Environmental Assessment Program

1999-2000

Annual Report

Environment Canada Environnement Canada

Canada

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EXECUTIVE SUMMARY

This Annual Report provides an overview of the activities, opportunities and challenges of Environment Canada's National Environmental Assessment (EA) Program for the 1999-2000 fiscal year.

The National EA Program is a multi-disciplinary, cross-cutting program composed of staff from the Environmental Protection Service (EPS), Environmental Conservation Service (ECS) and Meteorological Service of Canada (MSC), formerly the Atmospheric Environment Service (AES), from all five regions and headquarters. The headquarters contingent includes representatives from the Environmental Assessment Branch and EA practitioners in the National Hydrology Research Institute (NHRI, Saskatoon, Saskatchewan), the National Water Research Institute (NWRI, Burlington, Ontario) and the National Wildlife Research Centre (NWRC, Hull, Quebec).

The major part of the Program's mandate comes from the *Canadian Environmental Assessment Act* (CEAA). The 1999-2000 fiscal year marks the fifth year since CEAA was brought into force, and signals the start of the mandatory Five-Year Review. The EA Program invested considerable time and effort in providing Environment Canada's comments and constructive recommendations for improvement and renewal of CEAA to the Canadian Environmental Assessment Agency.

The EA Program was directly involved with ***2033 project EAs*** as either a responsible authority under CEAA or as an expert science department or federal authority providing advice to CEAA and other EA review processes.

The Department has responsibilities under the recently reissued Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals (June 1999). This process, also called Strategic Environmental Assessment or SEA, is now being implemented more fully across government, with EC providing advice to or participating in ***50 strategic EAs*** this year. The EA Branch in headquarters has developed a comprehensive training course for conducting strategic environmental assessments and has been active in communicating this course to other sections in the Department.

In the past year, the continuing increase in the number of assessments and the subsequent demand for EC's advice has stretched our resources to the limit. This has required that more emphasis be placed on developing EA tools and guidance materials to manage the workload and resources. Cumulative Effects Assessment (CEA), Strategic EA, and Adaptive Management practices are increasing in importance and proving to be very useful in the Program.

EC's National EA Program continues to be an effective tool for promoting pollution prevention and encouraging sustainable development practices throughout Canada through informed decision making.

PURPOSE

This Annual Report demonstrates the commitment of Environment Canada (EC) to be accountable for its actions and to share the successes and lessons learned in the field of Environmental Assessment (EA). This report details our EA activity between April 1, 1999 and March 31, 2000, in compliance with the *Canadian Environmental Assessment Act* (CEAA) and the 1999 Cabinet Directive on the EA of policies, plans and programs.

ASSESSMENT ACTIVITIES: REGIONAL HIGHLIGHTS

Atlantic

Voisey's Bay Mine/Mill Project

In April 1999, the Joint Environmental Assessment Panel on the Voisey's Bay Mine/Mill Project released its report. The report contained 107 recommendations, many of which had to do with environmental effects, mitigation, monitoring and follow-up. EC concerns were related to the management of tailings and waste rock, effects of contaminant releases on wildlife including migratory birds, impacts on the endangered eastern population of Harlequin Duck, impacts of the location of the proposed airstrip on the Gooselands (a regionally important migratory bird habitat), and effects of shipping activities on seabirds and sea ducks.

In August, the federal and provincial governments released responses to the recommendations, concluding that environmental impacts of the proposed development would be acceptable if commitments outlined in environmental assessment documentation, and conditions set out in responses to the recommendations, were respected. Implementation of requirements stemming from the assessment will be facilitated largely through the federal and provincial regulatory regimes. At the present time, the project is on hold pending resolution of an impasse between the proponent and the provincial government concerning the processing of concentrate from the mine.

Muggah Creek Watershed Clean-up Initiative

A community-based joint action group (JAG) has been formed to address the clean-up of the Muggah Creek Watershed in Sydney, Nova Scotia, in a comprehensive manner. The goal is to restore the watershed to as close to its natural state as technologically possible. At the request of the JAG, a federal/provincial/municipal memorandum of understanding (MOU) has been negotiated, which outlines how the signatory parties will work together in identifying and implementing remedial options. The costs involved are to be shared among the three levels of government through a cost-sharing agreement that accompanies the MOU. EC is a signatory to the MOU.

Environmental and health issues in the Muggah Creek Watershed are principally related to:

- a 34-hectare tar ponds site (containing approximately 700,000 tonnes of sediments contaminated with PAHs, of which 45,000 tonnes are also contaminated with PCBs);
- a 60-hectare former coke oven site (which includes abandoned structures, tanks containing chemical waste, ground/surface and soil contamination);
- an uncontrolled municipal/industrial landfill site (containing contaminated leachate from unlined landfill); and
- municipal sewage discharges (over 30 sewage outfalls).

In an effort to ensure consistency with respect to environmental screenings undertaken in compliance with CEAA, staff prepared an EA protocol for initiatives undertaken as part of the MOU.

In the past year, four projects underwent EA screenings under CEAA: installation and ongoing maintenance activities for a fence at the north end of the coke oven site; demolition of houses on Frederick Street and on Curry's Lane to facilitate impending investigation and remediation activities associated with the former coke oven site (two separate screenings); and construction of the Muggah Creek interceptor sewer to divert 30 sewage outfalls out of the tar ponds in order to stabilize the site and facilitate the eventual clean-up.

Muggah Creek

Ontario

Red Hill Valley Expressway

The proposed Red Hill Valley Expressway is an 8-km highway linking two provincial highways skirting Hamilton through the Red Hill Creek Valley. The Department of Fisheries and Oceans (DFO) is the lead responsible authority (RA), and EC is an RA because of the need to decommission and relocate a hydrometric station it owns. The project was initially subject to a screening under CEAA but was referred to panel review in May 1999. In July of the same year, the Regional Municipality of Hamilton-Wentworth (RMHW) Council passed a resolution withdrawing the RMHW's application for a *Fisheries Act* authorization for the project. An application for judicial review was filed by the RMHW on August 4, 1999, in the Federal Court Trial Division seeking to quash the Minister of the Environment's decision to proceed to a panel and seeking an order prohibiting the Panel from proceeding with the review under the terms of reference. The main application, and a subsequent one raising allegations of bias on the part of the Panel chair, are scheduled to be heard by the Court from November 27 to December 1, 2000, inclusive.

The Panel carried out scoping meetings on September 9-11, 1999, and the Environmental Impact Statement Guidelines for the Panel review were released on October 15, 1999. The Panel decided to suspend further activity on its review pending resolution of these legal issues.

