

Environmental Assessment Program



1998/99
Annual Report

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EXECUTIVE SUMMARY

This Annual Report provides an overview of the Activities of Environment Canada's National Environmental Assessment (EA) Program for the 1998-99 fiscal year.

The National EA Program is composed of staff from the Environmental Protection Service (EPS), Environmental Conservation Service (ECS) and Atmospheric Environment Service (AES) both from Headquarters and the five Regional offices. They all contribute to meeting the Department's EA responsibilities. The Headquarters component of the Program includes the Environmental Assessment Branch as well as "EA" practitioners residing in the National Hydrology Research Institute (Saskatoon, Saskatchewan), the National Water Research Institute (Burlington, Ontario) and the National Wildlife Research Institute (Hull, Quebec).

The major portion of the Program's mandate stems from the *Canadian Environmental Assessment Act* (CEAA). The 1998-99 fiscal year is the fourth year that the Act and its four key regulations have been in place. Once again, our program has spent a busy year, dealing with 1784 projects EAs. This has involved providing our "expert advice" on science to the design, mitigation, follow-up and outcome of these projects. The Report also includes the program activities in the past year in fulfillment of its responsibilities under the 1990 Cabinet Directive on the environmental assessment of policies, plans and programs.

During the 1998-99 year, the EA Program expended much effort to protect migratory birds (Cheviot Coal Mine, Trans Quebec Maritime pipeline) and endangered species (Voisey's Bay Mine/Mill, Tracadie Rivers Link) and to prevent pollution in the environment. Much time has also been spent on follow-up and monitoring, for specific projects and for overall performance of the Program. The Atlantic Region has devoted considerable effort to ensuring that conditions for funding and permits stemming from environmental assessments are being fully implemented to the Department's satisfaction (Sable Gas projects). The Seminar Series on Follow-up held in Ottawa focused attention on key lessons learned in the five case studies involving EA.

The EC National EA Program has worked cooperatively with the Canadian Environmental Assessment Agency, other government departments and other jurisdictions in an effort to fulfill our CEAA mandate for project assessment and examining federal policies, plans and programs for their environmental impacts. EA continues to be a key tool to promote pollution prevention and implementation of sustainable development through good planning.



PURPOSE

This Annual Report demonstrates the Department's commitment to be accountable for its actions and to share our successes and lessons learned in the field of Environmental Assessment (EA). This report details our activity between April 1, 1998 and March 31, 1999. It also responds to the need to report on the increasing level of EA activity in our EA Program including departmental activities relating to adherence to the 1990 Cabinet Directive on the EA of policies, plans and programs.



ASSESSMENT ACTIVITIES/REGIONAL HIGHLIGHTS

Atlantic

Voisey's Bay Mine/Mill Panel Review, Labrador, Newfoundland

The Voisey's Bay Nickel Company, a subsidiary of INCO Ltd., has proposed development of a massive (150 million tonne reserve) nickel-copper-cobalt mine/mill in northern Labrador comparable in size to the deposit in Sudbury, Ontario. A joint panel review of the project was conducted on the basis of a Memorandum of Understanding (MOU) signed by the Government of Canada, the Government of Newfoundland and Labrador, the Labrador Inuit Association and the Innu Nation. During 1998-99, an Atlantic Region led team of over 40 departmental

staff, including experts from the Prairie and Northern Region and Headquarters, facilitated Environment Canada's intervention in the panel hearings. Staff appeared before the Panel to deliver presentations, and respond to questions, on issues of key concern to Environment Canada.

On the final day of panel hearings, the department submitted a position statement summarizing the whole of EC's perspective on the proposed project. Recommendations in the position statement focused on minimizing the project footprint, protecting water quality from project wastes, protecting the health of wildlife from contaminant releases, protecting the endangered Harlequin Duck from multiple stressors, protecting productive wetland habitat from aircraft



movements, and protecting birds from releases of oil associated with vessel traffic. The panel report made available to the MOU parties on March 31, concluded that the project could proceed subject to implementation of 107 recommendations which, in many cases, mirror Environment Canada's perspective on the project. For example, three of the panel's recommendations address the need for the proponent to work with Environment Canada in conducting research and monitoring, and in implementing specific mitigation measures, that will help ensure that the endangered eastern population of the Harlequin Duck is adequately protected. Several other panel recommendations relate to management of mine/mill wastes including the need for the proponent to work with Environment Canada in developing a pollution prevention program focused on reducing pollutants at source on a continual improvement basis.

Tracadie Rivers Link Comprehensive Study, New Brunswick

A proposed project designed to attract recreational boaters and promote ecotourism activities in northeastern New Brunswick was the subject of a comprehensive study by Human Resources and Development Canada (HRDC) as well as a provincial environmental assessment. The Tracadie Rivers Link involves construction, operation and maintenance of a navigational channel sheltered from the Gulf of St. Lawrence. The navigational channel includes a canal across a small peninsula and a dredged route through a shallow lagoon system. The region features mudflats, sandbars and islands that offer important habitat for migratory birds and species recognized to be at risk by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

As an expert department, Environment Canada had considerable influence on this assessment leading to changes in project design and to identification of mitigation measures and conditions that will facilitate a comprehensive regional approach to environmental management. For example, a negotiated agreement that details research, mitigation, monitoring, and recovery efforts directed at protection of the endangered Piping Plover, local tern populations and the

vulnerable Gulf of St. Lawrence Aster is required. The agreement must include the proponent, Environment Canada, the Piping Plover Recovery Team, a local non-government environmental group, HRDC and the provincial government. These negotiations are underway with the expectation that a mutually agreeable strategy will be in place to address cumulative effects resulting from tourism activities in this sensitive environment.

Cranberry Operations, New Brunswick and Nova Scotia

The cranberry industry continues to expand rapidly in Nova Scotia and New Brunswick. During 1998-99, fifteen (15) new proposals subject to provincial and/or federal environmental assessment were reviewed by Environment Canada. Key issues for the department include potential impacts on wetlands and wetland functions, protected areas, migratory birds, species at risk, and water quality.

As a result of departmental interventions, the standard of review applied to proposed cranberry operations is higher, and the requisite environmental protection measures are more comprehensive. Such operations now require detailed water balances, rare plant surveys, integrated pest management plans, erosion and sedimentation prevention and control strategies, and monitoring programs. Potential stresses from cranberry operations on protected areas managed by Environment Canada have been highlighted in environmental assessments and actions are being taken to ensure adequate protection measures are in place. As a result of the high level of assessment activity, provincial guidelines for cranberry operations are being developed by the New Brunswick government in consultation with Environment Canada. Particular attention is being given to avoidance of significant cumulative effects.

Ontario

Red Hill Valley Expressway

The Regional Municipality of Hamilton-Wentworth is proposing to construct a six lane expressway



through the Red Hill Valley, the only remaining natural stream valley in east Hamilton, a highly urbanized area. This valley provides important functions to migratory birds, in particular as a migration corridor for songbirds between the Niagara Escarpment and Lake Ontario, and breeding habitats for many species, including a provincially significant wetland that supports the Least Bittern (designated Vulnerable by COSEWIC). This project has previously received approval under the Ontario environmental assessment process in 1985. Fisheries and Oceans Canada is the lead Responsible Authority for a screening under CEAA which was initiated in 1998 due to approvals required under the *Fisheries Act*.



Environment Canada is also an RA due to relocation of a hydrometric station that it operates on Red Hill Creek. There has been much concern from the public over the project, and debate within the community over the expressway has gone on for three decades. The proponent has admitted that the impacts of the highway on the wildlife functions in the lower valley will be severe and are not likely mitigable. Environment Canada considers the impacts on habitat in the valley which supports important functions for migratory birds to be significant, and is advising that a CEAA panel be held to consider the need for and alternatives to the project in order to justify the environmental effects. However, our position may be challenged by the proponent due to the lack of direct federal legislation to protect habitat of migratory birds.

