Paul Buxton

From: "McDonald,Derek [CEAA]" <Derek.McDonald@ceaa-acee.gc.ca>
To: "Paul Buxton (E-mail)" <paul.buxton@ns.sympatico.ca>
Cc: "Zamora,Phil J: DFO XMAR" <Phil.J.Zamora@XMAR.DFO-MPO.X400.GC.CA>
Sent: Tuesday, April 08, 2003 2:32 PM
Attach: Scoping_Package_000721.doc
Subject: EA Information and guidance

> Paul:
>
> As discussed, here is some information for you to peruse. It ended up
> being more than I thought, but my experience is that effort invested up
> front to ensure a solid understanding of expectations often pays off in
> the long term.
>
> A good overall reference is the "Guide to the Preparation of a
> Comprehensive Study for Proponents and Responsible Authorities"
> (http://www.ceaa-acee.gc.ca/0011/0001/0003/comps_e.htm). Another standard
> reference is the Responsible Authority's Guide
> (http://www.ceaa-acee.gc.ca/0011/0001/0008/guide_e.htm) - I have
> highlighted relevant portions of the guide below, and provided direct
> links to them.
>
> Here is the Tiverton link in which you were interested:
> http://www.ceaa-acee.gc.ca/cgi-bin/PRS/report.cfm?FeaiNo=31382
>
> Other points:
>
> Scoping and MOU - Some recent examples for you to look at:
> * Deep Panuke Scope
> http://www.cnsopb.ns.ca/deeppanuke/scope152002.pdf.
> * White Rose Scope (for comparison): see attached file
> Scoping_Package_000721.doc.
> * Deep Panuke MOU: http://www.cnsopb.ns.ca/deeppanuke/mou.pdf.
>
> Level of Detail - The level of detail required in the CSR is flexible, but
> it must provide sufficient information to allow for public comment and for
> the Minister's decision to be made. It must enable the reader to
> understand the issues and how they have been resolved. Enough detail
> should be included to permit a non-specialist reader to understand the
> connections between the project, environmental components, potential
> effects, mitigation and the conclusions posed in the report. It is not
> necessary to include all the technical details or component studies.
>
> Traditional "Problem Areas" - Particular aspects of past CSRs which have
> been the focus of criticism, and therefore merit close attention, include:
> cumulative effects, determination of significance, consideration of
> alternatives, public participation, mitigation and follow-up (e.g. effects
> monitoring):
>

APPENDIX A

MEMORANDUM OF UNDERSTANDING ON ENVIRONMENTAL ASSESSMENT PROCESS FOR THE DEEP PANUKE PROJECT

Execution Copy

MEMORANDUM OF UNDERSTANDING ON ENVIRONMENTAL ASSESSMENT PROCESS FOR THE DEEP PANUKE PROJECT

BETWEEN:

CANADA-NOVA SCOTIA OFFSHORE PETROLEUM BOARD
(CNSOPB)

AND

NATIONAL ENERGY BOARD
(NEB)

AND

DEPARTMENT OF FISHERIES AND OCEANS
(DFO)

AND

ENVIRONMENT CANADA
(EC)

AND

INDUSTRY CANADA
(IC)

AND

CANADIAN ENVIRONMENTAL ASSESSMENT AGENCY
(CEA AGENCY)

AND

PROVINCE OF NOVA SCOTIA
AS REPRESENTED BY
NOVA SCOTIA DEPARTMENT OF ENVIRONMENT & LABOUR
(PROVINCE)

WHEREAS PanCanadian Petroleum Limited (the Proponent) proposes to develop natural gas resources from the Deep Panuke gas field in the Nova Scotia offshore which development includes drilling, production, fabrication, processing, operating and transportation activities offshore and transportation of gas and condensate onshore (the Project); and

WHEREAS the Project involves the construction of a platform, artificial island or any other physical work for the production of oil and gas, where the platform, island or work is located offshore in salt water or fresh water as described in the federal *Comprehensive Study List Regulations* and therefore is subject to a Comprehensive Study and the *Canadian Environmental Assessment Act* (CEAA); and

WHEREAS the Proponent has filed documentation with the CEA Agency, the CNSOPB and the NEB to initiate the environmental assessment process (EA process) under CEAA, which information was filed on the 23rd day of July, 2001; and

WHEREAS the CNSOPB, NEB, DFO, EC and IC are or may be Responsible Authorities in relation to the environmental assessment under the CEAA; and

WHEREAS the Province has or may have responsibilities regarding the assessment of environmental effects for the onshore portion of the Project under the Nova Scotia *Environment Act* (NSEA); and

WHEREAS the Parties share an interest in taking actions that promote sustainable development; and

WHEREAS the Parties wish to avoid unnecessary duplication and promote environmental assessment efficiency; and

WHEREAS the Parties wish to ensure that the public is aware of the EA process and the opportunities for public input; and

WHEREAS the Parties recognize that further discussions will be required should any Responsible Authority or the federal Minister of the Environment decide, at the commencement or at any time during the course of the EA process, that the Project should be assessed by a review panel or mediator, or where the Province determines that a further assessment of the environmental effects of the Project is required.

THEREFORE the Parties agree, should the assessment of the Project pursuant to the CEAA proceed by way of a comprehensive study and the Proponent be delegated the comprehensive study and the preparation of a report, they will coordinate their respective processes and responsibilities regarding the assessment of the environmental effects of the Project as described below:

1. For the purposes of this Memorandum of Understanding (MOU),

"Comprehensive Study" has the same meaning as set out in section 2 of the CEAA;

"Comprehensive Study Report" (CSR) means the report to be prepared in accordance with paragraph 21(a) of the CEAA and also includes, for the purpose of the NSEA, a consideration of any additional matters identified in accordance with section 8 of this MOU;

"Expert Federal Authority" means any federal departments or agencies which possesses specialist or expert information or knowledge that is relevant to the environmental assessment of the Project;

"Parties" means the signatories to this MOU;

"Responsible Authority" has the same meaning as set out in section 2 of the CEAA.

2. The purpose of this MOU is to coordinate the responsibilities of the Parties regarding the assessment of the environmental effects of the Project. The Parties intend to coordinate the EA process to include a consideration of factors identified in accordance with sections 6 to 8 of this MOU.

3. The CNSOPB will act as the lead Responsible Authority under the CEAA and coordinate this process for federal purposes. The Province will coordinate the process for provincial purposes. The Parties will work together to establish reasonable and appropriate timetables and schedules.

4. The Parties will hold further discussions on ways to ensure the public and aboriginal persons are aware of the EA process and have opportunities for public input to achieve this result.

5. The Parties intend to consult amongst themselves and coordinate any public announcements with respect to the assessment of the environmental effects of this Project, including any announcements that further environmental assessment by way of a review panel or mediation is required.

6. The Parties, after considering comments from the public on this MOU and the scope of assessment, will finalize the terms and conditions outlined in this agreement and will decide on the scope of the assessment.

7. For the purpose of complying with the requirements of the CEAA, the assessment will include a consideration of the factors listed in subsections 16(1) and 16(2) of the CEAA, and of any other matters relevant to the environmental assessment of this Project that the federal Minister of Environment, in consultation with the Responsible Authorities, may require to be considered.

8. For the purpose of coordinating the responsibilities of all the Parties regarding the assessment of the environmental effects of the Project, the assessment will also include a consideration of any additional matters relevant to the assessment of the environmental effects of the Project under the NSEA that are identified by the Province.

9. The final scope of the environmental assessment will be forwarded by the CNSOPB to the Proponent.

10. The Responsible Authorities intend, pursuant to subsection 17(1) of the CEAA, to delegate the comprehensive study and the preparation of the report referred to in paragraph 21(a) of the CEAA to the Proponent. The Parties also intend to request the Proponent to consider any additional matters identified with section 8 of this MOU, and to report in the CSR on the said consideration.

11. A draft CSR will be submitted by the Proponent to the Parties and Expert Federal Authorities for review and comment.

12. Written Comments on the draft CSR will be provided by the Parties and Expert Federal Authorities to the CNSOPB and the CNSOPB will forward them to the Proponent. The CNSOPB will coordinate comments by the Responsible Authorities and Expert Federal Authorities and will arrange for the provision of those comments to the Proponent. The Province will coordinate provincial comments and will provide them to the CNSOPB for forwarding to the Proponent.

13. The Proponent will submit a revised CSR, as appropriate. The Parties, in consultation with the Expert Federal Authorities, will review the CSR to ensure its completeness in consideration of their respective legislative requirements. The Province will coordinate provincial comments of the review of the revised CSR.

14. Once the Parties are satisfied that the CSR is complete, the CSR shall be forwarded to the federal Minister of the Environment and the CEA Agency. The CEA Agency will invite public comment on the conclusions, recommendations and any other aspect of the CSR, in accordance with section 22 of the CEAA.

15. Notices of the commencement of respective regulatory public hearings by the CNSOPB and NEB will be published after the final CSR is submitted to the federal Minister of Environment. Notices of the commencement of regulatory public hearings by the Province will be published after the final CSR is submitted to the provincial Minister of Environment and Labour.

16. Once and if the federal Minister of the Environment takes the decision pursuant to subparagraph 23(a) of the CEAA, the CNSOPB agrees the CSR will form part of the Development Plan Application (DPA) filed by the Proponent to the CNSOPB under the DPA approval process.

17. The CNSOPB will maintain a public registry as required under the CEAA and establish a website for the registry (http://www.cnsopb.ns.ca/deeppanuke). The Province will provide information on its Environmental Assessment Branch website (http://www.gov.ns.ca/enla/ess/ea) as to the federal contact for the review of documentation.

18. The CNSOPB in consultation with the other Parties will arrange for the Proponent to establish local repositories where the public may access documentation in relation to the review.

19. The provisions of this MOU shall not restrict the decision-making authority or fetter the discretion of statutory decision-makers.

20. The Parties may amend this MOU upon the agreement of all Parties. A Party, without the consent of the other Parties, upon thirty (30) days notice may withdraw from this MOU and complete an independent EA process.

21. This MOU is not intended to be a legally binding instrument or give rise to any legal rights not otherwise held by the Parties.

22. This MOU may be executed in several counterparts, each of which so executed shall be deemed to be an original, and such counterparts together shall constitute one and the same original agreement.

IN WITNESS WHEREOF the Parties have signed this MOU on the dates indicated below.

Original signed by:

_____	Dec 14, 2001	_____
J.E. (Jim) Dickey	Date	Witness
Chief Executive Officer		
Canada- Nova Scotia Offshore Petroleum Board		

Original signed by:

_____	Dec 17, 2001	_____
Gaétan Caron	Date	Witness
Chief Operating Officer		
National Energy Board		

Original signed by:

_____	Dec 14, 2001	_____
Neil A. Bellefontaine	Date	Witness
Regional Director-General		
Department of Fisheries and Oceans		

Original signed by:

_____	Dec 17, 2001	_____
Garth Bangay	Date	Witness
Director General, Atlantic Region		
Environment Canada		

Original signed by:

_____	Dec 17, 2001	_____
F. George Richard	Date	Witness
Deputy Executive Regional Director, Atlantic Region		
Industry Canada		

Original signed by:

_____	Dec 17, 2001	_____
Paul Bernier	Date	Witness
Vice President, Program Delivery		
Canadian Environmental Assessment Agency		

Original signed by:

_____	Dec 14, 2001	_____
Kevin McNamara	Date	Witness
Deputy Minister, Department of Environment and Labour		

Province of Nova Scotia

APPENDIX B

SCOPE OF THE ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED PANCANADIAN ENERGY CORPORATION (PANCANADIAN) DEEP PANUKE GAS DEVELOPMENT PROJECT DECEMBER 18, 2001 (REVISED FEBRUARY 15, 2002)

Scope of the Environmental Assessment
For the
Proposed PanCanadian Energy Corporation (PanCanadian)
Deep Panuke Gas Development Project

December 18, 2001
(Revised February 15, 2002)

Scope of the Environmental Assessment
for the
Proposed PanCanadian Energy Corporation (PanCanadian)
Deep Panuke Project

1. Definitions

In this document,

"Environment" means the components of the earth and includes:

(a) Land, water, air and all layers of the atmosphere;

(b) All organic and inorganic matter and living organisms;

(c) The interacting natural systems that include components referred to in paragraphs (a) and (b); and

(d) The socio-economic, health, cultural and other items referred to in the definition of environmental effect.

"Environmental effect" means:

(a) Any change that a Project may cause in the environment, including any effect on socio-economic conditions, on health, 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 including that of historical, archaeological, paleontological or architectural significance; and

(b) Any change to a Project that may be caused by the environment.

2. Scope of the Project

The project to be assessed will include undertakings proposed by the proponent, or likely to be carried out in relation to the physical works proposed by the proponent, such as:

- Construction, operation, decommissioning and abandonment of:
    - Three new bottom-founded platform(s) accommodating the gas processing system and power generation, utilities, a helicopter landing pad, a refueling station and crew accommodations. The platforms will be interconnected by pedestrian / service bridges.
    - An offshore gas processing system consisting of:
        - Separation, measurement, dehydration, and hydrocarbon dew point control equipment; and
        - Full acid gas processing consisting of an amine unit to remove hydrogen sulphide (H_2S) and carbon dioxide (CO_2) from produced, raw, gas, and piping, compression and wellhead facilities associated with an acid gas injection / disposal well.

- A sub-sea gas pipeline from the platform to the coastline, and an onshore portion, to transport natural gas to Goldboro, Nova Scotia interconnecting with the Maritimes & Northeast Pipeline (M&NP) main transmission pipeline for further transport to markets in Canada and the Northeast United States.

- Onshore facilities consisting of the physical components necessary for interconnection of PanCanadian's natural gas pipeline with M&NP's facilities, including:
    - Metering and quality monitoring equipment;
    - Pressure control facilities (manifolding station);
    - Pig (smart and cleaning) launcher/receiver facilities, as required; and
    - A small building housing Supervisory Control and Data Acquisition Systems (SCADA) and other monitoring equipment for the pipeline.

- Ancillary undertakings in relation to the physical works identified above, including:
    - Dredging, trenching, blasting and other activities related to pipeline installation and construction, including activities for the management of the dredged sediments;
    - Development and injection well drilling;
    - Sub-sea gathering lines;
    - Support vessel and aircraft (e.g. helicopter) operations and facilities;
    - Installation and operation of communications equipment;
    - Various temporary construction work areas;
    - Transportation and installation of onshore fabricated components;
    - Equipment lay-down areas; and
    - Access roads.

3. Factors to be Considered

The assessment will include a consideration of the following factors as described in subsections 16(1) and (2) of the *Canadian Environmental Assessment Act*.

Factors to be considered in accordance with subsection 16(1) are:

- The environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;
- The significance of the environmental effects;
- Comments from the public that are received in accordance with the *Canadian Environmental Assessment Act* and its regulations; and

- Measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project.

In accordance with paragraph 16(1)(e) of the *Canadian Environmental Assessment Act*, the assessment will also include a consideration of the need for the project and alternatives to the project.

Factors to be considered in accordance with subsection 16(2) are:

- The purpose of the project;
- Alternative means of carrying out the project that are technically and economically feasible and the environmental effects of any such alternative means;
- The need for, and the requirements of, any follow-up program in respect of the project; and
- The capacity of renewable resources that are likely to be significantly affected by the project to meet the needs of the present and those of the future.

The likelihood and significance of predicted adverse environmental effects should be considered in the context of sustainable development principles, as set forth in the *Canadian Environmental Assessment Act* and other legislation. Measures proposed for mitigating adverse environmental effects should be considered in a hierarchical sequence with a clear priority on avoidance of adverse environmental effects.

It is recognized that environmental assessment is conducted at the early phases of project planning when alternative means of carrying out the project are under study and project details have yet to be finalized. As set out in this scope document, alternative means of carrying out the project must be considered in the environmental assessment.

It is expected that the project, and alternative means of carrying out the project, will reflect a consideration of sustainable development principles, incorporate the applicable best management practices and make provision for compliance with applicable legislative requirements. It is further expected that the consideration of alternative means will facilitate identification of site, configuration, design and management options that would be preferable in terms of avoiding or minimizing adverse environmental effects.

4. Scope of the Factors to be Considered

The review will consider the potential effects of the proposed project within spatial and temporal boundaries that encompass the periods and areas during and within which the proposed project may potentially interact with, and have an effect on, components of the environment. Relevant factors in determining boundaries include such things as ocean currents, wind conditions, and species migration patterns.

Table: Summary of CSR Considerations

The following is a list of environments, ecosystem components, project activities and environmental influences that, as a minimum, the Comprehensive Study Report (CSR) must consider. The list is not intended to be exhaustive and is provided solely to guide the proponent as to the type of content expected in the CSR. The proponent should carefully examine this list and expand upon it where necessary. For further guidance, the proponent should also carefully examine the detailed comments provided by the various agencies and public in response to the Scope document.

Major Environments	• Marine (Offshore) Physical, Biological and Chemical • Coastal and Nearshore Physical, Biological and Chemical (e.g. inter-tidal communities, aquaculture) • Onshore Aquatic and Terrestrial • Atmospheric • Geologic (geomorphology, marine sediments, sediment quality)
Ecosystem Components (candidate Valued Ecosystem Components, to be considered in all relevant environments)	<u>Environmental</u> • Air quality • Water quality • Sediment quality • Soil capability and quality • Fish and fish habitat • Mammals • Archaeological and heritage resources • Benthos • Vegetation (plants, trees, forests, kelp, rockweed, seaweed, etc.) • Plankton • Amphibians and reptiles • Birds and bird habitat • Special places (Sable Island, the Gully and other environmentally sensitive or protected areas) • Species at risk • Groundwater resources • Surface water resources • Wetlands and wetland functions <u>Socio-Economic</u> • Land use (parks and other recreational uses, forestry, agriculture, mineral tenures, gravel resources, landfills, proximity to residential areas, future development plans, access management, crossing of contaminated areas) • Public Health and Safety (project emissions and effluents, radio wave emissions from communications

	equipment, noise, dust, pipeline integrity, fire, water supplies, sewage treatment) • Use of Marine Resources (commercial fisheries and commercial fishing exclusion zones, aquaculture, commercial and recreational navigation, oil and gas, communications and submarine cables, maritime defense, marine science and technology) • Mi'kmaq Interests (hunting and traditional or commercial fishing, cultural sites)
Project Activities (possible causes of environmental effects)	• Normal and fugitive air emissions (e.g. greenhouse gases (CO_2, methane), H_2S, SO_2, NO_X, VOCs) • Marine discharges (e.g. produced water, drill fluids and cuttings, biocides, grey water, black water, galley waste) • Acid gas injection • Offshore storage and use of condensate • Electromagnetic emissions (radio) • Noise (underwater and atmospheric) • Onshore waste disposal • Erosion and sedimentation • Vessel traffic • Aircraft activity • Dredging / trenching / blasting and dredge material disposal • Malfunctions and accidental events (e.g. spills or leaks of hydrocarbons or chemicals, blowouts, injection well malfunctions)
Environmental Influences (factors which could affect the project design or operation)	• Meteorology and oceanography (e.g. extreme winds, waves, currents and precipitation, fog, freezing spray) • Seismic activity • Ice climate • Corrosion • Sinkholes

Appendices A-H to Comprehensive Study Guide

- Appendix A
- Appendix B
- Appendix C
- Appendix D
- Appendix E
- Appendix F
- Appendix G
- Appendix H

Appendix A

Agency Contacts for Information Concerning Comprehensive Studies

CEAA Regional Offices

VANCOUVER OFFICE
757 West Hastings Street, Suite 320
Sinclair Centre
Vancouver, B.C.
V6C 1A1
SCOTT, Paul (604) 666-6989
Fax (604) 666-6990
e-mail: Paul.Scott@ceaa-acee.gc.ca

EDMONTON OFFICE
Suite 100
Revillon Bldg
10237-104 Street S.W.
Edmonton, Alberta
T5J 1B1
CHRISTIE, Ryerson M.
(403) 422-7704
Fax (403) 422-0055
e-mail: Ryerson.Christie@ceaa-acee.gc.ca

HALIFAX OFFICE
1791 Barrington Street, Suite 1030
TD Centre
Halifax, Nova Scotia
B3J 3L1
COULTER, William (902) 426-6623
Fax (902) 426-6550
e-mail:Bill.Coulter@ceaa-acee.gc.ca

WINNIPEG OFFICE
123 Main Street, Suite 263
Winnipeg, Manitoba
R3C 4W2
McNAUGHTON, Dan
(204) 984-2457
Fax (204) 983-7174
e-mail:Dan.McNaughton@ceaa-acee.gc.ca

QUEBEC OFFICE
200 Sacré-Coeur Blvd.
Fontaine Building

Hull, Quebec
K1A 0H3
BOURGON, Michel (819) 997-2213
Fax (819) 994-1469
e-mail:Michel.Bourgon@ceaa-acee.gc.ca

ONTARIO OFFICE
200 Sacré-Coeur Blvd.
Fontaine Building
Hull, Quebec
K1A 0H3
RIVERIN, Guy (819) 997-2244
Fax (819) 994-1469
e-mail:Guy.Riverin@ceaa-acee.gc.ca

Comprehensive Study Team

MAIN OFFICE

200 Sacré-Coeur Blvd.
Fontaine Building
Hull, Quebec
K1A 0H3

PARKER, Brad (819) 953-5044 Brad.Parker@ceaa-acee.gc.ca

THERRIEN, Marie-France (819) 953-2537 Marie-France.Therrien@ceaa-acee.gc.ca

McCAULEY, John (819) 994-3159 john.mccauley@ceaa-acee.gc.ca

LAFLECHE, Louise (819) 953-4128 louise.lafleche@ceaa-acee.gc.ca

Fax (819) 994-1469

Appendix B

Public Involvement

Public involvement is a process for identifying and incorporating public concerns and values into a decision. It provides an opportunity for all parties interested in or affected by a decision to contribute and influence that decision. The fundamental feature of public involvement is two-way communication. That is, it goes beyond simply providing information to the public: there must be an opportunity for the public to provide information back to the decision-maker.

Just as there is no single public, but rather a diverse range of interests and organizations, there is also no single public involvement process. Public involvement can range, depending on circumstances, from relatively straightforward exchanges of information, to more complex approaches involving consultation, consensus-building, and mediation.

Requirements of the Act

Public involvement is a central element of the *Canadian Environmental Assessment Act* (the Act). The importance and function of public involvement is cited in both the preamble and purpose of the Act:

...Whereas the Government of Canada is committed to facilitating public participation in the environmental assessment of projects to be carried out by

or with the approval or assistance of the Government of Canada and providing access to the information on which those environmental assessments are based;...

and

The purposes of this Act are...

(d) to ensure that there be an opportunity for public participation in the environmental assessment process.

Public concerns play an important role under the Act. Following a comprehensive study, the Minister of Environment, with advice from the Agency, makes the determination on whether public concerns justify a referral to a panel or mediation.

The legal requirements of the Act regarding public participation for comprehensive studies are as follows:

• every comprehensive study of a project shall take into consideration... comments from the public... (paragraph 16(1)c))

• regarding public notice... the Agency shall, in any manner it considers appropriate to facilitate public access to the report, publish a notice setting out the following information.... (ss.22(1)).

• regarding public concern... any person may file comments with the Agency relating to the conclusions and recommendations and any other aspect of the comprehensive study report (ss. 22(2))... The Minister shall take one of the following courses of action in respect of a project after taking into consideration the comprehensive study report and any comments filed pursuant to subsection 22(2):.... (s.23).

• regarding follow-up... a responsible authority shall, in accordance with any regulations made for that purpose, advise the public of:

• its course of action...;

• any mitigation measures to be implemented;

• any follow-up program designed; and

• any results of a follow-up program (s.38(2)).

Benefits of public involvement

Public involvement can strengthen the quality and credibility of environmental assessments in several ways:

• Through the involvement of interested parties, decision-makers can, at an early stage, identify and address concerns that people have about a project. They can better understand the factors, issues or choices that are important to people likely to be affected by the decision.

• The public can be an important source of local and traditional knowledge about a project's physical site and likely environmental effects. A public involvement program can help ensure that such information contributes to the decision.

• People often need to be informed of potential actions and consequences before they can provide input into a decision. Public involvement techniques can help build this awareness and understanding, and help identify options or

alternatives that are likely to meet with community approval.

• At times, decision-makers must find a consensus among different or opposing interests. A public involvement program can help develop the credibility and trust in the decision-making process that is needed for such a consensus.

• Over time, a visible commitment to effective public involvement can help build a sense of public trust and credibility in the responsible authority's decisions, and reduce the possibility that public concerns will lead to costly delays in project approvals and implementation.

The result of an effective public involvement program will be better decisions by the responsible authority -- decisions that are made with a full understanding of public concerns and that are, in turn, better understood and trusted by the people affected by them.

Public involvement components led by the proponent and responsible authority

Although there is no specific requirement in the Act to consult the public during the preparation of a comprehensive study, the spirit of the Act clearly supports the principle of early and meaningful public consultation. There are sound reasons for having the public involved from the beginning of a comprehensive study, particularly for potentially controversial projects, as such involvement results in a better designed and a more publicly accepted project.

Public participation in a comprehensive study may be valuable during:

• scoping and the identification of issues;

• data collection for socioeconomic issues (economic, social, cultural, resource use, attitudes and perceptions, local community effects);

• preliminary analysis and assessment of significance;

• review and finalization of assessment;

• suggestions for mitigation measures.

Advisory guidelines

Advisory guidelines can provide a common understanding of the roles and responsibilities of all participants involved in a public involvement initiative under the Act. Guidelines can also clarify expectation of participants at the outset, and provide a standard against which to evaluate performance.

The following advisory guidelines intended for public involvement should apply to the responsible authorities, proponents, stakeholders and other interested organizations and individuals involved in a comprehensive study.

1) Clarifying the scope of public involvement

The scope of public involvement can vary from one environmental assessment to another. Responsible authorities should clearly identify, at the outset of the environmental assessment, the decision it must make, the objectives of its public involvement program, and the issues that are open to public input and those that are not.

Whenever appropriate, responsible authorities should consult with stakeholders and other interested members of the public about how they want to be involved, to ensure community needs and preferences are addressed.

The responsible authority should then convey information on the specific

opportunities for public involvement throughout the environmental assessment process, and on any constraints under which it may be operating.

2) Early involvement

The benefits of public involvement cannot be achieved by means of a simple public notice-and-comment period once an environmental assessment report is completed. Whenever appropriate or possible, responsible authorities should involve the public early, so that public concerns can be identified and addressed as part of the self-directed environmental assessment process, rather than after the fact in a panel review or mediation.

Early involvement of the public will be particularly important in the case of comprehensive studies, which will be conducted for large-scale, complex projects that in the past would likely have been reviewed by a public review panel.

3) Appropriate scale

The public involvement program should be appropriate for the scale and complexity of the comprehensive study.

A long-term, extensive public involvement program will likely be required for the large industrial and resource development projects that call for a comprehensive study. Specialist input to the development of such a program is advised.

4) Flexibility

Public involvement must be a flexible process, adapting to the particular set of environmental issues and public concerns relevant to the comprehensive study. Relatively rigid, and standardized approaches to public involvement may not be able to accommodate these issues and concerns. There is no "single best" public involvement technique, no standard set of techniques that make up a public involvement program.

Responsible authorities are encouraged to design and implement public involvement programs that match the needs and circumstances of the environmental assessment, and that reflect the needs and expressed preferences of stakeholders and other members of the public.

At the same time, responsible authorities, stakeholders and other participants should recognize that public involvement is a dynamic process and should be willing to revise public involvement plans when necessary.

5) *Accountability*

Participants in a public involvement process should be accountable for their actions. Responsible authorities should ensure and demonstrate that the public involvement process is directly linked to the decision-making process. Stakeholders should report back to their constituents in a fair and accurate manner and follow through on any negotiated commitments.

6) Timeliness

In developing a public involvement program, responsible authorities should ensure that members of the public have adequate time in which to review information and provide meaningful input into the environmental assessment process.

7) Reporting on decisions

Stakeholders and other members of the public involved in an environmental

assessment should recognize that the responsible authority remains accountable under the Act for making a decision on whether to proceed with the proposed project.

Responsible authorities should explain the decision to the public, clearly demonstrating how the results of the public involvement program have been used in arriving at the decision or explaining why the results have not been incorporated in the decision.

Other considerations

Shared process: Public involvement is a shared process, and no one group can claim ownership of it. All participants should demonstrate a commitment to working with the process once it is under way, even if it is not producing the immediate results that one group or another would like to see. All participants should commit themselves to sharing information on a timely basis, so that they can act on the basis of a full understanding of the information and on the views of other participants.

