative application for iPhone (shown left) and SPOT devices gives project managers and health and safety professionals the ability to view in real-time all field personnel’s daily journeys through GPS, and quickly identify if they are in need of assistance. Other built in tools in this app include access to digital copies of safety tickets, submitting Safety Opportunity Cards, and ability to report on Safe Work Practices.

A close runner up for this award was Jim Christie from McElhanney Associates for “Custom Mobile GIS for LNG Pipeline Project”, a project that used over 80 people and in-house mapping platform Vertisee to collect over 1 terabyte of data over a short time frame.

Contribution to Society

In the category *Contribution to Society*, the winner was Robert Allen (pictured far left in canoe) from Robert Allen and Company for the project entitled “Resurvey of Kootenay River”. This project was done in commemoration of one of Canada’s first surveyors, David Thompson. Canoe crews resurveyed the Kootenay River using hand held GPS.



Challenging Applications in Cadastral Surveying



In the category *Challenging Applications in Cadastral Surveying*, the winners were Kevin Kujala from Tulloch Engineering (pictured below receiving his award from ACLS president Estelle Moisan) and Murray Shantz from MMM Group Limited for the project entitled “Armow Wind Farm”. The project created a web-based GIS system to assist in the development of a large scale wind farm and a robust control network to allow surveyors to access every square metre of the 196km² project site.

The Association of Canada Lands Surveyors (ACLS) introduced the David Thompson National Geomatics Awards Program in cooperation with all professional surveying associations across Canada through the Canadian Council of Land Surveyors (CCLS) (Now

Professional Surveyors Canada (PSC)).



The David Thompson National Geomatics Awards Program is open to all commissioned surveyors who are members of a Canadian surveying association, submitting projects that have been completed within the last three years. The deadline for submissions is Tuesday, March 31, 2015.

Professional Surveyors Canada is conceived, developed, and run by Canadian surveyors, and is dedicated to building and enabling a strong multi-faceted community of surveying professionals committed to exceeding expectations. <http://www.psc-qpc.ca>

For more details on the David Thompson National Geomatics Awards Program, please visit: <http://www.acls-aatc.ca/en/node/27>

NATIONAL SURVEYORS' CONFERENCE

The National Surveyors' Conference was held from May 12th to 14th, 2014 in St. Andrews By-the-Sea, New Brunswick which was the second Conference held in partnership with Professional Surveyors Canada. The Conference was a success with over 100 delegates attending. The following Council was confirmed at the AGM:

POSITION	NAME	HOME
President	Gord Stark	Winnipeg, Manitoba
Past President	Estelle Moisan	Québec City, Québec
Vice President	J. Anne Cole	Sudbury, Ontario
3rd Year Councillor	Joe Iles	Whitehorse, Yukon
2nd Year Councillor	Tania Bigstone	Dartmouth, Nova Scotia
1st Year Councillor	Cameron Twa	Yellowknife, Northwest Territories
Appointed by Minister	Geoffrey Connolly	Cornwall, Prince Edward Island
Appointed by Minister	Zakary Hargrove	Clearview, New Brunswick
Surveyor General	Peter Sullivan	Edmonton, Alberta



Our President, Gord Stark, addressing the membership at the National Conference 2014. In background, from left to right: Past President Estelle Moisan, the Surveyor General Peter Sullivan, Councillors Tania Bigstone, Anne Cole, Geoffrey Connolly, Joe Iles and Zakary Hargrove.

Next year's conference will be held in Winnipeg, Manitoba from May 13th to 15th, 2015 at the Fairmont Winnipeg Hotel.

The preliminary Program includes:

- Keynote Speaker - James B. (Jamie) Wilson, B.A., U.S.T.C., M.Ed., Commissioner, Treaty Relations Commission of Manitoba
- Discussion of *Understanding Indigenous Issues and Building Respectful Relationships with First Nations*, led by Faculty member (TBA), University of Manitoba
- Presentation by Leona Irons, Executive Director, National Aboriginal Land Managers Association
- Presentation by Tania Bigstone, First Nations Land Management Resource Centre
- Presentation by Gordon Bluesky from Brokenhead Ojibway Nation, Scanterbury, Manitoba
- Review of *Williams Lake and Grassy Narrows Supreme Court decisions* by Aimée Craft, University of Manitoba
- Presentation by Geoff Cole, Director, Lands Directorate, Lands And Environmental Management Branch, AANDC

CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS (CBEPS)

The ACLS continues to provide the administration and registrar services for the Canadian Board of Examiners for Professional Surveyors. The ACLS has a strong core competency in the fields of candidate management and examinations and wants to continue to make these resources available to the whole surveying community.



MARINE CADASTRE

As mentioned in the section entitled “Certification of Hydrographic Surveyors” of this report, the Fall Report of the Commissioner of the Environment and Sustainable Development it was stated that : “... *many high-risk areas in the Canadian Arctic are inadequately surveyed and charted, and that capacity for work is limited*”.

The Government’s “northern strategy” has four pillars: exercising sovereignty, protecting the environment, devolving Northern governance and promoting social and economic development. This strategy highlights the need to develop a marine cadastre for Canada’s Offshore. Having a properly implemented marine cadastre backed up by base mapping from more complete navigational chart coverage will provide for orderly economic development and resource management. Having such an administrative system in place will help Canada assert its sovereignty in the Arctic because it will be able to demonstrate appropriate management of its northern region.