Peace Bridge Capacity Expansion

The Buffalo and Fort Erie Public Bridge Authority is proposing to construct a new multi-span vehicular bridge over the Niagara River between Fort Erie,

Ontario, and Buffalo, New York. The new bridge will be built parallel to the existing Peace Bridge and will have coincident piers within the river, with the existing bridge being refurbished for continued use. An EA study was initiated in 1995 to meet requirements in both Canada and the U.S., with Fisheries and Oceans Canada (DFO) as the Responsible Authority for a screening under CEAA. Environment Canada has participated in the EA as a Federal Authority, with our primary concerns related to transboundary water management issues as a result of impacts on water levels and flows during construction and operation, in context of the *Boundary Waters Treaty Act*. In order to address these concerns, EC has worked closely with U.S. agencies and the proponent to identify appropriate mitigation measures, including pier and shoreline streamlining. As a result, DFO completed its CEAA screening in early 1999.

The original Peace Bridge was approved by the International Joint Commission (IJC) in 1925, therefore an application was made to the IJC for the proposed new bridge. Under the *Boundary Waters Treaty*, the IJC approves any uses, obstructions and diversions of boundary waters that would affect the natural level or flow across the boundary, unless the two federal governments give approval by a special agreement. The IJC held public consultations in January 1999 on both the Canadian and U.S. sides at which EC staff participated. There is some perception of duplicative approval processes from



the IJC and federal EAs in Canada and the U.S. However, as a result of the involvement by EC through the EA process, the proponent has substantially satisfied the transboundary concerns, therefore IJC approval is expected shortly with minimal additional requirements.



Pacific and Yukon

Prosperity Mine Proposal

The review of this proposed gold/copper mine at Fish Lake near Williams Lake, B.C. remains ongoing. Regional EA and technical staff have continued to provide advice to the Department of Fisheries and Oceans as the Responsible Authority on water quality and migratory bird issues. The potential loss of Fish Lake to tailings disposal represents a potentially significant loss of migratory bird habitat and fish habitat, as well as posing a range of downstream water quality issues.

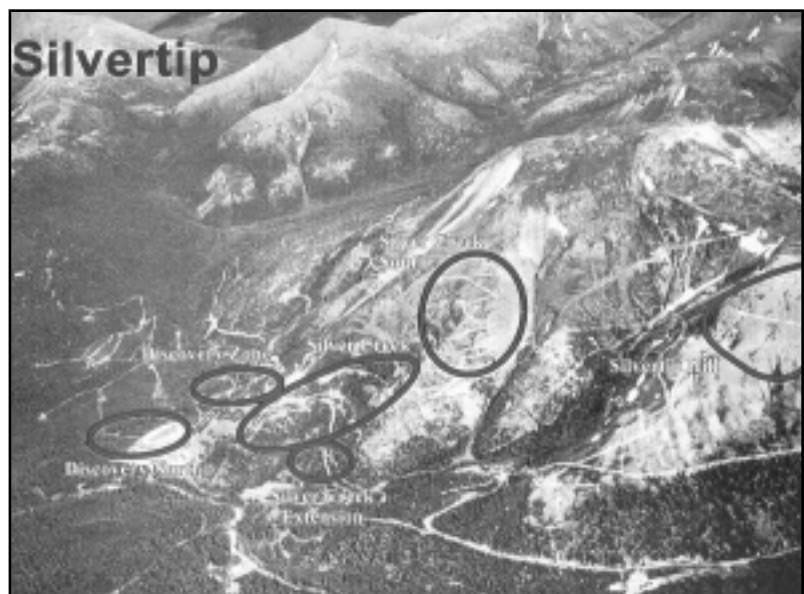


The proponent has presented five alternatives for the development of the mine project to the project committee. The proponent favours the option to turn Fish Lake into a tailings pond. The *Canadian Environmental Assessment Act* requires the examination of alternatives for the tailings disposal. This has led to substantial discussion among committee members on the analysis presented by the proponent. A sub-committee of the project committee has corroborated the proponent's finding that four of the five options are not economically viable.

Silvertip Mine Proposal

In mid-1998, Environment Canada became involved as a Federal Authority in the review of this base metal/gold/silver mine located near the B.C./Yukon border southwest of Watson Lake. Elements of the proposal lie both within B.C. and the Yukon, and the affected drainage flows from B.C. into the Yukon. As with many such projects, the Department of Fisheries and Oceans has declared itself to be a Responsible Authority. The Department of Indian and Northern Affairs (INAC) has also declared itself to be a Responsible Authority with respect to the proposed works in the Yukon Territory. The project has also triggered the *British Columbia Environmental Assessment Act* (BCEAA), and a joint Federal/Provincial review is underway.

This project poses a considerable challenge for P&Y's environmental assessment group, since the B.C. Provincial process is unable to encompass issues outside B.C. Therefore, the usual two-party harmonized review will not cover the full scope of the proposal. The CEA Agency's role has thus been elevated to full membership on the Project Committee in this case to ensure full consideration of issues raised by the Yukon Territorial Government and Federal interests in the Yukon Territory. The Yukon involvement also raises the profile of First Nations issues.



Cascade Heritage Power Project

This proposal envisions the construction of a 25 MW run-of-the-river hydro power plant on the Kettle River some 4 km north of the point where it flows into the United States. The design makes use of some remaining features of an historic pioneering hydro project which was located at the same site. The project will bypass a stretch of the Kettle River, with considerable potential for impacts on fish. As a result, the Department of Fisheries and Oceans has declared itself to be a Responsible Authority. The matter is also under review by the Province pursuant to the *British Columbia Environmental Assessment Act*.



In its capacity as a Federal Authority, Environment Canada provided advice to the effect that research done by the Department on the Kettle River indicated that climate change may have a substantial effect on flows in the river, which could in turn affect the availability of water for power generation and fish conservation. It was recommended that this issue be studied prior to a CEAA screening being finalised given the implications. DFO has accepted this advice, and the proponent has been asked to include the issue in his forthcoming environmental assessment.

Prairie and Northern

Alliance Natural Gas Pipeline

Environment Canada's involvement with the Alliance Pipeline began in October 1996. In July

1997 Alliance filed its application with Canadian and U.S. regulatory bodies for a large diameter natural gas pipeline from Northeast British Columbia to Chicago. All commitments and regulatory approvals are now in place on both sides of the border. Approval for construction and operation of the U.S. portion of the line was granted in September 1998 by the Federal Energy Regulatory Commission (FERC).

In October 1998 the National Energy Board (NEB) released the Comprehensive Study Report (CSR) for the proposed natural gas pipeline to the Canadian Environmental Assessment Agency (the Agency). Following a thirty day public review period, the Agency submitted the CSR to the Minister of the Environment along with recommendations. In November 1998 the Minister concluded the project was not likely to cause significant adverse environmental effects and referred the project back to the NEB for action under subsection 37(1) of CEAA. Within several days the NEB released its Reasons for Decision approving Alliance's application. Cabinet approved construction and operation of the Canadian portion of the \$2-billion natural gas pipeline in December 1998. The massive natural gas pipeline will move 37.3 million cubic meters per day. It will run 1565 km of mainline and 770 km of lateral pipeline on its route from Fort St. John in northeastern B.C. to Lloydminster on the Saskatchewan Alberta border, and on to southeastern Saskatchewan where it will cross into the United States and terminate in Chicago. It will cost an estimated \$4.7 billion.