Highway 407 Extension

EC has completed its review of the EA screening documentation for the Highway 407 East Partial and West Extensions, located near Toronto. The Province of Ontario has sold the rights to build and operate this toll highway to a private consortium, the 407 ETR. Departmental interests and concerns were related to impacts on water quality and quantity, migratory birds and wildlife habitat, and air quality. DFO is the RA for the project due to Law List triggers under the *Fisheries Act* and

Navigable Waters Protection Act. The 407 East Partial component has raised substantial public concern, which has translated into several hundred letters to the ministers of EC and DFO requesting a panel review. DFO's screening decision has been delayed to allow for additional public consultation and the opportunity for the proponent to address concerns raised.

TREC Wind Turbine

Through the Technology Early Actions Measures component of the Climate Change Action Fund, EC, as the federal lead, is intending to provide to the Toronto Renewable Energy Co-operative (TREC) $330,000 to install one wind turbine on Toronto's waterfront. This represents the first such installation in North America to be built in a downtown urban setting. TREC seeks to promote "green energy" use. With funding from the Toronto Atmospheric Fund, a proposal for these wind turbines was developed and the TREC Wind Power Co-operative was formed. Its goal? To feed clean energy into Toronto Hydro's electricity distribution grid on behalf of Co-op members, who will receive imputed reductions in their electricity consumption as per their share of the wind turbine electricity production. EC will also provide $98,500 to TREC for the purchase of 7% of one turbine's green power for its Toronto offices and laboratories.

This initiative is another example of a partnership between business and the community taking early action to promote renewable energy and improve air quality, all the while reducing emissions that contribute to climatic change, smog, acid precipitation and environmental loadings of heavy metals such as mercury.

As an RA under CEAA, EC scoped the project last summer. The proposed site, geotechnical and grid construction surveys, site preparations, excavation, foundation construction, transport of the turbine to the site and assembly, installation of transformers, connection to the power grid, commissioning, site remediation and future decommissioning activities were included in the scoping process. Two additional turbines are also being proposed by TREC and Toronto Hydro.

The proponents are currently holding public consultations regarding the acceptability of the project at the proposed site, and an EA report is being completed. The funding for TREC from the Climate Change Action Fund and from EC is contingent upon approval of the environmental assessment screening.

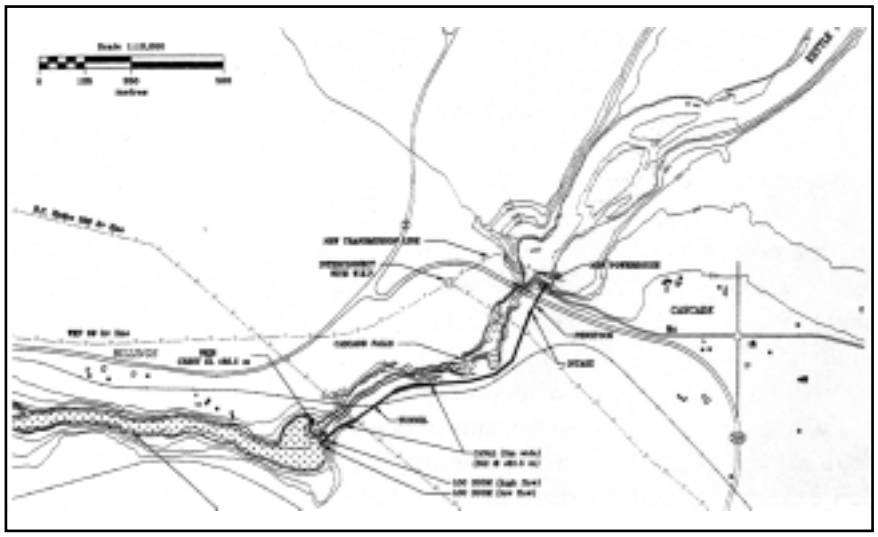
Wind Turbine

Pacific and Yukon

Brilliant Hydroelectric Dam Expansion

The Columbia Power Corporation plans to expand its Brilliant Hydroelectric facility near Castlegar, B.C., by adding a second 100 MW powerhouse. The works will include a new intake canal, powerhouse, tailrace channel, tailrace bridge, transmission lines, infilling of the existing head pond and ancillary works. Once an application has been formally received, this project will likely trigger a harmonized *Canadian Environmental Assessment Act/British Columbia Environmental Assessment Act* (CEAA/BCEAA) review. The project will result in changes to the operational regime of Kootenay River and possibly the

Columbia River. The project will provide important benefits by reducing total gas pressure (TGP) downstream of the facility, and U.S. agencies have requested that the proponent further increase the powerhouse capacity to provide even greater TGP benefits.



Cascade Site

Cascade Power

Environment Canada has continued to be involved in the review of the Cascade Heritage Power project, located on the Kettle River immediately upstream of the point where it crosses the Canada/U.S. border. A key issue tied to this project is the potential impact of climate change-related flow variations upon the project. There are also potential concerns relating to the presence of Harlequin ducks in the area as well as a range of water quality issues. The project has entered the Stage 2 process, which has full federal participation.

Melvin Creek/Cayoosh Ski Resort

NGR Resorts Ltd. proposes to construct the Cayoosh multi-season ski resort in the currently unroaded Melvin Creek Valley near Lillooet, B.C., approximately a five-hour drive north of Vancouver. The Cayoosh region is largely undeveloped. Facilities to be constructed include a village with a maximum of 16,814 bed units, 14 lifts with a comfortable carrying capacity of 12,510 persons per day servicing some 571 hectares of trails. The project triggered a joint CEAA/BCEAA review. Some key issues for EC relate to the presence of Harlequin ducks, and the need for adequate sewage facilities as the project is located upstream of important fish-bearing waters. Key issues for the environmental review relate to the project's cumulative effects, including potentially significant impacts to mountain goats and to grizzly bears. Cumulative effects are especially difficult to deal with in the absence of land use planning and pressures to keep the review scope small. The project generates strong public pressures both for and against.

Photo: John F. Baldwin

Melvin Creek Valley

Prairie and Northern

Cheviot Coal Mine

The proposed Cheviot Coal Mine Project is an open-pit mine and processing plant in west-central Alberta near Hinton. The project is subject to Alberta's environmental assessment requirements under the authority of the Alberta Energy and Utilities Board (EUB). Following a joint EUB/CEAA hearing in 1997 and the issuance of approvals by the EUB and DFO, a decision by the Federal Court Trial Division on April 8, 1999, rescinded the federal authorization. In response, the Canadian Environmental Assessment Agency (the Agency) requested the Joint Review Panel to reconvene and address the issues identified by the court's decision. Environment Canada tabled its submission to the Joint Panel on Cheviot on January 10, 2000, and presented its position at the March 1 hearing. At the hearing, the Panel requested that the proponent provide further analysis on migratory birds in the mine area. The last segment of the hearing resumed on April 25, 2000.