Mutual respect: Public involvement programs will often bring together people representing a wide range of perspectives and opinions. The public involvement process should be conducted in an atmosphere of mutual respect. All participants should demonstrate respect for other participants and for the process by, for example, acting honestly and ethically, declaring their own interests and perspectives, and respecting other perspectives, values and cultures.

Commitment to the process: Responsible authorities should consider public involvement an ongoing process and part of the way in which they do business, rather than a single event or program associated with a particular screening or comprehensive study. Responsible authorities should demonstrate a commitment to strengthening their public involvement approaches by evaluating their public involvement programs and by seeking feedback from stakeholder groups and other members of the public on an ongoing basis.

Addressing public concerns

Given the potential that public concerns may trigger a panel review or mediation, the responsible authority should take the appropriate steps, in a comprehensive study, to identify and address public concerns.

A public involvement program will allow a responsible authority to: identify the public concerns related to the project; address them when conducting the comprehensive study; determine whether the public concerns about the project warrant further investigation by means of a panel review or mediation.

Under the Act, public concerns must be related to the likely environmental effects of the proposed project. They can be expressed in different ways and from different sources:

• through a public involvement program conducted as part of the comprehensive study;

• from public comments on the comprehensive study report received by the Agency during the public review and comment period (or on the screening report, if the responsible authority has made it available for comment);

• from other activities or information that may be legitimate sources or reflections of public concerns (such as letters to the Minister, media coverage and public meetings held by community groups); and

• through direct, personal and informal communications to the responsible authority.

The responsible authority should address public concerns in the comprehensive study report, and determine whether they have been adequately addressed or whether they warrant further review by means of a panel or mediation.

Public concerns can trigger the need for a public review in one of two ways:

• the questions and issues raised by the public brings into question the scientific or technical soundness of the report's analysis and conclusions; and

• they deal with broader questions of public values that require further investigation than what was possible in the comprehensive study.

Public comments on the scientific or technical soundness of the report could include, for example, the identification of gaps in the information and analysis, the provision of new information and traditional ecological knowledge related to baseline conditions, the environmental effects, or the adequacy of proposed mitigation measures, and the identification of new alternatives or new mitigation measures.

Responsible authorities should not necessarily rely on numbers alone when judging the importance of public concerns. Even a few letters or telephone calls may reflect serious public concerns if they are from the people who will likely be most affected by the project.

The Point Aconi decision of the Federal Court of Canada has provided guidance to responsible authorities in using their discretionary powers in response to public concerns. (Cantwell and others v. Minister of the Environment and others (1991), 41 F.T.R. 18). In reviewing a decision by a federal Minister not to refer a project to a review panel, the Court noted factors that are likely to be relevant and irrelevant in deciding whether public concerns warrant a referral to a mediator or panel.

As a general guide, the Court stated that discretion by the responsible authority must be exercised reasonably and in good faith, taking into account relevant considerations (and) having regard to the purposes of the legislation.

Relevant factors identified in the Court's decision included:

• the level and extent of public concern about the project;

• the general conclusion of the environmental assessment that expressly refers to public concerns;

• the evidence of widespread public concern about the project and interest in a public review, as reflected in the environmental assessment report and other documents;

• advice to the Minister that environmental effects over which members of the public have expressed concern are considered to be insignificant or mitigable with known technology; and

• lack of likely effectiveness of a panel in recommending changes in the project that would address concerns expressed by the public.

Factors that were found to be irrelevant in determining the need for an referral to a public review panel included:

• considerations of expediency or practicality;

• the fact that construction had begun on the project; and

• the fact that a provincial government, having concluded its own assessment,

would be unlikely to agree to participate in a public review.

Evaluation of public concerns by the Agency

In designing a public involvement program for a comprehensive study, the responsible authority should be aware of the criteria that the Agency will use in evaluating public concerns when it reviews the completed comprehensive study report and prepares its recommendation to the Minister.

In determining whether public concerns warrant further investigation by means of a panel review or mediation, the Agency will consider how effective the responsible authority's efforts were in obtaining a full and accurate view of the public concerns associated with the project, and how well the report incorporates and addresses these concerns. The Agency will consider, for example, whether the responsible authority:

• conducted a public involvement program in accordance with the principles outlined in the advisory guidelines (above);

• heard from members of the public most likely to be directly affected by the project;

• provided a variety of opportunities for members of the public to participate and provide input; or

• adequately addressed public concerns in the comprehensive study report, or whether the comments raised new substantive issues.

Public involvement techniques

Responsible authorities should be aware of three key factors when considering a public involvement program:

• Communication needs change over the course of an environmental assessment. At the start, the responsible authority may need to share background information and its proposals for public involvement. Later, the responsible authority may need to obtain information from the public or gain a better understanding of community values and perspectives. There may also be a need to seek reaction to options, or explain decisions and follow up on commitments.

• The public actually consists of a wide range of interests. Some may be well-organized and highly visible, and others may be less visible, but nonetheless, an important group to include in the environmental assessment process.

• Techniques should match needs. There is no single best public involvement technique. There are many techniques, and each may be effective in a particular set of circumstances or in response to the preferences of a particular public group.

Involving the public in environmental assessment can range from the distribution of information brochures in affected communities to presentations by project representatives at public hearings. More specific techniques, including public meetings, are listed below under the categories of information dissemination, receiving information from the public, and two-way communication.

Information Dissemination

• reports, brochures, and information bulletins

• mass media (i.e. press releases, radio talk shows, films and videos)

• public information displays and open-houses

• large public meetings with official presentations followed by a question period

• public meetings where panelists offer alternative viewpoints

Receiving information from the public

• interviews

• questionnaires

• letters

• submissions and briefs at public hearings

• informal town meetings

• public meetings with group discussions

Two-way communication

• mediation groups

• advisory groups

• public workshops

• informal small-group meetings

Important features of a public involvement program are:

• ensuring an active and open exchange of information;

• ensuring the public has access to the decision-making process and are sure their opinion counts; and

• demonstrating that decisions taken are consistent with public desires.

Table 1 summarizes the possible objectives and sample techniques involving a self-directed environmental assessment.

Before designing a public involvement program, it is strongly recommended to consult with a specialist in public consultation or to refer to one of the more detailed guides listed at the end of this section.

Public involvement components led by the Agency

Refer to the main document, Phase 3/Step 2 for more information on this subject

Table 1

Involving the public in a self-directed environmental assessment

Stage in the environmental assessment	Objectives	Techniques
Scoping	Consider need for/scope	informal communications,

	of public involvement Identify stakeholders groups Seek feedback on public involvement program Seek advice on scoping issues	interviews public meetings, open houses, bilateral meetings workshops, open houses, bilateral meetings discussion papers, scoping meetings, review and comment period, open houses, stakeholder advisory groups
Conduct environmental assessment	Keep people informed Seek local and community information and traditional ecological knowledge on environment Identify public concerns Seek feedback on options Build consensus, if required	public registry, news releases bilateral meetings, interviews, briefs, informal community hearings public meetings, open houses, focus groups, workshops, stakeholders advisory committees workshops, stakeholder advisory committees stakeholders advisory committees, mediation
Prepare environmental assessment report	Address public concerns in the report and explain objectives and scope of public involvement program	advisory and review committee
Public review and comment	Identify public concerns Obtain feedback on conclusions	public notice and comment period
Decision on project	Explain responsible authority's decision on project and next steps Identify how results of public involvement program were used or, if not, explain why	news releases, open house
Follow-up	Seek information and feedback on follow-up and monitoring aspects of project	open houses, news releases, community advisory committee

Other References

There is considerable experience and expertise in Canada in public involvement, both within governments and in the private sector. Many government departments and industrial associations have established public involvement policies and coordinating units. Training courses are offered by experts in the private sector and in non-governmental organizations. A large body of literature on public involvement has also been developed in recent years.

Responsible authorities are encouraged to consult these resources for more detailed information on designing and implementing public involvement programs for a comprehensive study.

The following resource materials and publications may provide a more detailed orientation to public programs than was possible in this guide:

• *A Proponent's Guide to Public Involvement* (Canadian Standards Association (CSA), Draft, June 16, 1995)

• *Building Consensus for a Sustainable Future: Guiding Principles* (National Round Table on the Environment and Economy, 1993)

• *Consultations and Partnerships: Working Together with Canadians* (Environment Canada, 1992)

• *Consultation: When the Goal is Good Decisions* (Canadian Centre for Management Development, 1992)

• *Citizens' Forum on Canada's Future: Report on the Consultative Process* (Canadian Centre for Management Development, 1992)

• *Public Managers and Policy Communities: Learning to Meet New Challenges* (Canadian Centre for Management Development, 1991)

• *Planning and Implementing Public Involvement Programs* (prepared for the Federal Environment Assessment Review Office, 1988)

• *Public Consultation: A Resource Kit for Ministry Staff* (Environment Ontario, 1988)

• *Public Participation Handbook* (Niagara Institute, n.a.)

Appendix C

Suggested Content for a Comprehensive Study Report

1: Executive Summary

Key points
• What is the project?
• What are the important potential environmental effects?
• What are the mitigations?
• What are the uncertainties and public concerns?

This section should briefly describe the project, indicating the main predicted environmental effects. Practitioners should highlight the key aspects of the project and of the environment affected by the project. The proposed mitigation measures that will render effects insignificant should be tied to the predicted effects. Any public concerns and uncertainties should also be noted.

For most readers, the executive summary will provide the first and most lasting impression of the project's environmental effects. In many cases, this is all that members of the affected public will read. As a result, this section should be clear, complete, concise and to-the-point. Summary tables, graphics and flow charts should be considered as effective ways to present information clearly and accurately. The use of technical terminology and jargon should be avoided

as much as possible.

Executive summaries of comprehensive study reports can be presented under separate cover. They may get greater distribution than the rest of the document. The responsible authority should consider the benefits of providing the executive summary in languages most common to the project area.

2: Introduction

Key point
• What is the project?
• Why will the project be carried out?
• Why is the project important? *(optional)*
• How important is the project's timing? *(optional)*
• Why is the assessment required?

Project overview

The proposed project should be briefly described, including location, project components, associated activities, scheduling details, cost, and other key features. In the cases where the project being assessed is part of a larger sequence of projects, the larger context should be outlined and relevant references listed if available. It should also identify the project proponent. The intent of this overview is to provide context rather than description since a more detailed description of the project will follow (below).

Purpose of the project

The proposed project will be designed to achieve certain specific objectives (e.g. in the case of a highway widening project, it will be intended to permit a greater volume of vehicle traffic). The objectives should be adequately described. If the objectives of the project are related to or contribute to broader private or public sector policies, plans or programs, this information should also be included to assist in placing the project's objectives in a broader and more meaningful context.

Need for the project

The comprehensive study report should include this element if there is public concern regarding the proposed project. A description of the need for the project can provide valuable information in support of the proponent's case. The public may not realize why a particular project is important and therefore why particular environmental effects may be justified. This information is also useful to the responsible authority who may be asked to justify environmental effects of the project in relation to economic and social costs and benefits.

Timing considerations

The need for the project may have an important time dimension. For example, if a project is delayed, business opportunities may be foregone and the need for the project diminished. The future demand for products from a development (e.g. a mine) may also be identified here.

Regulatory, policy and planning context

The introduction should clearly identify why the assessment is being carried out, including which triggers have led to the assessment. It should also

describe the regulations, acts, policies and plans (e.g. land or resource use) that have a bearing on the project. In the case of projects being assessed under more than one project review process, the different jurisdictions and processes involved should be listed. This information will provide reviewers with an understanding of the context of the environmental assessment and the issues that have been addressed in it.

3: Project Description

Key points
• What undertakings does the project include?
• What are the activities and when and where will they be carried out?

In defining the project and describing activities, the comprehensive study report should focus on those project activities that are most likely to lead to environmental effects.

Definition of the project

This section should begin with a general description of the project. The general description should include the project's background, context and current status. If this project is one in a series of separate projects that together form part of a larger project or development plan, then that relationship should be clearly stated since this will have implications with respect to alternatives, mitigation options and potential cumulative effects.

This overview should include the following:

• a brief descriptive summary of each of the project's undertakings (e.g., construction, operation, decommissioning);

• overall project location and a description of the site location using maps of appropriate scale. The location map should include the boundaries of the proposed site, the major existing infrastructure, adjacent land uses and any important environmental features;

• key project-related technology and processes as appropriate, including information on solid wastes, liquid effluents, gaseous emissions and water consumption, and use of renewable resources; and

• a summary of the project's proposed timing and schedule.

List of activities, their location and schedule

Once the overall definition of the project is established, the specific project activities should be identified and described in greater detail. It is often useful to organize these activities according to undertakings as follows: construction, operation and maintenance, abandonment and decommissioning, as applicable.

This description should include the location of each activity, scheduling details and an indication of the activity's magnitude and scale. Although a complete list of project activities is required, the emphasis should be on those activities that have the greatest potential to create environmental effects. Sufficient information should be included to predict environmental effects and address public concerns about the effects. If activities involve periods of increased environmental disturbance or the release of materials into the environment, these should be highlighted.

It may be difficult to separate project components and activities from

mitigations since many mitigation measures are sometimes part of standard practice. Practitioners should include those standard mitigation practices that are applied regardless of location as part of the project description in this section. Those mitigations that are site or project-specific should be included in the section on mitigation.

4: Project Alternatives

The Act identifies two categories of alternatives which can be considered in an environmental assessment. Both are included in these guidelines, but only the first is a general requirement under the Act for comprehensive study reports.

Key points
• What are alternative means of carrying out the project?
• What are the alternatives to the project? *(optional)*

Alternative means of carrying out the project

In any project design, alternative means of carrying out a project are often considered. For example, a road connecting two points can pass over a number of different routes. The comprehensive study report must describe the process taken to select the most appropriate route based on a set of pre-determined criteria. Under the Act, the consideration of these alternatives and the selection criteria used to identify the preferred alternatives must include environmental factors. The information going into that decision and the decision-making process must be documented in the comprehensive study report.

Examining alternative means of carrying out a project involves answering the following three questions:

• What are the alternatives?

• What are the environmental effects associated with each alternative?

• What is the rationale for selecting the preferred alternative?

Alternatives should be listed and described in sufficient detail so that the answers to the second and third questions are apparent to the reader of the report. For example, if "alternative means" refers to site selection for a large hydroelectric dam, the location of each alternative would have to be described, the environmental effects of each alternative defined and the criteria and analysis of site selection presented.

Since the selection of alternatives can involve detailed technical analysis that includes more than just environmental factors, it may be preferable to present the details of this analysis as an appendix and include only the results and summary of this selection process in the body of the report. For example, a table listing the alternatives on one axis, and the criteria, such as reliability, cost, performance, inherent environmental effects and necessary mitigation measures, on the other axis may provide an effective summary.

Regulatory requirements may constrain the alternatives that are feasible or permitted. In some cases, proponents may have consulted with the regulatory authorities to produce the project plan that is being assessed. If this is the case, it should be clearly indicated in the report.

Alternatives to the project (Optional)

When defined in the scope of the assessment under paragraph16(1)(e), the

comprehensive study report must include a discussion on whether the project is required, and if so, whether this project is the best way to fulfill these objectives. Examining alternatives to the project involves answering the same three questions that were asked above.

This section is recommended if an analysis of alternatives to the project will assist the Minister and the responsible authority in its determinations. In the case of potentially controversial projects, decision-makers may be asked to respond to public concerns that the project does not represent the best way to achieve its stated objectives. Without documentation and analysis supplied in the comprehensive study report, decision-makers may have insufficient information on which to base their response. In addition, segments of the public may react negatively if they perceive that (1) the report has not considered alternatives to the project, or (2) the preferred alternative is proceeding based on flawed assumptions. Therefore, if controversy is expected surrounding the fundamental reasons for the project, the comprehensive study report should include a discussion of alternatives to the project.

Any examination of the alternatives to the project needs to operate within the realities of the planning situation. If the project is included in a larger strategic planning process such as a land use plan or federal budget, this tends to limit alternatives since a decision at a broader level may have already been made. If this is the case, it should be made clear here.

"Alternative means of carrying out the project" vs. "alternatives to the project"

The analytical approach and presentation for the two classes of alternatives is largely the same. In both cases, alternatives must be identified, information must be collected on each alternative and a selection criterion must be applied to determine a preferred alternative. The selection criteria may include economic, technical, social and environmental factors.

The differences between the two lie in the nature and scope of the alternatives. For "alternative means", the project is considered a given, and only the means of carrying out this project is an issue. Alternative means, for example, include alternative sites, alternative routes and alternative methods for construction, operation or mitigation.

For "alternatives to", the analysis examines and evaluates alternatives to the project itself. For example, alternatives to construction of a nuclear power plant may include thermal power generation using alternative fuels, hydroelectric power generation, and demand-side management since all three options have the potential to produce the necessary electrical capacity needed to fulfill project objectives.

One alternative that should receive special attention is the "no go" alternative. In some planning and policy contexts, this may be the only alternative to the project that can be realistically considered.

5: Scope of the Assessment

Scope of the project

The responsible authority will determine what components of the undertaking are considered part of the project for the purpose of the environmental assessment. For reporting purposes, the project scope should be clearly identified at the outset to ensure that confusion does not arise on the part of the proponent, the public, or the decision-makers.

Key points

• What is the scope of the project?

- What are the factors to be considered in the assessment?
- What is the scope of the factors?

Factors to be considered

1. Environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects.

2. The significance of the effects.

3. Public comments.

4. Mitigation measures.

5. Purpose of the project.

6. Alternative means for carrying out the project.

7. The need for and the requirements of any follow-up program.

8. Sustainability of renewable resources.

9. Any matter the Minister or responsible authority may require to be considered, including need for and alternative to the project, and that the responsible authority may require to be considered.

If the responsible authority decides to add factors other than those required by subsections 16(1) and 16(2) it should be clearly stated.

Scope of factors

This section of the report should describe the process by which the environmental focus of the environmental assessment was established.

Experience has shown that the most successful EAs have been those that clearly identified the concerns raised by affected stakeholders, and then proceeded to address these concerns through a combination of information, mitigation and/or monitoring. Sections of the report can be built around these concerns.

Determining the scope of the issues to be investigated and defining the level of effort for the environmental assessment represents one of the most important aspects of the process. Faced with a limited budget, time constraints and complex ecosystems, proponents must provide enough information to enable decision-makers to make informed decisions. This can only be accomplished if (1) the spatial and temporal boundaries for the assessment are well-defined; and (2) effort is focussed on the project activities and ecosystem components that are likely to have the greatest relevance to the final environmental assessment decision. Special attention must be paid to documenting cumulative environmental effects and indirect (or secondary) effects since they may strongly affect the overall scope of the assessment.

This section should provide the reviewer with the rationale and the justification for selecting those issues that appear in the report, and for excluding other issues. Challenges may arise regarding particular exclusions, so it is important that the report document both the information and the criteria used to make each scoping determination. Primary data collection, computer modelling, literature references, public consultation, expert input or professional judgement may be valid justifications. This section should not only identify the criteria used to define the scope, but also describe the methodology used to

apply these criteria.

Determining the scope of the assessment is an iterative process of focussing and refocussing, each time, using available information to refine the issues being assessed. As the environmental assessment proceeds and information is collected, it may become apparent that certain ecosystem components are not really important to the decision. These can be dropped from further investigation by the proponent provided that sufficient justification is included in the comprehensive study report. Contrarily, if information collected during the environmental assessment identifies new potential concerns, the proponent will be responsible for addressing these since they become an issue later in the review.

For more information on scoping see the main document (Phase 2/Step 1). A guide on this subject is also available (see Appendix H for details).

6: Public Consultation Program

This section should describe the public consultation program and its results. It should include a summary of the more detailed discussion of public input found in the appendix to the comprehensive study report (see below).

Key points
• How was public input solicited?
• Who was consulted?
• What information came forward from the public consultations?
• How was this information incorporated into the EA process?

This section of the report should also describe any planned future consultations, for example to ensure that members of the public are fully informed about the project status and possible environmental effects.

7: Description of the Existing Environment

There is a tendency in many environmental assessment reports to describe the environment in a dry and factual manner, to the extent that the relevance of the information to the rest of the report is not apparent. The writer should remember that the description of the environment is not only to describe the existing environmental condition but also provides the foundation upon which environmental effects will be predicted and evaluated. For example, if stakeholders are concerned that the project may affect commercial fishing, the comprehensive study report should provide sufficient information to support the predictions and conclusions made later in the report on effects to commercial fishing. Equally important, the relevance of the information to predictions, evaluations and/or conclusions should be indicated where appropriate.

Key points
• What is the general environmental context?
• What are the environmental components in the study area?
• What are the relationships among environmental components?
• What are the sensitivities to disturbance?
• What are the potential environmental hazards to the project?

General environmental context

This section should provide the general environmental context for the project. The description should not be comprehensive or detailed. After reading the description, a person who is unfamiliar with the project or the area should be left with an appreciation for the project's overall environmental setting.

Examples of broad environmental characteristics include climate, terrain and geology, water (both surface waters and groundwaters if relevant), vegetation, fisheries, wildlife, archaeology and heritage resources, the built environment, general local land uses (particularly the traditional use of the area by aboriginal people), and land capability or ecozone classification. The definition of environmental components should be broadly interpreted. However, the inclusion of health, socioeconomic conditions, physical and cultural heritage, and current use of lands and resources for traditional purposes by aboriginal persons, should include only those components that may be affected as a consequence of a change in the biophysical environment attributable to the project.

Ecosystem components in the study area

The specific valued ecosystem components will have been listed in the previous section under scoping. In this section, these components should be described in sufficient detail to allow the reviewer to understand their importance and assess the potential for environmental effects arising from the project activities.

For example, the report could describe a fisheries resource (i.e., fish species, populations, migratory, spawning, and rearing habitat) because fish harvesting is important in a region and may be affected by the project. Maps or charts may be used to communicate relevant information about the sensitive areas to readers. Components that may be affected by the project should be named and located to facilitate mitigation, monitoring and follow-up.

Information collection methods for each environmental component should be described briefly or cross-referenced to supporting documents. This information could be obtained through consultation with stakeholders, with experts, and with people having local knowledge. Technical details should be included in a supporting document.

Relationships between environmental components

This section should identify the key environmental relationships that may be affected by the project. Many of these key environmental relationships will be readily apparent from examining the list of potentially affected environmental components.

The scientific understanding of an ecosystem function and the relationship between environmental components is limited. Therefore, effort should focus on those environmental components identified as being most important according to the issues and concerns raised by stakeholders. For example, if commercial fishing has been identified as an area of concern, the report should identify the linkages between the fishery resource and features such as water quality, water quantity and habitat availability.

Sensitivity to disturbance

Environmental components differ in their sensitivity to disturbance. Depending upon the component and the type and timing of the disturbance, the effects of a project activity may not lead to any apparent change in a particular environmental component. Yet the same disturbance may result in significant changes to a different environmental component. This section should include a description of the sensitivity of each environmental component to the project activities that may affect it. For example, the Arctic tundra is considered to be

highly sensitive, partly because of the low growth rate of the vegetation. The tundra is also particularly susceptible to the movement of heavy machinery.

Other factors can contribute to sensitivity. For example, if an ecosystem can recover from a disturbance over a reasonable period of time, it should be considered less sensitive than if the effects of the disturbance are irreversible. Also, the uniqueness of a particular habitat, the rarity of a species, or the scarcity of a particular resource can increase concern from both the ecological and the public perspective. Uses of the environmental component may further influence its perceived or real sensitivity and therefore its treatment in the report. For example, if an environmental component represents a source of country food for local inhabitants of a region, the effect of disrupting it would be greater than if that same resource were not locally consumed. Each of the sources of sensitivity should be described for these environmental components.

The methods used to define sensitivity should be clearly documented in the report.

Potential environmental hazards

This section should include a description of the environmental hazards that could potentially affect the project. These could include avalanches, wind, earthquakes, landslides, frost heave, permafrost, ice scour, wave action, erosion, rockburst-induced seismicity, seismicity due to project-induced subsidence or rebound, and flooding.

8: Predicted Environmental Effects of the Proposed Project

This section should contain information on any change that the project will cause to the environment, more specifically to the valued ecosystem components identified in the previous section, and the effects of these changes on human health, socioeconomic conditions, physical and cultural heritage and on current use of lands and resources for traditional purposes by aboriginal persons. This section should also address cumulative environmental effects, effects of possible malfunction or accidents, effects on sustainable use of renewable resources and effects of the environment on the project.

Project effects on environmental components

This section should describe the predicted project effects in a way that will permit evaluation of the accuracy of the predictions. It should refer to the components identified in previous sections. For each environmental component, the report should document all potential project-related effects. To the maximum extent possible, this documentation should include an indication of the nature of the effect, mechanism, magnitude, direction, likelihood, duration, frequency and timing, geographic extent, and the degree to which it may be reversible. All of this information may be used to determine the significance of the effect.

Key points

• What are the effects of the project on environmental components?

• What are the effects of environmental changes on human health, socioeconomic conditions, physical and cultural heritage and on current use of lands and resources for traditional purposes by aboriginal persons?

• What are the cumulative effects of the project?

• What are the effects on the sustainable use of renewable resources?

• What are the effects of the environment on the project?

• What are the effects of possible malfunctions or accidents? • What are the methods used to predict effects

Effects of environmental changes on:

Human health

The self-directed environmental assessment must consider the effects on human health caused by a change in the environment due to the project. For the purposes of the Act, effects on health include effects at the population or community level on:

• physical health, including death and disease rates; and

• psychological, emotional, spiritual, or mental health and well-being.

In addition, the assessment must consider:

• cumulative environmental effects on health;

• the significance of the effects on health; and

• technically and economically feasible measures that would mitigate any significant adverse effects on health.

Example of effects on health conditions
• toxicological effects of human consumption of fish contaminated by toxic chemicals

Socioeconomic conditions

The comprehensive study can consider only effects on socioeconomic conditions caused by a change in the environment due to the project. For the purposes of the federal environmental assessment process, socioeconomic conditions include effects at the population or community level on:

• the quality of life or "way of life";

• the economy, commercial opportunities, or employment;

• the availability of recreational opportunities or amenities;

• home life or personal security;

• future land uses; and

• the future use or future production of commercial species or resources;

In addition, the following effects must be considered:

• cumulative environmental effects on socioeconomic conditions;

• the significance of the effects on socioeconomic conditions; and

• technically and economically feasible measures that would mitigate any significant adverse effects on socioeconomic conditions.

Example of effects on socioeconomic conditions

• closure of commercial or recreational fishery because of contaminated fish

Physical and cultural heritage

The self-directed environmental assessment must consider the potential environmental effects on physical and cultural heritage and to any structure, site, or thing that is of historical, archaeological, paleontological or architectural significance that would result from environmental changes associated with the project.

In assessing effects on heritage, the environmental assessment should:

• ensure the preservation and protection of sites and objects formally recognized at the international, national, provincial, and municipal levels;

• ensure that the consideration of heritage resources in the environmental assessment is consistent with existing laws and policies on heritage relevant within the project area;

• recognize that a heritage site may have a cultural value greater than the apparent value of the site's physical components; and

• take into account the unique cultural interests and values of aboriginal peoples.

In addition, the assessment must consider:

• cumulative environmental effects on physical and cultural heritage resources;

• the significance of the effects on these resources; and

• technically and economically feasible measures that would mitigate any significant adverse effects on these resources.

Examples of effects on heritage

• loss of an archaeological site because of excavation or site preparation for an industrial park or plant

• damage to a historic burial site during pipeline construction

Current use of lands and resources for traditional purposes by aboriginal persons

Examples of effects on the current use of lands and resources for traditional purposes by aboriginal persons

• flooding of traditional trapping lines by a hydroelectric dam

• reduction in subsistence fishing as a result of a river-dredging project

Cumulative environmental effects

Cumulative environmental effects receive an increased emphasis within CEAA. Guidance on how to consider cumulative environmental effects in an environmental assessment is provided in the Reference Guide on Cumulative Environmental Effects (see Appendix H for details).

Cumulative environmental effects will be addressed here and in the scoping section of the comprehensive study report. One outcome of the scoping should be an identification of other projects and the cumulative environmental effects of those projects in combination with the proposed project. This section of the report should discuss the predicted environmental effects of the project in the context of other projects already under way or that will occur. The proponent will need to describe the activities of the other projects and provide some indication of the environmental effects that are expected. Considering these effects together with the project effects can determine the cumulative effects.

The report should document the sources of information used to identify other projects. If possible, they should briefly describe the methods used to determine the environmental effects of these other project activities. The methods used to combine the proponent's project effects with those of other projects should also be described.

The objective is *not* to identify two classes of environmental effects. Instead, the report should identify a *single* set of environmental effects that take into account the aggregate effect of the project in the context of other projects acting upon the environment.