The NEB Certificate of Terms and Conditions included 54 conditions. All 41 CSR recommendations were incorporated in these 54, 11 of which require action on the part of the proponent to either send information to or discuss potential action with Environment Canada. In its Reasons for Decision, the NEB noted it will carry out its own inspections and audits in accordance with the relevant legislation and conditions of approval to ensure protection of the environment.

In early January 1999, the Rocky Mountain Ecosystem Coalition filed an application with the Federal Court of Canada seeking orders to quash or set aside the NEB decision to approve the proposal



and a *Mandamus* directing Fisheries and Oceans Canada and the Prairie Farm Rehabilitation Administration to engage in a panel review of this proposal.

Environment Canada will continue to be involved with this project until the legal question is resolved and will participate in the construction and operation phases. NEB hearings are scheduled for April 1999 in response to landowner opposition to 38 portions of the proposed route but are not expected to raise environmental issues. Actual pipeline construction begins May 15, 1999 in the United States and June 1, 1999 in Canada.

Cheviot Mine

All permits and approvals are in place for the construction of the \$250 million dollar open pit coal mine located near the eastern boundary of Jasper National Park, 70 km south of Hinton, Alberta. A panel report was released in June 1997 approving the proposed coal mine project. Federal Cabinet approval followed in October 1997. In April 1998, a coalition of environmental groups filed a lawsuit stating the Review Panel failed to conduct a proper environmental impact assessment as required by CEAA and that the review failed to address alternatives (underground mining) and cumulative effects. The coalition argued that issuing authorizations for the mine would be contrary to the *Migratory Birds Convention Act*, as the mine would result in thousands of tons of waste rock being dumped and left on top of stream-valley habitat for Harlequin Ducks and thousands of migratory song birds. The lawsuit was rejected by the Federal Court in June 1998. In December 1998, environmentalists won the right to appeal. The appeal was heard in March 1999 and a decision is expected in the near future.

Environmentalists are particularly concerned about the potential for destruction of Harlequin Duck habitat in the project area. Harlequin Duck habitat is under extreme pressure due to recreational boating and pollution on the coast, destruction of habitat by logging on their breeding streams in British Columbia and increased

development adjacent to breeding streams in the Alberta foothills of the Rocky mountains. Canadian Heritage and Parks Canada took steps in 1998 to ensure Harlequin breeding habitat is protected by ensuring there will be no more rafting allowed on the Maligne River in Jasper National Park.



Federal-provincial management and technical committees are developing the detailed provisions of the company's development and operating permits. Environment Canada is a participant. Construction of the project has been delayed for at least a year due to ongoing environmentalist challenges and weak international coal prices. Environment Canada will work to ensure that mitigation plans are maintained and to use the delay to learn more about the status of the affected population.

Little Bow Project/Highwood Diversion Plan

In June of 1998, the Joint Natural Resources Conservation Board and Canadian Environmental Assessment Review Panel gave conditional approval for the construction of the Little Bow River dam and reservoir near Champion and the enlargement of the Highwood River diversion structure and canal at High River; and the Clear Lake diversion structure and canal near Stavely, to Alberta Public Works, Supply and Services (APWSS) and Alberta Environmental Protection (AEP). However, they deferred consideration of an expanded reservoir at Squaw Coulee and the Highwood River Diversion Plan for the low-flow season, pending further information to be filed by June 15, 1999. The Panel recommended that Environment Canada work closely with the



Applicant and appropriate groups to provide expertise and experience on several areas of concern: the Clear Lake Wetlands, to ensure mitigation of lost shorebird habitat due to lake stabilization and the mitigation of impacts on Burrowing Owls and Ferruginous Hawks; support of wildlife and vegetation habitat mitigation planning; the Habitat Evaluation Procedures (HEP) process to achieve no net loss of mixed grassland habitat; and selection of indicator species for determination of habitat type needed for compensation to adequately reflect the area's biodiversity.

As a condition of the approval, the Applicant is required to submit Mitigation Progress Reports within one year of the decision. Of interest to Environment Canada are the following required reports:

- Process plan for completing the Highwood River Basin Water Management Plan;
- Habitat Compensation Plan;
- Fisheries Mitigation and Enhancement Plan;
- Plan to address livestock effects on riparian habitat and water quality;
- Area Structure Plan for lands surrounding Little Bow River Reservoir and the Field-Oriented Operations Plan.

The Panel also recommended Mitigation Progress Reports be submitted for:

- the Frank Lake Water Quality Mitigation Plan;
- the Little Bow River Reservoir Water Quality Protection Plan;
- the Clear Lake Irrigation Development Plan and the Clear Lake Wildlife Management Plan.

The Panel addressed all of Environment Canada's major recommendations for the three components of the project that were approved. Environment Canada will participate in the upcoming EA of the expanded reservoir at Squaw Coulee and the Highwood River Diversion Plan for the low-flow season, pending further information to be filed by June 15, 1999.

Oilsands

Several major projects were approved during the last year. The most significant included Suncor Millennium Oilsands Mine Project, Shell Canada Limited Muskeg River Mine Project, Shell Scotford Refinery and the Shell Corridor Pipeline. Environment Canada played a significant role in ensuring that the issue of Regional cumulative effects were addressed in the review processes. As a result of this work, the Province of Alberta is putting in place an Athabasca Oilsands Regional Sustainable Development Strategy (RSDS) which likely will be viewed as a model for consideration of cumulative effects through integrated resource planning.



Research and Development, 1998-99

The following projects were funded through the Regional EA Research and Development funds with the intent of enhancing the region's advisory capability through supporting regional science:

- Compilation of Existing Data on the Potential Significance of Forest Harvesting in Mixed-Wood Boreal Forest on Neotropical Migratory Birds.
- Follow-Up Study on Pipeline Projects in the Boreal and Prairie Ecozones — Phase II — Field Verification of the Effectiveness of DOE Advice.



- Modeled Estimates of Terrestrial Isoprene Emissions and Potential for Inducing Errors in Regional Air Quality Modeling Exercises.
- Investigation of Aquatic Impacts of On-Ice Exploratory Diamond Drilling — Kimberlite Targets.
- Reservoir Impacts of the Meridian Dam on Wildlife Habitat of the Proposed CFB — Suffield National Wildlife Area.
- Harlequin Duck Occurrence/Distribution Along the Eastern Slopes of the Rocky Mountains of Alberta.

Prairie and Northern Region continues to make good use of these projects in the decision making process. A 1997-98 project, “Fine Aerosol Chemistry at Dissimilar Non-Urban Sites” influenced the Suncor decision and was referred to in the hearings. Dr. Karen McDonald of the Atmospheric Environment Branch also presented the report to the International Global Atmospheric Chemistry Conference held in Seattle, Washington in August of 1998. Another Oilsands related project funded in 1998-99, “Modeled Estimates of Terrestrial Isoprene Emissions and Potential for Inducing Errors in Regional Air Quality Modeling Exercises” is currently being used by the Wood Buffalo Environmental Association (WBEA) Ozone Modeling Working Group for work being done in northeastern Alberta.

Quebec

Selective Dredging of St. Lawrence Ship Canal Shoals

The Montreal Port Corporation (MPC) seeks to selectively dredge 36 shoals over a 145-km stretch of the St. Lawrence Ship Canal between Montreal and Deschaillons to increase its depth from 11.0 to 11.3 metres. The sediment to be dredged amounts to approximately 200,000 m³. Approximately 20% of this sediment is highly toxic. The Department of Fisheries and Oceans (DFO) was the Authority Responsible for issuing a permit under the *Navigable Waters Protection Act* (NWPA) and section 35 of the *Fisheries Act*.