CN Intermodal Terminal

In October 1998, EC received a referral under CEAA from the Rail Infrastructure Directorate, Canadian Transportation Agency (CTA), for an intermodal yard development by CN Rail on a 150-hectare site west of their main Edmonton yard. This site contains Kinokamau Lake, a regionally significant wetland used intensively by migrating waterfowl, as well as a locally significant woodlot used extensively by neotropical migrants and believed to be used as a foraging area by Peregrine falcons nesting nearby.

Because impacts on these areas could not be fully avoided, EC advised the CTA on the potential adverse environmental effects of this project. Consequently, CN Rail agreed to measures to minimize habitat losses and onsite enhancement measures as mitigation. CN Rail also entered into a conservation easement agreement with Ducks Unlimited (DU) Canada for those areas not needed for their intermodal facility. This agreement provides for management of the area to sustain its ecological integrity and provides assurance both of appropriate water management within the wetlands and of effective vegetation management, including weed control in the upland areas.

As compensation for the remaining 8.1 hectares of unavoidable wetland and upland habitat losses, CN Rail is in the process of purchasing 48.6 hectares of unbroken land in the ecologically unique Beaverhills area southeast of Edmonton. A conservation easement will also be applied to this property and similarly administered by DU Canada. It is intended that this property be subsequently incorporated into the adjoining Ministik Bird Sanctuary, thereby providing further assurance of sustained conservation.

Wetlands Near Proposed Terminal

Diavik Diamond Mine

The Diavik Diamond Mine development is located approximately 100 km north of the treeline in the central barrenground tundra of the Northwest Territories, 350 km northeast of Yellowknife. The project involves open-pit and underground mining of four diamond-bearing kimberlite pipes located underwater along the shore of Lac de Gras. Dikes will be constructed to isolate the pipes from the lake, which will require damming and draining part of Lac de Gras. The life span of the mine is projected to be 23 years, with the possibility of extensions depending on markets and ongoing exploration programs.

On June 10, 1999, the Comprehensive Study Report (CSR) was submitted to the Minister of Environment for approval. It provided for a 30-day public review period, which ended on July 22, 1999. The Agency submitted the CSR to the Mackenzie Valley Environmental Impact Review Board (MVEIRB) along with all public comments.

Lac de Gras Mine Site

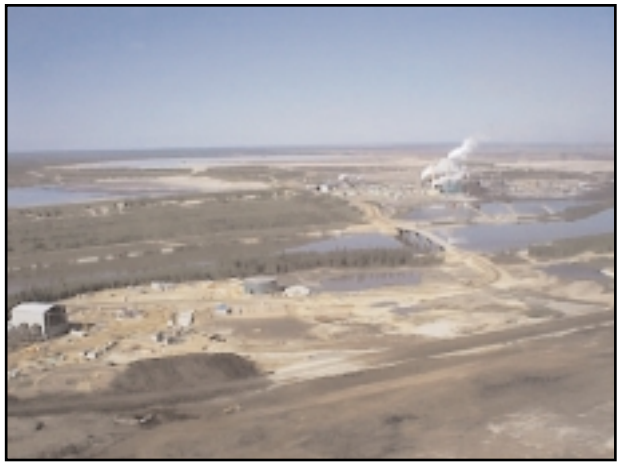
On November 3, 1999, after addressing the concerns of the seven-member MVEIRB, Minister Anderson concluded the project could proceed and, with the implementation of all mitigation measures identified in the CSR, the project was not likely to cause significant adverse environmental effects. He also concluded that public concerns did not warrant further environmental assessment by a review panel but that specific commitments were warranted. Those commitments were:

- that a regional cumulative effects management framework be designed and implemented. The framework will include all appropriate federal and territorial regulatory agencies, non-governmental organizations, Aboriginal governments, industry representatives and the proponent. An action plan for this framework must be presented to ministers by March 31, 2000, with a framework implementation date of April 1, 2001;

- that in conjunction with the management framework, the RAs and proponent establish a mechanism to ensure that monitoring of the Diavik operation occurs and that it involve Aboriginal peoples; and

- that federal regulatory approvals ensure Diavik's abandonment and restoration plan be revised, adapted and approved as necessary over the life of the mine and that the project be abandoned incrementally, in a manner consistent with sustainable development.

The project is now in the regulatory phase where appropriate licences, permits and agreements are issued in order for the development to proceed. On March 2, 2000, an environmental agreement between Diavik and Indian and Northern Affairs Canada (INAC) was reached requiring Diavik to post a $180 million bond payable in phases. Diavik then mobilized to take advantage of the winter road to move supplies and equipment to the site.



Athabasca Oil Sands

Alberta Regional Sustainable Development Strategy for the Athabasca Oil Sands

In an effort to balance resource development pressures and environmental protection in northeastern Alberta, a Regional Sustainable Development Strategy (RSDS) for the Athabasca Oil Sands was drafted by Alberta Environment in consultation with EC and other stakeholders. The RSDS will ensure implementation of adaptive management approaches that address regional cumulative environmental effects, environmental thresholds, appropriate monitoring techniques, resource management, knowledge gaps and research to fill those gaps. The management approach may include streamlining of current regulatory processes, thereby making more efficient and timely use of public and private resources. The final RSDS for the Athabasca Oil Sands was released on August 20, 1999.

EC has been participating in multi-stakeholder workshops to begin the process of the implementation of the RSDS adaptive management model, and a more in-depth analysis of the themes and issues.

Saskfor MacMillan

In 1995, Saskfor MacMillan Limited Partnership disclosed a project to construct an oriented strandboard plant in Hudson Bay, Saskatchewan. The plant would consume 860,000 m^3 of wood annually from the Pasquia-Porcupine Forest Management Area. The proponent's forest management plan (FMP) was subject to an environmental assessment under Saskatchewan's *Environmental Assessment Act*. In 1998, EC made 16 recommendations to Saskatchewan Environment and Resource Management for improvements to the proposed mitigation measures in the FMP. Several of EC's recommendations were covered under the Provincial Ministerial Approval released on April 19, 1999, requiring the proponent to:

- clarify how the goals and objectives of its forest management plan will be achieved at an operational level, and conduct its forest management activities so that the integrity of the forest ecosystem in the Pasquia-Porcupine Forest Management Area is maintained;

- implement an ongoing evaluative program to determine if its harvesting strategy maintains a full range of vegetation types and all forest serial stages;

- undertake a monitoring program to evaluate the short- and long-term effects of its forest management activities on the health of the forest ecosystem. The proponent must provide an analysis and interpretation of the results of the monitoring program and submit its conclusions and any proposed response to Saskatchewan Environment and Resource Management as part of its five-year operational planning process; and

- continue to involve those who may be affected by the implementation of operational plans by ensuring they have an informed opportunity to provide input and review of proposed plans. Where monitoring indicates that ecosystem sustainability is not being maintained, the proponent must determine how the FMP must be adapted to ensure the effects of forest management activities do not significantly reduce overall ecosystem integrity.