The environmental description section could include a description of ongoing environmental effects (e.g. from other projects), as a way of predicting sensitivity to possible cumulative effects.

Effects on sustainable use of renewable resources

The Act requires that the proponent assess the effect that the project may have on the sustainable use of renewable resources. The report should identify what resources are potentially affected by the project, and whether it could affect the capacity of the renewable resource to meet present and future needs.

This capacity -- sustainable use -- is based on a range of ecological considerations, such as:

• the integrity of the ecosystem (that is, its complexity, diversity, stability, and resilience);

• the productive capacity of the resource;

• the carrying capacity of the ecosystem; and

• the assimilative capacity of the ecosystem.

The sustainable use of renewable resources is closely linked to the consideration of cumulative environmental effects. For example, an adverse effect on the sustainable use of a renewable resource, such as a fishery, may be caused by a cumulative environmental effect of a project, or it may be a cumulative environmental effect in its own right.

As with cumulative environmental effects, assessing sustainable-use effects requires consideration of temporal and geographic boundaries and scales. When assessing sustainable-use effects, the responsible authority should consider

• only the environmental effects as defined in the Act;

• only the renewable resources likely to be affected in a significant way by the project; and

• the significance of the sustainable use effects.

The report should not only include direct effects of the project on resource

capacity, but also all indirect effects. For example, a project that has an adverse effect on water quality can not only affect the water resource, but also the fisheries resource that may depend upon the affected aquatic ecosystem.

Effects of the environment on the project

Environmental hazards potentially affecting the project were described in a previous section of the report. The predicted effects from these hazards on the proposed project should be documented here.

Effects of possible malfunctions or accidents

This section should identify and describe the possible malfunctions or accidents associated with project activities. This should include an identification of potential accidents, malfunctions or emergency situations that are associated with these activities, the safeguards that have been established to protect against such occurrences, and the contingency/emergency response procedures in place if an accident does occur. Depending on the project, a description of the probabilities and hazards associated with the accidents and malfunctions may be appropriate.

Detailed contingency plans should be submitted as a supporting document.

Methods used to predict effects

This section should include a brief, general description of the methods used to predict the potential effects of project activities on environmental components. If a detailed description of a particular method (such as a computer model used to predict emission dispersion or assimilative capacity) is required, it should be placed in a supporting document.

These methods will be used to judge the validity and accuracy of the predicted environmental effects. For quantitative modelling and predictions, a discussion of the model assumptions, the data quality and the confidence levels should be included in this section.

Predictions may be made by other than technical scientific or engineering methods. Consultations or the incorporation of traditional knowledge may have played a role in determining and predicting environmental effects. If so, those methods should be documented here.

9: Mitigation Measures

The comprehensive study report must identify technically and economically feasible measures that will mitigate a project's likely environmental effects. Mitigation is the elimination, reduction, or control of a project's adverse environmental effects, including restitution for any damage to the environment caused by such effects through replacement, restoration, compensation, or any other means.

Key points
• What mitigation measures are planned?
• How effective will these measures be in addressing identified environmental effects?

The Act requires that mitigation measures be developed to address significant effects. As well, mitigation measures are considered part of the project when determining the significance of any adverse environmental effects under the Act.

A precise description of the interventions, structures, preventative measures and corrective actions should be presented in enough detail to give clear understanding of the measures for the responsible authority and the Minister to base a determination.

Descriptions should include anticipated effectiveness and rough costs, the residual effects expected after the mitigation is applied, and the potential environmental effects associated with the failure or malfunction of the mitigation measure. Residual effects should be described in the same terms as the original effects. If outside experience, literature or engineering specifications are used to support a particular mitigation measure, references should be included in the report.

Any assumptions or uncertainty surrounding implementation of mitigation measures, such as untested technology, should be clearly stated in the report.

The selected mitigations should be linked to the environmental effects section and to the monitoring and follow-up description. A summary table or graphic would be useful to identify:

• the predicted environmental effects before mitigation;

• the proposed mitigation;

• the anticipated residual environmental effects after mitigation; and

• follow-up and monitoring required for the mitigation.

Such a table would be particularly instructive since it is the residual environmental effects that are used to determine significance. This summary table could also be reproduced in a modified form in the report's Executive Summary. By making this link it will be possible to identify any unmitigated or only partially mitigated effects. This linkage is also important for people responsible for implementing mitigations to understand the concern and the intent of the mitigation.

Mitigations should not be combined with the project activities, unless the mitigations are standard practices that are always used in conjunction with specific activities. If the mitigations involve a modification of standard practices, then they should be documented separately. This will help ensure that they are identified as needing follow-up and monitoring.

10: Determination of Significance

The determination of significance and likelihood of residual environmental effects

are at the core of the decision about the project. It will dictate whether a responsible authority can take a course of action with respect to the project, or whether additional consideration of the project is needed through public review.

Key points
• Are the residual environmental effects adverse?
• Are the residual environmental effects significant?
• Are the significant environmental effects likely?

In the comprehensive study report, the methods used to determine significance should be clearly documented and the results of that determination should be easily linked to these methods. These methods should include not only an

analysis of the results and professional judgement, but also consultations with both the public and appropriate experts. This section of the report should document the assumptions that entered into the determination of significance and the uncertainty that surrounds predictions made in the environmental assessment. If those results or predictions are later found to be incorrect, the determination of significance may no longer apply. The report should convey the level of confidence associated with the predictions since this reflects upon the validity of the significance determination. The report should also note dissenting opinions.

The report should make it clear that the focus is on the significance of *residual* environmental effects that remain *after* mitigation has been put into place.

Factors used in determining whether or not

environmental effects are adverse

Environmental changes:

• *negative effects on the health of biota including plants, animals, and fish*

• *threat to rare or endangered species*

• *reductions in species diversity or disruption of food webs*

• *loss of, or damage to, habitats, including habitat fragmentation*

• *discharges or release of persistent and/or toxic chemicals, microbiological agents, nutrients (e.g., nitrogen, phosphorus), radiation or thermal energy (e.g., cooling wastewater)*

• *population declines, particularly in top predator, large, or long-lived species*

• *the removal of resource materials (e.g., peat, coal) from the environment*

• *transformation of natural landscapes*

• *obstruction of migration, or passage of wildlife*

• *negative effects on the quality and/or quantity of the biophysical environment (e.g., surface water, groundwater, soil, land and air)*

Effects on people resulting from environmental changes:

• *negative effects on human health, well-being, or quality of life*

• *increase in unemployment or shrinkage in the economy*

• *reduction of the quality or quantity of recreational opportunities or amenities*

• *detrimental change in the current use of lands and resources for traditional purposes by aboriginal persons*

• *negative effects on historical, archaeological, paleontological, or architectural resources*

• *decreased aesthetic appeal or changes in visual amenities (e.g., views)*

• *loss of, or damage to, commercial species or resources*

• *foreclosure of future resource use or production*

• *loss of, or damage to, valued, rare, or endangered species or their habitats*

11: Follow-up Program

Objectives

Under the Act, a follow-up program is used to verify the accuracy of the environmental assessment and to determine the effectiveness of any mitigation measures that have been implemented. In addition, monitoring and follow-up programs can be established to check compliance with approval conditions or to monitor for unanticipated effects. In the report, it is important that these objectives be clearly defined and be as specific as possible since they will form the basis for the monitoring and follow-up program that will be carried on after the project is approved.

Key points
• What are the objectives of the follow-up program?
• What are the elements of the follow-up program?
• How will the follow-up program be implemented?
Who will implement the follow-up program?

When a follow-up program may be appropriate

The responsible authority *should develop a follow-up program for a project when the circumstances warrant. Examples include situations where*

• *the project involves a new or unproven technology*

• *the project involves new or unproven mitigation measures*

• *an otherwise familiar or routine project is proposed for a new or unfamiliar environmental setting*

• *the assessment's analysis was based on a new assessment technique or model, or there is otherwise some uncertainty about the conclusions*

• *project scheduling is subject to change such that environmental effects could result*

The critical question regarding implementation of a follow-up program is one of uncertainty or unfamiliarity -- in either the analysis and predictions of the environmental assessment, or in the mitigation measures. The assessment must consider, for example, whether a new modelling technique or an untried mitigation measure introduces a level of uncertainty into the project and, if so, what are the corresponding risks of an inaccurate analysis or ineffective mitigation measure?

Elements

The report should provide enough information to allow the reviewer to determine whether the program is likely to be effective in meeting the program objectives defined above. Details such as sampling and analytical protocols, sampling locations and equipment should be included into an appendix.

The focus of the monitoring and follow-up program should be on those potential environmental effects associated with the greatest risk and uncertainty. Statements on the future development of follow up programs may also be

placed in this section. Periodic re-evaluations of the plan should also be included to ensure that objectives continue to be met.

Implementation

The report should specify who is responsible for financing and carrying out the follow-up program. The report should also clearly identify a responsible body to review the results of the program to ensure that feedback occurs and that any necessary remedial actions are taken when appropriate.

12: Conclusion and Recommendations of the Responsible Authority

The responsible authority should arrive at a preliminary conclusion about the nature of the project's environmental effects before submission of the report to the Agency and to the Minister. It is recognized that this will not be a final conclusion since public comments may provide additional information which must be considered. One of four conclusions are possible (see box).

Key point
• What is the recommendation about the project? • Outstanding issues and concerns • Conditions for approval

Possible conclusions
1. The project is not likely to cause significant adverse environmental effects, taking into account appropriate mitigation measures, if necessary. 2. The project is likely to cause significant adverse environmental effects that cannot be justified. 3. The project is likely to cause significant adverse environmental effects and it is uncertain whether these can be justified in the circumstances. 4. It is uncertain whether the project is likely to cause significant adverse environmental effects. The final decision will be made after the Agency and the public have reviewed the comprehensive study report and the Minister of the Environment has made a decision on the next step in the process. This section may document and summarize the predicted adverse environmental effects of the project, any terms and conditions deemed appropriate, and any reference to public concern or other aspects of the proposal relevant to the decision.

13: Appendices

RA Co-ordination

The *Federal Co-ordination Regulations* require that the following be collected and submitted with or as part of the comprehensive study report:

• the responses to the notifications sent out under section 5 of the regulations; and

• written confirmation from all the RAs that the factors agreed upon in section 8 of the regulations have been considered and the EA report is complete.

Expert department consultation

This appendix should include a record of the consultation with expert (or advisory) departments. The departments included will depend on the project.

It should briefly describe who was consulted, what information was provided, and how that information was incorporated into the environmental assessment process. This record will help ensure accountability in terms of responsibility and also in terms of analysis. Any unresolved issues with expert departments should also be described.

This appendix could also be used to document the consultation with other non-federal experts, for example in relevant provincial agencies. There will not be the same level of accountability for these experts as for formally designated expert departments.

Public Involvement

This appendix should contain a record of the public consultation program, a summary of the comments received from members of the public, and a description of how the comments received have been addressed. Details may be provided in supporting documents.

A summary of the consultation should be provided that outlines who has or will be consulted, including when and how the consultation has or will occur. This summary should include:

• an outline of existing and planned information materials such as news releases, reports, bulletins, newsletters, brochures, audio-visual materials, other print and electronic advertisements or displays; and

• a description of public information events that have been held or are proposed; and

• a description of concerns raised. A lack of response from groups who were consulted should also be noted.

The responses to these concerns should be linked to the concerns. (If appropriate, the concerns could be cross-referenced to the mitigation section in the report.)

Supporting information

This could include a brief summary or synthesis of environmental studies, maps, or other information used or referred to in the environmental assessment.

Departmental/agency contact

This should give, at a minimum, the names, agencies and telephone numbers of the people preparing the report. Additional information about the person responsible for the comprehensive study report could include the office, department, departmental region, address, and facsimile numbers. An additional valuable item would be the name and contact numbers for an alternate if the person who conducted the comprehensive study is unavailable.

Other Appendices

This could include a glossary of technical and scientific terms used which may not be readily understandable by the public.

Appendix D

Sample Letters From the Responsible Authority to the Minister and the Agency

EXAMPLE

LETTER ADDRESSED TO THE MINISTER OF THE ENVIRONMENT

The purpose of this letter is to inform you that we have forwarded to the Canadian Environmental Assessment Agency (the Agency) a Comprehensive Study Report on _____ project as required under subsection 21(a) of the *Canadian Environmental Assessment Act* (Act). This project is located _____.

(Second paragraph should indicate why a comprehensive study is required - e.g. project is in the Comprehensive Study List Regulations).

(Also, indicate whether or not, and how the proponent has carried out public and government consultations for this project and if meetings have been held with First Nation communities and other interested parties.)

Following your review of the Agency's recommendation on the Comprehensive Study Report and taking into account any public comments received during the consultation period, I would appreciate receiving your advice on an appropriate course of action that should be taken with respect to this project.

Yours sincerely,

Minister _____

EXAMPLE

LETTER ADDRESSED TO THE TO PRESIDENT OF THE CANADIAN ENVIRONMENTAL ASSESSMENT AGENCY

The purpose of this letter is to provide you with a Comprehensive Study Report on _____ project as required under subsection 21(a) of the *Canadian Environmental Assessment Act* (Act). This project is located _____.

(Second paragraph should indicate why a comprehensive study is required - e.g. project is in the Comprehensive Study List Regulations).

(Also, indicate whether or not, and how the proponent has carried out public and government consultations for this project and if meetings have been held with First Nation communities and other interested parties.)

We have informed the Minister of the Environment that the comprehensive study report has been submitted to the Agency for review and for his approval. If you require further information on the report, please contact _____.

Yours sincerely,

Departmental Official

Attachment

PROCEDURES FOR PREPARING A TRANSMITTAL LETTER

Letters Required

1. Letter of transmittal from the RA (Minister) to the Minister of the Environment (only letter should be submitted, not the report).

2. Letter of transmittal from departmental official to the President of the Canadian Environmental Assessment Agency (letter and report).

Letter Content

Do not include other issues in the transmittal letter, as the letter will be public information and provided with the report during the comment period.

Do not provide any ministerial advice in the transmittal letter.

Appendix E

Public Notice

Canadian Environmental Assessment Agency | Agence canadienne d'évaluation environnementale

Canadian Environmental Assessment Act

Comprehensive Study Report

PUBLIC NOTICE

(PROJECT NAME)

(NAME OF PROPONENT) is proposing to (DESCRIPTION OF PROJECT AND LOCATION). Under s. 21 of the *Canadian Environmental Assessment Act* (Act), the (NAME OF THE RESPONSABLE AUTHORITY) has completed a Comprehensive Study report of the project and filed it with the Canadian Environmental Assessment Agency.

Pursuant to s. 22(1) of the Act, the Agency now invites public comments on the conclusions, recommendations and any other aspect of the Comprehensive Study report. All comments received by the Agency will become part of the public registry for the project.

Interested persons have until XXXX to address their remarks in the official language of their choice to the Agency project officer:

Brad Parker
Comprehensive Study Project Officer
Canadian Environmental Assessment Agency
200 Sacré-Coeur Blvd.,
Hull, Quebec
K1A 0H3
Tel: (819) 953-5044
FAX: (819) 994-1469
Copies of the report can be consulted from xxxx, 199X at the following locations:

Canadian Environmental Assessment Agency

(REGIONAL OFFICE ADDRESS)

Tel: ( )

FAX: ( )

(PROVINCIAL GOVERNMENT)

(ADDRESS)

Tel: ( )

Fax: ( )

(LIBRARY NAME)

(ADDRESS)

Tel: ( ) (CONTACT NAME)

(LIBRARY NAME)

(ADDRESS)

Tel: ( ) (CONTACT NAME)

(LIBRARY NAME)

(ADDRESS)

Tel: ( ) (CONTACT NAME)

(LIBRARY NAME)

(ADDRESS)

Tel: ( ) (CONTACT NAME)

For more information on the project, please contact:

(CONTACT NAME OF PROPONENT)

(ADDRESS)

Tel: ( )

FAX: ( )

NOTE: All documents received regarding this report are considered public.

Appendix F

Glossary

Acronyms used in the guide

CEAA Canadian Environmental Assessment Agency

CS comprehensive study

CSR comprehensive study report

EA environmental assessment

FA federal authority

Minister Minister of the Environment

RA responsible authority

Definitions from the Canadian Environmental Assessment Act

comprehensive study

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

comprehensive study list

a list of all projects or classes of projects that have been prescribed pursuant to regulations made under paragraph 59(d)

environment

the components of the Earth, and includes

• land, water, and air, including all layers of the atmosphere;

• all organic and inorganic matter and living organisms; and

• the interacting natural systems that include the above components

environmental assessment

in respect of a project, an assessment of the environmental effects of the project that is conducted in accordance with this Act and the regulations

environmental effect

in respect of a project, any change that the project may cause in the environment, including any effect of any such change on health and socioeconomic 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 historical, 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

federal authority

a Minister of the Crown in right of Canada;

an agency of the Government of Canada or other body established by or pursuant to an Act of Parliament that is ultimately accountable through a Minister of the Crown in right of Canada to Parliament for the conduct of its affairs;

any department or departmental corporation set out in Schedule I or II to the *Financial Administration* Act, and

any other body that is prescribed pursuant to regulations made under paragraph 59(e)

follow-up program

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

interested party

in respect of an environmental assessment, any person or body having an interest in the outcome of the environmental assessment for a purpose that is neither frivolous nor vexatious

mitigation

in respect of a project, the elimination, reduction, or control of the adverse environmental effects of the project, and includes restitution for any damage to the environment caused by such effects through replacement, restoration, compensation, or any other means

project

in relation to a physical work, any proposed construction, operation, modification, decommissioning, abandonment, or other undertaking in relation to that physical work; or

any proposed physical activity not relating to a physical work that is prescribed or is within a class of physical activities that is prescribed pursuant to regulations made under paragraph 59(b)

proponent

in respect of a project, the person, body, federal authority, or government that proposes the project

record

includes any correspondence, memorandum, book, plan, map, drawing, diagram, pictorial or graphic work, photograph, film, microform, sound recording, videotape, machine-readable record, and any other documentary material, regardless of physical form or characteristics, and any copy thereof

responsible authority

in relation to a project, a federal authority that is required pursuant to subsection 11(1) to ensure that an environmental assessment of the project is conducted

sustainable development

development that meets the needs of the present, without compromising the ability of future generations to meet their own needs

Terms used in the guide

Act

Canadian Environmental Assessment Act

Agency

Canadian Environmental Assessment Agency

alternative means

methods of a similar technical character or methods that are functionally the same; "alternative means" with respect to a nuclear power plant, for example, includes selecting a different location, building several smaller plants, and expanding an existing nuclear plant

alternatives to a project

functionally different ways of achieving the same end; for example, "alternatives to" a nuclear power plant include importing power, building a hydroelectric dam, conserving energy, and obtaining the energy through renewable sources

cumulative environmental effects

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

EA track

the form of environmental assessment a project must undergo, whether a screening, comprehensive study, mediation, or panel review

expert federal departments

any federal authority in possession of specialist or expert information or knowledge with respect to a project

federal support for a project

the federal power, duty, or function that a federal authority exercises or performs in relation to the project, including acting as the proponent, or providing financial support, an interest in federal lands, or a federal permit or licence

interest in land

a right, claim, title to, or legal share in land

lead RA

where the same project has two or more RAs, one of the RAs may be designated as the lead for purposes of conducting the EA

public registry

a system for providing convenient public access to documents relating to an EA

public review

for the purpose of this guide only, an environmental assessment by means of a mediation or a panel review

scope of the assessment

a determination of: the environmental effects to be addressed; the scope of the environmental effects to be assessed; and the effects to be considered in making decisions regarding the project

scope of the project

those components of the proposed development that should be considered part of the project for the purposes of the EA

self-directed environmental assessment

for the purpose of this guide only, an environmental assessment by means of a screening or comprehensive study

trigger

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 regulation

undertaking

construction, operation, modification, maintenance and repairs, decommissioning, abandonment

Appendix G

Comprehensive Study Checklist

Phase 1: Preparing for a comprehensive study	
Have you	*Done*
Determined if the Act applies?	
Determined whether the project has been previously assessed?	
Determined the environmental assessment track to follow?	
Contacted the Agency?	
Identified the other federal authorities and expert departments involved, if any, according to the *Federal Co-ordination Regulation*?	
Identified a lead responsible authority, if required?	
Reviewed your obligations under the Act?	
Involved expert federal authorities?	
Determined, whether harmonization of process is required?	
Prepared a public involvement program?	
Established a public registry for the project?	

Phase 2: Preparation of the comprehensive study	Done
Have you	
Determined the scope of the project?	
Determined the factors to be considered in the assessment?	

Determined the scope of the factors to be assessed?
Consulted with stakeholders (experts, public) on scoping issues?
Prepared project-specific guidelines for the comprehensive study?
Ensured that the comprehensive study has been conducted?
Ensured that a draft comprehensive study report has been prepared?
Reviewed the report and identified information gaps?
Involved other stakeholders in the review of the CS report?
Provided, for review, a copy of the draft CS report to the Agency?
Determined how any information gaps will be filled?
Included with or as part of the report the responses to the notifications sent out under section 5 of the *Federal Co-ordination Regulations*, and written confirmation from all the RAs that the factors agreed upon in section 8 of the regulations have been considered and the EA report is complete?
Integrated comments received in final CS report?
Try to resolve any outstanding issues?
Listed concerns and explained how they are being addressed in the report?
Listed any outstanding issues in the report?

Phase 3: Public comment period and decision Done

Have you
Provided input in the preparation of the public notice plan?
If necessary, translated the report?
Submitted a final CS report to the Agency?
Informed the Minister of the Environment that the CS report was submitted to the Agency?
Fulfilled your obligations with respect to the public registry?
Distributed the CS report for the consultation period?
In cooperation with the Agency, tried to resolve any significant issues raised by the public during the consultation period?
Reviewed the decision of the Minister of the Environment?
Decided on a course of action?
Informed the proponent of your course of action?
Provided a public notice of your course of action?
Decided whether a follow-up program is appropriate?
Ensured the implementation of appropriate mitigation measures?
Ensured the implementation of the follow-up program?

Appendix H

Other Guides Available

Responsible Authority's Guide (November 1994) including 4 reference guides:

- Addressing Cumulative Environmental Effects
- The Public Registry
- Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects
- Physical and Cultural Heritage Resources

Available: Agency Web Site, paper copy

Citizen's Guide (November 1994)

Available: Agency Web Site, paper copy

A Guide on Biological Diversity and EA (April 1996)

Available: paper copy

Guide on Agency Procedures (April 1995) including chapters on:

• Public Registry

• Class Screenings

• Comprehensive Studies

• Mediation

• Public Review Panels

• Participant Funding Programs

Available: paper copy

Guide on Policy EA (September 1996)

Available: paper copy

Draft Guide on Scoping

Available: paper copy

Guide on the Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements

Available: paper copy

Documents may also be orderd using the Publications Order Form.

Return to GUIDE TO THE PREPARATION OF A COMPREHENSIVE STUDY for Proponents and Responsible Authorities

Last Updated: 2004-04-28 Important Notices

GUIDE TO THE PREPARATION OF A COMPREHENSIVE STUDY for Proponents and Responsible Authorities May 1997

PREFACE

INTRODUCTION

PHASE 1: PREPARING FOR A COMPREHENSIVE STUDY

- STEP 1.1: DETERMINING WHETHER THE ACT APPLIES
- STEP 1.2: DETERMINING THE EA TRACK
- STEP 1.3: CONTACTING THE AGENCY FOR ADVICE AND COORDINATION
- STEP 1.4: CO-ORDINATING AMONG FEDERAL AUTHORITIES
- STEP 1.5: INVOLVING EXPERT FEDERAL AUTHORITIES
- STEP 1.6: HARMONIZING WITH OTHER JURISDICTIONS
- STEP 1.7: MAKING USE OF PREVIOUS ENVIRONMENTAL ASSESSMENTS
- STEP 1.8: DETERMINING THE ROLES OF THE RESPONSIBLE AUTHORITY AND PROPONENT
- STEP 1.9: DESIGNING A PUBLIC INVOLVEMENT PLAN
- STEP 1.10: ESTABLISHING THE PUBLIC REGISTRY

PHASE 2: THE COMPREHENSIVE STUDY REPORT

- STEP 2.1: SCOPING THE COMPREHENSIVE STUDY
  1. Scope of the project
  2. Scope of the factors to be considered in a comprehensive study
- STEP 2.2: ENSURING THE COMPREHENSIVE STUDY IS CONDUCTED
- STEP 2.3: PREPARING A FIRST DRAFT OF THE COMPREHENSIVE STUDY REPORT
- STEP 2.4: REVIEWING THE COMPREHENSIVE STUDY REPORT
- STEP 2.5: FINALIZING AND TRANSMITTING THE COMPREHENSIVE STUDY REPORT

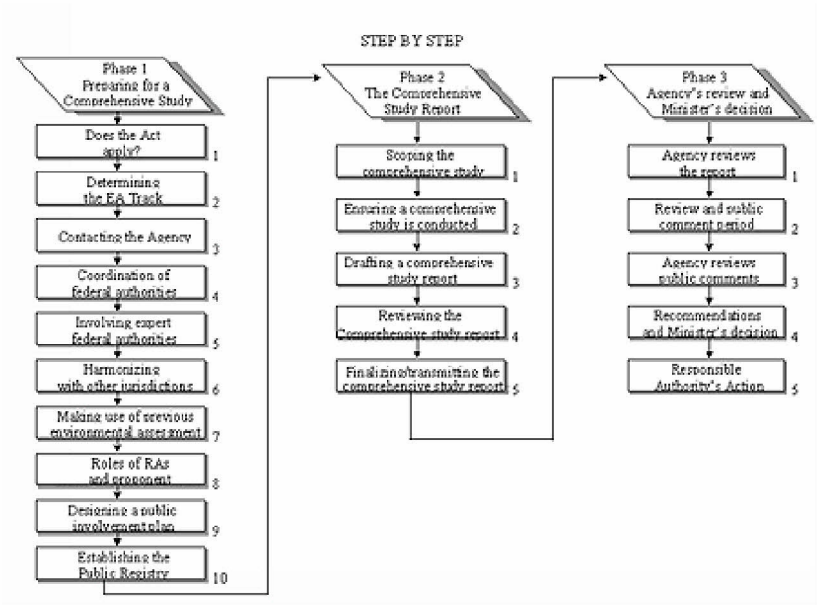
PHASE 3: REVIEW OF THE COMPREHENSIVE STUDY REPORT AND MINISTERIAL DECISIONS

- STEP 3.1: REVIEW OF THE COMPREHENSIVE STUDY REPORT BY THE AGENCY
- STEP 3.2: AGENCY WILL COORDINATE THE PUBLIC REVIEW OF THE COMPREHENSIVE STUDY REPORT
- STEP 3.3: REVIEW OF THE PUBLIC COMMENTS
- STEP 3.4: AGENCY'S RECOMMENDATIONS AND MINISTER'S DECISION
- STEP 3.5: RESPONSIBLE AUTHORITY'S DECISION AND ACTIONS

APPENDICES

Appendix A
Appendix B
Appendix C

Appendix D
Appendix E
Appendix F
Appendix G
Appendix H



PREFACE

This document offers guidance to those involved in planning, conducting, documenting, reviewing and participating in the comprehensive study of projects in accordance with the *Canadian Environmental Assessment Act* (the Act) and its regulations. It is intended primarily for the information and use of responsible authorities and project proponents who are most directly involved in carrying out environmental assessments and in preparing comprehensive study reports.

This guide should not be perceived as a substitute for the Act and, in the event of a discrepancy, the Act will prevail. The Canadian Environmental Assessment Agency can help interpret the Act and offers guidance on issues related to comprehensive studies.

This document will be updated and expanded periodically in response to inquiries and comments from those involved in comprehensive study. Please forward any questions, suggestions or comments to:

Brian Torrie, Acting Director, Project Assessment
Canadian Environmental Assessment Agency
22nd Floor, Place Bell
160 Elgin Street
Ottawa ON K1A 0H3
Tel: (613) 948-2669
Fax: (613) 957-0941

INTRODUCTION

The Canadian Environmental Assessment Act (the Act) specifies that the environmental assessment of a project may take the form of a screening, a comprehensive study, mediation or a panel review.

The comprehensive study, like a screening, is a self-directed environmental

assessment. The responsible authority, whether or not it is the proponent of the project, must ensure that the comprehensive study report is prepared in accordance with the Act and the regulations pursuant to the Act.

Although the majority of projects covered by the Act will undergo an environmental assessment through a screening, some projects will require a more intensive assessment of environmental effects through a comprehensive study. Such projects tend to be large-scale and, due to their nature, have the potential to result in significant environmental effects and/or to generate considerable public concern.