From the outset, DFO asked Environment Canada to make a substantial consulting contribution. The project was strongly opposed by shoreline residents of Lac Saint-Pierre, its social acceptability subject to an “environmental guarantee.” The credibility of Environment Canada experts became a major asset, allowing us to have special influence. The Department arranged for the proponent to perform another physical-chemical characterisation of the sediment to be dredged and to conduct lab bio-testing for a more accurate picture of the contamination. Our experts also exerted influence in how the sediments would be managed. Although we failed to have the proponent experiment with methods other than discharging the sediment into the open water, we did ensure that such sediment would be discharged sequentially to cover the more contaminated sediment with sand of a relatively low toxicity. We also ensured that the stakeholders would examine these methods as part of Phase 3 of the St. Lawrence Action Plan.

Extension of the Trans Québec et Maritimes Inc. (TQM) Pipeline Network to the Portland Natural Gas Transmission System (PNGTS) Network

The project involved construction of a pipeline approximately 60 cm in diameter over a distance of approximately 220 km between Lachenaie and East-Hereford. The project was subject to the *Canadian Environmental Assessment Act* and was the focus of a detailed study. The National Energy Board (NEB) acted as Federal Authority for issuing a development permit. Moreover, since the proponent planned to cross the river at Île aux Fermiers, the property of the Canadian Wildlife Service (CWS), DOE also acted as the Responsible Authority under the CEAA.

This was the first major project in which we asked the proponent to conduct an inventory of nesting avifauna. The consultant used our *Guide pour l'évaluation des impacts sur les oiseaux* to develop a sampling strategy which was later submitted for our approval. The proponent agreed to our recommended changes of its sampling protocol and developed an inventory by transects.



The results showed that no rare, vulnerable or endangered species were breeding along the chosen route. This approach showed that it was possible to develop a reliable and affordable inventory of nesting avifauna under a large-scale, linear development.

HARMONIZATION

Implementation of the Harmonization Sub-agreement on Environmental Assessment requires the development of bilateral agreements with provinces to give effect to the provisions of the Sub-agreement. The Canadian

Moreover, CWS transferred the necessary property rights on the Île aux Fermiers to the proponent under an agreement in which the proponent promised to recommend a series of mitigation and compensation measures.

Environmental Assessment Agency conducted negotiations with four provinces: Alberta, Saskatchewan, Manitoba and Ontario. These negotiations are continuing into the new year and Nova Scotia will also be involved in the process.

PROJECT /ACTIVITY

The EA program has seen trends in the statistics. Again this year, our RA activity decreased from 435 to 387 screenings, whereas, FA activity increased slightly, from 1392 to 1397 project referrals.

In [Figure 1](#), the Atlantic Region showed a strong increase in the number of new projects for which it is an RA, 31% of the total number of screenings. In the previous year their share was 20%. Quebec, Ontario and P&N did not change appreciably, whereas P&Y showed a decline in RA activity (from 39% for last year to 23% of this year's total). This is due to the new optimized process to assess Ocean Dumping permits.

[Figure 2](#) demonstrates that the bulk of our RA activity revolved around the issuance of permits, and [Figure 3](#) provides a break down of the permits issued by the Department. CEPA Part VI (Ocean Dumping permits), comprised the largest single group, whereas Migratory Birds permits constituted an almost equivalent share.

FIGURE 1: RA ACTIVITY BY REGION

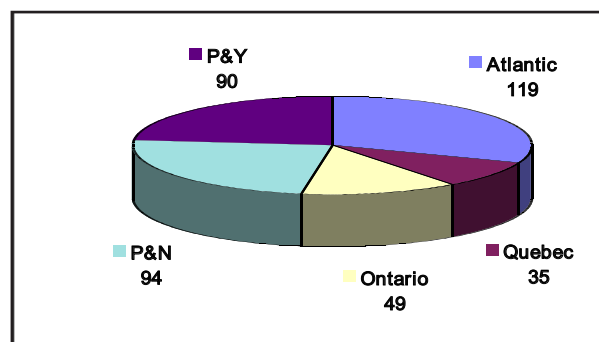


FIGURE 2: RA ACTIVITY BY PROJECT TYPE

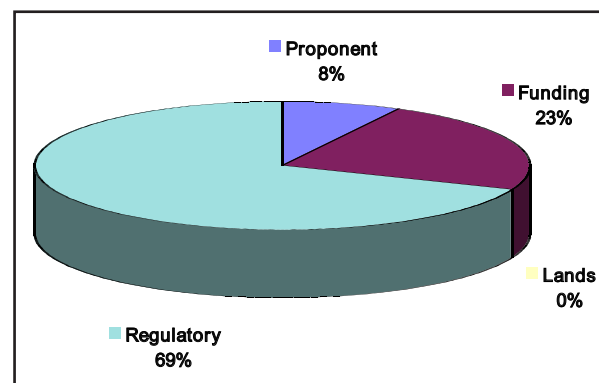
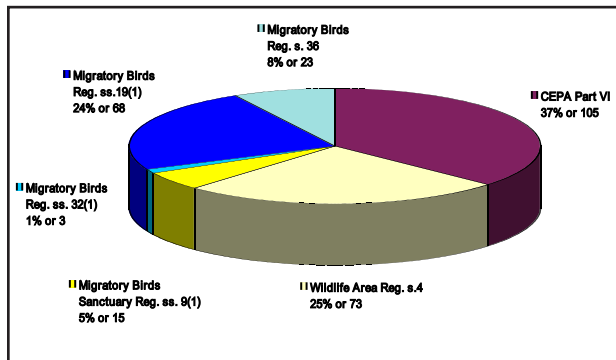


FIGURE 3: PERMITS ISSUED UNDER SPECIFIC REGULATIONS



Our activities as an expert department are shown in Figure 4. The new inclusion of Yukon Territory numbers has swelled the statistics to make our P&Y region “most often consulted.”

FIGURE 4: FA/EXPERT ACTIVITIES BY REGION

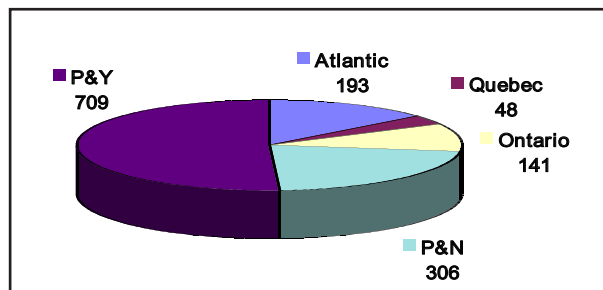
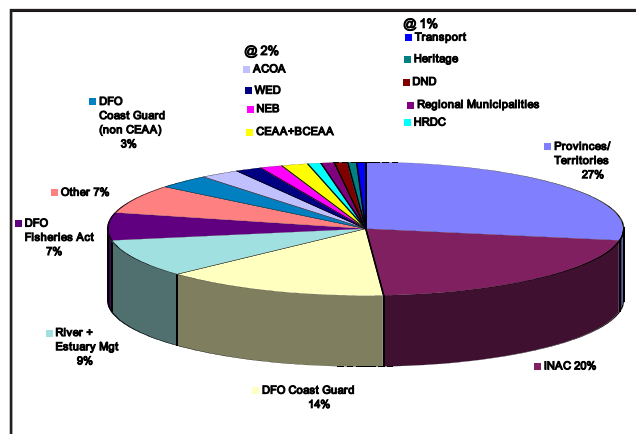


Figure 5 describes the distribution of consultations (or referrals) by referring department or agency. It is the Provinces and Territories who consulted us most (27%), followed by the Department of Fisheries and Oceans (DFO), Habitat and Coast Guard combined (24%) and Indian and Northern Affairs (INAC) (20%).