Research and Development Fund

This $100,000 fund is managed by the Departmental Affairs Branch in association with Branch representatives on the regional Environmental Assessment Coordinating Committee (EACC). An interbranch working group reporting to the EACC identified critical regional EA management questions, established priorities and recommended support of proposals that best reflect these priorities. Fifteen proposals were reviewed, and seven were funded. Three additional projects received funding through $50,000 in supplemental funding.

Other major projects in the Prairie and Northern Region include:

NWT: Kunnek Resource Development Revitalization of the Reindeer Industry;
Alberta: Dunvegan Hydroelectric Project, Syncrude Mildred Lake, Spray Lakes Resort;
Saskatchewan: Processing Cigar Lake Phase 1 Ore at Rabbit Lake;
Manitoba: Omnitrax Port; and
Nunavut: Jericho Diamonds Project – Carat Lake.

Quebec

Golf Course at Lac Leamy

Société CASILOC Inc., which operates the Hull Casino, plans to build a high-end hotel and golf course at Leamy Lake Park in Hull. Much of the land needed to build the golf course is owned by the National Capital Commission (NCC), which is not subject to the *Canadian Environmental Assessment Act*, but its policy is to carry out environmental assessments in accordance with the spirit of the Act. As the project will lead to the destruction of fish habitat, the Department of Fisheries and Oceans will also have to issue a permit under section 35 of the *Fisheries Act*, and act as the responsible authority (RA).

The project, which was presented to the public in the summer of 1999, received a lukewarm reception. The business sector was pleased about the economic benefits, whereas the *Club des Ornithologues de l'Outaouais* (COO), and some park users condemned the fact that community green space in an urban setting was being sacrificed for an elite. The issues of pesticides, the disappearance of scarce woodlands, compliance with the principle of no net loss in function within the application of the Federal Policy on Wetland Conservation, and the destruction of habitat for the striped chorus frog (a species that could be identified as threatened by the government of Quebec) are some of the main concerns expressed by the public.

The Department of Fisheries and Oceans has received numerous requests from citizens and from the COO to hold public consultations on the project and to comply with the Federal Policy on Wetland Conservation. Environment Canada is working closely with the Department of Fisheries and Oceans in the environmental assessment for this project and has requested an inventory of nesting birds in the area under study during the summer of 2000 so that a scientifically accurate appraisal of the environmental impact of the project on avifauna can be completed.

Hydroelectric Development at Grand-Mère

Hydro-Québec is planning to build a new hydroelectric facility at Grand-Mère on the Saint-Maurice River. The current station, which was built in 1916, is obsolete, and it would be both difficult and very costly to rehabilitate it technically. The new 225 MW generating station requires the excavation of 1,500,000 cubic metres of rock, over 1,000,000 cubic metres of which would have to be disposed of in a nearby sandpit.

On a site visit, Environment Canada determined that there was a colony of bank swallows with approximately 225 active nests in the sandpit. We therefore asked the developer to review the description of avifauna and proceed with a site inventory in accordance with the "*Guide pour l'évaluation des impacts sur les oiseaux*", which was developed by the Quebec region. The developer completed the inventory in

May and June 1999 and the results have been available since 14 September 1999.

The project for the new station is subject to both federal and provincial environmental assessment procedures. The Department of Fisheries and Oceans is acting as the RA under section 35 of the *Fisheries Act*. It is a Comprehensive Study under the *Canadian Environmental Assessment Act*.

The Quebec Department of the Environment mandated the *Bureau d'audiences publiques en environnement* (BAPE) to proceed with a commission. Hearings were held in September and October. Members of the public expressed their concerns, which were primarily related to the new methods of operation for the station, which would likely lead to an increase in turbine flow during the summer and accentuate the rise and fall of water levels in winter.

The BAPE asked Environment Canada to take part in the hearings as the expert department in order to answer questions concerning migratory birds. The BAPE released its public report on 31 January 2000. Its recommendations were to authorize the project for a trial period of five years, and the results of the follow-up program could lead to full management authorization including control over water levels in winter.

On 18 January 2000, the Minister responsible for the Agency returned the Comprehensive Study to the Department of Fisheries and Oceans for a decision. The Department is currently finalizing its authorization for the loss of fish habitat. The Quebec Department of the Environment is preparing its recommendation in anticipation of the government decision with respect to the request for authorization.

HARMONIZATION

Implementation of the Harmonization Sub-Agreement on Environmental Assessment required the development of bilateral agreements with provinces. The Agency has been the lead in the negotiation process. EC has provided detailed comments to assist the Agency in the task of negotiation. These bilateral agreements commit us to work with the provinces and territories to achieve the highest environmental standards across the country and to continue to play a leadership role in the protection of Canada's environment. In the past year, agreements have been signed with the provinces of Alberta and Saskatchewan. Negotiations with Manitoba and Ontario are approaching completion. Next year, Nova Scotia and New Brunswick will enter into negotiations.

PROJECT ACTIVITY

The EA Program noted a small increase in responsible authority (RA) activity with **398 new projects**, an increase from last year's 387. Expert advice activity jumped sharply: advice was provided on **1635 new projects**, up from 1397 last year.

Figure 1 gives a good idea of where the heaviest workload of RA activity resided in 1999-2000. Prairie and Northern and Atlantic regions together did the largest block of screenings.

Figure 2 shows that 50% of the screenings dealt with regulatory approvals, a reduction from last year's 69%. A decrease was noted in the Ocean Dumping program in particular, which had received a greater than normal number of applications in 1998-1999 in advance of a new fee structure.

FIGURE 1: RA ACTIVITY BY REGION

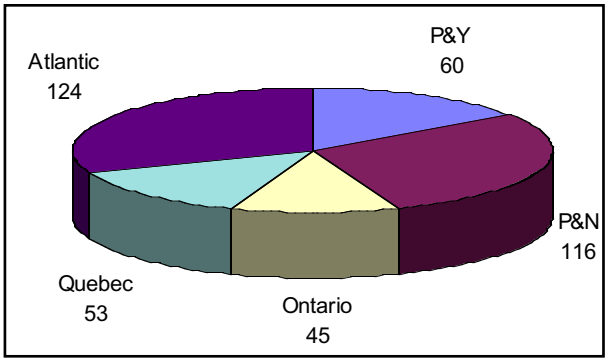
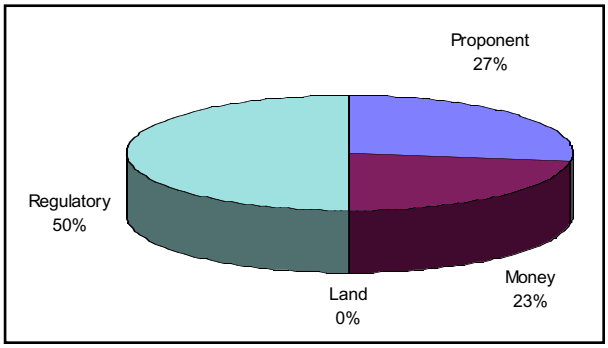


FIGURE 2: RA ACTIVITY BY PROJECT TYPE



EC-triggered projects increased from 8% last year to 27% in 1999-2000. One reason for the jump is that EC dealt with site clean-ups or decommissionings for 75 of its hydrometric stations: 47 in the Northwest Territories and Nunavut, 3 in Alberta, 12 in each of Ontario and Quebec and 1 in Nova Scotia.