A marine cadastre is “A marine information system, encompassing both the nature and spatial extent of interests and property rights, with respect to ownership and various rights and responsibilities in the marine jurisdiction.” (Nichols, S. et al, 2000)

Canada’s oceans face unique and challenging environmental threats. Receding ice in the Arctic, rising sea levels, man-made pollution, declining stocks of fish – and many other challenges - all require comprehensive solutions, but those solutions are difficult to find unless there is a complete and accurate record of rights and responsibilities for our ocean territory. Further, the potential for environmental catastrophe in the marine environment is getting larger every day.

Some estimates suggest that 25 – 50% of the world’s yet-to-be-discovered hydrocarbon energy resources exist above the 60 degree latitude line. Canada’s oceans hold tremendous opportunity for renewable energy development and many other mineral resource opportunities.

With only a small percentage of Canada’s ocean territories mapped and analyzed, it is impossible for the government of Canada, or any authority, to appropriately manage, implement or enforce policy. Canada’s sovereign claims over the continental shelf, which extend beyond the 200nM limit of our territory, cannot be supported unless we, as a Nation, very carefully and accurately map these territories and, in turn, appropriately manage that territory just as we do our land-based resources.

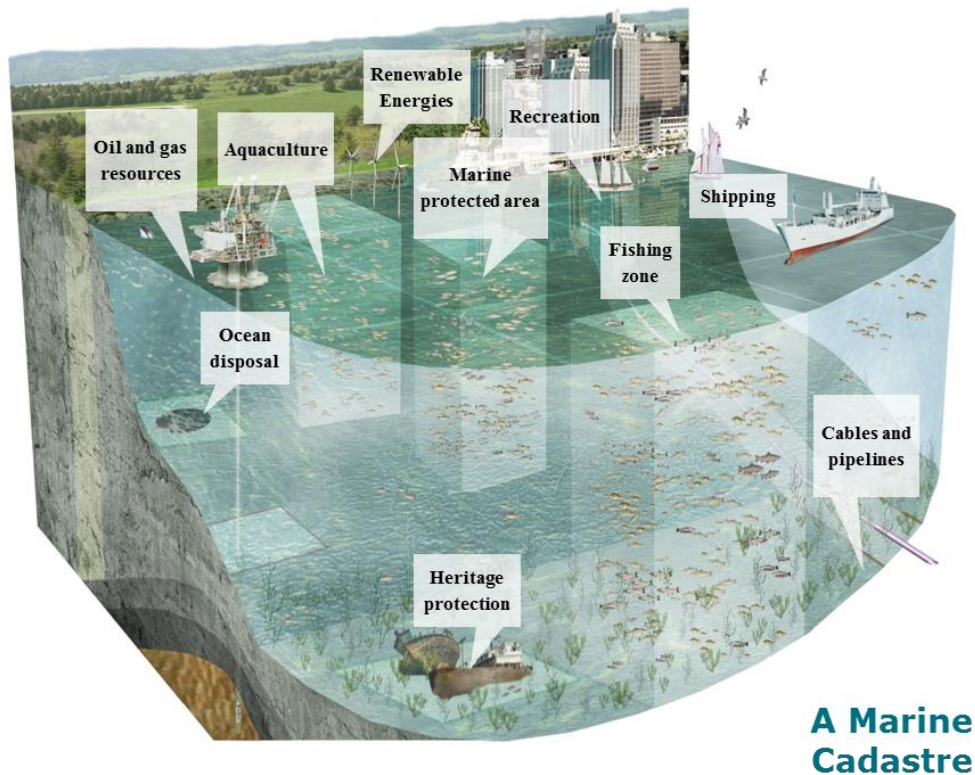


Image provided by Natural Resources Canada

In April of 2012, the ACLS Executive Director was invited by the International Centre for Research on Environmental Issues (ICREI) to present a paper on the concept of a marine cadastre in Aix-en-Provence, France. Then in June 2013, the Executive Director made a presentation via videoconference on the same subject during a conference of the Association du Grand Littoral Atlantique in Nantes, France. Since 2012, we have maintained contact with our French friends and recently had the opportunity to visualize a demonstration portal on a marine cadastre for the Marseille area developed by the Ordre des Géomètres experts de France during the GéoCongrès 2014 in Québec City last October.

The ACLS believes that it is in the best interest of all Canadians to have a marine cadastre in place to better manage Canada's offshore zone.

RELATIONSHIP WITH NRCAN'S SGB

ACLS's relationship with the Surveyor General Branch (SGB) continues to be a close and valued partnership. In this past year both parties have worked closely on a specific project, the revision of the Plan Review Checklists (MyCLSS) due to the update of the National Standards which is quite a challenge, but is a tribute to our strong, constructive relationship. The ACLS and SGB continue to set the groundwork for the evolution of the Canada Lands Survey System into the foundation for a truly integrated property rights infrastructure for Canada Lands. Twelve Surveyor General Branch employees are active in various ACLS committees.

CONCLUSION

The ACLS continues to be a leading organisation in the geomatics community and is grateful to its dedicated staff and many volunteers who are really the backbone of this association.

Canada Lands Surveyors (CLS) in government and the private sector are responsible for building and maintaining a reliable survey system on Canada Lands and private lands in the territories which is a critical element of a strong property rights system. Without a strong property rights system, there cannot be economic growth. Survey and registration systems provide the necessary framework for the identification, documentation, registration and protection of land interests. This in turn provides security of land tenure and enables efficient markets for land transfers by specifying the rights and obligations of owners and investors in the land.

On First Nations reserves especially, surveys are necessary for resource management and planning as well as social and cultural preservation. This enables accurate definitions of the land to be used to build a strong property rights infrastructure which creates the basis for sustainable development.

Our members are proud of this responsibility and have met the challenge since 1874.



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