In P&Y, the Whitehorse office dealt mostly with INAC and the Yukon Water Board, whereas in British Columbia, most referrals came from British Columbia Lands, DFO, and river and estuary management boards.

In P&N, INAC is the most notable client north of 60°, whereas DFO is the biggest client south of 60°. Ontario Region received half of its referrals from DFO and most of the remainder from the Ontario government. The Quebec Region mirrors this pattern with DFO as its biggest client. However, a lot fewer projects were referred by the provincial government. Atlantic Region received more than half its referrals from the four Atlantic provinces, with ACOA standing next in number of referrals.

FIGURE 5: FA/EXPERT ACTIVITIES BY REFERRING GROUP



The group designated as “Other” making up 7% of the total referrals, includes federal departments (EC, NRCan, PWGSC, AAFC) and Boards (AECB), Agencies (FORD, PFRA), Regional bodies and private proponents.



POLICY ASSESSMENT

The EA Branch Strategic Environmental Assessment Team has received, examined and provided comments on 56 Memoranda to Cabinet or Aide-Mémoires in the past year. The team provided one-on-one training, follow-up and input to the environmental considerations sections or strategic EAs. Noteworthy among them were MCs regarding Aquaculture, Freshwater Fish

Habitat Management, Bulk Water Export, Biotechnology Strategy Renewal, the Biosafety Protocol under the United Nations Biodiversity Convention, and proposals like Sydney Tar Ponds Remediation, Cape Breton — Devco, and Nuclear Fuel Waste Management. A draft training package for policy developers has been prepared and will be distributed in April 1999.

EA TOOLS

Atlantic Environmental Assessment Query Tool

In responding to requests for specialist information, and in conducting assessments of Environment Canada projects, Atlantic Region staff make use of the computer-based Environmental Assessment Query Tool. This application is designed to quickly identify the location of a proposed project in relation to key environmental resources, pollutant sources and monitoring stations. The Query tool provides important information that should be considered in the further design and assessment of a project including what resources may be impacted; what environment quality data are available for the area; and what existing pollution sources and

contamination may be encountered. The system presently includes electronic mapping for all of New Brunswick and Prince Edward Island, as well as approximately 40 databases obtained from various agencies throughout the region. The tool is currently being expanded to include Newfoundland mapping and data.

National Environmental Assessment System (NEAS)

The NEAS system has been on-line since April 1st, 1998. As of April 1st, 1999, all of our assessment reports are also being made available to the public through our new Website on EC's Green Lane.

GUIDANCE MATERIALS

Mandate and Position Statements

“Environment Canada’s Mandates, Roles and Responsibilities Relevant to Environmental Assessment” was made available in January 1999 and can be viewed on the Infolane at

<http://infolane.ec.gc.ca:8000/~EA/EN/CreatePage.cfm?pg=advice>

Position statements are now being finalized for 1) EA and Management of Toxic Substances; 2) EA and Sustainable Development; 3) EA and Pollution Prevention; 4) EA and Transboundary Environmental Effects; and, 5) EA and Cumulative



Effects. These will also appear on the same site shortly.

Quebec

Since the *Guide pour l'évaluation des impacts sur les oiseaux* was published in June 1997, methodical inventories have been developed under a total of 14 projects, including two major linear developments, based on the Guide's recommendations. We plan to complete a major revision of this guide in 1999 in order to produce a second, improved version by the fall.

Collaboration with the *Direction des évaluations environnementales of the Ministère de l'environnement du Québec* (MENVIQ) continued during a review of the generic directives which the branch is currently developing. On the whole, the Department's comments have been welcomed and included in the final version of these directives.

Atlantic

In support of Environment Canada's involvement in the review of cranberry developments proposed for wetlands, the environmental assessment program has investigated the latest understanding of issues attending such operations, and has developed generic guidance to facilitate consideration of best available science and best management practices. This guidance is being factored into all EC reviews in the region and into New Brunswick government direction on the site evaluation and assessments of proposed cranberry developments. EC/Atlantic guidelines outlining applicability of departmental knowledge and expertise to environmental assessment of golf courses was also prepared during 1998-99, while existing regional guidance materials (e.g. environmental assessment guidelines for roads and bridges) were refined.

During the fiscal year, the Atlantic Region promoted development of and provided support to regional cumulative effects studies for protected areas managed by Environment Canada. These studies will provide a much needed evaluative

context for ongoing and future assessments of cumulative effects on protected resources. Cumulative effects on Cape Jourimain National Wildlife Area, on Bay of Fundy National Wildlife Areas and Migratory Bird Sanctuaries, and on important coastal wintering areas for migratory birds along Nova Scotia's eastern shore including the Port Joli National Wildlife Area have been the focus of 1998-99 efforts. The Cape Jourimain cumulative effects study has already provided important direction to the environmental assessment of the Nature Centre complex and associated infrastructure proposed for the protected area already heavily influenced by the Confederation Bridge to Prince Edward Island.

Ontario

Over the last few years, Ontario Region has been working on developing guidelines to assist practitioners who are providing specialist information on projects with water related issues. These guidelines are intended to facilitate a more consistent response to federal departmental requests for specialist advice, primarily under section 12(3) of CEAA. These guidelines may also be useful to proponents to help them identify and address water related issues of concern to EC (i.e. appropriate project design and location, collection of adequate baseline environmental data, undertaking of pertinent hydrotechnical or other modelling and analyses to determine project impacts, development of appropriate impact mitigation measures and monitoring, etc.).

The guideline includes specific examples of certain types of high volume projects (and associated activities) in context of their impact on water resources. The project types considered are routinely carried out by the proponents in the private sector or various levels of government and include: Land Development and Stormwater Management; Infilling of Lakes, Rivers and Waterways; Bridges; Highways and Roads; Marinas and Docks; Dredging; and, Pipelines. One or more of the following project types are also being considered for inclusion at a later date: Mines; Airports; Landfill Site Development; and, Dams and Hydroelectric Projects.



These water issues guidelines are currently in a final draft format and are available on request.

A similar set of guidelines exists for air quality issues and are used nationally by air issue specialists providing EA advice on projects.

TRAINING

18th Annual Conference of the International Association for Impact Assessment (Christchurch, New Zealand)

The theme of the 18th Annual Conference of the International Association for Impact Assessment (IAIA'98) was *Sustainability and the Role of Impact Assessment in the Global Economy*. The Conference was held from the April 19-24, 1998 in the Convention Centre at Christchurch, New Zealand. The professional challenge within the impact assessment community worldwide is for greater excellence, innovation, and adaptability, and this conference provided the forum for this challenge to be answered within several key themes, including: Impact assessment in Policy and Planning; Effective Devolution of Impact Assessment Responsibilities; Application of Impact Assessment to Biodiversity and Sustainability Issues; Gender Issues in Impact Assessment; and Indigenous People and Impact Assessment. Pre-conference sessions in the area of EA and Environmental Management Systems, and participation in a forum on Strategic and Policy Assessment provided excellent training for participants. Several papers were given at the conference by EC staff and an effective "Canada Display" was organized and provided for conference participants by EC and the Agency. Through the efforts of EA Branch, a CD-Rom was compiled containing the abstracts of both the 1997 and 1998 conference participants. It was distributed to IAIA members in January, 1999.

3rd Colloquium of Francophone Environmental Impact Assessment Specialists (Montreal)

The 3rd international colloquium of Francophone environmental impact assessment specialists was held in Montreal from May 25 to 27, 1998 on the theme: "Environmental impact assessment and public participation: Trends in the Francophone world." Environment Canada was a member of the organising committee.