Figure 3 shows how permitting activity was distributed. Numbers are roughly similar to last year's distribution.

FIGURE 3: PERMITS ISSUED UNDER SPECIFIC REGULATIONS

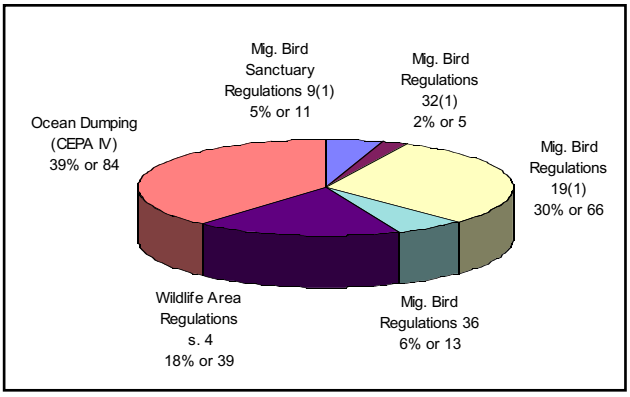


Figure 4 demonstrates the distribution of new projects referred by other bodies to EC for expert advice. Ontario and Quebec showed substantial increases, 70% and 87% respectively, and the Atlantic Region showed the next biggest increase in referrals, up 44% from last year. Pacific and Yukon and Prairie and Northern regions stayed at about the same level of new activity.

FIGURE 4: FA/EXPERT ACTIVITY BY REGION

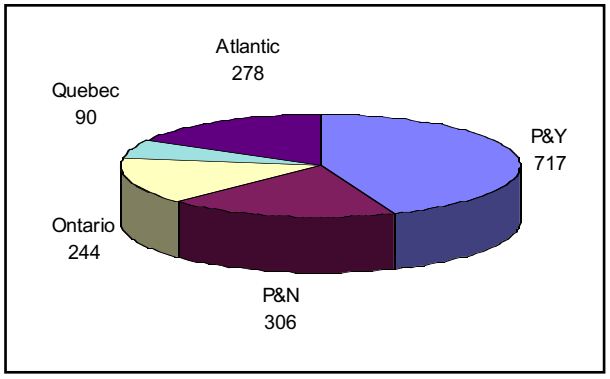
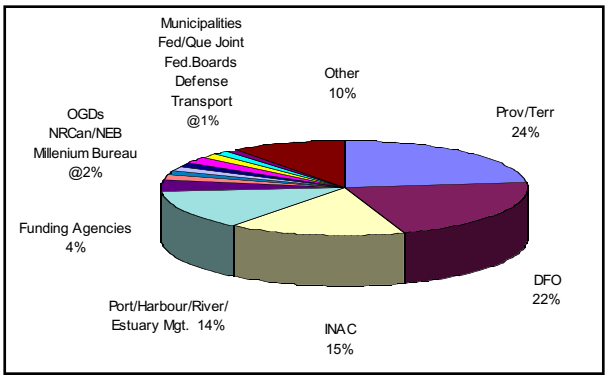


Figure 5 indicates the number of referrals to EC by referring group. Non-CEAA referrals from provincial and territorial bodies made up the largest group of requests for advice. Port, harbour, river, and estuary management bodies also made many requests. DFO seeks our advice more often than any other federal department (22%), and INAC (Northern programs in particular) is the next most frequent requester (15%). This shows much the same pattern as last year. Funding bodies (ACOA, WED, FORD and PFRA) were much more active this year, making 67 referrals to EC or a 4-fold increase over last year.

Ongoing advice in relation to projects first referred in previous years, along with the increase in new referrals, has resulted in a very heavy workload for the regions.

FIGURE 5: FA/EXPERT ACTIVITY BY REFERRING GROUP



POLICY ASSESSMENT

January 2000 saw completion of the Strategic Environmental Assessment (SEA) Training Manual. It was highlighted in the "Let's Talk Green" departmental newsletter, and Environmental Assessment Branch (EAB) has subsequently received requests from many quarters for a copy of the manual. EC's Cabinet Liaison Group is distributing the SEA manual as part of the departmental Memorandum to Cabinet Drafter's Guide.

Several one-on-one coaching sessions have been given to assist departmental staff in complying with the Cabinet Directive. We provided training in SEA, participated in the drafting of SEAs, or provided assistance to drafters on major initiatives such as: Aquaculture, Federal Contaminated Sites, *Species at Risk Act*, Northern Diamond Mining, Accession to the 1996 Protocol to the London Dumping Convention, UNEP Agreement on POPs – Funding for Capacity Building, Renewal of the Great Lakes Program, WTO – Canada's Negotiating Mandate, Strengthening Our Capacity to Enforce Environmental Legislation, Federal Climate Change Strategy, and Harmonization: Canada Wide Standards (Air).

Documents from other federal departments that were examined and/or commented upon included: Cape Breton Devco, Yukon Devolution, Strengthening Fish Habitat Protection in Inland Provinces, Quebec and Atlantic Canada, among others.

The EAB reviewed over 50 Memoranda to Cabinet, Aide-mémoires and decks (briefing packages).

EA Tools

National Environmental Assessment System (NEAS)

Launched on April 1, 1998, the NEAS has continued to evolve. Several modifications were done on the application during the last fiscal year. This is to ensure that the application continues to meet the needs of the EA Program.

Federal Environmental Assessment Index (FEAI)

The Error Detector Tool (EDT) and the FEAI packaging tool were implemented in March 2000. The FEAI packaging tool is a Visual Basic application that packages the records ready for the FEAI. For any transaction to the FEAI, the practitioner can, at any time, check whether all necessary information has been entered by using the EDT. The EDT indicates missing mandatory fields. When a record is ready to be sent to the FEAI with the transaction "Initial Filing," the record also becomes accessible on the Green Lane.

Environmental Assessments on the Green Lane

Launched on April 1, 1999, the site "Environmental Assessments on the Green Lane" is accessible to the public on the Internet. The site makes public all of EC's environmental assessments under the *Canadian Environmental Assessment Act* or under any other EA processes. The site can be accessed at the following URL: http://ea-ee.ncr.ec.gc.ca/glea/index.asp

New Referral Tracking System

The New Referral Tracking System (NRTS) is a tool to assist the regional environmental assessment coordinators in managing all expert advice requests to EC in the course of an environmental assessment conducted under CEAA or any other EA review process.