Comprehensive studies are designed to assess larger-size projects that may not require mediation or a panel review; a comprehensive study can eliminate the need for a panel review or mediation in situations where, taking into account any applicable mitigation measures, a project is deemed to:

- have insignificant environmental effects and does not generate a great deal of public concern; or
- have unjustifiable and significant environmental effects.
- As such, a comprehensive study serves as a useful, proactive environmental assessment (EA) tool which can reduce the number of larger projects requiring a public review or mediation.

There are important differences between a comprehensive study report and a screening report. In a comprehensive study:

- the proponent or responsible authority (RA) must address a wider range of factors than those required by a screening report (ss.16(2));
- the RA must submit the comprehensive study report to the Canadian Environmental Assessment Agency (the Agency) for public comment;
- the RA must consider the need for a follow-up program; and
- the Minister of the Environment (the Minister) is responsible for determining the next step in the environmental assessment process.

Examples of Projects
in the Comprehensive Study List Regulations

- large oil and natural gas developments
- construction of major electricity generating stations
- large mining developments
- major pipelines
- nuclear power facilities
- large industrial plants

A comprehensive study is required for the projects described in the Comprehensive Study List Regulations.

The benefits of a well-conducted comprehensive study are manifold. A comprehensive study:

- results in a better project, providing for front-end planning;
- respects the principle of sustainable development;
- increases the level of acceptance of the project by the public;
- is more cost- and time-efficient than a panel review; and
- eliminates unnecessary duplication in the EA process.

This step-by-step guide has been developed to assist RAs in the preparation of a comprehensive study. The guide is divided into three phases, as follows:

Phase 1 outlines the steps required to prepare for a comprehensive study.

Phase 2 discusses the steps necessary to conduct the comprehensive study and to prepare the comprehensive study report.

Phase 3 explains the process followed by the Agency and the Minister of the Environment for the review and approval of the report.

PHASE 1: PREPARING FOR A COMPREHENSIVE STUDY

STEP 1.1: DETERMINING WHETHER THE ACT APPLIES

To determine whether the *Canadian Environmental Assessment Act* applies, the responsible authority must determine if:

- there is a "project" as defined by the Act;
- the project is not excluded by the Act or a regulation under the Act;
- the project involves a federal authority; and/or
- the project involves an action that triggers the need for an environmental assessment under the Act.

Is the proposal a "project" as defined by the Act?

According to the Act, a project can either be:

- an undertaking in relation to a physical work, such as any proposed construction, operation, modification, decommissioning, or abandonment; or
- any proposed physical activity not relating to a physical work that is set out in the Inclusion List Regulations of the Act.

The first category covers most projects. The second category is designed to bring into the environmental assessment process certain activities that may have an impact on the environment. A proposed physical activity will fall under the Act only if it is described in the Inclusion List Regulations of the Act.

Examples of projects

Undertakings in relation to a physical work:

- *construction, decommissioning or abandonment of a hydroelectric generating station*
- *construction of an oil and gas pipeline*
- *construction, decommissioning or abandonment of a pulp and paper mill*

Physical activities not relating to a physical work:

- *testing of weapons*
- *low-level flying of military fixed-wing jet aircraft*

Is the project excluded?

A project is excluded from assessment under the Act when it is:

- carried out in response to a national emergency for which special temporary measures are being taken under the *Emergencies Act*;
- carried out in response to an emergency and carrying out the project is designed to prevent damage to property or the environment or is in the interest of public health or safety; and
- described in an exclusion list prescribed by regulations under the Act (Exclusion List Regulations).

Does the project involve a federal authority?

The requirement for an environmental assessment under the Act is triggered by an action of a federal authority. A federal authority is described as:

- a federal minister of the Crown;
- an agency or other body of the Federal Government that is ultimately accountable to Parliament through a federal Minister of the Crown;
- any federal department or departmental corporation set out in Schedules I or II of the *Financial Administration Act*; or
- any other body prescribed in the regulations to the Act.

Does the project involve an action by a federal authority that triggers the need for an environmental assessment?

An environmental assessment is required when a federal authority (s. 5 of the Act):

- is the proponent of a project;
- grants money or other financial assistance to a project;
- grants an interest in land to enable a project to be carried out (that is, sells, leases, or otherwise transfers control of land); or
- exercises a regulatory duty in relation to a project, such as issuing a permit or license, that is covered under the Law List Regulations. (Note that not every federal licensing or permitting action relates to projects that may cause environmental effects and require an EA; only those regulatory powers described by the Law List Regulations trigger the process under the Act).

STEP 1.2: DETERMINING THE EA TRACK

The RA must determine which EA track to follow. There are two broad categories of assessment: self-directed EAs and public reviews.

The majority of federal projects requiring an environmental assessment will undergo a self-directed EA, which can involve either a screening or a comprehensive study. Both are considered self-directed environmental assessments because the responsible authority:

- determines the scope of the environmental assessment;
- ascertains the factors to be considered;
- directly manages the environmental assessment process; and
- ensures that an environmental assessment report is drawn up.

Although the majority of self-directed EAs will involve screenings, some will require a comprehensive study, which involves a more intensive and rigorous assessment of a proposed project's environmental effects.

A project will undergo a comprehensive study when it:

- is prescribed within the Comprehensive Study List Regulations;
- has not been referred directly by the RA to the Minister for mediation or panel review; and
- takes place inside of Canada.

The RA must review the Comprehensive Study List Regulations to determine if the project, for which it is proposing to exercise a power, is described on the list. Where it is unclear whether a project is on the list, the RA should seek advice from the Agency.

Conducting a comprehensive study may eliminate the need for a public review in the form of a mediation or review panel. However, projects may be referred directly to the Minister of the Environment for a public review (ss.21(b)), without completing a comprehensive study, when the RA is of the opinion that:

- the project, taking into account the implementation of appropriate mitigation measures, is likely to cause significant adverse environmental effects that, under the circumstances, may nonetheless be considered justified;

- public concerns are significant enough to warrant an immediate referral to a mediator or review panel; or
- there is likely to be significant uncertainty associated with the environmental effects of the project, and the uncertainty is unlikely to be resolved through a comprehensive study.

Projects should only be referred to the Minister for a public review or mediation when it is evident that the project, despite its environmental effects, would likely be justified under the circumstances, or that undertaking a comprehensive study would not resolve public concerns or scientific uncertainty, nor identify suitable mitigation measures.

For projects outside of Canada, there are some differences in the environmental assessment process as described in the *Projects Outside Canada Regulations* which came into force on November 7, 1996. Determining whether the Act applies is the same for projects outside Canada as for any other project. The key difference is that there is no comprehensive study stage for projects outside Canada. All projects are subject to a screening. If, after a screening, the RA determines that further assessment is needed because the project is likely to have significant effects, the effects are unknown, or there is significant public concern, the project is referred to the Minister. In consultation with the Minister of Foreign Affairs, the Minister may refer the project to a panel, an advisory committee or mediation. The panel may be a joint panel with another country. Advisory committees can only be appointed for projects outside of Canada. The difference between an advisory committee and a panel is that an advisory committee is not required to hold public hearings.

STEP 1.3: CONTACTING THE AGENCY FOR ADVICE AND COORDINATION

Early coordination between the RA and the Agency is an essential factor in conducting an effective and efficient comprehensive study. Seeking early and ongoing assistance from the Agency has several important benefits as it:

- builds greater flexibility into the comprehensive study review process by ensuring that unforeseen developments or relatively minor issues do not unnecessarily trigger the need for a costly, time-consuming public review;
- ensures consistency in the way comprehensive studies are conducted and in the way reports are drafted;
- avoids the need for additional information requests late in the process (i.e. once the report has been submitted), which significantly increases the time required to conduct the comprehensive study;
- reduces cost and time as the Agency can assist in identifying efficient practices/procedures for the various steps of the comprehensive study;
- ensures that the comprehensive study report released to the public is in compliance with the Act and all relevant policies and guidelines; and
- reduces the Agency's time to review the comprehensive study report.

RAs should contact the Agency's regional offices as soon as the need for a comprehensive study has been identified. A list of the Agency's regional office locations is provided in Appendix A.

The roles and responsibilities of the Agency regarding comprehensive studies include:

- assisting in the co-ordination the comprehensive study among federal authorities as specified in the *Federal Co-ordination Regulations*, including:
- assisting in identifying and defining the role of the RAs in cases where the same project may have two or more RAs;
- assisting in identifying expert authorities to review and to provide input to comprehensive study reports;
- providing advice on the scope of the assessment;

- advising on federal assessment processes and procedures and, in cases where the same project is also subject to assessment by another jurisdiction, advising on harmonizing with other EA processes;
- reviewing comprehensive study reports and supporting documentation to determine compliance with statutory, regulatory and policy guidelines related to federal environmental assessments;
- ensuring that public notification and consultation requirements under the Act are met (ss.22(1)), including the preparation of public notice plans, issuance of notices, distribution of comprehensive study documents, and receipt and analysis of public comments;
- facilitating the resolution of disagreements among responsible authorities (ss.12(2)), expert departments, proponents and others during the comprehensive study, and among stakeholders and the public during the review of the comprehensive study report; and
- preparing and submitting, for the consideration of the Minister, recommendations on the need for further assessment, taking into account the comprehensive study documents and comments from the public.

Timeliness

The Agency will act expeditiously in fulfilling its obligations under the Act and in providing advice and assistance to those conducting comprehensive studies. It will seek to ensure that the RA is informed in a timely manner of the Minister's decision on the course of action to be taken following the comprehensive study.

STEP 1.4: CO-ORDINATING AMONG FEDERAL AUTHORITIES

Many comprehensive studies will involve more than one RA. It is important that the conduct of the comprehensive study be co-ordinated among RAs and expert departments. All likely RAs and expert departments should be identified at the outset. To meet these objectives, the *Federal Co-ordination Regulations* contain a procedure that federal authorities must follow to co-ordinate EAs. The requirements of the *Federal Co-ordination Regulations* are summarized in this guide. For more detail on the regulations, consult the reference guide on the *Federal Co-ordination Regulations* (See Appendix H for more information on how to obtain a copy of this guide).

The application of the procedure in the *Federal Co-ordination Regulations* will result in:

a. All the RAs for a comprehensive study being identified early in the process;
b. Expert departments being identified and involved early in the process;
c. Provinces, other jurisdictions and proponents being informed early of which RAs are involved in a project;
d. Any previous EAs of a project being provided to one of the RAs.

The following is a summary of the procedure in the *Federal Co-ordination Regulations*:

If you are a federal authority that has received a project description from a province, a proponent or the Agency, you must:

- determine if you are likely to be an RA within 10 business days if there is an indication that the project is subject to another jurisdiction's EA process, and within 30 business days if there is no indication that the project is subject to another jurisdiction's EA process;
- inform the proponent, the Agency or the province of this determination; and
- if the determination is that you are likely to be an RA, notify other federal authorities that are likely to be RAs or expert departments. The notice must include a project description and specify how long the recipient has to respond (which must be no longer than 30 business days).

If you are a federal authority that has received a notification of project from another federal authority, you must:

- determine if you are likely to be an RA within the time frame specified in the notice;
- inform the contact given in the notice and the proponent of the determination; and
- provide any previous EAs you have conducted for the project or parts of the project to the contact given in the notice.

In either case, if you require more information to determine whether you are likely to be an RA, you may request this information from the appropriate party within 10 days of determining that this information is needed. Once you have received the information, you have 10 business days to determine whether you are likely to be an RA.

When the parties that are likely to be RAs and expert departments have been identified, they should discuss how the conduct of the comprehensive study will be co-ordinated One of the RAs may be designated as the lead RA, or the RAs may coordinate their assessment in a team or working group structure. The responsibility to determine the manner in which to ultimately proceed lies with the identified RAs. However, if so desired or in the case of disagreement, the Agency can advise RAs on how to proceed (ss.12 (2)).

A supplementary guide entitled *Process Advice for the Participation of Federal Authorities in an Environmental Assessment* has been prepared by the Agency. It can assist in identifying other RAs which may have an interest in the environmental assessment of a project. In addition, the guide offers advice on determining the respective roles and responsibilities of multiple RAs in the conduct of EAs (see Appendix for details).

STEP 1.5: INVOLVING EXPERT FEDERAL AUTHORITIES

RAs are responsible for ensuring that their comprehensive study report is scientifically and technically sound. To do so, advice should be sought prior to and during the preparation of the comprehensive study report. Obtaining a sufficiently broad range of expert input will, in the majority of cases, require that the RA obtains more than in-house advice.

Significant information and expertise on issues that must be addressed in a comprehensive study already exist in many federal departments and agencies. Expert federal authorities represent an important source of information and knowledge for an RA conducting a comprehensive study.

Expert federal authorities also have a second, important function. By providing information and knowledge and by reviewing issues discussed in the comprehensive study report, expert federal authorities can help ensure the scientific and technical accuracy of the comprehensive study.

Specialist information and knowledge should also be solicited from other sources, including provincial, local and aboriginal governments, as well as independent experts in universities or the private sector. Including an external review of the comprehensive study report will not only increase the technical and scientific accuracy of the study, but will also strengthen public confidence in the environmental assessment process. For assistance in seeking out appropriate expert advice, RAs may wish to consult the Agency.

STEP 1.6: HARMONIZING WITH OTHER JURISDICTIONS

A key question in the early planning stages of an environmental assessment is to identify whether the project is subject to more than one environmental assessment process (e.g. provincial, Native and federal). Without close cooperation, a project might be subject to separate environmental assessments, resulting in unnecessary duplication, confusion, and excessive

costs to all parties.

Harmonization of Canada's various environmental assessment processes is essential if the environmental effects of projects are to be assessed in an effective manner across the country. Harmonization also benefits private-sector decision makers carrying out EAs by streamlining regulatory approval processes and reducing planning uncertainties and delays. As such, when projects requiring a comprehensive study are also subject to assessment within another jurisdiction, activities should, to the extent that this is possible, be coordinated in order to avoid unnecessary duplication and delays. For information regarding joint assessment procedures in each province, please contact the appropriate regional Agency office. For information regarding any other jurisdiction, please contact the Agency's central office.

STEP 1.7: MAKING USE OF PREVIOUS ENVIRONMENTAL ASSESSMENTS

On occasion, proposed projects may have been previously assessed. These include previously assessed projects:

- which did not proceed after an assessment was performed; or
- for which changes are being proposed (e.g. changes such as decommissioning of or major modifications to a project).

In such cases, the documentation from the previous environmental review may be used to whatever extent the RA sees fit to complete the current comprehensive study (s. 24). However, the RA must ensure that adjustments are made to the previous environmental assessment so as to take into account any changes in the circumstances of the project and/or any significant changes in the environment, including cumulative environmental effects.

STEP 1.8: DETERMINING THE ROLES OF THE RESPONSIBLE AUTHORITY AND PROPONENT

For any given project requiring assessment, RAs must ensure that a comprehensive study is conducted (s. 21) if the proposed project is described in the *Comprehensive Study List Regulations*, and must also ensure that a comprehensive study report is prepared and submitted to the Minister and the Agency. If the RA is the project proponent, it will be actively involved throughout the comprehensive study process. However, in cases where the RA is not the proponent, the respective roles and responsibilities should be clearly defined. Activities should be coordinated with provincial requirements where a joint assessment is undertaken.

The responsible authority must:

- determine, where there are two or more responsible authorities in relation to a project, the manner in which to coordinate its duties and functions under the Act with other RAs (ss. 12(1) and the *Federal Co-ordination Regulations*);
- ensure that all relevant federal expert departments have been consulted (the *Federal Co-ordination Regulations)*
- for projects described on the comprehensive study list, ensure that a comprehensive study is conducted as early as practicable in the planning stages and before irrevocable decisions are made (ss. 11(1));
- not exercise any power or perform any duty or function which may allow the project to proceed until completion of the comprehensive study or public review (ss. 11(2));
- establish and maintain the public registry (s. 55);
- determine whether the project or a component of the project has been previously assessed (s. 24);
- determine the scope of the environmental assessment (s. 15 and s. 16);
- determine the significance of the effects of the project (paragraph 16(1) b);

- ensure that a comprehensive study report is prepared and submitted to the Minister and the Agency (s. 21);
- make a decision on whether or not the project may proceed, taking into account the Minister's recommendations (s. 37);
- provide public notice of its course of action (paragraph 37(3)(a) and ss. 38(2));
- ensure that for any project that is proceeding, all appropriate mitigation measures are implemented (paragraph 16(1)d); and
- ensure that, when appropriate, a follow-up program is developed and implemented (s. 38).

The responsible authority may:

- delegate the conduct of the comprehensive study and the preparation of the comprehensive study report (s. 17);
- request that the Minister refer the project for a public review through mediation or a panel review (ss. 21(b)); and
- coordinate with provincial or other environmental assessment processes in situations where another jurisdiction has the responsibility or authority to conduct an EA on the same project (in whole or in part) (ss. 12(4)).

The responsible authority should:

- provide an opportunity for public consultation during preparation of the report; and
- ensure that scientific and technical issues identified in the comprehensive study are reviewed and addressed by experts.

The proponent:

- provides information regarding the proposed project including a detailed description of its phases, schedules and assessment considerations;
- provides input to help establish realistic time frames for the assessment and approval processes;
- conducts an environmental assessment of the project which considers factors specified in the project-specific guidelines, and in the case of joint assessments, the requirements of other jurisdiction(s);
- prepares environmental assessment documents;
- prepares the comprehensive study report;
- consults the public and key stakeholders such as provincial and municipal governments, aboriginal peoples and environmental groups, and ensures that concerns with respect to environmental effects of the project receive appropriate attention;
- provides input to the public notice plan developed by the Agency;
- ensures that scientific and technical issues identified in the comprehensive study are reviewed and addressed;
- responds to issues identified through the review of comprehensive study documents;
- participates in the resolution of disagreements that might otherwise require that the project be rejected or referred for further assessment by a review panel or mediator;
- implements mitigation measures and participates in monitoring and follow-up programs, if it is determined that the project can proceed; and
- participates in the review by a mediator or an environmental assessment panel, if it is determined that further assessment is necessary.

** in situations where the proponent is not the RA, the above activities should be undertaken in consultation with the RA.*

STEP 1.9: DESIGNING A PUBLIC INVOLVEMENT PLAN

Public involvement plays an important role at all stages of a comprehensive

study.

The public is not a single entity, but rather comprises varied interests such as those of local residents, community groups, environmental groups, aboriginal peoples, the private sector, municipal and regional governments, and many others. A public involvement plan should recognize all interested publics and provide for various means to receive their input.

A public involvement program goes beyond allowing the public to comment on a completed comprehensive study report. Rather, it seeks to provide the public with a variety of opportunities to be informed at all stages of the comprehensive study, to offer ideas and information, to react to proposals in order to influence recommendations and decisions, and to be informed of all decisions.

Although there is no specific requirement in the Act to consult the public during the preparation of a comprehensive study, the intent of the Act clearly supports the principle of early and meaningful public consultation. Early, well-conducted consultations will likely result in a shorter review and commentary period later on in the process.

Communication needs will change over the course of a comprehensive study. The responsible authority (or proponent) may need to:

- provide information through community meetings or various media so that the public can be informed and participate effectively;
- receive information and comments from the public;
- discuss issues and clarify positions and concerns with the public;
- build consensus among key groups or individuals particularly affected by the project; and
- inform participants of results and decisions.

For more information on the requirements of the Act and on the development of an effective public involvement program, refer to Appendix B.

STEP 1.10: ESTABLISHING THE PUBLIC REGISTRY

The Act is based, to a large extent, on the principle of public participation. To help realize this, public access to information upon which environmental assessments are based is provided through a public registry system.

Obligations

The Act imposes two main obligations on responsible authorities with respect to the public registry (s. 55):

- establishing a public registry for the purpose of facilitating public access to the records relating to the comprehensive study; and
- operating such registry in a manner to ensure convenient public access.

A public registry must be maintained in respect of every project for which a comprehensive study is conducted. It should be established at the outset of the environmental assessment and updated on a regular basis.

The public registry system framework consists of three components:

- the federal environmental assessment index;
- document listings of the responsible authority; and
- environmental assessment documents (registry).

"The Public Registry" reference guide provides details on the organization of the public registry system, as well as guidelines in five key areas (see Appendix H for details on how to obtain a copy of this guide):

- coordination with other responsible authorities;
- document clearing;
- responding to requests;
- cost recovery; and
- official language considerations.

The responsible authority should be aware of the public registry obligations. Questions should be directed to the responsible authority's departmental specialist or the Agency.

The responsible authority should note that the public registry system is only one component of a public information program. It does not replace the need to prepare and implement a public involvement plan.

PHASE 2: THE COMPREHENSIVE STUDY REPORT

STEP 2.1: SCOPING THE COMPREHENSIVE STUDY

It is up to the responsible authorities to determine the scope of the project (s.15), and the scope of the factors to be taken into consideration during the comprehensive study (ss. 16(1), ss.16(2) and ss 16(3)). The *Federal Co-ordination Regulations*require that the RAs and expert departments together determine the scope of the project, the factors to be considered and the scope of the factors. The best practice is for federal authorities to agree on one scope that satisfies all their EA responsibilities. However, this is not a legal requirement.

It is highly recommended that the scoping exercise be undertaken in consultation with the proponent, stakeholders groups, expert departments and the Agency. Scoping sessions should be held as early as possible in the process. The success of the environmental assessment process will often depend on how well this step is undertaken. The scoping exercise sets the parameters for the comprehensive study and provides a rationale for the design of the studies which may be required.

1. Scope of the project

Scoping of the project involves identifying the components of the proposed undertaking or activity which should be considered part of the project for the purposes of the comprehensive study.

A paper entitled "Scope of an Environmental Assessment under the *Canadian Environmental Assessment Act"* has been prepared by the Agency to promote consistency in the scoping process undertaken by responsible authorities and to reduce the risk of including inappropriate components in the environmental assessment or excluding components which should be assessed. The first section of this paper discusses how to proceed in determining the scope of the project. (See Appendix H for information on how to obtain a copy of this guide).

2. Scope of the factors to be considered in a comprehensive study

Every comprehensive study must include a consideration of all factors described in s.16 of the Act, including any environmental effects which the project may have on any areas falling within federal or provincial jurisdiction.

Moreover, any additional factors relevant to the assessment of the environmental effects of the project that any other federal law or regulation requires or permits the responsible authority to consider, can be included.

Section 16 of the Act

In accordance with Section 16 of the Act, the following factors must be considered in a comprehensive study (ss.16(1) and ss.16(2)):

- environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects;
- significance of the effects;
- public comments;
- mitigation measures;
- purpose of the project;
- alternative means of carrying out the project;
- need for and the requirements of any follow-up program;
- sustainability of renewable resources; and
- any matter relevant to the comprehensive study that the Minister or responsible authority may require to be considered.

For details on what should be included for each of these factors, consult Appendix C (Table of Contents of a Comprehensive Study).

The Act also requires that the responsible authority shall determine the scope of the following factors (ss.16(3)):

- environmental effects of the project (including cumulative effects and accidents) (paragraph 16(1)(a));
- significance of the effects (paragraph 16(1)(b));
- mitigation measures (paragraph 16(1)(d));
- alternative means of carrying out the project (paragraph 16(2)(b));
- follow-up program (paragraph 16(2)(c)); and
- capacity of renewable resources (paragraph 16(2)(d)).

Limits in time and resources make it impractical for an environmental assessment to address all the potential environmental effects of a project or to study all of the alternative means of carrying out a project to the same level of detail. Scoping will identify, from a broad range of potential problems, a number of priority issues to be addressed in the environmental assessment. The scoping exercise should improve the efficiency in which the comprehensive study will be conducted and result in a report focussed on issues identified as important by the public and experts.

Social, economic and ecological criteria are often used to provide a focus for the environmental assessment. For example, the public may have a great concern for species of animals or plants which are rare or endangered, or which are considered important for subsistence, or scientific, commercial or recreational use. After identifying such valued ecosystem components, the responsible authority needs to define the spatial and temporal boundaries for assessing each component, and must determine the appropriate level of effort attributed to each of the components in the comprehensive study.

The methods for scoping factors can be developed or selected by the responsible authority. For additional information on the scoping of factors, please refer to the guide entitled "Scope of an Environmental Assessment under the *Canadian Environmental Assessment Act*." (See Appendix H for details on how to obtain a copy of this guide).

STEP 2.2: ENSURING THE COMPREHENSIVE STUDY IS CONDUCTED

The responsible authority may undertake the comprehensive study directly or delegate all or part of it to a consultant, to another federal authority or to the project proponent. However, the responsible authority may not delegate its decision-making responsibility (s.17).

In most cases, the environmental assessment will be conducted by the proponent and its consultants according to the project-specific guidelines (resulting from the scoping exercise) prepared by the responsible authority in

consultation with other interested parties.

Project-specific guidelines can serve to outline all relevant factors and issues identified during the scoping exercise. In addition, such guidelines can establish from the onset, the structure and/or format of the comprehensive study report, which can help facilitate the review of the comprehensive study report by increasing its clarity, organization and logical flow.

Throughout the environmental assessment, the proponent and responsible authority should work closely together to ensure that the assessment meets the requirements of the project-specific guidelines as well as the requirements of the Act.

STEP 2.3: PREPARING A FIRST DRAFT OF THE COMPREHENSIVE STUDY REPORT

The comprehensive study report must provide the responsible authority, and ultimately the Minister of the Environment, with the information necessary to decide whether the potential adverse environmental effects associated with the proposed project are significant. In doing so, the report should document the planning process and how conclusions and recommendations with respect to s.15 and s.16 of the Act have been developed.

The report must demonstrate how both the potential adverse environmental effects and related stakeholder concerns are being addressed so that decision makers can determine whether residual effects are acceptable.

The comprehensive study report should be kept concise and well-organized. The report should only contain information directly relevant to environmental assessment decisions. Background and supplementary details, as far as possible, should be provided in supporting documents that accompany the comprehensive study report.

Supporting documents should include any background or supplementary information that assists reviewers and decision makers to better understand and evaluate the comprehensive study. These documents may include additional details about the project, the existing environment, scientific and engineering studies, reference materials such as government regulations, policies and guidelines applicable to the project, and result of public consultation.

The following titles may be used as a framework for the development of the comprehensive study report. For details on what should be included in each of these sections please refer to Appendix C.

1. Executive Summary
2. Introduction
3. Project Description and Purpose
4. Alternatives
5. Scope of Assessment
6. Public Consultation Program
7. Description of the Existing Environment
8. Predicted Environmental Effects of the Proposed Project
9. Mitigation Measures
10. Determination of Significance
11. Follow-up Program
12. Conclusion and Recommendations
13. Appendices

As with the conduct of the comprehensive study, the RA can delegate the preparation of the first draft of the comprehensive study report to the proponent.

STEP 2.4: REVIEWING THE COMPREHENSIVE STUDY REPORT

The draft report prepared by the proponent should now be reviewed by the responsible authority (and other jurisdictions when applicable), who will ensure that the report meets the project-specific guidelines for the project. If information is missing, the responsible authority may request additional information from the proponent.

The responsible authority should ensure that the report has been reviewed for scientific and technical accuracy. Specialist information and knowledge can be solicited from expert federal authorities, provincial, local and aboriginal governments, and/or from independent experts in universities or from the private sector.

The responsible authority is encouraged to involve identified stakeholders in the review of the report prior to the submission of the report to the Agency and the Minister.

To ensure the efficiency of the comprehensive study process, it is recommended that the responsible authority forward comprehensive study documentation in draft form for the preliminary Agency review, prior to its formal transmittal to the Agency and the Minister.

STEP 2.5: FINALIZING AND TRANSMITTING THE COMPREHENSIVE STUDY REPORT

Having taken into account comments from the expert federal authorities or other experts and comments from the public, the responsible authority will now finalize the comprehensive study report.

The comprehensive study report presents the responsible authority's views regarding the comprehensive study and the project. Although the proponent or other parties may prepare the report, the responsible authority must fully agree with its content before it is submitted to the Agency and the Minister.

Under the Act, the responsible authority must ensure that the comprehensive study report is prepared and provided to the Minister of the Environment and the Agency. An example of the letters of transmittal to the Agency and the Minister is contained in Appendix D. If more than one responsible authority is involved in the project, the report should be jointly submitted to the Agency and to the Minister by all responsible authorities.

The *Federal Co-ordination Regulations* require that the following be collected and submitted with or as part of the comprehensive study report:

- the responses to the notifications sent out under section 5 of the regulations; and
- written confirmation from all the RAs that the factors agreed upon in section 8 have been considered and the EA report is complete.

It is in the interest of the proponent and the responsible authority to resolve all outstanding issues before the comprehensive study report is submitted to the Agency. If this is not possible, all outstanding issues should be itemized, and the proponent and/or responsible authority should state how it intends to address these issues. The responsible authority should determine whether the issues have been adequately addressed or whether they warrant further review by means of a panel review or mediation.