During the opening ceremony, Jean-Pierre Gauthier, Director General of the Quebec Region, gave a speech in which he traced the development of the environmental impact assessment process in Canada, and also addressed the challenge of improving the effectiveness of environmental assessment.

Almost 300 people from 22 countries attended the event where 51 technical sessions were delivered. The Environmental Assessment Branch presented the National Environmental Assessment System (NEAS). The exhibitor's hall featured 11 organisations, including the federal government. The federal government's booth received more than fifty requests for documents.

Quebec

Workshop on Federal Co-ordination in Quebec

During the last meeting of the *Table sectorielle régionale en évaluation environnementale*, representatives of approximately twenty federal departments expressed deep interest in attending a



workshop on the *Federal Coordination Regulation*. The Department participated jointly with Canadian Heritage and the Canadian Environmental Assessment Agency to prepare this workshop to be held in the spring of 1999. Most of the departments wanted to understand the provisions of the Regulations more fully, and especially the spirit in which it was developed.

Environmental Assessment Meeting

In addition, a one day information session on environmental assessment was held on March 22, 1999 in Québec City. Representatives of the Canadian Environmental Assessment Agency and the Environmental Assessment Branch in Hull reported on issues such as the departmental response to the Auditor General, the CSA standard on environmental assessment and the five-year review of the *Canadian Environmental Assessment Act*.

Practitioners' Workshop Oct. 26-30, 1998

About 55 departmental staff from across Canada met in Québec City to consider issues important to practitioners in the EA Program. The theme of the Workshop was "***Towards National Consistency***" in the EA program in EC. All regions and districts, headquarters and the Canadian Environmental Assessment Agency were represented. Simultaneous translation made things work very smoothly. The principle objectives of this workshop were: to review recent legal decisions and discuss the impacts to this national program; to consider issues relating to the consistent delivery of the EA Program and to develop action plans to improve consistency; and, to encourage ongoing interaction and communication amongst Headquarters and all regions.

François Guimont, ADM, Environmental Protection Service, opened the workshop along with Jean-Pierre Gauthier, Quebec's Regional Director General. Mr. Guimont noted that the Department's provision of scientific information is one of the keys to consistency and quality of environmental assessment. Jean-Pierre Gauthier followed up his hearty welcome by presenting the "**EA Practitioner of the Year**" Award to Jean-Yves Charette (Quebec).



A pre-workshop session dealt with the Learning Fund proposal "Reviewing the EA Summary", and the next day's field trip to Cap Tourmente, in the rain, was quite a learning experience. The first day of the workshop highlighted our contribution as an expert department to major project assessments and the second day focused on our activities as a Responsible Authority under CEAA.



AUDITOR GENERAL

EC National Action Plan Responding to the Auditor General's Report

Chapter 6 of the Auditor General's (AG) Report assesses whether the *Canadian Environmental Assessment Act* is being properly implemented by federal departments. The comments and recommendations contained in the report were reviewed, and an Action Plan was developed which addresses specific recommendations that apply to Environment Canada. Environmental assessment is a critical tool for sustainable development, and the

National EA Program is ensuring that this tool is used as effectively as possible within our federal mandated areas of responsibility. Environment Canada supports the recommendations put forth in this Report, and recognizes areas of possible improvement. The department has already taken actions to help improve its performance, and will continue to strive for consistent application of this legislation, both within our department and across the federal government as a whole. The departmental Action Plan was reviewed by the Headquarters and Regional offices, and will be updated to incorporate activities assigned on our current planning documents.

FOLLOW-UP AND MONITORING

Atlantic Follow-up and Monitoring

In the Atlantic Region, Environment Canada has devoted considerable environmental assessment resources to ensuring that conditions related to assessments of Sable Gas Projects are fully implemented, to EC's satisfaction. This task has involved ongoing liaison with the National Energy Board, the Canada-Nova Scotia Offshore Petroleum Board, provincial governments, project proponents and various advisory committees to ensure progress on implementation of environmental requirements is tracked and problem areas are identified and addressed in a timely manner. To date, the follow-up effort has been key to ensuring the requirement to develop plans for managing acid generating rock

fully reflecting pollution prevention opportunities and the need for compliance with the *Fisheries Act* prohibition against deposition of a deleterious substance.

Environment Canada assessment staff have also been involved in development of the environmental effects monitoring programs for the Newfoundland Transshipment Facility and Terra Nova offshore oil development as they relate to impacts on aquatic ecosystems and migratory birds. These programs were important requirements resulting from the comprehensive study and panel review, respectively. Ongoing involvement by assessment staff with expertise in effects monitoring is helping to ensure that the required programs meet EC expectations stemming from the environmental assessments.



Ottawa Seminar Series on Monitoring and Follow-up in EIA

The Impact Assessment Centre at Carleton University and the efforts of the International Association of Impact Assessment (IAIA) and its Canadian affiliates, the Ontario Association of Impact Assessment (OAIA) and *l'Association québécoise pour l'évaluation d'impacts* (AQEI) have made sustained efforts to promote two basic objectives: to persuade decision-makers that environmental assessment is an essential means to manage environmental resources effectively; and, to promote greater professionalism among environmental assessment practitioners.

Dr. Husain Sadar, heading up the Impact Assessment Centre at Carleton University thought to initiate a Series of Seminars in order to focus attention on the very important topic of follow-up and monitoring in EIA. The Seminar Series reported on the successes and challenges faced in conducting follow-up programs in several salient cases: the Rafferty-Alameda project; Environment Canada's regional follow-ups for major oil sands, pipeline and surface mining projects; the Department of National Defence's Low-Level Flying in Labrador; the Canadian Museum of Nature's wetlands mitigation and compensation program at its Pink Road site; and Hydro Québec's La Grande Hydroelectric Complex (James Bay) (April '99). The Seminar series will have published proceedings which outline the results of the follow-up programs as well as detail what the participants believe are the key lessons learned from the case studies.

Options and Tools for Improving Follow-up

The need to examine and improve the manner in which follow-up is undertaken under the CEEA has been confirmed by the Commissioner of the Environment and Sustainable Development as part

of the 1998 Auditor General's report. The Commissioner concluded that the follow-up component of environmental assessment needs to be strengthened. To assist the Agency and federal authorities in their efforts to improve the way in which follow-up activities are developed and implemented, a "Follow-Up Sub-Committee" of the Senior Management Committee on Environmental Assessment (SMCEA), was created to investigate the problem and analyze a number of options and tools which would improve the process. Based on the evaluation of a variety of options and tools, the Sub-Committee deemed the following activities to have a high or moderate potential for improving follow-up:

- the development of Agency Guidelines or Operational Policies;
- implementation of follow-up related tools to improve practices;
- development and delivery of training programs;
- use of inter-departmental coordinating committees;
- selected compliance monitoring of RA/FA follow-up activities;
- the development of standards, codes of practice or protocols;
- the development of agreements and/or contracts between RAs, FAs, project proponents and other stakeholders; and
- the improvement of public registries which will highlight follow-up reports.

The Sub-Committee concluded that not all options/tools are applicable or useful to all federal departments, and departments must be given the flexibility to tailor their activities and implement those options/tools that suit their diverse needs, priorities, and human and financial resources. They also concluded that the Agency has an important role to play in developing a framework that will guide federal authorities and project proponents regarding follow-up, and promoting the implementation of the recommended action plan and appropriate communication and training opportunities.