It is a web-based application on the Infolane of the Department developed for coordinators in Prairie and Northern and Ontario regions. The goal is to launch the application on May 1, 2000.

Guidance Materials

Ocean Disposal

The current National Environmental Assessment System (NEAS) is an overall system that makes it possible to conduct and keep track of environmental assessments for all projects for which the Department is the RA. Based on the experience of the past two years, it was felt that the use of a system that is suited to certain types of projects would increase the efficiency of applied scientists and improve the quality of the assessments.

The ocean disposal program seemed an ideal place to begin such a process. After a consultation phase with the managers responsible for the program, both at Headquarters and in the regions, the Environmental Assessment Branch (EAB) undertook to use the NEAS to develop an environmental assessment "model" specific to the program. Following a trial period this spring, we hope that the new NEAS model will be made available to applied scientists during the summer.

Guide for EA of Mining Projects

The "Guide to Information Requirements for Federal Environmental Assessment of Mining Projects in Canada" has been finalized. The intention of this guide is to bring a greater level of certainty and consistency to the information requirements for environmental assessments of mining projects. The approach put forward in this guide conforms with the legislative requirements of CEAA. The report is being reviewed by an Agency management committee for final approval. It will be released shortly.

Pipeline Guideline

The "Practitioners Guide to Environmental Assessments of Energy-Related Pipelines" has been completed. The document will be translated and made available on the EAB Infolane site once renovation of the site is completed.

Canadian Standards Association (CSA) Guideline

During the last fiscal year, the CSA Technical Committee on environmental impact assessment redefined its scope of work to take into account major opposition from various industry members. The new goal of the Committee will be the development of a voluntary Environmental Assessment Guideline that will provide clear guidance on the consistent application of EA best practices. After it has been tested for small to medium-sized projects, the Guideline will help proponents and practitioners to conduct environmental assessments of projects, or groups of projects, of any type or level of complexity.

Aquaculture Guidelines

The Atlantic Region is preparing national guidelines for environmental assessments of freshwater and marine aquaculture projects. The aquaculture sector is rapidly expanding in many parts of the country. Recently, the Agency determined that aquaculture facilities meet the definition of "project" under CEAA and thus are subject to assessment when CEAA is triggered. The guidelines will assist reviewers in determining whether sufficient information is available to assess proposals for aquaculture operations, in addition to providing an understanding of potential environmental effects. The guidelines will also describe measures for avoiding, minimizing and mitigating environmental impacts and will promote best environmental management practices and pollution prevention opportunities. The completed guidelines will be available in early 2000-2001.

Water Issues Guidelines

To facilitate a more consistent response to federal department requests for specialist advice pertaining to water-related EA issues, Ontario Region prepared these guidelines, with review and comments given by other regions and headquarters. Based on the many years of experience of several EC practitioners, it consists of a general document providing an overview of EA, identifies water issues, and summarizes and provides links to legislation, regulations and guidelines dealing with water issues in Canada. Several sector-specific water issues guides are provided as appendices to the main document, including: land development and stormwater management; infilling of lakes, rivers and waterways; bridges (and large culverts); highways and roads; marinas and docks; dredging; and, pipelines.

Radar Sites

The Meteorological Service of Canada (MSC) is in the process of installing Doppler radars at 21 new sites across the country. In order to facilitate the preparation of the EA screening reports and to ensure consistency in these reports, MSC, in collaboration with EAB, the Ontario Region and a consultant, prepared a template screening using the National Environmental Assessment System (NEAS). This tool serves as a starting point that helps project managers and EA practitioners prepare EA screenings for Doppler radar installation projects. The template can be accessed as record number 1243 on the NEAS.

Conflict of Interest in the Context of EA

This guidance document, based on legal advice received from the Department of Justice, was developed to help EA practitioners and project managers identify, understand and respond to situations where real or perceived conflict of interest may arise. The document examines the nature of real and apparent conflicts of interest and explores ways of avoiding or minimizing conflicts. Specific situations, described in the document, primarily relate to Meteorological Service of Canada activities, but the document is general enough to be helpful in providing guidance for similar situations in other departmental services. This document will be available internally on the EAB Infolane site.

EA Guidelines for Golf Course Development in the Atlantic Region

On March 2, 2000, a draft guideline document on the development and operation of golf courses was distributed to EC practitioners for review and comment. Issues addressed included siting and design considerations, mitigation of potential environmental impacts associated with construction activities, and best practices/ mitigation measures for the management of golf course operations (e.g. management of stormwater, hazardous materials and wastes, wildlife, clubhouse activities, in addition to integrated pest management strategies). A final guideline document should be available early in 2000-2001.

TRAINING

IAIA 1999 – Scotland

In Glasgow, in June 1999, the 19th annual meeting of the International Association for Impact Assessment (IAIA) assembled over 400 presenters from around the world. During the 87 sessions (over five days), papers covered environmental, social and health impact assessment. The proceedings stressed environmental follow-up, strategic assessments, methodology, and the situation in developing countries. Next year's meeting will be held in Hong Kong with the theme "Back to the Future."

IAIA 1999 – Francophonie

The June 1999 international meeting of Francophone specialists in impact assessment was held prior to the IAIA meeting in Glasgow. The main focus of the meeting, which gathered more than 75 persons from a dozen countries, was on environmental follow-up, strategic assessments, methodology, and the situation in developing countries. The conferences and workshops enhanced links and exchanges among the participants. At the invitation of the French environment minister, the year 2000 meeting will be held in Paris to work on the theme of "Strategic Environmental Assessment."

Cumulative Effects Assessment

The Cumulative Effects Assessment (CEA) Practitioners Guide (February 1999) was developed by an independent, multi-stakeholder committee to provide practical guidance to those involved in designing and conducting CEA and in using this information for project planning and decision making. It focuses on the assessment of cumulative biophysical effects and advances principles for CEA that are intended to be relevant across jurisdictions and to projects of varying size and complexity in different industry and development sectors.

A two-day course based on this Practitioners Guide was prepared with the help of two consulting companies (Axys and Senes) and was presented by CEA specialists in several locations by the Agency in collaboration with EC. Sessions took place in Hull (April 1999), Calgary (June 1999), Edmonton and Halifax (October 1999), Ottawa and Whitehorse (November 1999), Winnipeg and Moncton (February 2000) and Toronto (March 2000). Detailed case studies and examples were used throughout the course, and opportunity was provided for the discussion of issues of concern to participants.

Wetlands Training

An introductory training course on Canada's commitment to wetlands, and how to live up to that commitment in the environmental assessment process under CEAA, has been developed with the assistance of the North American Wetlands Conservation Council (Canada). A pilot session was delivered to 24 EC staff on October 26, 1999, at the EA Practitioners' Workshop. The course is designed to help proponents of federal projects; responsible authorities (RAs); environmental consultants who undertake assessments for proponents and RAs; and EA practitioners who provide guidance and review assessments.