A minimum of two copies of the final report should be provided to the Agency for review. As well, the submission of an electronic copy of the report could expedite the Agency's review of the comprehensive study report.

The Agency will strive to provide the responsible authority with a determination by the Minister within 60 days of the submission of the final comprehensive study report to the Agency. During this period, the documentation will be reviewed and distributed by the Agency, and studied and commented upon by

the public, usually for a period of at least 30 days. The Agency will receive and analyze the public comments and will prepare recommendations on a course of action. The recommendations will be forwarded to the Minister who will make a determination on the need for further assessment.

To meet this time frame, it is essential for Agency staff to be kept informed of progress on the assessment, and for the comprehensive study report to meet the requirements of the Act. To achieve this objective, it is advisable that the Agency staff have an opportunity to review the final draft of the comprehensive study report before its official submission. It is also important that, as much as possible, consequential differences of opinion among stakeholders regarding the assessment and environmental issues be addressed before the documentation is submitted for Ministerial consideration.

It is sufficient to forward the final report to the Agency only, as the Agency ultimately forwards the report and its recommendations to the Minister. However, it is necessary for the RA to submit a letter to the Minister stating that the report has been completed and forwarded to the Agency, and that a decision is required.

So as to avoid delays in the decision-making process, the letter to the Minister should be forwarded at the same time the report (and its own accompanying transmittal letter) is forwarded to the Agency for review.

PHASE 3: REVIEW OF THE COMPREHENSIVE STUDY REPORT AND MINISTERIAL DECISIONS

STEP 3.1: REVIEW OF THE COMPREHENSIVE STUDY REPORT BY THE AGENCY

While responsible authorities must ensure that comprehensive study reports are prepared, the Agency is responsible for reviewing such reports to confirm that the information meets the requirements of the Act, that appropriate input has been received from key participants, and that issues or problems needing to be resolved before the comprehensive study reports are released, are correctly identified. In its review, the Agency can help identify and correct major omissions or deficiencies before seeking public input, which can help reduce the risk of projects being rejected or referred for further assessment simply because of inadequacies in the documentation.

Objectives of the Agency's Review

The Agency will:

- verify that the comprehensive study report complies with the Act, and relevant regulations under the Act, and take into account Agency guidelines such as those concerning scope of project, scope of assessment, cumulative environmental effects, biodiversity and significance;
- determine whether or not relevant stakeholders and expert federal authorities have been consulted and if any concerns raised regarding the comprehensive study and its findings remain outstanding;
- confirm that sufficient information is available for the public to evaluate whether the comprehensive study conclusions and recommendations are consistent with the comprehensive study findings; and
- gain an adequate understanding of the project assessment in order to:
- summarize comments received from the public and other parties;
- facilitate the resolution of disagreements which might otherwise necessitate the project's referral for public review; and
- formulate suitable recommendations for the Minister's consideration.

Scientific/technical analysis

The Agency does not carry out independent research or in-depth scientific and

technical analyses in relation to projects undergoing a comprehensive study. It would not, for example, determine whether the modeling techniques used to predict the dispersion of effluents in groundwater are methodologically sound. Instead, the Agency relies on opinions of federal departments on scientific and technical matters within their respective areas of expertise, and on expert input from other stakeholders.

In reviewing the comprehensive study documentation, the Agency confirms that the principal scientific and technological questions have been identified and adequately scrutinized. To do so, it considers:

a. whether relevant expert federal authorities and other parties with scientific and technical expertise have provided comments;
b. whether expert federal authorities have analyzed the scientific/technical basis of the comprehensive study report. Federal authorities may also focus on policy, program, regulatory or financial implications relevant to their respective mandates;
c. whether scientific/technical issues raised by expert federal authorities and other stakeholders are considered to be resolved or are still outstanding; and
d. whether there are major gaps in the scientific/technical analysis presented in the comprehensive study report.

In addition to reviewing the documentation, the Agency may be called upon to work with the concerned parties in resolving disagreements of a scientific or technical nature, and to brief the Minister on the implications of these issues.

Framework for the Agency Review

A detailed framework has been developed to guide the Agency's analysis of comprehensive study reports and other documents provided by responsible authorities. In most cases, the following areas are considered before the documents are released: background information on the comprehensive study and the preparation of the comprehensive study report, consultations with key parties during the comprehensive study, and an evaluation of the adequacy of the information in the comprehensive study documents. Later, comments received from the public are evaluated. There is an effort to coordinate these activities in the case of joint federal-provincial assessments.

The framework used to guide the Agency's analysis is available for consideration by interested parties. This framework will be of interest to responsible authorities and proponents as it indicates the type and level of information that is expected in comprehensive study reports and supporting documentation. Please contact the Agency for the most recent analysis format.

STEP 3.2: AGENCY WILL COORDINATE THE PUBLIC REVIEW OF THE COMPREHENSIVE STUDY REPORT

Once the Agency receives the comprehensive study report from the responsible authority, it must facilitate public access to the report, publish a notice setting out the date, the place at which copies of the report may be obtained, the deadline and address for filing comments on the conclusions and recommendations of the report.

To meet these obligations, the Agency develops and implements a plan that provides public notice and ensures public access. The plan is developed in close cooperation with the responsible authority and proponent before the Agency receives the comprehensive study report, so that the public notice can be published and copies of the report distributed to designated access points, within one week of receiving it.

Consistent with the principles of a self-directed environmental assessment, the responsible authority will be responsible for the costs associated with the public notice (for example, the costs of translating the report into the appropriate languages and for providing a sufficient number of copies).

In developing the public notice plan, the Agency officer and responsible authority will take into account the location and circumstances of the public likely to have an interest in the environmental assessment. Notice format, language requirements, and public access points will differ from project to project.

Notice format

The circumstance of each comprehensive study will determine how the public should be notified of the opportunity to review and comment on the report. The notice format will be consistent with the scale and nature of the project, and could include:

- a published notice in local or regional newspapers;
- a news release for general distribution to print and electronic media in the community and region;
- public service announcements on radio and television, in all appropriate languages;
- distribution to all those organizations and individuals on the responsible authority's mailing list; and
- public meetings, when necessary.

A sample public notice can be found in Appendix E.

Number of copies of the comprehensive study report required

The Agency encourages the proponent and responsible authority to provide the comprehensive study report in both hard copy and electronic format. The number of copies required for release to the public will depend on the nature and location of the project, the opportunities for and outcomes of any public consultations conducted by the proponent or responsible authority during the comprehensive study, and the availability of the material in electronic format. More copies may be needed, for example, if the project is to be located near a large urban area, or if many interested parties are involved. The responsible authority and proponent should assist in the preparation of a mailing list for distributing the report.

Responsible authorities should consider submitting a summary of the comprehensive study report, as it will likely decrease the number of full reports required for distribution.

Public Comment Period

The Agency has not adopted strict deadlines for the provision of public comments on the report. In most cases, the review and comment period will be 30 to 45 days long. Deadlines will be established by the Agency officer in consultation with the responsible authority, taking into account the scale and complexity of the proposed project, the level of public interest, and the nature and extent of any public consultations held during the preparation of the comprehensive study report.

Designation of public access points

The public access points are determined by the Agency in consultation with the responsible authority, taking into account such factors as

- the location of the project near towns or cities;
- the desirability of a neutral site in the community (such as a town hall or community library);
- the availability of an Agency office in the area;
- the availability of a community information office established by the responsible authority or proponent;
- the need to provide access to the report in a wider region (for example, for a project that has generated considerable public interest beyond the

immediate project site, or for a project located in a remote area); and
- the need to ensure convenient access to the report to persons with disabilities.

Language requirements

The public notice will be prepared in both official languages if the project occurs in a region designated as bilingual under the Official Languages Act.

The responsible authority or proponent must provide the comprehensive study report in both official languages if the report is to be released to the public from any of the following:

- the responsible authority's head office, which, as the central office of a federal institution, is designated bilingual under the Official Languages Act (OLA);
- an office or facility located within the National Capital Region; and
- an office or facility located in a region designated as bilingual under the OLA under the Treasury Board's significant demand criterion.

The need for translation of the comprehensive study report and notice into other languages (such as Aboriginal languages) will depend on the location of the project, and can only be determined on a case-by-case basis by the Agency in consultation with the responsible authority.

Public comments

The public notice will invite the public to provide written comments in hard copy or electronic format. The Agency will also provide a copy of the public comments to the responsible authority so that the latter can consider the public comments in determining its course of action and to include the comments in the public registry for the project.

STEP 3.3: REVIEW OF THE PUBLIC COMMENTS

Following the release of the documents for public comment, Agency staff analyze the comments received and, where possible, attempt to facilitate the resolution of disagreements that might otherwise require the project to be referred for assessment by mediation or panel review. Any matters still outstanding may subsequently be taken into account in the Agency's recommendations to the Minister.

STEP 3.4: AGENCY'S RECOMMENDATIONS AND MINISTER'S DECISION

After taking into account comments from the public and other stakeholders, and the information contained in the comprehensive study report and other documents submitted by the responsible authority, the Agency recommends a course of action to the Minister.

The Minister decides on the next step in the environmental assessment process, taking into account the comprehensive study report and any comments received on the report. One of two courses of action is possible (s.23) :

1. The Minister will refer the project back to the responsible authority for action if, taking into account appropriate mitigation measures:
    - the project is not likely to cause significant adverse environmental effects and public concerns do not warrant a public review; or
    - the project is likely to cause significant adverse environmental effects that cannot be justified; or
2. The Minister will refer the project to a mediator or review panel if, again taking into account appropriate mitigation measures:

- it is uncertain whether the project is likely to cause significant adverse environmental effects;
- the project is likely to cause significant adverse environmental effects and a determination must be made whether these effects are justified in the circumstances; or
- public concerns warrant the referral.

The Minister will provide the responsible authority with a written statement of the course of action taken.

STEP 3.5: RESPONSIBLE AUTHORITY'S DECISION AND ACTIONS

If the Minister refers the project to a public review, then neither the responsible authority nor any other federal authority may provide federal support to the project until the public review is completed.

However, if the Minister refers the project back to the responsible authority, the responsible authority may exercise any power or perform any duty or function that would permit the project to be carried out in whole or in part. The responsible authority will also be responsible to ensure that mitigation measures referred to in the comprehensive study report are implemented.

Post-decisional Activity

The final step in the self-directed environmental assessment process addresses the responsible authority's obligations following completion of the comprehensive study report and its determination about whether to provide federal support to the project. These obligations fall into three general categories:

1. provide public notice about the course of action that the responsible authority intends to take;
2. decide whether a follow-up program is appropriate; and
3. ensure the implementation of appropriate mitigation measures.

The responsible authority must provide public notice regarding its course of action, regardless of whether or not it determines that it may provide federal support to the project.

If it does not provide federal support, the responsible authority must file a notice of that course of action in the public registry. If it does provide federal support, the responsible authority must advise the public of :

- the responsible authority's course of action;
- any mitigation measures to be implemented with respect to the project's adverse environmental effects;
- any follow-up program that is implemented; and
- any results of the follow-up program.

The method of public notice should be appropriate to the circumstances of the project and reflect the public involvement effort that has been undertaken. Examples include newspaper advertisements, news releases, community bulletin boards, and meetings with stakeholders and the public. All documents should be included in the public registry.

Implementation of mitigation measures

When the responsible authority decides to exercise any power or perform any duty or function that will permit a project to be carried out, it must ensure that all the mitigation measures referred to in its decision (paragraph 37(1)(a)) are implemented.

Implementation of the follow-up program

Where a responsible authority permits a project to be carried out, it should design a follow-up program that it considers appropriate and arrange for the implementation of that program.

For additional information on a follow-up program, please refer to Appendix C.

Appendices A - H

Last Updated: 2007-08-17 Important Notices

The Responsible Authority's Guide

Purpose

The **Responsible Authority's Guide** is one part of the **Canadian Environmental Assessment Act Procedural Manual**, a set of reference materials designed to provide guidance on the application of the *Canadian Environmental Assessment Act* (Act) to federal government departments and agencies, provincial and municipal governments, private sector proponents of projects requiring federal funding or decisions, and members of the public interested in environmental assessment.

The guide interprets the legal framework established by the Act and provides guidance to responsible authorities (RAs) for conducting environmental assessments (EAs) of projects in compliance with the Act. It is designed for those within federal departments and agencies who are required to plan, manage, conduct, review, or otherwise participate in federal environmental assessments. It consists of separate guides for managers and environmental assessment practitioners, and includes a set of detailed reference guides on specific environmental assessment topics.

The other major component of the **Procedural Manual** is the **Agency Procedures Guide**. It provides a step-by-step explanation of the procedures that should be followed in meeting the responsibilities of the **Canadian Environmental Assessment Agency** (CEAA/Agency). It is intended for staff of the Agency, mediators, and the chairpersons and members of public review panels.

The **Responsible Authority's Guide** addresses

- the objectives and principles of the Act;
- the EA process established by the Act;
- the procedures for conducting EAs of projects in compliance with the Act;
- the obligations of RAs;
- the roles and responsibilities of participants in the process;
- guidelines on key topics.

The guide is also designed to be used in the development of departmental-specific operational procedures and training related to environmental assessment.

Approach

The **Responsible Authority's Guide** is written from a **user's point of view**. It is not a clause-by-clause explanation of the Act. Rather, it addresses the process of environmental assessment as set out in the Act, providing guidance on what needs to be done, when it must be done, and what decisions are required. Although the focus is on procedures, the guide also identifies many of the methods and techniques that can be used at various steps in the EA process. Key steps, concepts, and applications are illustrated throughout the guide by the use of examples.

Additionally, the focus is on **mandatory** procedures. Emphasis is given to

ensuring that RAs are aware of what is required to comply with the legislation. Less attention is given to practices and procedures that, while perhaps promoting better EAs, are beyond the scope of the legislation.

The guide is also designed to meet the **needs of different users** -- from those needing only an overview of the major requirements of the Act, to those requiring a detailed explanation of procedures.

Organization

The Responsible Authority's Guide comprises the following sections:

- An **Introduction** gives an overview of the objectives and guiding principles of the Act and of the role of the CEAA.
- **Part I: The Manager's Guide** provides an overview of the federal EA process and summarizes the roles and responsibilities of participants. It is written for federal government managers who need to be aware of the requirements of the Act and the obligations placed on their department or agency.
- **Part II: The Practitioner's Guide** reviews the federal EA process in detail. It is intended for those responsible for planning, conducting, reviewing, or participating in federal EAs. Part II details the procedures required to conduct EAs in compliance with the legislation, with separate chapters on the self-directed EA in the form of a screening or comprehensive study, and on the public review in the form of mediation or panel review. Part II also includes a set of appendices that focus on the key regulations to the Act relevant to practitioners. **Part III: Reference Guides** provides detailed guidance on key topics relating to the federal EA process. Three reference guides are included in Part III:
  - "Addressing Cumulative Environmental Effects";
  - "Determining Whether a Project Is Likely to Cause Significant Adverse Environmental Effects";
  - "The Public Registry"

Additional reference guides will be prepared, including

- "Assessing the Effects on Health";
- "Assessing the Effects on Socioeconomic Conditions";
- "Determining the Capacity of Renewable Resources to Meet Present and Future Needs";
- "Determining Environmental Effects on Physical and Cultural Heritage";
- "The Follow-up Program";
- "Public Involvement."

Updates

The **Responsible Authority's Guide** is intended to evolve over time as departments, project proponents, and EA practitioners gain experience with the Act, and as additional policy and legal decisions relating to it are made. To help users of the guide keep up-to-date with these decisions, the Agency intends to issue regular **Responsible Authority Guide Updates**.

| Previous page | Table of contents | Next page |

Last Updated: 2003-10-07 Important Notices

Environmental Assessments
Public Participation
How to do Environmental Assessments
Legislation & Regulations
Training Opportunities
Research & Development
Strategic Environmental Assessment
Publications
Frequently Asked Questions

Canadian Environmental Assessment Registry
CEAR Main »

A primer for Industry
Will your project need a federal EA? More »

Search our site

| Previous page | Table of contents | Next page |

Introduction

- Environmental Assessment in Canada
- The Canadian Environmental Assessment Act
- The Canadian Environmental Assessment Agency

Environmental Assessment in Canada

During the last decade, Canadians have become increasingly aware of the importance of maintaining both a strong economy and a healthy environment.

In the 1980s the World Commission on Environment and Development, known as the Brundtland Commission, focused public concern on the need for policies and practices that promote sustainable development -- development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Canada has endorsed the goal of sustainable development, and is actively supporting efforts to achieve it.

Environmental assessment (EA) is a powerful tool to help decision-makers achieve the goal of sustainable development.

EA provides a systematic approach for identifying the environmental effects of proposed projects. By identifying adverse environmental effects before they occur, EAs allow decision-makers to modify plans so that the effects can be minimized or eliminated.

As a planning tool, EA has been applied in the Canadian government since 1974 to predict the likely environmental effects of proposals requiring a federal involvement or decision. The process was updated in 1977 and reinforced in 1984 when the Environmental Assessment and Review Process (EARP) guidelines were issued by order-in-council.

These guidelines were an important and effective step in helping to integrate environmental factors into the decision-making process for projects involving the federal government. Over time, however, it became clear that the EA process needed to be strengthened. There was a need to provide clear procedures for conducting EAs, to clarify the responsibilities of certain federal agencies and bodies such as Crown corporations, and to provide a mechanism for funding public participation in the EA process.

In 1987 the federal government began extensive public consultations on reforming the EARP. Participants called for an accountable and administratively simple process based in legislation that would be effective, efficient, fair, and open. The Brundtland Commission also gave new impetus and focused growing public demand for reforming the EA process in Canada. In its report, "Our Common Future," the Commission concluded that EA processes would be more effective if they were mandatory and entrenched in legislation.

More recently, court decisions have underscored the need for reforming the federal EA process. In decisions on the Rafferty-Alameda and Oldman River dams, the courts ruled that what was thought to have been a non-enforceable guideline was, in fact, a legally enforceable law of general application that imposes added duties on top of existing federal responsibilities. The EARP guidelines, however, were not drafted with a view to strict legal interpretation,

thereby creating administrative difficulty and uncertainty.

In addition, there has been a growing realization that the different EA systems of the federal and provincial governments need to be harmonized. Without close cooperation, a project might need to undergo separate EAs by different governments, resulting in unnecessary duplication, confusion, and excessive costs for all parties.

In June 1990 the federal Minister of the Environment announced a reform package that included new EA legislation, an EA process for new policy and program proposals, and a participant funding program that supports public participation in the EA process. The reforms will help ensure that environmental considerations are integrated into federal decision-making processes, and will help develop greater harmonization of EA systems across Canada. By introducing a degree of certainty in the EA process, the reforms will also reduce costs and time demands for all participants.

In June 1992, after nation-wide consultations and comprehensive parliamentary review, Bill C-13, the *Canadian Environmental Assessment Act* (Act) received royal assent.

The Canadian Environmental Assessment Act

The Act sets out, for the first time in legislation, responsibilities and procedures for the environmental assessment of projects involving the federal government. The Act establishes a clear and balanced process that brings a degree of certainty to the EA process and helps responsible authorities (RAs) determine the environmental effects of projects early in their planning stage.

The Act applies to projects for which the federal government holds decision-making authority -- whether as proponent, land administrator, source of funding, or regulator.

Although the EA process established by the Act is similar in many respects to the EARP guidelines order, it does introduce changes in several important areas. These include

- the definition of a "project";
- the definition of an "environmental effect";
- the introduction of comprehensive study and mediation as new EA tracks that a project might follow;
- requirements to keep an ongoing record of all documents related to the EA in a public registry;
- the requirement to consider the need for a follow-up program;
- mandatory public input into an EA at certain points.

Federal-Provincial Agreements Some projects may require authorization by both provincial or territorial governments and the federal government. To avoid the duplication and excessive costs of separate EAs, the Act gives the Minister the power to enter into agreements or arrangements with any jurisdiction for the purpose of assessing the environmental effects of projects where both parties have authorization responsibilities. These bilateral agreements provide guidelines for cooperating on EAs, including roles and responsibilities relating to joint panels, mediation, screening, notification, and cost-sharing. By promoting cooperation and "harmonization" of EA procedures among governments, the agreements help achieve more effective and consistent EA processes in Canada.

Objectives

The Act has four stated objectives:

- To ensure that the environmental effects of projects receive careful consideration before RAs take action;
- To encourage RAs to take actions that promote sustainable development, thereby achieving or maintaining a healthy environment and a healthy economy;
- To ensure that projects to be carried out in Canada or on federal lands do not cause significant adverse environmental effects outside the jurisdictions in which the projects are carried out;
- To ensure that there be an opportunity for public participation in the EA process.

Guiding Principles

In general, the following principles should be used in the application of the Act:

- *Early application* - The process should be applied as early in the project's planning stages as practicable, and before irrevocable decisions are made, so that environmental factors are incorporated into decisions in the same way that economic, social, and policy factors have traditionally been incorporated.
- *Accountability* - The self-assessment of projects for environmental effects by federal departments and bodies is a cornerstone of the process.
- *Efficient and cost effective* - Each project should undergo only one EA, and the level of effort required to undertake an EA for the project should match the scale of the project's likely environmental effects.
- *Open and participatory* - Public participation is an important element of an open and balanced EA process.

The Canadian Environmental Assessment Agency

The Act establishes the Canadian Environmental Assessment Agency (CEAA) to replace the Federal Environmental Assessment Review Office (FEARO). The new Agency reports to the Minister of the Environment, but operates independently of any federal department, including Environment Canada, or any other agency.

The mission of the Agency is

> *"To provide effective means of integrating environmental factors into federal planning and decision-making in a manner that takes into account public values and the goal of sustainable development."*

Under the Act, the Agency's objectives are to

- administer the EA process;
- promote uniformity and harmonization in the assessment of environmental effects across Canada at all levels of government;
- promote EA research, including the development of EA techniques and practices;
- promote EA in a manner that is consistent with purposes of the Act;
- ensure opportunities are provided for public participation in the EA process.

In carrying out its responsibilities, the Agency has three major areas of activity:

- It develops, evaluates, promotes, and monitors the policy, legislative, regulatory, administrative and international aspects of EA processes, by developing, for example, regulations, a federal public registry system, and federal-provincial EA harmonization agreements.
- It directly manages certain elements of the Act, including panel reviews,

mediations, and the review of comprehensive study and class screening reports.
- It supports initiating departments (RAs) in the management of their self-directed assessment obligations, through such activities as education and training.

The Agency also provides procedural advice, and can use its independent position to help resolve procedural difficulties that could otherwise lead to delays in the assessment or necessitate a referral to a mediator or review panel.

| Previous page | Table of contents | Next page |

Last Updated: 2004-07-09 Important Notices

Part I: The Manager's Guide

- Applying the Canadian Environmental Assessment Act
  - Key questions
  - Scope of the environmental assessment
  - Public registry
  - Expert federal departments
  - Public involvement
- Self-directed Environmental Assessment
  - Screening
  - Comprehensive study
  - Factors to be considered
  - Review of the environmental assessment report
  - Decision by the responsible authority or Minister
  - Summary of responsibilities
- Public Review
  - Need for a public review
  - Factors to be considered
  - Mediation
  - Panel review
  - Decision by the responsible authority
  - Summary of responsibilities
- Working with Other Governments

Applying the Canadian Environmental Assessment Act

The fundamental purpose of the Canadian Environmental Assessment Act (Act) is to ensure that federal decision-makers are aware of and carry out their obligation to assess the environmental impacts of a project. The EA must be conducted early on in the project's development process, and before any irrevocable decisions are made.

Figure 1 summarizes the major decision points of the EA process.

Key questions

What is a project?

Under the Act, a project can be either

- an undertaking in relation to a physical work, such as any proposed construction, operation, modification, decommissioning, abandonment or other undertaking; or
- any proposed physical activity not relating to a physical work that is listed in the regulations to the Act.

Examples of project definition

Undertakings in relation to a physical work

- dredging as part of constructing a bridge
- construction of a fish ladder

Physical activities not relating to a physical work

- the movement of CFCs out of Canada
- the harvesting of marine plants in coastal waters
- low-level flying over the back country of a National Park
- ocean dumping of substances prescribed by the Canadian Environmental Protection Act

Figure 1:*Canadian Environmental Assessment Act* Process Overview

What is a federal authority?

Under the Act, a federal authority is

- a federal Minister of the Crown;
- an agency or other body of the federal government that is ultimately accountable to Parliament through a federal Minister of the Crown;
- any federal department or departmental corporations set out in Schedule I or II to the *Financial Administration Act*;
- any other body prescribed in the regulations to the Act.

The following are not federal authorities under the Act:

- the governments of the Yukon or Northwest Territories;
- a council or band under the Indian Act;
- harbour commissions;
- Crown corporations within the meaning of the *Financial Administration Act*.

When does the Act apply?

An EA is required if a federal authority exercises or performs one or more of the following powers, duties, or functions in relation to a project:

- proposes the project;
- grants money or any other form of financial assistance to the project;
- grants an interest in land to enable a project to be carried out (that is, sells, leases, or otherwise transfers control of land); or
- exercises a regulatory duty in relation to a project, such as issuing a permit or licence, that is included in the Law List prescribed in the regulations to the Act.

What is a responsible authority?

The federal authority that either has proposed the project or has been asked to provide support or approval in the form of funding, land, or a permit, licence, or other approval specified by regulation is known as the project's responsible authority (RA). Among other things, the RA

- must ensure that an EA of the project is conducted as early as possible, and before irrevocable decisions are made regarding the proposed project;
- shall not provide federal support to the project before the EA is completed;
- shall not provide federal support to the project if, following an EA, an RA concludes that the adverse environmental effects of a project are not justified in the circumstances.

Is the project likely to involve transboundary effects?

The transboundary provisions of the Act give the Minister of the Environment the authority to refer a project directly to a mediator or panel, if the Minister

believes that the project may cause significant adverse transboundary environmental effects in cases when the project would otherwise not require an EA, and no other federal Act or regulations apply.

Transboundary effects under the Act refer to adverse effects that are likely to occur

- on federal lands (because of projects carried out outside these lands);
- off federal lands (because of projects carried out on these lands);
- across provincial boundaries; or
- across international boundaries.

Special EA procedures may be required if a project is likely to have significant adverse environmental effects across Canada's international boundaries. Canada is a signatory to the *Convention on Environmental Assessment in a Transboundary Context*. The *Convention* seeks to ensure that countries take measures to prevent, reduce, and control significant adverse transboundary environmental effects from proposed activities.

For more information on Canada's obligations under the *Convention*, the RA should contact the Agency.

What are the key stages to the EA process under the Act?

There are four key stages to the EA process:

- start-up;
- the EA;
- decision by the RA;
- post-decision activity.

In start-up, the RA must determine whether the Act applies to the project, and which EA track will be followed.

In some cases, the first phase of the EA is a self-directed assessment through either a screening or a comprehensive study. These tracks are considered self-directed because the RA determines the scope of the EA, and directly conducts or manages the EA process in compliance with the requirements of the Act. If the project is not on the Comprehensive Study List, is not registered for a class screening, and has not been previously assessed, the RA must conduct the screening without the benefit of a class or previous screening report. Most projects will fall into this category.

By one measure, screening is the most important EA track under the Act. The majority of federal projects -- perhaps 95% or more -- can be expected to be assessed through a screening or class screening.

If the screening concludes that further investigation is needed, or if public concerns about the project warrant, the RA refers the project to the Minister of the Environment for a referral to mediation or a panel review. In the case of a comprehensive study, the Minister determines whether the project can be referred back to the RA for action or whether further investigation is required.

No matter which EA track is followed, the goal is to determine whether, after taking into account the implementation of any mitigation measures the RA considers appropriate, the project is likely to result in significant adverse environmental effects. Only those environmental effects as defined in the Act are considered in the determination, which must be supported by objective reasoning, based on scientific, technical, and other relevant information.

Upon completion of the EA, the RA must determine whether to provide federal support for the project (that is, whether it may undertake any action that enables the project to proceed). The fate of the project itself is the responsibility of the project's proponent. In some cases, of course, the RA will be the proponent. When this is not the case, however, the withholding of federal support or authorization may prevent the proponent from proceeding. In other cases, the proponent may be able to proceed without federal support.

Once the RA has made its decision, it must give public notice concerning its course of action and, if the project is to proceed, ensure that all appropriate mitigation measures are implemented. It must also determine whether a follow-up program is appropriate, and if so, design and implement one.

What is a follow-up program?

Under the Act, a follow-up program

- verifies the accuracy of the EA; and/or
- determines the effectiveness of any mitigation measures that have been implemented.