CLIMATE CHANGE

National Implementation Strategy for Climate Change

An important effort has been made on the strategic EA of the National Implementation Strategy for Climate Change. Through Issues Tables and other initiatives, Canada is preparing its National Implementation Strategy (NIS) to respond to its commitments under the Framework Convention on Climate Change. The NIS which will incorporate the recommendations and analysis of the Issues Tables, will be presented to Cabinet and is therefore subject to a Strategic environmental assessment (SEA) under the old 1990 Cabinet Directive on policy assessment. EAB assisted in the development of an Advisory Guideline on Climate Change Policy Options. The Guideline will be used by the Issues Tables to carry out the SEA.

An Atlantic Example

Based on Environment Canada interventions in assessments of pipeline laterals related to the Sable Gas projects (comprehensive studies of pipeline laterals to Saint John and Halifax, and screening of pipeline lateral to Point Tupper, Cape Breton), steps must be taken by the proponent, Maritimes and Northeast Pipeline, to address greenhouse gas emissions. Specifically, the proponent must prepare an action plan that would account for, and facilitate reductions in, greenhouse gas emissions from all Sable Gas on-land pipelines and related facilities in Atlantic Canada. The plan must be prepared in consultation with Environment Canada and must be approved by the National Energy Board prior to project commissioning.

LOOKING TO THE FUTURE

In our fourth year of implementing the *Canadian Environmental Assessment Act* and over the many years of conducting environmental assessments, the practitioners have concluded that our workload is ever increasing and more complex. More project development occurring in remote northern areas means that we must deal more with data and science gaps. As an expert science department, we continue to receive more requests for specialized knowledge and advice.

The Program Goals for this coming year include: improving the CEAA; providing guidance to manage our response to new regulatory features; cumulative effects assessment; follow-up; and having a strong national EA Team.

The five-year review of the *Canadian Environmental Assessment Act* (CEAA) will offer an excellent opportunity to draw attention to problems we have confronted since CEAA came into force. Special attention must focus on a review of the permits issued by the Department which could or should be included in the Regulations giving the designated legislative and regulatory provisions.

Precedent setting court decisions such as *Cheviot* and *Sunpine* will revise our way of looking at cumulative effects and project scoping in EAs and will have an impact on the options put forward for the 5-Year Review of CEAA. A training package for Cumulative Effects Assessment developed interdepartmentally will be ready for use.



We must also develop tools to measure the “value-added” of our involvement in various environmental assessment issues in order to create a single yardstick for measuring the actual effectiveness of our actions.

The conclusions of the Senior Management Committee on Environmental Assessment (SMCEA) Sub-Committee on Follow-up will help to guide the efforts of federal departments and the Canadian Environmental Assessment Agency in conducting follow-up. The key lessons learned at the Ottawa Seminar series will be presented at the International Association for Impact Assessment (IAIA) conference in June 1999.

Our Practitioners’ Workshop for 1999 will be held in Halifax, in the last week of October. Its theme will be “Building the National EA Team”.

We want to draw our science arm more closely into the assessment process and in turn support the science of the department. Good science is critical to good EAs.

The EA program has been promoting the protection of migratory birds, endangered species and the prevention of pollution in general. These efforts will continue in 1999-2000, not only through improvements to cumulative environmental assessment impact analyses but also through legislative amendments. The collaborative approach taken in dealing with oil sands development will be extended to mining projects in northern regions. The EA Program will promote regional environmental assessment that go beyond project specific studies.

Rosaline Frith

Tim Hibbard

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GLOSSARY

Agency — means the Canadian Environmental Assessment Agency established by section 61 of the *Canadian Environmental Assessment Act* (CEAA).

Aquaculture — means the marine or freshwater cultivation of finfish or shellfish (Wildlife Advisory Council 1993).

Aquatic — Pertains to both marine and freshwater ecosystem.

Biodiversity (Biological Diversity) — means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (Federal–Provincial–Territorial Biodiversity Working Group 1995).

Biotechnology — means the application of science and engineering in the direct or indirect use of living organisms or parts or products of living organisms in their normal or modified forms (Government of Canada 1988).

Boundary — means a limitation conferred by space, time, ecology, as well as political, social or economic factors.

Climate Change — means an alteration to measured quantities (e.g. precipitation, temperature, solar radiation, wind, cloudiness) within the climate system that departs significantly from previous average conditions and is seen to endure, bringing about corresponding changes to ecosystems and socioeconomic activity (Environment Canada 1995).

Compliance Monitoring — means surveillance to ensure conformity to a law, regulation, or guideline.

Comprehensive Study — means an environmental assessment that is conducted pursuant to section 21 of CEAA and that includes a consideration of the factors required to be considered under subsections 16(1) and (2).

Conservation — means the maintenance or sustainable use of the Earth's resources in a manner that maintains ecosystems, species and genetic diversity and the evolutionary and other processes that shaped them. Conservation may or may not involve the use of resources; that is, certain areas, species or populations may be excluded from human use as part of an overall landscape/waterscape conservation approach. (Federal–Provincial–Territorial Biodiversity Working Group 1995).

Contaminant — means any solid, liquid, gas, or odor or a combination of any of them that, if emitted into the environment, would create or contribute to pollution.

Contamination — means introduction of any undesirable foreign substance, physical, chemical, or biological, into an ecosystem. It does not imply an effect. Usually refers to the introduction of human-made substances (adapted from Wells and Rolston 1991).

Cumulative Effects — means the effects on the environment, over a certain period of time and distance, resulting from effects of a project when combined with those of other past, existing or imminent projects and activities.

Ecosystem — means a community of interdependent plants and animals together with the environment which they inhabit and with which they interact.



Endangered Species — means species that are threatened with immediate extinction or extirpation if the factors threatening them continue to operate. Included are species whose numbers have been reduced to a critical level or whose habitats have been so drastically reduced that they are deemed to be in immediate danger of extinction.

Environment — means the components of the Earth including: a) land, air and water; b) all organic and inorganic matter and living organisms; c) the interacting natural systems that include components described in a) and b).

Environmental Effect — means

- any change that the project may cause in the environment, including any effect of such change on health and socio-economic conditions, on physical and cultural heritage, on the current use of lands and resources for traditional purposes by aboriginal persons, or on any structure, site, or thing that is of historic, archaeological, paleontological, or architectural significance, and
- any change to the project that may be caused by the environment, whether any such change occurs within or outside Canada.

Environmental Impact Assessment — means an activity designed to identify, predict, interpret, and communicate information about the impact of a project or activity, on human health and well-being, including the well-being of ecosystems on which human survival depends.

Federal Authority — means a Minister of the Crown, an agency or body of the federal government, any department or departmental corporation (see Schedule I and II of the Financial Administration Act) or any other body prescribed in the regulations to CEAA. The following are not federal authorities under CEAA: the governments of the Yukon and the Northwest Territories; a council or band under the Indian Act; harbor commissions; Crown corporations within the meaning of the Financial Administration Act; and provincial governments.

Follow-up Program — means a program for:

- verifying the accuracy of the environmental assessment of a project; and determining the effectiveness of any measures taken to mitigate the adverse environmental effects of the project.

Habitat — means the place or type of site where plants, animals or microorganisms normally occur. The concept of habitat includes the particular characteristics of that place, such as climate and the availability of water and other life requisites (e.g. soil nutrients for plants and suitable food and shelter for animals), which make it especially well suited to meet the life cycle needs of the particular wildlife.

Infrastructure — means physical structures that form the foundation for development (Ontario Ministry of Municipal Affairs 1994). Infrastructure includes sewage and water works; waste management systems; electric power, communications, transit, and transportation corridors and facilities; and oil and gas pipelines and associated facilities.