SEA Training

EC is fulfilling its obligations under the renewed Cabinet Directive (June 1999) requiring that all federal departments and agencies examine the environmental effects of any policy, plan or program being developed (also called Strategic Environmental Assessment or SEA). Over the past year, the Environmental Assessment Branch in Hull developed a training manual, "Strategic Environmental Assessment at Environment Canada: How to Conduct Environmental Assessments of Policy, Plan and Program Proposals," several hundred copies of which have been printed. Since then, a training session was successfully delivered to a group of 10 EC and two Agency staff. This first group training session provided positive feedback that resulted in adjustments to the manual and the training program to better meet the needs of EC staff.

The manual is now included in the "Memorandum to Cabinet Drafter's Guide" to provide guidance to policy drafters on the proper environmental evaluation of their proposals. The manual was featured in the March 2000 edition of "Let's Talk Green," resulting in numerous inquiries about the manual and training. More SEA training sessions using the revised manual are planned for the new fiscal year.

Federal Coordination Regulations

As part of the activities of the Regional sectoral table on environmental assessments, the representatives of some twenty federal departments attended two workshops. Environment Canada participated, along with Canadian Heritage, DFO and the Agency, in preparing for the workshop held in the fall of 1999. These workshops led to the development of a regional action plan that placed an emphasis on training representatives of the departments, which act mainly as proponents or contribute to project funding. Some action plan initiatives, such as the preparation of a guide for Responsible Authorities, are currently in progress.

Federal Authorities Workshop

An in-house pilot workshop was held in Edmonton November 25-26, 1999. The pilot was directed at regional staff who review EA documents and provide specialist and expert information and knowledge to clients from other departments and jurisdictions. Participants were mainly regional EA coordinators and technical reviewers, but several EAB headquarters staff also attended. Topics for discussion included Why We Are Doing This Work, How to Write Review Comments/ Guidelines for Technical Reviewers, What We Should Review in EA, and What Information We Should Look for When Reviewing EA Documents.

Practical exercises gave participants hands-on experience in identifying EA issues when a project proposal is first received. Workshops are being planned for other locations in the Prairie and Northern Region. The workshop was developed and delivered by Anne Marie Henry, Meteorological Services of Canada, Curtis Englot, Departmental Affairs Branch, Andy Smart, Environmental Protection Branch, and Rolly Wickstrom, Environmental Conservation Branch.

National Meeting for EP EA Coordinators and Technical Specialists

On September 23-24, 1999, Environmental Protection Branch, Ontario Region, hosted this second national meeting in Niagara-on-the-Lake, Ontario. Approximately 30 Environmental Protection (EP) staff participated. The objectives of this annual meeting are to ensure that regional EA coordinators and technical specialists within EPB are aware of current and emerging policies and issues in the EP program nationally; to provide a forum to discuss how EP issues may be integrated into EA advice in a consistent manner; and to provide a forum for information exchange, communication and networking amongst regional EP staff involved in the EA Program. The agenda for this year's meeting focused technical discussions on s. 36(3) of the *Fisheries Act* and aquaculture proposals, and included a session on strengthening EP staff participation in EA panel hearings.

National EA Practitioners' Workshop

Atlantic Region was host to the 1999 Annual EA Practitioners' Workshop, which was held at the Citadel Hotel in Halifax, October 27-29. The workshop, organized in conjunction with EAB, provides an opportunity for EC staff across the country to share experiences and to evaluate tools for conducting and reviewing environmental assessments. Among the topics discussed during the workshop were the Five-Year Review of CEAA, recent legal decisions relating to EA, regional experiences with a number of high-profile projects and national assessment guidelines for aquaculture projects. There were also demonstrations of a variety of electronic databases and EA tools. A special highlight of the workshop was the presentation of the EA Practitioner of the Year Award to Atlantic Region's Barry Jeffrey, in recognition of his dedication and achievements in environmental assessment both in the region and nationally.

EAs for Smaller Projects

Regional Canadian Wildlife Service EA practitioners met in Hull, February 10-11, 2000, to discuss the first draft protocol developed by a consultant to deal with management of EAs for smaller projects, those that are similar in nature and whose environmental effects can be mitigated readily. Enforcement and EA representatives discussed the key issues and concerns relating to this approach. Hans Blockpoel addressed the group on aircraft/bird interactions; Steve Wendt addressed proposed changes to the Migratory Birds Regulations; and Pauline Lynch-Stewart and Clay Rubec addressed the gaps in understanding the application of the Federal Policy on Wetlands to EA.

National EACC Annual Meeting

The regional chairs of the Environmental Assessment Coordinating Committee (EACC) met in Hull for two days of fruitful exchange, March 15-16, 2000. They discussed the EA Program Strategic Planning Exercise, which will soon be moving to the regions, the EA Core Capacity Study, and EC's draft position on the Five-Year Review of CEAA, and they received an update on revisions to the Migratory Birds Regulations. The Agency briefed participants on the status of the Five-Year Review and Operational Policy statements.

FOLLOW-UP AND MONITORING

Mining Follow-up Study

This year we initiated a study to evaluate EC's contribution, as a responsible authority, to the EAs of mining projects. The objective of the study is to identify positions and advice provided by the Department in various mining projects subjected to the EARP or CEAA process over the past few years. By reviewing EC's involvement in mining EAs in terms of advice and recommendations to panels and in Environmental Impact Statements, we will be able to get a better idea of the level of consistency in EAs at the national level. The study should also provide a basis for discussing where additional mining guideline information, resources and R&D could evolve in order to increase national consistency in EAs of mining. We have completed the information-gathering part of the study. In the new year we will conduct the analysis and hold a workshop to get regional input.

Atlantic Region Follow-up to Environmental Assessments

Follow-up is an essential component of the EA process, both for verifying the accuracy of the EA process itself and for determining the effectiveness of any measures taken to mitigate the adverse environmental impacts of a project.

In the summer of 1999, following review and comment on environmental issues associated with the construction and operation of the Maritimes and Northeast Pipeline natural gas main line through Nova Scotia and New Brunswick, EC staff initiated a follow-up program to determine whether our mandated requirements, noted in the National Energy Board (NEB) Reasons for Decision, were in fact carried out satisfactorily. The program was expanded to include follow-up issues for the Point Tupper, Halifax, and Saint John laterals and the Sable Offshore Energy Project. The follow-up was accomplished through field inspections, meetings, review of design and construction revisions, and close communication with and support from NEB staff and proponents.

Follow-up issues addressed acid rock excavation and disposal, greenhouse gas action plans, environmental protection plan revisions, detailed crossing plans for the sensitive wetlands, waste management plans, and mitigation requirements for migratory birds due to delays in clearing the Saint John and Halifax laterals. Other issues to date include a post-construction Roseate tern study for Sable Offshore Energy.