In a screening, the RA must consider whether a follow-up program is appropriate only when it has determined that it may provide federal support for the project.Acomprehensive study, mediation, or panel review, on the other hand, must explicitly address the need for and requirements of a follow-up program during the assessment itself.

When a follow-up program may be appropriate

The RA should develop a follow-up program for a project when the circumstances warrant. Examples include situations where

- the project involves a new or unproven technology
- the project involves new or unproven mitigation measures
- *an otherwise familiar or routine project is proposed for a new or unfamiliar environmental setting*
- *the assessment's analysis was based on a new assessment technique or model, or there is otherwise some uncertainty about the conclusions*
- *project scheduling is subject to change such that environmental effects could result*

Scope of the environmental assessment

The scope of the project and the scope of the assessment define the components of a proposed development and the environmental effects that should be included in an EA conducted under the Act.

Scope of the project

Under the Act, the RA must determine the scope of the project in a screening or comprehensive study. The scope of the project refers to those components of the proposed development that should be considered part of the project for the purposes of the EA.

In determining the scope of the project, therefore, the RA must consider:

- which physical works fall within the scope of the project, and which undertakings in relation to those physical works fall within the scope of the project; or
- which physical activities not in relation to a physical work (identified in the Inclusion List regulation) fall within the scope of the project.

The "principal project/accessory" test

The Act does not provide direction to RAs in determining which physical works should be included within the scope of a project. To ensure consistency in scope of the project determinations, RAs should consider applying the "principal project/accessory" test. This test consists of two steps.

First, what is the principal project? The principal project is always either the undertaking in relation to a physical work or the physical activity for which a power, duty, or function is being exercised (therefore triggering the need for an EA under the Act. The principal project must always be included as part of the scoped project.

Second, are other physical works or physical activities accessory to the principal project? If so, then these may be included as part of the scoped project. Those physical works or physical activities not accessory to the principal project may not be included as part of the scoped project. To determine what is accessory to the principal project, the RA should apply the following two criteria:

- **interdependence**: If the principal project could not proceed without the undertaking of another physical work or activity, then that other physical work or activity may be considered as a component of the scoped project.
- **linkage**: If the decision to undertake the principal project makes the decision to undertake another physical work or activity inevitable, then that other physical work or activity may be considered as a component of the scoped project.

Same EA for related projects

Under the Act, the RA can combine two or more triggered projects into the same EA if it determines that the projects are so closely related that they can be considered to form a single project.

In making this determination, RAs should apply the following three criteria:

- **interdependence**: If the principal project could not proceed without the undertaking of another project, the two may be considered to form a single project.
- **linkage**: If the decision to undertake the principal project makes the decision to undertake another project inevitable, the two may be considered to form a single project.
- **proximity**: If the geographic study areas developed in relation to the scope of the assessment for the individual projects overlap, the two may be considered to form a single project.

Not all criteria must be met in every case. Each case must be considered on its own merit. However, the **proximity** criterion on its own will rarely be sufficient cause for the RA to combine two or more projects into the same EA.

Undertakings in relation to a physical work

Finally, under the Act, the RA must include in the EA all relevant aspects of a physical work (that is, all undertakings in relation to that physical work) that are proposed or, in its opinion, are likely to be carried out. These undertakings could include, for example, the construction, operation, modification, decommissioning, or abandonment of a physical work. Such proposed undertakings or undertakings that are likely to be carried out must be included in the scope of the project even if there is no specific trigger for them. The assessment of all proposed undertakings or undertakings that are likely to be carried out in relation to a physical work should be conducted as early in the planning stages of the physical work as is practicable.

(Note that this applies only to undertakings in relation to a physical work and not to physical activities.)

Scope of Project for EA Triggered by Federal Funding Project:

- Construction of an oil refinery in southern Saskatchewan by an oil company
- An extension of a pipeline is required to the new refinery.

EA Trigger:

- Funding contribution from Natural Resources Canada.

Scope of the project:

i. *Principal project:*
   - construction of oil refinery
ii. *Accessory physical works:*
   - under the linkage principle, the construction of the pipeline can be considered an accessory work of the construction of the refinery
iii. *Other undertakings in relation to the physical work:*
   - operation, planned modifications, and decommissioning of refinery

---

Scope of the assessment

Once the RA has determined the scope of the project, it must then address the question of the scope of assessment. The scope of assessment includes a determination of the environmental effects to be addressed, the scope of the environmental effects to be assessed, and the effects to be considered in making decisions regarding the project.

Effects to be assessed

The RA exercising any power, duty or function under section 5 of the Act must include in the assessment all factors that are relevant to the decision that the RA must make:

- all the factors that the Act requires an RA to consider, including all effects that fall within the Acts definition of "environmental effect", regardless of whether the effect falls within an area of federal jurisdiction. Section 1.4.2 below, addresses the statutory provisions in the Act for the scoping of environmental effects in greater detail; and
- any factors that are relevant to the assessment of effects of the project in the environment that any other federal law or regulation require or permit the RA to consider. Where the RA is acting as a regulator this includes the factors that the law creating the RAs decision-making authority states must or may be considered.

Additionally, where the RA is

- the project proponent,
- asked to provide financial assistance, or
- asked to sell, lease or transfer its interest in lands,

it may also assess beyond the statutory requirements to the extent that it considers necessary in the circumstances. The RA may broaden the scope of assessment for these decisions because they relate to the operation of the Government itself or its property; matters which are within exclusive federal jurisdiction.

Effects to be considered in making decisions

If a factor is considered relevant to the decsion that the RA must make (see "Effects to be Assessed" above), the RA must take it into account in making its decision whether to provide federal support for a project.

Attaching conditions

Where the RA is

- the project proponent,
- asked to provide financial assistance, or
- asked to sell, lease or transfer its interest in lands, it may attach any condition or require any mitigation measure it considers appropriate in the circumstances. Where the RA takes a regulatory action that supports the project (that is, where the RA decides to issue an authorization under a statutory or regulatory provision on the Law List regulation), the conditions it attaches to the approval must pertain to the factors which are relevant to its decision:
    - the factors that the Act requires the RA to consider, and
    - any factors that the RA must or may consider pursuant to the triggered federal law or regulation.

This analysis is based on recent decisions of the Supreme Court of Canada relating to the permitted scope of assessment under the EARP Guidelines Order. However, it is expected that the principles enunciated by the Court with respect to the Order will apply to the Act as well.

Public registry

The Act is based, in large part, on the principle of public participation. To help realize this objective, public access to information upon which EAs are based is provided through a public registry.

Obligations

The Act imposes two main obligations on RAs with respect to the public registry:

- to establish a public registry for the purpose of facilitating public access to the records relating to EAs;
- to operate such a registry in a manner to ensure convenient public access.

A public registry must be maintained in respect of every project for which an EA is conducted, regardless of whether the project undergoes a screening, comprehensive study, panel review, or mediation.

Organization

The Agency has established a public registry framework within which all RAs can function. The framework seeks to provide all Canadians convenient access tocomplete information about EAs carried out under the Act. It will also ensure consistency across the federal government, and assist RAs in meeting their public registry obligations in an efficient and convenient manner.

The framework consists of three components:

- **The Federal EA Index**
    - The Federal EA Index is an electronic listing of all EAs conducted by all RAs under the Act. The index provides "one-window" access to information on the who, what, when, where, and why of any EA conducted under the Act, regardless of the RA. It also

directs the public to contacts and document listings related to specific EAs.

- **RA document listings**
  - The second component of the public registry system is the listing of all publicly available documents relating to each EA. The RA maintains such a listing (in electronic or hardcopy form) for each of its respective EAs. The RA has three key responsibilities with respect to its listings:
    - determining whether each document should be placed in the public registry;
    - maintaining a current list of documents for all active EAs;
    - ensuring the document listing is available to the public upon request.
- **EA documents**
  - The third component of the public registry system consists of the EA documents produced by, collected by, or submitted to the RA with respect to an EA. Key issues are
    - responding to requests in a timely manner;
    - determining the need to translate documents into the other official language;
    - applying cost recovery guidelines, when applicable.

Benefits

The public registry system provides several important benefits to RAs:

- The framework allows all RAs to meet their registry obligations in a consistent, cost-effective manner that ensures convenient, low, or no-cost public access to information.
- RAs do not have to develop their own procedures.
- RA tasks are streamlined so as to minimize workload requirements.
- Many of the tasks build on current practices so as to minimize costs and workload requirements for RAs.
- Procedures make practical and effective use of technology whenever possible, further reducing the RA's workload and costs.
- Tasks can be phased-in where appropriate.

"The Public Registry" reference guide in Part III of the guide provides details on the organization of the public registry system, as well as guidelines in five key areas:

- coordination with other RAs;
- document clearing;
- responding to requests;
- cost recovery;
- official language considerations.

Expert federal departments

Some federal authorities may be a source of baseline data, information, knowledge, or expertise relevant to the EA. These federal authorities, or expert federal departments, have a special role to play in the EA process. Under the Act, these expert departments must provide specialist information and expertise when requested by the RA, mediator, or panel.

Expert federal authorities include Agriculture Canada, Department of Natural Resources Canada, Environment Canada, Fisheries and Oceans Canada, Health Canada, Heritage Canada, and Indian Affairs and Northern Development.

Expert federal departments may be involved at every stage of the EA process, from reviewing terms of reference at the scoping step, and providing data during preparation of the EA report, to reviewing the report and appearing as an expert witness during a panel review. The independent review function is of particular importance, because it helps ensure the scientific and technical integrity of EA reports prepared under the Act.

The following general guidelines should apply to the RA when involving an expert department:

- The RA should try to identify and involve the relevant expert federal departments at the early stages of an EA.
- The RA's request for information or advice should relate directly to its EA, and should be clear and concise, in order to use the expert department's time most effectively.
- Expert departments should be expected to provide reasonably available (that is, "off-the-shelf") information, but not to undertake lengthy or costly research toobtain the information.
- The "proponent pays" principle should apply in cases where the expert department undertakes new work, at the request of the RA, to provide necessary information or analysis.
- Prior to submitting a class screening report or comprehensive study report for Agency and public review, the RA should ensure that all relevant expert federal departments have reviewed it for scientific and technical accuracy, and that any concerns raised by these departments have been addressed.

Public involvement

Since public involvement is a key objective of the EA process established by the Act, the RA should make an effort to understand the range of public concerns in a project. The public is not a single entity, but rather comprises varied interests: local residents, local environmental groups, small-business owners, and many others.

The public can also be a valuable source of information to the RA. Local community residents and indigenous peoples can provide helpful information at all steps of an EA. Public input also will be appropriate when there are public concerns about a proposed project, and when the RA needs to build a consensus among different groups. Thus, the RA should determine as early as possible when and to what extent public input should be sought.

A public involvement program goes beyond allowing the public to comment on a completed screening report or comprehensive study report. Rather, it seeks to provide the public with a variety of opportunities to be informed at all stages of the EA, to offer ideas and information, to react to proposals in order to influence recommendations and decisions, and to be informed of all decisions.

Public concerns

Public concerns, if not addressed sufficiently in the screening or comprehensive study, can warrant a referral to a public review either through mediation or panel review. Public concerns can be expressed in many ways:

- correspondence and telephone calls to the Minister, local MPs, the Agency, or the department
- media coverage of public concerns
- community events, such as demonstrations or meetings about the project;
- formal interventions
- informal communication

RAs should not necessarily rely on numbers when judging the importance of public concerns. Even a few letters or calls may express public concerns, particularly if they are from people who will be most directly affected by a project.

| Previous page | Table of contents | Next page |

Last Updated: 2005-03-23 Important Notices

Self-directed Environmental Assessment

- Screening
- Comprehensive study
- Factors to be considered
- Review of the environmental assessment report
- Decision by the responsible authority or Minister
- Summary of responsibilities

The majority of federal projects requiring an EA will undergo either a screening or a comprehensive study. Both can be considered self-directed environmental assessments in the sense that the RA determines the scope of the EA and the scope of the factors to be considered, directly manages the EA process, and ensures the EA report is prepared.

In practice, the project proponent may conduct the EA, prepare the report, and design and implement mitigation measures and a follow-up program. The RA alone, however, remains directly responsible for ensuring that the screening or comprehensive study is carried out in compliance with the Act, and for deciding on the course of action with respect to the project following the screening or comprehensive study.

Screening

Screening is a self-directed assessment in which the RA retains the greatest degree of management and flexibility over the scope and pace of the EA process. Screenings will vary in time, length, and depth of analysis, depending on the circumstances of the proposed project, the existing environment, and the likely environmental effects. Some screenings may require only a brief review of the available information and a one- ortwo-page report; others may need new background studies and be as thorough and rigorous as a comprehensive study.

In cases where there is sound knowledge of the environmental effects and appropriate mitigation measures for a group or class of projects, the RA may be able to use all or part of a class screening report.

Different levels of screening

A screening is the most flexible EA track, accommodating a wide range of projects. A railway crossing, for example, may require only a simple screening without the involvement of outside experts, the public, or the Minister of the Environment. The RA for a proposed gold mine in an environmentally sensitive area may, on the other hand, decide that the assessment needs to

- consider the project's purpose and any alternative means of carrying out the project
- collect additional information
- involve the public and outside experts.

Future use of a screening report

Besides forming the basis of the decision on the project, an RA's screening report will become a source of information on environmental effects and mitigation for future screenings, and eventually may be used as a class screening report. Some departments may want to establish a database of completed screening reports that is easily accessible to those responsible for screening.

Comprehensive study

Although the majority of projects covered by the Act will undergo an EA through a screening, some projects will require a comprehensive study, a more intensive and rigorous assessment of their environmental effects. Conducting a comprehensive study may eliminate the need for further review by mediation or review panel.

The Comprehensive Study List (Appendix D), established by regulation, deals with those projects that have the potential to result in significant environmental effects regardless of their location. Such projects tend to be large-scale and often generate considerable public concern. Examples include

- large oil and natural gas developments;
- major electrical-generation projects;
- large mining projects;
- major pipelines;
- nuclear power facilities, including uranium mines;
- large industrial plants.

In a comprehensive study, the RA retains a primary management role over the EA, although it has more obligations than in a screening. These include the need to consider a wider range of factors, to submit the comprehensive study report for review by the Agency and the public, to take public comments into account, and to consider the need for a follow-up program. In addition (opposed to a screening), the Minister of the Environment has a key role to play in determining the next step in the EA process, when the comprehensive study has been completed.

Federal authorities with specialist information and expertise have a special role to play in a comprehensive study. Under the Act, expert departments must provide specialist information and expertise related to the project when requested by the RA. To ensure that all scientific or technical matters have been adequately addressed in the comprehensive study report prior to submitting the report to the Agency, the RA should make certain that all relevant expert federal departments have provided specialist information or expertise, and have had an opportunity to comment on the comprehensive study report.

Given the scale and complexity of many of the projects that will undergo a comprehensive study, the RA should also consider establishing a public consultation program during preparation of the comprehensive study report.

The comprehensive study report submitted to the Agency for review should include a record of consultations with expert federal departments and the public, as well as a discussion of any unresolved scientific or technical concerns.

Factors to be considered

The RA determines the scope of the factors to be considered in the self-directed EA. Both a screening and comprehensive study must consider the following factors:

- the environmental effects of the project, including environmental effects of

Sample outline for an EA report The RA can develop its own simple format for a screening report or comprehensive study report. Following is a sample outline:

- Name of proposal
- Brief description (location, cost, etc.)
- Nature of effects identified
- Proposed mitigation measures
- Federal/provincial agencies consulted
- Public advised (list methods as applicable)
- Approximate date of implementation
- Conclusion and rationale
- Departmental/agency contact (name and telephone number)

---

malfunctions or accidents that may occur in connection with the project, and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;

- the significance of these environmental effects;
- comments from the public received in accordance with the Act and its regulations;
- technically and economically feasible measures that would mitigate any significant adverse environmental effects of the project;
- any other matter relevant to the screening or comprehensive study that the RA or, in the case of a comprehensive study, the Minister, may require.

Environmental effects of the project are changes in the biophysical environment caused by the project, as well as certain effects that flow directly from those changes, including effects on

- human health;
- socioeconomic conditions;
- physical and cultural heritage, including effects on things of archaeological, paleontological, or architectural significance;
- the current use of lands and resources for traditional purposes by aboriginal persons.

Environmental effects also include the effects of any changes to the project that may be caused by the environment.

In addition to the above factors, the comprehensive study must address

- the purpose of the project;
- alternative means of carrying out the project that are technically and economically feasible, as well as the environmental effects of any such alternative means;
- the need for, and the requirements of, any follow-up program;
- the capacity of renewable resources that are likely to be significantly affected by the project to meet present and future needs.

Alternatives

The Act distinguishes between "alternative means" and "alternatives to"

"Alternative means" of carrying out the project are methods of a similar technical character or methods that are functionally the same. "Alternative means" with respect to a nuclear power plant, for example, includes selecting a different location, building several smaller plants, and expanding an existing nuclear plant. "Alternative means" that are technically and economically feasible must be considered in a comprehensive study, mediation, and panel

review, but are discretionary under a screening.

In contrast, "alternatives to" the project are functionally different ways of achieving the same end. For example, "alternatives to" the nuclear power plant include importing power, building a hydroelectric dam, conserving energy, and obtaining the energy through renewable sources. Consideration of "alternatives to" the project is at the discretion of the RA in screening, or of the Minister in consultation with the RA in a comprehensive study, mediation, or panel review.

Review of the environmental assessment report

The screening and comprehensive study tracks differ on the matter of mandatory review. In a screening, the RA has the option of allowing public review and comment on the screening report before making any decision on the project. In addition, it also may give expert federal departments an opportunity to review the report and other relevant documents.

When the comprehensive study report has been completed, however, the RA must submit it to the Agency for review and public comment. The Agency has several responsibilities relating to the review of the comprehensive study report, including

- ensuring that the report complies with the Act;
- ensuring opportunities are provided for the public to comment on the report;
- receiving and reviewing public comments that are forwarded to the Agency;
- making recommendations to the Minister based on its review of the report and the comments received from expert departments and the public.

The Agency will not normally subject the report to a rigorous scientific review.

Prior to the deadline set out in the public notice issued by the Agency, any person may file comments with the Agency about the conclusions, recommendations, and any other aspect of the comprehensive study report.

Decision by the responsible authority or Minister

There is an important difference between the screening and comprehensive study in terms of who determines the next step in the EA process upon completion and review of the report.

When the screening report is completed, the RA must determine whether it may provide federal support to the project (that is, whether to grant the funds, licence, or interest in lands needed by the project). One of three decisions is possible:

- It may provide federal support if the project is not likely to cause significant adverse environmental effects, taking into account appropriate mitigation measures, if necessary.
- It must not provide federal support if the project is likely to cause significant adverse environmental effects that cannot be justified, taking into account appropriate mitigation measures.
- The RA will request that the Minister order a mediation or panel review of the project.

In the case of a comprehensive study, however, the Minister determines whether the project can be referred back to the RA for appropriate action, or whether further assessment is required by mediation or a panel review. The Minister

- refers the project back to the RA for appropriate action if

    - the project is not likely to cause significant adverse environmental effects, taking into account appropriate mitigation measures, if necessary; or
    - the project is likely to cause significant adverse environmental effects that cannot be justified, taking into account appropriate mitigation measures;
- orders a public review of the project through either mediation or a panel review when
    - it is uncertain whether the project is likely to cause significant adverse environmental effects;
    - the project is likely to cause significant adverse environmental effects and a determination must be made as to whether they are justified in the circumstances;
    - public concerns warrant a public review.

From a practical perspective, the RA can ask the Minister to refer the project directly to a public review before the EA begins, or at any time before completion of the screening or comprehensive study, if it is clear that a public review will be necessary. For example, it may be apparent to all interested parties at the start that public concerns about the project are unlikely to be adequately addressed in a self-directed EA.

Summary of responsibilities

The following summarizes the RA's responsibilities in a self-directed EA:

Prior to screening or comprehensive study

- determines, along with the Agency if necessary, the lead RA for projects with two or more RAs;
- establishes and maintains the public registry;
- must not provide any federal support to the project until completion of the EA;
- determines whether a previous EA was conducted with respect to the project.

Public concerns

At any time during a screening or comprehensive study, the RA may request that the Minister of the Environment refer the project to a review by mediator or panel. One key justification for such a request is the presence of public concerns. Depending on the nature of the project and the environmental setting, public concerns can be expressed in a wide range of ways. As a result, RAs should be aware of, and sensitive to, such questions as

- Who will be affected by the project?
- What are the views of these affected parties?
- Do they need more information about the project?
- How do they express themselves -- through the media, correspondence, community action, informal communication?

Screening and comprehensive study

- determines the scope of the EA (that is the scope of the project and the scope of the assessment);
- ensures that a screening or comprehensive study is conducted on a project as early as is practicable in the planning stages and before irrevocable decisions are made (may delegate conduct of EA and preparation of report);
- ensures that a screening report or comprehensive study report is prepared;
- makes a determination on the impact of the project.

Screening

- may use or permit the use of all or part of any class screening report, ensuring that adjustments are made to take into account local circumstances and any cumulative environmental effects;
- determines whether public participation is appropriate and, if so, gives the public an opportunity to comment on the screening report;
- makes a determination about whether it may provide federal support to the project, based on the results of the screening report, and taking into account any comments from the public or expert departments.

Comprehensive study

- considers the need for and requirements of a follow-up program during the comprehensive study;
- submits the comprehensive study report to the Agency for review by the Agency and the public;
- if the Minister has referred the project back to the RA, makes a determination about whether it may provide federal support to the project.

Following screening or comprehensive study

- provides public notice of its course of action, taking into account any obligations under the *Official Languages Act*;
- ensures that, for any project that is proceeding, all appropriate mitigation measures are implemented;
- ensures that, if appropriate, a follow-up program is developed and implemented.

| Previous page | Table of contents | Next page |

Last Updated: 2004-07-09 Important Notices

Environmental Assessments
Public Participation
How to do Environmental Assessments
Legislation & Regulations
Training Opportunities
Research & Development
Strategic Environmental Assessment
Publications
Frequently Asked Questions

Canadian Environmental Assessment Registry
CEAR Main »

A primer for Industry
Will your project need a federal EA? More »

Search our site

| Previous page | Table of contents | Next page |

Public Review

- Need for a public review
- Factors to be considered
- Mediation
- Panel review
- Decision by the responsible authority
- Summary of responsibilities

Need for a public review

In a public review, members of the public are allowed to participate in the conduct of the EA. The Act provides three options for the public review of projects: mediation, panel review, or a combination of the two. The Minister of the Environment can order a public review at any time during a screening or comprehensive study. The RA may also request such a review from the Minister at any time.

Mediation and panel reviews are advisory, not decision-making procedures. The RA still determines whether it may provide federal support to the project.

A referral to a public review is made because

- it is uncertain whether the project is likely to cause significant adverse environmental effects;
- the project is likely to cause significant adverse environmental effects and a determination must be made on whether these effects are justified in the circumstances;
- public concerns about the project and its possible environmental effects warrant further investigation of the project.

A project can be referred to mediation or a panel review after a screening or comprehensive study, or at any time before completion of a screening orcomprehensive study (and, in practice, **before** the screening or comprehensive study actually begins, if it is clear from the outset that a public review will be necessary).

The Minister determines whether the project will proceed to mediation or a panel review.

Where mediation is inappropriate or unsuccessful, the EA review is conducted by an independent panel. In certain cases, a panel review may be conducted jointly with another jurisdiction.

Factors to be considered

The Minister establishes the terms of reference for the mediator or panel review after consulting with the RA and other parties as appropriate. The factors that must considered in a public review are the same as those for a comprehensive study. These are

- the purpose of the project;
- alternative means of carrying out the project that are technically and economically feasible, as well as the environmental effects of any such

alternative means;
- the environmental effects of the project, including environmental effects of malfunctions or accidents that may occur in connection with the project, and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;
- effects on the capacity of renewable resources that are likely to be significantly affected by the project to meet present and future needs.
- the significance of these environmental effects;
- public comments
- mitigation measures;
- the need for and the requirements of any follow-up program;
- any other matter relevant to the review, such as the need for and alternatives to the project, that the Minister or RA may require.

Mediation

Mediation is a voluntary process of negotiation in which an independent and impartial mediator helps the interested parties resolve their issues. It is characterized by a non-adversarial, collaborative approach to solving problems and generating agreements where consensus is possible. It may also be used to identify and clarify issues where agreement is not possible.

In mediation, members of the public participate as representatives of interestedparties, along with representatives of the RA, the proponent, and other groups as appropriate. Meetings or hearings open to the general public, as are held in a panel review, usually are not part of a mediation.

Mediation is an appropriate choice whenever all of the interested parties have been identified and are willing to participate, and a consensus appears possible. It is particularly effective where there are a small number of interested parties and the environmental issues are limited in scope and number. It can be sensitive to local concerns and less costly than a panel review in terms of time and resources. Participants also gain a sense of having contributed to the resolution of a problem.

In this process, a mediator is appointed by the Minister after consulting with the RA and the other parties to the mediation. The mediator assists the participants in reaching a consensus, but does not make decisions for them.

Successful mediation reflects the following guiding principles:

- Participation must be voluntary, and participants must see the value of such an approach.
- All legitimate stakeholders must be allowed to participate.
- The mediator must be independent and impartial.
- The mediator must be acceptable to all the parties involved.

Panel review

The fourth EA track established by the Act is an EA by an independent public review panel. The Minister appoints the panel and establishes its terms of reference after consulting with the RA. Where appropriate, a panel review may be conducted jointly with another jurisdiction.

Panel reviews are conducted in compliance with the Act and according to the following guiding principles:

- Information available to the panel is also made available to the public (with the exception of information that must remain confidential because of privacy or security concerns).
- Parties with a legitimate interest in the project are encouraged to participate.
- Panel reviews involve informal but structured meetings.

In conducting the public review, the panel must

- ensure that the information required for the EA is obtained and made available to the public;
- convene hearings in a manner that offers the public an opportunity to participate;
- prepare a report setting out the rationale, conclusions, and recommendations of the panel, including any mitigation measures and follow-up program, as well as a summary of comments received by the public;
- submit the report to the Minister and the RA.

Decision by the responsible authority

When the report of the mediator or panel is completed, the RA must decide what action to take.

The RA may provide federal support to the project if the project is not likely to cause significant adverse environmental effects, taking into account appropriate mitigation measures, or if the project is likely to cause significant adverse environmental effects that can be justified in the circumstances.

Conversely, the RA may **not** provide federal support if the project is likely to cause significant adverse environmental effects that cannot be justified in the circumstances.

Summary of responsibilities

The following summarizes the responsibilities of the RA in a public review:

Prior to mediation or panel review

- must not provide federal support to the project until completion of the EA;
- recommends to the Minister of the Environment whether mediation is appropriate;
- maintains the public registry for the project up to the time the project is referred to a mediator or panel and after the report of the mediator or panel is submitted to the Minister and RA, until the completion of any follow-up program.

Mediation

- advises the Minister on the terms of reference for the mediator;
- provides background information;
- participates in the mediation process.

Panel review

- advises the Minister on the panel's terms of reference;
- ensures, for any project referred to a panel, that an environmental impactstatement (EIS) is prepared in accordance with the guidelines established by the panel (if a screening report or comprehensive study report has not been prepared);
- ensures any information deficiencies in the EIS that are identified by the panel are addressed;
- participates in the panel's public hearings.

Following mediation or panel review

- considers the report of the mediator or panel in reaching a decision about whether to provide federal support to the project;
- provides public notice of its course of action, including the extent to

which the recommendations of the mediator or panel have been adopted;
- ensures that for any project that is proceeding, all appropriate mitigation measures are implemented;
- ensures that, when appropriate, a follow-up program is developed and implemented.

| Previous page | Table of contents | Next page |

Working with Other Governments

Some projects require authorization from both the federal government and a provincial or territorial government. Without close cooperation, a project might need to undergo separate EAs, resulting in unnecessary duplication, confusion, and excessive costs for all parties.

Harmonization of Canada's various EA processes is essential if the environmental effects of projects are to be assessed in an effective and consistent way across the country. Harmonization also helps create a more favourable atmosphere for private-sector decision-makers by streamlining regulatory approval processes and reducing planning uncertainties and delays.

Given the potential for overlapping EAs, the Act allows the Minister of the Environment to enter into agreements with provincial and territorial governments relating to the EA of projects where both governments have an interest.

The bilateral agreements provide guidelines for the roles and responsibilities of each government in the EA of such projects. The agreements cover cooperation in such areas as joint panels, mediation, screening, comprehensive studies, notification, cost-sharing, and time frames.

In 1992 the Canadian Council of Ministers of the Environment (CCME) approved the *Framework for Environmental Assessment Harmonization*. The framework serves asthe foundation for bilateral agreements. Governments committed themselves to establishing appropriate mechanisms for consultation and cooperation at every stage of an EA.