Integrated Pest Management — means a broadly based method that uses all suitable control measures to reduce pest-related losses to an acceptable level with the goal of respecting biodiversity and reducing risks to ecosystems and human health (adapted from Pest Management Alternatives Office 1995).

The ingredients of an integrated pest management program include:

- planning and managing production systems to prevent organisms from becoming pests;
- identification of potential pests;
- monitoring populations of pests, beneficial organisms, and all other relevant ecological factors;
- establishment of economic/damage/action thresholds;
- application of cultural, physical, biological, chemical, and behavioral control measures to maintain pest populations below threshold levels; and
- evaluation of the effects and efficiency of pest control measures used.



Issue — means an unresolved question or concern about an environmental impact, consequence or effect.

Lead RA — means where the same project has two or more Responsible Authorities (RAs), one of the RAs may be designated as the lead for purposes of conducting the EA.

Migratory Birds Convention Act (MBCA) — is an Act to facilitate the protection of migratory birds and the conservation of their habitat. The regulations prohibit the disturbance, destruction, taking of a nest, egg, or nest shelter, except under the authority of a permit. The regulations prohibits the deposition of oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds.

Mitigation — means an activity aimed at reducing the severity of, and avoiding or controlling environmental or social impacts of a proposal, through design alternatives, scheduling, and other measures.

Monitoring — means the process of checking, observing, or keeping track of something for a specified period of time or at specified intervals (Soil Conservation Society of America 1982).

Panel — means a multi-disciplinary group, usually of 3-6 individuals, appointed on the basis of expertise and objectivity, to evaluate, through public hearings and study, the potential environmental impact of a proposal referred to the Minister of the Environment for review.

Pipeline — means all metallic onshore and offshore pipelines within the scope of the CSA standards, including associated components such as valve assemblies, drip tops, cathodic protection beds, signage, and headers, but not including station facilities such as pump or compressor stations.

Project — means any proposed construction, modification, operation, decommissioning, abandonment or other undertaking in relation to a physical work.

Proponent — means the organization, company, or the department planning to undertake a proposal.

Protected Area — means a geographically defined area that is designated or regulated and managed to achieve specific conservation objectives (Federal-Provincial-Territorial Biodiversity Working Group 1995).

Responsible Authority (RA) — means a federal authority that exercises or performs one or more of the following duties, powers or functions with respect to a project; proposes the project; grants money or any other form of financial assistance to the project; sells, leases or otherwise transfers control of land to enable a project to be carried out; exercises a regulatory duty (i.e. issuing a license or permit) in relation to a project that is included in the Law List Regulations pursuant to CEAA.

Scoping — means a consultation exercise conducted to identify important environmental issues for the purpose of conducting an environmental review.

Screening — means an environmental assessment that is conducted pursuant to section 18 of CEAA and that includes a consideration of the factors set in subsection 16(1).

Species — means a group of related individuals with common hereditary morphology, chromosome number and structure, physiological characteristics, and way of life, separated from neighboring groups by a barrier that is generally sexual in nature — i.e., members of different species do not normally interbreed, and, if they do, the progeny are sterile (Demayo and Watt 1993).

Stakeholder — means members of the public who are most directly affected by a proposed activity, and may include members of the public, at large, who are interested in the proposed activity. In the past a stakeholder was called an intervenor.

Sustainability — means the ability of an ecosystem to maintain ecological processes and functions, biodiversity, and productivity over time (Kaufmann et al. 1994).



Sustainable Development — means development that meets the needs of the present without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development 1987). Development that ensures that the use of the ecological resources and ecosystem today does not damage prospects for their use by future generations (Canadian Council of Resource and Environment Ministers 1987).

Tailings — means material rejected from a mill after most of the recoverable valuable minerals have been extracted (Whiteway 1990). Tailings are generally finely ground rock particles that are transported as a water slurry to a storage area, known as a **tailings pond**, at the mine site. Usually the tailings composition is similar to the parent ore body and may therefore contain metals, sulphides, salts, or radioactive materials.

Toxic — means pertains to any substance if it is entering or may enter the environment in a quantity or concentration or under conditions having or that may have an immediate or long-term effect on the environment (including living organisms within it) or constituting or that may constitute a danger to human life or health (adapted from Government of Canada 1988).

Trigger — means an action by a federal authority that triggers or initiates the need for an environmental assessment; that is, one or more of the following duties, powers, or functions in relation to a project: proposes the project; grants money or other financial assistance to a project; grants an interest in land for a project; or exercises a regulatory duty in relation to a project, such as issuing a permit or license, that is included in the Law List prescribed in the Act's regulations.

Wetland — means land that has the water table at, near, or above the land surface or that is saturated for a long enough time to promote wetland or aquatic processes and various kinds of biological activity that are adapted to the wet environment (National Wetlands Working Group [Canada Committee on Ecological Land Classification] 1988). Includes fen, bog, swamp, marsh, and shallow open water.

Wildlife — means pertains to all non-domesticated living organisms, as defined in the Wildlife Policy for Canada (Wildlife Ministers' Council of Canada 1990). It includes not only vertebrate animals (mammals, birds, fish, amphibians, and reptiles) but also invertebrate animals, vascular plants, algae, fungi, bacteria, and all other wild living organisms.



ABBREVIATIONS

AAFC – Agriculture and Agri-Food Canada

AECB – Atomic Energy Control Board

ACOA – Atlantic Canada Opportunities Agency

AEP – Alberta Environmental Protection

AES – Atmospheric Environment Service

AG – Auditor General

APWSS – Alberta Public Works, Supply and Services

AQEI – *Association québécoise pour l'évaluation d'impact*

BCEAA – *British Columbia Environmental Assessment Act*

CEAA – *Canadian Environmental Assessment Act*

CEAA – Canadian Environmental Assessment Agency

CEPA – *Canadian Environmental Protection Act*

CFB – Canadian Forces Base

COSEWIC – Committee on the Status of Endangered Wildlife in Canada

CSR – Comprehensive Study Report

CWS – Canadian Wildlife Service

DFO – Department of Fisheries and Oceans Canada

EA – Environmental Assessment

EAB – Environmental Assessment Branch

EACC – Environmental Assessment Coordinating Committee

EARP – Environmental Assessment and Review Process

EC – Environment Canada

ECS – Environmental Conservation Service

EIA – Environmental Impact Assessment

EIS – Environmental Impact Statement

EMS – Environmental Management System

EPS – Environmental Protection Service

FA – Federal Authority

FERC – Federal Energy Regulatory Commission

FORD – Federal Office of Regional Development

HEP – Habitat Evaluation Procedures

HRDC – Human Resources and Development Canada

IAIA – International Association for Impact Assessment

IJC – International Joint Commission

INAC – Indian and Northern Affairs Canada

IRIA – *International Rivers Improvement Act*

MBCA – *Migratory Birds Convention Act*

MC – Memorandum to Cabinet

MOU – Memorandum of Understanding



MPC – Montreal Port Corporation

MW – Megawatt

NEAS – National Environmental Assessment System

NEB – National Energy Board

NIS – National Implementation Strategy

NRCan – Natural Resources Canada

NWPA – *Navigable Waters Protection Act*

OAIA – Ontario Association for Impact Assessment

PFRA – Prairie Farm Rehabilitation Administration

PNGTS – Portland Natural Gas Transmission System

PWGSC – Public Works and Government Services of Canada

RA – Responsible Authority

RSDS – Regional Sustainable Development Strategy

SEA – Strategic Environmental Assessment

SMCEA – Senior Management Committee on Environmental Assessment

TQM – *Trans Québec et Maritimes Inc.*

WBEA – Wood Buffalo Environmental Association

WED – Western Economic Diversification