This program is being expanded in fiscal year 2000-2001 to follow up on completed EAs under CEAA (e.g. components of the Muggah Creek Watershed Clean-up Initiative, fish aquaculture, federally funded highways, and selected Eco-Action projects). Those who initiated specific concerns about a project are encouraged and supported in following up on their comments as the project progresses.

COMPLIANCE

Performance of Environment Canada as a Responsible Authority Based on NEAS Data

At the National EA Practioners' Workshop held in October 1998 in Québec City, EAB presented an analysis of the information contained in the NEAS since its introduction in April 1998. The main shortcomings observed related to the speed with which projects were registered in the NEAS, the entry of data on monitoring programs and the consultation of experts, and lack of consistency in processing environmental assessments, particularly those triggered as a result of applications for ocean disposal permits.

Following the discussions held at the 1998 workshop and at meetings with program managers, a number of measures were suggested to correct the observed shortcomings. Indeed, the analysis presented at the EA Practioners' Workshop in October 1999 in Halifax revealed a significant improvement in the manner in which data were entered into the NEAS, particularly in terms of consistency in the way ocean disposal projects were assessed. Delays in data entry had also decreased considerably.

With a view to further improvements, the EAB intends to actively attend annual meetings of program managers involved in environmental assessment. We note that the environmental assessments for Environment Canada projects are now available at the Department's Web site.

FIVE-YEAR REVIEW OF CEAA

The Five-Year Review of CEAA presented an excellent opportunity for EC to systematically consider past experiences and identify issues that will assist in improving the operations of the Act. EAB coordinated EC's input and provided comments and support to the Agency throughout the ongoing review. EAB also coordinated an interdepartmental committee to ensure that all major issues were identified, and that an organized approach was developed to communicate these issues to the Agency. Issues were discussed at several national meetings and workshops, and an internal working group was identified (including headquarters, Canadian Wildlife Service and regional personnel) in order to prepare the final departmental position papers. Regional meetings were held during March 2000 in Winnipeg, Montréal and Halifax.

In general, Environment Canada wants to focus on making management and administration of the Act and its processes more effective, while at the same time ensuring that the objectives of sustainable development are achieved in the context of federal decision making, that its own environmental assessments are sound and comprehensive, and that the Department's scientific advice is being appropriately used by

other departments and agencies. The Department's three top-priority recommendations address:

- strengthening the accountability of the Agency and federal authorities to support better compliance;
- ensuring federal involvement in the EA process at an earlier stage (particularly for the Law List); and
- facilitating the development and use of EA tools such as regional assessments of multiple projects.

Other significant issues relate to coordinating management of the process; establishing clear accountabilities (e.g. for monitoring and follow-up); the need for improved efficiency, effectiveness and predictability; and the need for more effective development and use of tools and innovative approaches to facilitate better EA.

Looking to the Future

During the five years since the implementation of the *Canadian Environmental Assessment Act*, the EA Program has expended considerable energy in examining how we have fulfilled our responsibilities and complied with the Act. In the last year we have focused on developing an Environment Canada position on the amendments we would like to see in the Act to enhance and further protect the environment. Our analysis and input to the Five-Year Review will contribute to a revitalized CEAA, with new features and a more streamlined, more efficient process. We trust this will begin to address our need, and industry's need, for greater simplicity, timeliness and clarity of process. We expect that legal challenges and court decisions will continue to further define our roles and responsibilities.

Challenges in the EA Program

- There is an increasing demand from the public, especially First Nations groups, for access to EA information and for participation in the EA process. Legal challenges have resulted when such needs were not fully met.
- Developing national consistency remains an ongoing challenge.
- There is growing demand for expert advice on infrastructure projects, DFO permitting, and assessments devolved to Aboriginal processes, *all without the promise of necessary resources.*
- There is a lack of adequate resources for follow-up, monitoring and coordination of science studies in support of EA, hindering the Program's ability to have a continuing sound scientific foundation for its advice.
- The new *Species at Risk* legislation will need analysis and necessitate appropriate training for our practitioners.
- Cumulative Effects Assessment (CEA) and Strategic Environmental Assessment (SEA) or "policy assessment" are gaining a higher profile, allowing us to do assessments on a more comprehensive scale than before. We need to do more.

Managing our resources and developing a sound recruitment policy will be our central challenges.

Proposed Future Directions

- The Program will promote the use of existing tools such as Strategic EA and Adaptive Management practices across all of EC, and to other government departments and proponents, and provide advice on what is required to conduct Cumulative Effects Assessments. This is one way of ensuring the early integration of EA into decision making.

- The Program will undertake to document and analyze its resource utilization to determine how the increased reach of the Program has affected the timeliness and quality of the advice provided. This is particularly necessary due to the increase in referrals from groups such as DFO, the federal and provincial infrastructure projects, and harmonization agreements. Once the analysis is completed, the Program will identify where results are at risk.

- Ongoing training of practitioners will be necessary and new training will be provided to explain and work with the revised CEAA. Guidance and position statements will be prepared to deal with the new and challenging facets of our work. The next EA Practitioners' Workshop is scheduled for Victoria, B.C., in early November 2000. Its theme will be "EA and Science: Building Linkages at Environment Canada."

It promises to be another busy year filled with opportunities and challenges.

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ABBREVIATIONS

Agency – Canadian Environmental Assessment Agency

BCEAA – *British Columbia Environmental Assessment Act*

CEA – Cumulative Effects Assessment

CEAA – *Canadian Environmental Assessment Act*

CSA – Canadian Standards Association

CSR – Comprehensive Study Report

CTA – Canadian Transportation Agency

DFO – Department of Fisheries and Oceans

DU – Ducks Unlimited

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

EDT – Error Detector Tool

EPS – Environmental Protection Service

EUB – (Alberta) Energy and Utilities Board

FA – Federal Authority

FEAI – Federal Environmental Assessment Index

FMP – Forest management plan

IAIA – International Association for Impact Assessment

INAC – Indian and Northern Affairs Canada

JAG – Joint action group

MOU – Memorandum of Understanding

MSC – Meteorological Service of Canada

MVEIRB – Mackenzie Valley Environmental Impact Review Board

NEAS – National Environmental Assessment System

NEB – National Energy Board

NHRI – National Hydrology Research Institute

NWRC – National Wildlife Research Centre

NWRI – National Water Research Institute

NRTS – New Referral Tracking System

PAHs – Polycyclic aromatic hydrocarbons

PCBs – Polychlorinated biphenyls

POPs – Persistent organic pollutants

RA – Responsible authority

RMHW – Regional Municipality of Hamilton Wentworth

RSDS – Regional Sustainable Development Strategy

SEA – Strategic Environmental Assessment

UNEP – United Nations Environment Program

WTO – World Trade Organization