The framework

- confirms each government's jurisdictional responsibilities for EA;
- recognizes that federal, provincial, and territorial EA practices are consistent in principle and intent;
- acknowledges the need for clear and consistent rules that eliminate unnecessary duplication and are sensitive to the needs of proponents and to concerns for a timely and fair process;
- affirms the need for a "single-window" approach to EA that provides all proponents with the information they may require;
- establishes the mechanisms to allow for intergovernmental cooperation at all steps of the federal EA process.

The Canada-Alberta Agreement for Environmental Assessment Cooperation, the first bilateral agreement under the framework, includes provisions for

- early notification of projects of shared interest to allow for cooperative EAs;
- establishment of designated "single-window" offices in Alberta;
- coordination of decision-making by both parties with mutually agreeable time frames;
- guidelines for the establishment of joint review panels consistent with federal and provincial legal and operational requirements.

Part II: The Practitioner's Guide

- Purpose and Organization
- Chapter 1: The Self-Directed Environmental Assessment: Screening and Comprehensive Study
  - 1.1 The Self-directed Environmental Assessment
    - 1.1.1 Screening
    - 1.1.2 Class screening
    - 1.1.3 Comprehensive study
  - 1.2 Roles and Responsibilities
  - 1.3 Start-up
    - 1.3.1 Does the Act apply?
    - 1.3.2 Selecting the environmental assessment track
    - 1.3.3 The public registry
    - 1.3.4 Public concerns
    - 1.3.5 Working with other governments
  - 1.4 Step 1: Scoping
    - 1.4.1 Scope of the environmental assessment
    - 1.4.2 Factors to be considered
    - 1.4.3 Interested parties
    - 1.4.4 Appropriate level of effort
  - 1.5 Step 2: Assessing Environmental Effects
    - 1.5.1 The project
    - 1.5.2 The existing environment
    - 1.5.3 Project-environment interactions
    - 1.5.4 Other factors
  - 1.6 Step 3: Mitigating Environmental Effects
  - 1.7 Step 4: Determining the Significance of Adverse Environmental Effects
    - 1.7.1 The question
    - 1.7.2 The role of the public
    - 1.7.3 Applying the criteria
  - 1.8 Step 5: Preparing the Environmental Assessment Report
    - 1.8.1 The screening report
    - 1.8.2 The comprehensive study report
  - 1.9 Step 6: Review of the Environmental Assessment Report
    - 1.9.1 The screening report
    - 1.9.2 The comprehensive study report
  - 1.10 Step 7: Decision by the Responsible Authority and the Minister
    - 1.10.1 Public concerns
    - 1.10.2 Screening
    - 1.10.3 Comprehensive Study
  - 1.11 Step 8: Post-Decision Activity
    - 1.11.1 Public notice
    - 1.11.2 Follow-up program
    - 1.11.3 Mitigation measures
  - 1.12 The Self-directed Environmental Assessment Checklists

Purpose and Organization

The **Practitioner's Guide** provides detailed guidance on conducting environmental assessments in compliance with the *Canadian Environmental Assessment Act* (Act). It is written for practitioners who must prepare, review, or contribute to federal EAs. It focuses on the procedures for conducting an EA under the Act. It also provides, where appropriate, guidance on "how-to" techniques for conducting EAs.

The guide is organized into two chapters and a set of appendices:

Chapter 1: The Self-Directed Environmental Assessment is a detailed look at the procedures to follow in conducting a screening or comprehensive study in compliance with the Act.

Chapter 2: The Public Review provides an overview of the scope, nature, and procedures of mediation and panel reviews, focusing on the role and obligations of the responsible authority.

Appendices include the four key inclusion and exclusion lists for the Act, and will be provided when the Act and its regulations come into effect.

Chapter 1: The Self-Directed Environmental Assessment: Screening and Comprehensive Study

1.1 The Self-directed Environmental Assessment

This chapter provides guidance on conducting a self-directed environmental assessment (EA) in the form of a screening or comprehensive study, in compliance with the *Canadian Environmental Assessment Act* (Act). It describes the obligations of the responsible authority (RA) at each step, and summarizes the roles and responsibilities of the major participants.

The majority of federal projects requiring an EA will undergo either a screening or comprehensive study. Both can be considered self-directed environmental assessments, in the sense that the RA determines the scope of the EA and the scope of the factors to be considered, directly manages the EA process, and ensures that the EA report is prepared. In practice, the project proponent may actually conduct the EA and prepare the report, but the RA alone remains directly responsible for ensuring that the screening or comprehensive study is carried out in compliance with the Act.

A self-directed EA usually consists of eight major steps (see Figure 1-1).

1.1.1 Screening

Most projects involving the federal government will be assessed through screening. Under the Act, screening is a systematic, documented assessment of the environmental effects of a proposed project. Screening will determine whether or not the RA may provide federal support for the project (that is, take action that enables the project to proceed). Specifically, screening will identify the need to

- mitigate environmental effects;
- modify the project plan;
- carry out further assessment of the environmental effects of the project through mediation or panel review.

RAs have considerable flexibility in conducting screenings. Screenings will vary in time, length, and depth of analysis, depending on the circumstances of the proposed project, the existing environment and the likely environmental effects. Some screenings may require only a brief review of the available information and a one- or two-page report; others may be as thorough and rigorous as a comprehensive study.

Figure 1-1: Key Steps of the Self-Directed Environmental Assessment
In a screening, the RA must

- determine the scope of the project, scope of the assessment, and scope of the factors to be considered;
- determine whether a project has already been assessed or whether a class screening report is available for the project;

- determine whether mitigation measures are required to eliminate or reduce significant environmental effects, and ensure implementation of these measures;
- determine whether the project is likely to cause any significant adverse environmental effects;
- ensure that a screening report is prepared;
- make a determination, based on the screening report's conclusions, about whether it may provide federal support to the project;
- maintain all publicly available documents related to the assessment in a public registry;
- monitor expressions of public concern about the project and, if appropriate, provide opportunities for public review and comment.

By one measure, screening is the most important EA track under the Act. The majority of federal projects -- perhaps 95% or more -- can be expected to be assessed through a screening or class screening.

Different levels of screening

A screening is the most flexible EA track, accommodating a wide range of projects. A railway crossing, for example, may require only a simple screening without the involvement of outside experts, the public, or the Minister of the Environment. The RA for a proposed gold mine in an environmentally sensitive area may, on the other hand, decide that the assessment needs to

- *consider the project's purpose and any alternative means of carrying out the project*
- *collect additional information*
- *involve the public and outside experts.*

1.1.2 Class screening

Under the Act, an RA can apply to the Agency to have a report (or reports) declared as a class screening report for future projects. A class screening report presents the accumulated knowledge about the environmental effects of a given class or type of project and identifies the known measures to mitigate those environmental effects.

A class screening report is considered acceptable for any class of projects where there is a sound knowledge of the environmental effects and appropriate mitigation measures, such as classes of projects that are routine and repetitive. In applying a class screening report to a project, however, the RA must still take into account site-specific circumstances and cumulative environmental effects.

Once approved by the Agency, a class screening report can be used by any RA as a model in conducting screenings of other projects within the same class.

Examples of possible project classes for class screening declaration

- *dredgings*

- *culvert installations*
- *highway maintenance*
- *rail-and-tie replacement*
- *shoreline stabilization*
- *building construction*

Federal authorities with specialist information and expertise have a special role to play in the preparation of a class screening report. Under the Act, expert departments must provide specialist information and expertise related to the class screening when requested by the RA. Expert federal authorities include Agriculture Canada, Department of Natural Resources Canada, Environment Canada, Fisheries and Oceans Canada, Health Canada, Heritage Canada, and Indian Affairs and Northern Development.

To ensure that all scientific or technical matters have been adequately addressed in the class screening report prior to submitting it to the Agency, the RA should make certain that all relevant expert federal departments have had an opportunity to provide specialist information or expertise, and comment on the draft class screening report, as appropriate.

The class screening report submitted to the Agency for review should include a record of consultation with the expert federal departments as well as a discussion of any unresolved scientific or technical concerns.

In seeking to designate a report (or reports) as a class screening report, the RA must provide the following information to the Agency:

- a description of the class of projects for which the declaration is sought;
- the potential environmental effects of the class of projects;
- the information required to conduct the screening, including necessary site- and situation-specific data;
- appropriate mitigation measures to eliminate or reduce adverse environmental effects that would normally be expected to occur;
- specific conditions under which a project of this class should undergo more detailed review;
- terms and conditions under which the project may proceed;
- documentation of a technical review by expert federal departments;
- any other information required by the Agency.

Having received the proposed class screening report from the RA, the Agency must make it available for public comment. The Agency must then consider any public comments received in determining whether to designate the report a class screening report.

A class screening report is not a substitute for an EA. It does not exempt the RA from the need to conduct a screening. The RA will still need to factor site-specific issues and cumulative environmental effects into the assessment, and will still need to prepare a screening report for the project. A class screening can greatly simplify and streamline the screening process, however. For example, a screening may be streamlined by using any or all of the descriptions in the class screening report such as the

- project's activities;
- type of information needed;
- environmental components to be addressed;
- nature of environmental effects;
- scope of issues to be considered; or
- mitigation measures.

If the project falls into a class but does not meet all the requirements outlined in the report (for example, a dredging project at a different location), further assessment will be needed. Studies may be required to take account of site-specific circumstances or cumulative effects, or to identify appropriate mitigation measures.

1.1.3 Comprehensive study

Although the majority of projects covered by the Act will undergo an EA through a screening, some projects will require a more intensive and rigorous assessment of their environmental effects through a comprehensive study. Conducting such a study may eliminate the need for further review by mediation or review panel.

The Comprehensive Study List, established by regulation, deals with those projects experience suggests have the potential to result in significant environmental effects no matter where they are located. Such projects tend to be large-scale and often generate considerable public concern. Examples include

- large oil and natural gas developments;
- major electrical generation projects;
- large mining projects;
- major pipelines;
- nuclear power facilities, including uranium mines;
- large industrial plants.

In a comprehensive study, the RA retains a primary management role over the EA, although it has more obligations than in a screening. These include the need to consider a wider range of factors, submit the comprehensive study report to the Agency and the public for review, take public comments into account, and look at the need for a follow-up program. In addition (as opposed to a screening), the Minister of the Environment is responsible for determining the next step in the EA process when the comprehensive study report has been completed.

Compared to projects that will undergo a screening, projects requiring a comprehensive study are generally large-scale, complex, and environmentally sensitive. The scope and depth of the analysis must be correspondingly greater as well, and will demand highly specialized skills and experience. There may be a need for

- gathering environmental baseline data;
- commissioning new studies on specific issues;
- considering highly technical, one-of-a-kind, site-specific mitigation measures;
- extensive public consultation.

Public concerns

Public concerns, if not addressed sufficiently in the screening or comprehensive study, can warrant a referral to a public review either through mediation or panel review. Public concerns can be expressed in many ways:

- correspondence and telephone calls to the Minister, local MPs, the Agency, or the department
- media coverage of public concerns
- community events, such as demonstrations or meetings about the project;
- formal interventions
- informal communication

RAs should not necessarily rely on numbers when judging the importance of

public concerns. Even a few letters or calls may express public concerns, particularly if they are from people who will be most directly affected by a project.

Again, as opposed to a screening, a comprehensive study involves the establishment of a working relationship between the RA and the Canadian Environmental Assessment Agency (CEAA/Agency). The Agency has a direct role to play in reviewing the comprehensive study report for procedural compliance with the Act, providing opportunities for public comments on the comprehensive study report, and advising the Minister of the Environment of the next steps in the EA process. Thus, the RA should keep the CEAA informed at all steps of the comprehensive study.

The Agency also provides procedural advice, and can use its independent position to help resolve disputes before they lead to delays in the assessment or necessitate a referral to a mediator or review panel.

As in the case of a class screening report, federal authorities with specialist information and expertise have a special role to play in a comprehensive study. Under the Act, expert departments must provide specialist information and expertise related to the project when requested by the RA.

To ensure that all scientific or technical matters have been adequately addressed in the comprehensive study report prior to submitting the report to the Agency, the RA should make certain that all relevant expert federal departments have provided specialist information or expertise, and have commented on the comprehensive study report, as appropriate.

The comprehensive study report submitted to the Agency for review should include a record of consultation with the expert federal departments as well as a discussion of any unresolved scientific or technical concerns.

If a project is undergoing a comprehensive study, then neither the RA nor any other federal authority may provide federal support to the project until the completion of the comprehensive study or subsequent public review.

1.2 Roles and Responsibilities

Depending on the circumstances of the self-directed EA, there can be up to seven major participants in a screening or comprehensive study:

- the RA;
- the proponent;
- the Agency;
- the Minister;
- expert federal departments;
- other federal authorities;
- the public.

Tables 1-1 and 1-2 summarize the roles and responsibilities of these participants in a screening and comprehensive study, respectively.

Table 1-1

Roles and Responsibilities of Participants in a Screening

The RA

- determines whether project has been previously assessed;
- ensures that a screening is conducted on a project not described on the Comprehensive Study List or Exclusion List as early as is practicable in

the planning stages and before irrevocable decisions are made (may delegate conduct of EA and preparation of the report);
- must not provide federal support to the project until completion of the EA;
- determines the scope of the EA (that is, the scope of the project, the scope of the assessment, and the scope of the factors to be considered);
- may use or permit the use of all or part of any class screening report, ensuring that adjustments are made to take into account local circumstances and any cumulative environmental effects;
- determines whether public participation is appropriate and, if so, provides the public an opportunity to comment on the screening report;
- establishes and maintains the public registry;
- makes a determination on the impact of the project;
- makes a decision, based on the results of the screening report and taking into account any public comments, about whether to provide federal support to the project;
- *provides public notice of its course of action;*
- *ensures that for any project that is proceeding, all appropriate mitigation measures are implemented;*
- *ensures that, if appropriate, a follow-up program is designed and implemented;*
- *may request that the Minister refer the project for a public review through mediation or a panel review.*

The Proponent

- prepares screening report and all other necessary documentation (if RA not proponent);
- follows all conditions of licences imposed by the RA;
- implements mitigation measures;
- develops and implements a follow-up program, if appropriate.

The Agency

- provides procedural advice to RA as required;
- provides advice to the Minister if project is to be referred to a public review.

The Minister

- refers a project to a public review at the request of the RA, or at own initiative.

Expert Federal Departments

- make expert information or knowledge available upon request;
- review proposed class screening reports as appropriate for scientific and technical accuracy prior to the RA's submission of the report to the Agency.

Other Federal Authorities

- may not provide federal support for a project where an RA has concluded that the project will cause significant adverse environmental effects that are not justified in the circumstances.

The Public

- comments on the class screening report;
- comments on the screening report, if the RA determines that public participation is appropriate.

Table 1-2

Roles and Responsibilities of Participants in a Comprehensive Study

The RA

- determines whether project has been previously assessed;
- ensures that a comprehensive study is conducted on a project

described on the Comprehensive Study List as early as is practicable in the planning stages and before irrevocable decisions are made (may delegate conduct of study and preparation of the report);
- must not provide federal support to the project until completion of the comprehensive study or public review.
- determines the scope of the EA (that is, the scope of the project and the scope of the assessment);
- ensures that all relevant federal expert departments have been consulted;
- provides an opportunity for public consultation during preparation of the report, if appropriate;
- ensures that a comprehensive study report is prepared (or prepares the report, if RA is the proponent);
- establishes and maintains the public registry;
- makes a determination on the impact of the project;
- submits the comprehensive study report to the Agency for review by the Agency and the public;
- in the case of a project referred back by the Minister, makes a decision about whether to provide federal support to the project, based on the results of the comprehensive study report and taking into account any public comments;
- provides public notice of its course of action;
- ensures that for any project that is proceeding, all appropriate mitigation measures are implemented;
- ensures that, when appropriate, a follow-up program is developed and implemented;
- may request that the Minister refer the project for a public review through mediation or a panel review.

The Proponent

- prepares comprehensive study report and all other necessary documentation (if RA not proponent);
- follows all conditions of licences imposed by the RA;
- implements mitigation measures;
- designs and implements a follow-up program, if appropriate.

The Agency

- provides procedural advice to RAs, as appropriate;
- provides public notice of the availability of the comprehensive study report to facilitate public comment;
- reviews the comprehensive study from a procedural perspective;
- provides recommendations to the Minister about the next step in the EA process, taking into account the report and comments from the public and expert federal departments

The Minister

- refers the project either back to the RA for action or to a public review in the form of mediation or panel review, taking into consideration the comprehensive study report and any public comments received;
- may refer the project to a public review at any time at the request of the RA or at own initiative.

Expert Federal Departments

- make expert information or knowledge available upon request;
- review comprehensive study report as appropriate for scientific and technical accuracy prior to the RA's submission of the report to the Agency.

Other Federal Authorities

- must not provide federal support to the project until the comprehensive study or public review is completed;
- may not provide any support for a project where an RA has concluded that the project will cause significant adverse environmental effects that are not justified in the circumstances.

The Public

- provides input and comments during preparation of the comprehensive study report, if the RA has implemented a public involvement program;
- comments on the comprehensive study report after report submitted to the Agency.

| Previous page | Table of contents | Next page |

1.3 Start-up

Before starting a self-directed EA, an RA must address five key questions:

- Does the Act apply to its project?
- Should the project undergo a screening or comprehensive study?
- Has a public registry been established for the project?
- Is the project likely to cause public concerns?
- Is the EA of the project covered by an agreement with another government?

This section reviews each of these questions as they apply to a screening and comprehensive study.

1.3.1 Does the Act apply?

To determine whether the Act applies, the RA must determine that the proposal

- is a "project" for the purposes of the Act;
- is not excluded by the Act or by a regulation under the Act;
- involves a federal authority;
- involves an action that triggers the need for an EA under the Act.

See Figure 1-2 for a summary.

Is the proposal a "project" according to the Act?

Figure 1-3 summarizes the decisions required in determining whether the RA has a project as defined in the Act.

A project can be either

- an undertaking in relation to a physical work, such as any proposed construction, operation, modification, decommissioning, or abandonment; or
- any proposed physical activity not relating to a physical work that is set out in the regulations to the Act.

Figure 1-2: Does the Act Apply?

Figure 1-3: Is the Proposal a "Project" under the Act?

The first category covers most projects. The second category is designed to bring into the EA process certain activities that could result in significant adverse environmental effects. A proposed physical activity will fall under the Act only if it is described on the Inclusion List (Appendix C; in preparation) prepared under the regulations to the Act.

Examples of project definition

Undertakings in relation to a physical work

- dredging as part of constructing a bridge
- construction of a fish ladder

Physical activities not relating to a physical work

- the movement of CFCs out of Canada
- the harvesting of marine plants in coastal waters
- low-level flying over the back country of a National Park
- ocean dumping of substances prescribed by the Canadian Environmental Protection Act

---

Is the project excluded?

A project may be excluded from the need to undergo an EA under the Act when it is

- carried out in response to a national emergency for which special temporary measures are being taken under the Emergencies Act;
- carried out in response to an emergency and carrying out the project is in the interest of preventing damage to property or the environment or is in the interest of public health or safety;
- carried out for national security reasons;
- described on the Exclusion List, which are undertakings in relation to a physical work considered to have an insignificant impact on the environment, such as simple renovations and routine operations.

Does the project involve a federal authority?

An EA under the Act must be triggered by an action of a federal authority. A federal authority is

- a federal Minister of the Crown;
- an agency or other body of the federal government that is ultimately accountable to Parliament through a federal Minister of the Crown;
- any federal department or departmental corporations set out in Schedule I or II to the Financial Administration Act;
- any other body prescribed in the regulations to the Act.

The following are not federal authorities under the Act:

- the governments of the Yukon or Northwest Territories;
- a council or band under the Indian Act;
- certain harbour commissions;
- Crown corporations within the meaning of the Financial Administration Act.

Does the project involve an action that triggers the need for an EA?

An EA is required before a federal authority exercises one or more of the following duties, powers or functions in relation to a project:

- proposes a project;
- grants money or other financial assistance to a project;
- grants an interest in land to enable a project to be carried out (that is, sells, leases, or otherwise transfers control of land); or
- exercises a regulatory duty in relation to a project, such as issuing a permit or licence, that is covered under the Law List Regulation.

The EA must be completed before the federal authority exercises any of these powers, duties, or functions.

Not every federal licensing or permitting action relates to projects that may cause environmental effects, however. Therefore, only those regulatory duties

covered under the Law List will be considered as federal triggers for an EA.

With respect to the second factor, if a federal authority or the Government of Canada enters into an agreement with a province to provide financial support and the essential details of the project are **not** specified at that time, the federal authority or the Government of Canada must ensure that the agreement provides for an EA of that project as early as possible in the planning stage and before any irrevocable decisions are made.

If the agreement is with a foreign government (for projects to be carried out both outside Canada and outside federal lands), the same conditions apply in so far as is practicable and subject to any other agreements to which the Government of Canada or the federal authority is party.

If the essential details of the project **are** known, or will be known before the federal authority provides financial support, the federal authority must conduct the EA before such support is given.

In addition to the four triggering factors listed above, the Act also applies in the following special case: When the Governor in Council is responsible for issuing a licence or other authorization listed on the Law List that would allow a project to proceed, an EA must be conducted before that decision is taken. The federal authority recommending that the Governor in Council take action with respect to a project must ensure an EA is done early in the planning stages and before irrevocable decisions are made. This federal authority has the same duties as an RA, except for the responsibility for making a decision with respect to the project.

Is the project likely to involve transboundary effects?

The transboundary provisions of the Act give the Minister of the Environment the authority to refer a project directly to a mediator or panel, if the Minister believes that the project may cause significant adverse transboundary environmental effects in cases when the project would otherwise not require an EA, and no other federal Act or regulations apply.

Transboundary effects under the Act refer to adverse effects that are likely to occur

- on federal lands because of projects carried out outside these lands;
- off federal lands (because of projects carried out on these lands);
- across provincial boundaries; or
- across international boundaries.

Special EA procedures may be required if a project is likely to have significant adverse environmental effects across Canada's international boundaries. Canada is a signatory to the Convention on Environmental Assessment in a Transboundary Context. The Convention seeks to ensure that countries take measures to prevent, reduce, and control significant adverse transboundary environmental effects from proposed activities. Signatory countries must

- notify an affected country of any proposed activities likely to cause a significant adverse transboundary impact (guidelines are listed in the Convention);
- provide information on the project to the affected country;
- allow the public in the affected country an opportunity to comment on the proposed project, if requested to do so;
- conduct an EA of the project before making any decision on providing federal support to the project;
- inform the affected country of its decision on the project.

There is a need to ensure that projects with possible significant transboundary impacts are assessed according to the requirements of the Convention while avoiding unnecessary duplication, delays, and confusion that could arise from separate assessments. Under the **Framework for Environmental Assessment Harmonization**, adopted by the Canadian Council of Ministers of

the Environment in November 1992, federal, provincial and territorial governments agreed to adhere to the provisions of the Convention. Bilateral Agreements for Environmental Assessment Cooperation, under the harmonization framework, will establish the broader principles and context for coordination and cooperation on environmental assessment. Specific procedures related to the assessment of transboundary impacts under the Convention will be established through subsidiary agreements to the bilateral harmonization agreements.

For more information on Canada's obligations under the Convention, RAs should contact the Agency.

Has the project been previously assessed?

When a proponent proposes to carry out all or part of a project for which a screening or comprehensive study has already been conducted, it can use that previous EA to an appropriate extent when

- the project did not proceed after the EA was completed;
- in the case of a project that is in relation to a physical work, the proponent proposes an undertaking in relation to that work different from that proposed when the EA was conducted;
- the manner in which the project is to be carried out has subsequently changed; or
- the renewal of a licence, permit, approval, or other action under a prescribed provision is sought.

The RA must ensure, however, that adjustments are made in its screening report or comprehensive study report to take into account any significant changes in the environment, including cumulative environmental effects, and in the circumstances of the project since the previous EA was conducted.

More than one RA

The same project may have two or more RAs. To ensure that only one EA is conducted for each project, rather than each RA conducting its own EA, one of the RAs could be designated as the lead RA, or the RAs could coordinate their assessment in a team or working group structure

1.3.2 Selecting the environmental assessment track

Once the RA has determined that the Act applies to its project, it must then determine which EA track must be followed. In most cases, the EA will be conducted through either a screening or a comprehensive study. If further investigation is needed, the project will be subjected to a public review in the form of a mediation or panel review (see Figure 1-4).

The project will undergo a screening when it

- is not on the Comprehensive Study List regulation;
- has not been previously assessed; and
- has not been referred directly to a mediation or panel review.

Most projects will fall into this category.

All or part of a class screening report may be used when the project

- is of a class of projects for which a class screening report has been designated by the Agency;
- is not on the Comprehensive Study List regulation; and
- has not been referred directly to a mediation or panel review.

The project will undergo a comprehensive study when it

- is on the Comprehensive Study List regulation; and
- has not been referred directly to a mediation or panel review.

Figure 1-4: Determining the EA Track

1.3.3 The public registry

The Act is based, in large part, on the principle of public participation. To help realize this objective, public access to information upon which EAs are based is provided through a public registry.

Obligations

The Act imposes two main obligations on RAs with respect to the public registry:

- to establish a public registry for the purpose of facilitating public access to the records relating to EAs;
- to operate such a registry in a manner to ensure convenient public access.

A public registry must be maintained in respect of every project for which an EA is conducted, regardless of whether the project undergoes a screening, comprehensive study, panel review, or mediation.

Organization

The Agency has established a public registry framework within which all RAs can function. The framework seeks to provide all Canadians convenient access to complete information about EAs carried out under the Act. It will also ensure consistency across the federal government, and assist RAs in meeting their public registry obligations in an efficient and convenient manner.

The framework consists of three components:

- **The Federal EA Index**
  - The Federal EA Index is an electronic listing of all EAs conducted by all RAs under the Act. The index provides "one-window" access to information on the who, what, when, where, and why of any EA conducted under the Act, regardless of the RA. It also directs the public to contacts and document listings related to specific EAs.
- **RA document listings**
  - The second component of the public registry system is the listing of all publicly available documents relating to each EA. The RA maintains such a listing (in electronic or hardcopy form) for each of its respective EAs. The RA has three key responsibilities with respect to its listings:
    - determining whether each document should be placed in the public registry;
    - maintaining a current list of documents for all active EAs;
    - ensuring the document listing is available to the public upon request.
- **EA documents**
  - The third component of the public registry system consists of the EA documents produced by, collected by or submitted to the RA with respect to an EA. Key issues are
    - responding to requests in a timely manner;
    - determining the need to translate documents into the other official language;
    - applying cost recovery guidelines, when applicable.

Benefits

The public registry system provides several important benefits to RAs:

- The framework allows all RAs to meet their registry obligations in a consistent, cost-effective manner that ensures convenient, low, or no-cost public access to information.
- RAs do not have to develop their own procedures for operating the public registry.
- RA tasks are streamlined so as to minimize workload requirements.
- Many of the tasks build on current practices so as to minimize costs and workload requirements for RAs.
- Procedures make practical and effective use of technology whenever possible, further reducing the RA's workload and costs.

"The Public Registry" reference guide in Part III of the guide provides details on the organization of the public registry system, as well as guidelines in five key areas:

- coordination with other RAs;
- document clearing;
- responding to requests;
- cost recovery;
- official language considerations.

1.3.4 Public concerns

Public concerns play an important role at all steps of the self-directed EA.

At any time before completion of the screening or comprehensive study -- or even before the EA begins -- the RA can ask the Minister of the Environment to refer the project directly to a public review if it is clear that public concerns about the project's environmental effects are unlikely to be adequately addressed in a self-directed EA.

Public concerns, if not resolved through public involvement in a self-directed EA, can also warrant a public review by a mediator or review panel. The RA (following completion of the screening report) or Minister (following a comprehensive study report) must explicitly address the question of whether there are public concerns about the project that justify a public review.

Given the importance of public concerns, the RA should try to be aware of them and respond to them from the outset of a self-directed EA.

The public is not a single entity, but rather comprises varied interests: local residents, local environmental groups, small-business owners, and many others. Public concerns can be expressed in several ways, as well.

The public can also be a valuable source of information to the RA. Local community residents and indigenous peoples can provide critical information at all steps of an EA. Public input will also be appropriate when there are public concerns about a proposed project, and when the RA needs to build a consensus among different groups. Thus, the RA should determine as early as possible when and to what extent public input should be sought.

A public involvement program goes beyond allowing the public to comment on a completed screening report or comprehensive study report. Rather, it seeks to provide the public with a variety of opportunities to be informed at all stages of the EA, to offer ideas and information, to react to proposals in order to influence recommendations and decisions, and to be informed of all decisions.

Communication needs will change over the course of a screening or comprehensive study. The RA (or proponent) may need to

- provide information so that people can be informed and participate effectively;
- receive information and comments from the public;
- discuss issues and clarify positions and concerns;
- build consensus among key groups or individuals particularly affected

by the project; or
- inform participants of results or decisions.

A wide range of public involvement activities can meet these changing needs. For more information on developing an effective public involvement program, review the reference guide "Public Involvement" (in preparation) in Part III.

Who is the public?

The public represents a complex mix of interests. RAs should be aware of the range of public interests in the region or community affected by the project. These could include

- residents living near the project
- aboriginal persons
- local and regional government officials
- community organizations, such as homeowner groups, senior citizen organizations, service clubs and environmental groups
- professional and business associations
- small-business operators
- educational institutions
- public-interest groups
- the media

Screening

Public involvement is discretionary in a screening. When the RA believes that public involvement in the screening is appropriate, it should provide the public with an opportunity to examine and comment on the screening report before making any decision on whether to provide federal support to the project. It may also choose to provide opportunities for public involvement during the screening, before the preparation of the screening report.

In addition, the public will be given an opportunity to review and comment on all proposed class screening reports.

Comprehensive study

From a practical perspective, public input is an essential component of a comprehensive study. The RA's task is to determine the most effective approach to ensuring public involvement in the EA. Public input can be sought at any step in the comprehensive study process: from scoping issues, collecting data, assessing environmental effects, and identifying mitigation measures, to commenting on a draft report, and participating in a follow-up program. An effective public involvement program identifies and links these opportunities so as to meet the overall needs of the comprehensive study.

Upon receiving the comprehensive study report from the RA, the Agency will publish a public notice about the opportunity to review and comment on the report. Any person may file comments with the Agency within the specified time period. The scope for public comment is broad, and can cover the conclusions, recommendations and other aspects of the report. These comments will be considered by the Minister in arriving at a decision about the need for a public review.

1.3.5 Working with other governments

A key question of the start-up stage is to identify whether the EA of the project is covered by an EA harmonization agreement between the federal government and a province or territory.

Some projects require authorization from both the federal government and a provincial or territorial government. Without close cooperation, a project might need to undergo separate EAs, resulting in unnecessary duplication, confusion, and excessive costs for all parties.

Harmonization of Canada's various EA processes is essential if the environmental effects of projects are to be assessed in an effective and consistent way across the country. Harmonization also helps create a more favourable atmosphere for private-sector decision-makers by streamlining regulatory approval processes and reducing planning uncertainties and delays.

Given the potential for overlapping EAs, the Act allows the Minister of the Environment to enter into agreements with provincial and territorial governments relating to the EA of projects where both governments have an interest.

The bilateral agreements provide guidelines for the roles and responsibilities of each government in the EA of such projects. The agreements cover cooperation in such areas as joint panels, mediation, screening, comprehensive studies, notification, cost-sharing, and time frames.

In 1992 the Canadian Council of Ministers of the Environment (CCME) approved the Framework for Environmental Assessment Harmonization. The framework serves as the foundation for bilateral agreements. Governments committed themselves to establishing appropriate mechanisms for consultation and cooperation at every stage of an EA.

The framework

- confirms each government's jurisdictional responsibilities for EA;
- recognizes that federal, provincial, and territorial EA practices are consistent inprinciple and intent;
- acknowledges the need for clear and consistent rules that eliminate unnecessary duplication and are sensitive to the needs of proponents and to concerns for a timely and fair process;
- affirms the need for a "single-window" approach to EA that provides all proponents with the information they may require;
- establishes the mechanisms to allow for intergovernmental cooperation at all steps of the federal EA process.

The Canada-Alberta Agreement for Environmental Assessment Cooperation, the first bilateral agreement under the framework, includes provisions for

- early notification of projects of shared interest to allow for cooperative EAs;
- establishment of designated "single-window" offices in Alberta;
- coordination of decision-making by both parties with mutually agreeable time frames;
- guidelines for the establishment of joint review panels consistent with federal and provincial legal and operational requirements.

| Previous page | Table of contents | Next page |

Last Updated: 2003-10-07 Important Notices

1.4 Step 1: Scoping

In the first step of a self-directed EA, the RA should establish the boundaries of the screening or comprehensive study, and focus the analysis on directly relevant issues and concerns. Scoping can reduce delays, improve the quality of the EA, and enhance its credibility by involving all interested parties.

It is assumed here that the RA itself is conducting the EA. In many cases, of course, the proponent will conduct the EA. Although the RA can delegate the preparation of the screening report or comprehensive study report to the proponent or a consultant, it alone is responsible for ensuring that the EA is conducted in compliance with the Act, and it alone can make a decision on the course of action with respect to the project following the screening or comprehensive study.

1.4.1 Scope of the environmental assessment

The scope of the project and the scope of the assessment define the components of a proposed development and the environmental effects that should be included in an EA conducted under the Act.

Scope of the project

Under the Act, the RA must determine the scope of the project in a screening or comprehensive study. The scope of the project refers to those components of theproposed development that should be considered part of the project for the purposes of the EA.

In determining the scope of the project, therefore, the RA must consider:

- which physical works fall within the scope of the project, and which undertakings in relation to those physical works fall within the scope of the project; or
- which physical activities not in relation to a physical work (identified in the Inclusion List regulation) fall within the scope of the project.

The "principal project/accessory" test

The Act does not provide direction to RAs in determining which physical works should be included within the scope of a project. To ensure consistency in scope of the project determinations, RAs should consider applying the "principal project/accessory" test. This test consists of two steps.

First, what is the principal project? The principal project is always either the undertaking in relation to a physical work or the physical activity for which a power, duty, or function is being exercised (therefore triggering the need for an EA under the Act). The principal project must always be included as part of the scoped project.

Second, are other physical works or physical activities accessory to the principal project? If so, then these may be included as part of the scoped project. Those physical works or physical activities not accessory to the principal project may not be included as part of the scoped project. To determine what is accessory to the principal project, the RA should apply the

following two criteria:

- **interdependence**: If the principal project could not proceed without the undertaking of another physical work or activity, then that other physical work or activity may be considered as a component of the scoped project.
- **linkage**: If the decision to undertake the principal project makes the decision to undertake another physical work or activity inevitable, then that other physical work or activity may be considered as a component of the scoped project.

Same EA for related projects

Under the Act, the RA can combine two or more triggered projects into the same EA if it determines that the projects are so closely related that they can be considered to form a single project.

In making this determination, RAs should apply the following three criteria:

- **interdependence**: If the principal project could not proceed without the undertaking of another project, the two may be considered to form a single project.
- **linkage**: If the decision to undertake the principal project makes the decision to undertake another project inevitable, the two may be considered to form a single project.
- **proximity**: If the geographic study areas developed in relation to the scope of the assessment for the individual projects overlap, the two may be considered to form a single project.

Not all criteria must be met in every case. Each case must be considered on its own merit. However, the proximity criterion on its own will rarely be sufficient cause for the RA to combine two or more projects into the same EA.

Undertakings in relation to a physical work

Finally, under the Act, the RA must include in the EA all undertakings or activities in relation to a physical work, and all activities in relation to a physical work that are proposed or, in its opinion, are likely to be carried out. These undertakings could include, for example, the construction, operation, modification, decommissioning, or abandonment of a physical work. Such proposed undertakings or undertakings that are likely to be carried out must be included in the scope of the project even if there is no specific trigger for them. The assessment of all proposed undertakings or undertakings that are likely to be carried out in relation to a physical work should be conducted as early in the planning stages of the physical work as is practicable.

(Note that this applies only to undertakings in relation to a physical work and not to physical activities.)

Scope of the assessment

Once the RA has determined the scope of the project, it must then address the question of the scope of assessment. The scope of assessment includes a determination of the environmental effects to be addressed, the scope of the environmental effects to be assessed, and the effects to be considered in making decisions regarding the project.

Effects to be assessed

An RA exercising any power, duty or function under section 5 of the Act must include in the assessment all factors that are relevant to the decision that the RA must make:

- all the factors that the Act requires an RA to consider, including all effects that fall within the Acts definition of "environmental effect", regardless of whether the effect falls within an area of federal jurisdiction. Section 1.4.2 below, addresses the statutory provisions in the Act for the scoping of environmental effects in greater detail; and
- any factors that are relevant to the assessment of effects of the project in the environment that any other federal law or regulation require or permit the RA to consider. Where the RA is acting as a regulator this includes the factors that the law creating the RAs decision-making authority states must or may be considered.

Additionally, where the RA is:

- the project proponent;
- asked to provide financial assistance; or
- asked to sell, lease or transfer its interest in lands;

it may also assess beyond the statutory requirements to the extent that it considers necessary in the circumstances. The RA may broaden the scope of assessment for these decisions because they relate to the operation of the Government itself or its property; matters which are within exclusive federal jurisdiction.

Effects to be considered in making decisions

If a factor is considered relevant to the decsion that the RA must make (see "Effects to be Assessed" above), the RA must take it into account in making its decision whether to provide federal support for a project.

Attaching conditions

Where the RA is

- the project proponent;
- asked to provide financial assistance; or
- asked to sell, lease or transfer its interest in lands

it may attach any condition or require any mitigation measure it considers appropriate in the circumstances. Where the RA takes a regulatory action that supports the project (that is, where the RA decides to issue an authorization under a statutory or regulatory provision on the Law List regulation), the conditions it attaches to the approval must pertain to the factors which are relevant to its decision:

- the factors that the Act requires the RA to consider, and
- any factors that the RA must or may consider pursuant to the triggered federal law or regulation.

This analysis is based on recent decisions of the Supreme Court of Canada relating to the permitted scope of assessment under the EARP Guidelines Order. However, it is expected that the principles enunciated by the Court with respect to the Order will apply to the Act as well.

Scope of the Assessment for EA Triggered by Federal Permit Decision

Project:

- Construction of a pulp-and-paper mill to be situated on a navigable river in the Yukon Territory
- As part of the mill, construction of:
  - intake and outflow pipes to be installed in the river for the purposes of supplying water and removing process wastes from the mill
  - new access road

- new dedicated waste storage facilities
- construction camp

EA Trigger:

- Licence under section 5 of the Navigable Waters Protection Act (NWPA) for intake and outflow pipes
- Licence under subsection 14(1) of the Yukon Waters Act (YWA) for water use

Scope of the assessment:

- As a minimum, EA must include consideration of environmental effects as defined in the Act for a comprehensive study (project subject to the comprehensive study list regulation)
- Scope of assessment can also be broadened through powers given to Minister of Transport under the NWPA and the Yukon Water Board under the YWA. For example, the Minister of Transport could decide to include the effects of changes in water levels, flow rates, and obstructions in navigable waters (such as adverse effects on wildlife habitat as a result of changes in water levels). The Yukon Water Board must assess the effects of the mill's water uses on other water uses. These effects may be strictly economic and include the potential economic losses to individuals already using the water.

Scope of Project for EA Triggered by Federal Funding

Project:

- Construction of an oil refinery in southern Saskatchewan by an oil company
- An extension of a pipeline is required to the new refinery.

EA Trigger:

- Funding contribution from Natural Resources Canada.

Scope of the project:

i. Principal project:
   - construction of oil refinery
ii. Accessory physical works:
   - under the linkage principle, the construction of the pipeline can be considered an accessory work of the construction of the refinery
iii. Other undertakings in relation to the physical work:
   - operation, planned modifications, and decommissioning of refinery
   - operation of pipeline

Scope of Project for Two Related Projects

Projects:

- Construction of an oil refinery in southern Saskatchewan by an oil company; and
- Extension of a pipeline to the new refinery

EA Triggers:

- Funding contribution from Natural Resources Canada; and
- Permit for construction of pipeline

Scope of the project:

i. Principal project:
   - principles of linkage and proximity apply to the two projects
   - construction of the two can be considered so closely related that they can be considered to form a single project
   - that is, principal project is construction of oil refinery and construction of pipeline
ii. Accessory physical works:
   - none
iii. Other undertakings in relation to the physical work:
   - operation, planned modifications, and decommissioning of refinery
   - operation of pipeline

Scope of Project for Physical Activity on Inclusion List

Project:

- Dredging operation on federally-owned canal
- Temporary access road across a field is required to move the dredge material to an existing privately-owned disposal area

EA Trigger:

- Permit for dredging

Scope of the project:

i. Principal project:
   - dredging operation
ii. Accessory physical works:
   - principle of interdependence can be applied to the dredging and access road
   - thus, construction of the access road can be considered as an accessory work
iii. Other undertakings in relation to the physical work:
   - not applicable to Inclusion List activities
   - thus, consideration of the operation and closure of the disposal site and road are not required

---

Scope of Assessment for EA Triggered by Federal Funding

Project:

- Construction of an oil refinery in southern Saskatchewan by an oil company; an extension of a pipeline is required to the new refinery
- Proposed site is adjacent to an deer breeding ground and a migratory bird sanctuary

EA Trigger:

- Funding contribution from Natural Resources Canada

Scope of the assessment:

- The federal government is exercising its spending power in relation to a project. Thus, there is no limit to the environmental effects or to the range of factors listed in section 16 of the Act that can be taken into consideration in the EA. The EA can include consideration of the environmental effects of the refinery and pipeline extension on the deer as well as on the migratory birds. The RA can impose conditions on the

project funding, such as mitigation measures to reduce any adverse environmental effects on the deer.
- The RA will still need to consider the scope of the factors listed in section 16 of the Act. For example, if other refineries are located near the proposed site or there are new refineries proposed in the area, the RA will need to determine which of those projects should be considered in assessing the project's cumulative environmental effects.

1.4.2 Factors to be considered

Both screening and comprehensive study

The following factors must be addressed in both a screening and a comprehensive study:

- the environmental effects of the project, including
  - the environmental effects of malfunctions or accidents that may occur in connection with the project;
  - any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;
- the significance of the environmental effects;
- public comments, if applicable or received in accordance with the regulations (under current regulations, providing opportunities for public comment is mandatory for comprehensive studies and public reviews, but not for screenings);
- technically and economically feasible measures that would mitigate any significant adverse environmental effects of the project;
- any other matter relevant to the assessment that the RA may require, such as the need for and alternatives to the project.

The RA must also identify those environmental effects (including any directly related to human health, heritage, socioeconomic conditions, and other factors) relevant to the assessment requiring further investigation.

Comprehensive study only

In addition to the factors listed above, a comprehensive study must also consider the following:

- the purpose of the project;
- technically and economically feasible alternative means of carrying out the project as well as the environmental effects of these alternative means;
- effects on the capacity of renewable resources likely to be significantly affected by the project to meet present and future needs;
- the need for, and the requirements of, any follow-up program.

The RA must also determine the scope of the factors to be considered in the screening or comprehensive study. This refers to the geographic boundaries and time frame of the effects.

Alternatives

The CEAA distinguishes between "alternative means" and "alternatives to"

"Alternative means" of carrying out the project are methods of a similar technical character or methods that are functionally the same. "Alternative means" with respect to a nuclear power plant, for example, includes selecting a different location, building several smaller plants, and expanding an existing nuclear plant. "Alternative means" that are technically and economically feasible must be considered in a comprehensive study, mediation, and panel review, but are discretionary under a screening.

In contrast, "alternatives to" the project are functionally different ways of achieving the same end. For example, "alternatives to" the nuclear power plant include importing power, building a hydroelectric dam, conserving energy, and obtaining the energy through renewable sources. Consideration of "alternatives to" the project is at the discretion of the RA in screening, or of the Minister in consultation with the RA in a comprehensive study, mediation, or panel review.

1.4.3 Interested parties

The third aspect of scoping is to determine who is interested in the project, what their concerns are, and how they should be involved in the assessment. At this step, the RA can begin a program of communication and consultation that can provide benefits later in the EA (for example, through early response to public concerns in order to minimize time delays and increases in project costs).

Interested parties will typically fit into one of five categories: expert federal departments; other federal authorities; provincial, municipal, and territorial governments; private sector organizations; and the public.

Expert federal departments

Some federal authorities may be a source of baseline data, knowledge, or expertise relevant to the EA. These federal authorities, or expert federal departments, have a special role to play in the EA process. Under the Act, these departments mustprovide specialist information and expertise relevant to the project when requested by the RA.

Expert federal authorities include Agriculture Canada, Department of Natural Resources Canada, Environment Canada, Fisheries and Oceans Canada, Health Canada, Heritage Canada, and Indian Affairs and Northern Development.

Expert federal departments may be involved at every stage of the EA process, from reviewing terms of reference at the scoping step, and providing data during preparation of the EA report, to reviewing the report and appearing as an expert witness during a panel review. The independent review function is of particular importance, because it helps ensure the scientific and technical quality of EA reports prepared under the Act.

The following general guidelines should apply to the RA when involving an expert department:

- The RA should try to identify and involve the relevant expert federal departments at the early stages of an EA.
- The RA's request for information or advice should relate directly to its EA, and should be clear and concise, in order to use the expert department's time most effectively.
- Expert departments should be expected to provide reasonably available (that is, "off-the-shelf") information, but not to undertake lengthy or costly research to obtain the information.
- The "proponent pays" principle should apply in cases where the expert department undertakes new work, at the request of the RA, to provide necessary information or analysis.
- Prior to submitting an EA report for Agency and public review, the RA should ensure that all relevant expert federal departments have reviewed it for scientific and technical accuracy, and that any concerns raised by these departments have been addressed.

Other federal authorities

Other federal departments and agencies may have an interest as another RA of the project, such as a regulator, owner or administrator of lands, or source of funds for the project.

If another federal authority is involved through funding, granting an interest in federal land, or granting of a licence or permit, then the two RAs need to determine which will be the lead RA for the screening. The Agency can advise the RAs on this determination, if necessary.

Provincial, municipal, and territorial governments

Provincial, municipal, and territorial government departments and agencies may be directly involved in the project in one or more ways. Another level of government could be the proponent, or could be involved as a regulator, landowner, or source of funds for the project. If a province is involved, the RA should determine whether there is a federal-provincial agreement in place on EA procedures. If so, the project could be assessed through a joint EA procedure that satisfies both the federal and the provincial requirements. In such a case, the RA should review that agreement for its applicability to the proposed project.

In addition, another level of government could be a source of baseline environmental information, expertise, or specialist knowledge for the screening.

Federal-Provincial Agreements

Some projects may require authorization by both provincial or territorial governments and the federal government. To avoid the duplication and excessive costs of separate EAs, the Act gives the Minister the power to enter into agreements or arrangements with any jurisdiction for the purpose of assessing the environmental effects of projects where both parties have authorization responsibilities.

These bilateral agreements provide guidelines for cooperating on EAs, including roles and responsibilities relating to joint panels, mediation, screening, notification, and cost-sharing. By promoting cooperation and "harmonization" of EA procedures among governments, the agreements help achieve more effective and consistent EA processes in Canada.

Private-sector organizations

A private-sector company or organization may need or want to be involved in the screening as the proponent, as a source of environmental information or expertise about the project, or because it is affected directly or indirectly by the project.

The public

Public concerns about a project can justify its referral to a public review at any time during a screening or comprehensive study. The RA should be aware of, and respond to, public concerns at every step of the assessment, and not only when the screening or comprehensive study report is completed.

Public interest will vary depending on the nature of the project and the site. The RA should contact those who have expressed an interest in the project in the past, as well as those who are likely to be directly or indirectly affected (whether or not they have expressed an interest). Members of the public may also provide the RA with local knowledge and expertise about the project's environmental setting.

1.4.4 Appropriate level of effort

The fourth aspect of scoping is to determine the appropriate level of effort for

the screening or comprehensive study. Depending on the project, the environmental setting, the likely environmental effects, the availability of information, and uncertainty about the environmental effects or mitigation measures, a self-directed EA may vary in time, effort and documentation. A decision about the appropriate level of analysis and effort is therefore an important element of the scoping step, and can lead to significant savings in both time and cost.

After having determined the scope of the issues and identified the interested parties, the RA will be in a better position to determine the appropriate level of effort. The wider the range of relevant issues, the greater the information needs, the higher the level of uncertainty about the environmental effects or mitigation measures, and the greater the number of interested parties, the greater will be the required effort and analysis.

| Previous page | Table of contents | Next page |

1.5 Step 2: Assessing Environmental Effects

Once scoping has been completed, the second step in a self-directed EA is to assess the environmental effects of the project. This consists of three tasks:

- description of the project;
- description of the existing environment;
- identification of project-environment interactions.

The RA has the option of involving others -- the public, outside experts, other federal government departments and other governments -- in any of these tasks if it believes such information could be helpful.

1.5.1 The project

The project's components or activities should be described. For a project that is in relation to a physical work, for example, the description should include

- location;
- physical layout and design;
- construction plans and scheduling;
- standard control procedures and mitigation measures;
- operating procedures and decommissioning plans;
- the federal power, duty, or function required or requested (such as funding, an interest in federal lands, or federal permit or licence).

In the case of an industrial project, it is essential to specify the quantity and quality of all emissions (solids, liquids, and gases), as well as any pollution-control devices to be used.

Describing a dredging project

The information needed to assess a dredging project should include

- data on the volume and composition of the material to be dredged (e.g., sand, silt, metals, organics, etc.)
- the type of dredging equipment to be used
- the extent and duration of dredging activity
- the project's expected completion date

Knowing where and when the dredging will be done, how much and what kind of material is involved, and how it will be collected and transported will help determine environmental effects if any material must be dumped into water or onto land.

Project descriptions

Depending on the nature of the project and its site, the project description could include

- name of proponent and contact person
- brief discussion of the size, scope, and phasing of activity
- legal description of the project
- proposed location on a map at an appropriate scale, showing boundaries of the proposed site, major existing infrastructure, adjacent land uses, and any important environmental features (such as rivers)
- site plan of the project illustrating location of existing buildings and facilities, proposed components of the project, and any infrastructure required to service the project (such as utilities, rail and road access)
- where appropriate, schematic drawing and discussion of the project's production processes and technology
- estimates of the type of solid waste, liquid effluent, and gaseous emissions expected from the project, and a brief discussion of plans for their treatment and disposal
- identification of the expected volume of water required for the project, and an indication of its source and availability
- biophysical description of the site, having regard for soil, topography, vegetation, wildlife, and surface and ground water
- an estimate of the start and completion of construction, and the number of construction and operational employees

1.5.2 The existing environment

Relevant and reliable information on the environmental components of the study area's existing environment should be collected and described. The description should identify the most important environmental elements of the region being examined and explain the reasons for the boundaries of the study area. Only elements of the biophysical environment within the study area that are relevant to the project need be identified and evaluated.

The description must identify the physical, biological, and social characteristics of the environment, including

- relevant physical features and characteristics, such as landscape features, dynamics, and patterns;
- biological characteristics such as ecological processes and functions, species presence and seasonality, species interrelationships, and habitat;
- social characteristics such as patterns of land use and resource use;
- present land uses;
- patterns of other human disturbance.

Gathering environmental information

Existing sources of information:

- previously conducted EAs
- reports
- databases
- expert departments
- indigenous peoples
- members of local communities
- industry
- academia
- aerial photos and satellite imagery

Collecting new information:

- field investigations and surveys
- monitoring
- aerial photography

Traditional ecological knowledge

Traditional ecological knowledge (TEK) (also known as indigenous knowledge) is the knowledge base acquired over hundreds of years by indigenous peoples through direct experience and contact with the environment. It takes several forms: an intimate and detailed knowledge of the environment, including plants, animals, and natural phenomena; the development and use of appropriate technologies for hunting, fishing, agriculture, and forestry; and a holistic world view that parallels the scientific discipline of ecology.

1.5.3 Project-environment interactions

Using the basic information on the project and the existing environment, the assessment should then identify any potential links between them: how, where, and when could the project's activities interact and affect environmental components? It should compare the location and timing of project activities with the location, sensitivity, seasonal presence, and abundance of the environmental components.

Project-environment interactions can often be identified by using map overlays and matrix tables. The interactions are not always apparent, however. In some cases, such as the disposal of toxic substances, it may take years for an effect to be recognized. In other cases, such as the transport of pollutants by air or water, the project-environment interaction occurs far from the project site itself.

Methods for identifying project-environment interactions

- overlay maps
- matrix tables
- expert groups

Cumulative environmental effects (for both a screening and comprehensive study)

In a self-directed EA, whether a screening or comprehensive study, the assessment must consider any cumulative environmental effects likely to result from the project in combination with existing or planned projects or activities.

Environmental effects are often seen as isolated or separate from one another. In reality, however, they interact over time and space. Therefore, to address cumulative environmental effects requires analysts to "think cumulatively," taking into account

- time and geographic boundaries;
- interactions between the project's environmental effects;
- interactions between the project's environmental effects and those of other projects and activities.

Examples of cumulative environmental effects

- decline in water quality resulting from discharge of various chemicals by different industrial plants
- decline in air quality resulting from NOx and SOx emissions from automobiles, industrial plants, and coal and oil-fired generating stations

---

The assessment should consider the following points with respect to cumulative environmental effects:

- Only "environmental effects" as defined in the Act are considered.
- The legislation does not define "activity"; hence, any relevant past or future activity must be taken into account.
- Only future projects that **will** be carried out need to be considered (that is, not those that "may" or "could" be).
- Only **likely** cumulative environmental effects must be taken into account.
- The significance of the cumulative environmental effects must be determined.

For more information on cumulative environmental effects, review the reference guide "Addressing Cumulative Environmental Effects" in Part III.

Sustainable use of renewable resources (mandatory for a comprehensive study; optional in a screening)

A comprehensive study must also consider the effect of the project on the capacity of those renewable resources that are likely to be significantly affected to meet present and future needs.

This capacity -- sustainable use -- is based on a range of ecological considerations, such as

- the integrity of the ecosystem (that is, its complexity, diversity, stability, and resilience);
- the productive capacity of the resource;
- the carrying capacity of the ecosystem;
- the assimilative capacity of the ecosystem.

The sustainable use of renewable resources is closely linked to the consideration of cumulative environmental effects. For example, an adverse effect on the sustainable use of a renewable resource, such as a fishery, may be caused by a cumulative environmental effect of a project, or it may be a cumulative environmental effect in its own right.

As with cumulative environmental effects, assessing sustainable-use effects requires consideration of temporal and geographic boundaries and scales. When assessing sustainable-use effects, the RA should consider

- only those environmental effects as defined in the Act;
- only those renewable resources likely to be affected in a significant way by the project;
- the significance of the sustainable use effects.

For more information on sustainable use effects, review the reference guide "Determining the Capacity of Renewable Resources to Meet Present and Future Needs" (in preparation) in Part III.

1.5.4 Other factors

The RA must also ensure that the screening or comprehensive study considers the full range of environmental effects as defined in the Act. These effects include not only the direct changes to the biophysical environment, but also effects in several socioeconomic and cultural areas that flow directly from the environmental effects of the project, including

- effects on human health;
- effects on socioeconomic conditions;
- effects on physical and cultural heritage, including effects on things of archaeological, paleontological, or architectural significance;
- effects on the current use of lands and resources for traditional purposes by aboriginal persons.

In addition, the screening or comprehensive study must consider the effects of

any change to the project that may be caused by the environment. Several of these factors are briefly discussed below.

Effects on human health

The self-directed EA must consider the effects on human health caused by a change in the environment due to the project. For the purposes of the Act, effects on health include effects at the population or community level on

- physical health, including death and disease rates;
- psychological, emotional, spiritual, or mental health and well-being.

In addition, the assessment must consider

- cumulative environmental effects on health;
- the significance of the effects on health;
- technically and economically feasible measures that would mitigate any significant adverse effects on health.

For more information, review the reference guide "Assessing the Effects on Health" (in preparation) in Part III.

Example of effects on health conditions

- toxicological effects of human consumption of fish contaminated by toxic chemicals

---

Effects on socioeconomic conditions

The screening or comprehensive study can consider only effects on socioeconomic conditions caused by a change in the environment due to the project. For the purposes of the federal EA process, socioeconomic conditions include effects at the population or community level on

- the quality of life or "way of life";
- the economy, commercial opportunities, or employment;
- the availability of recreational opportunities or amenities;
- home life or personal security;
- future land uses;
- the future use or future production of commercial species or resources;

In addition, the following effects must be considered

- cumulative environmental effects on socioeconomic conditions;
- the significance of the effects on socioeconomic conditions;
- technically and economically feasible measures that would mitigate any significant adverse effects on socioeconomic conditions.

For more information, review the reference guide "Assessing the Effects on Socioeconomic Conditions" (in preparation) in Part III.

Effects on physical and cultural heritage

Example of effects on socio-economic conditions

- *closure of commercial or recreational fishery because of contaminated*

fish

The self-directed EA must consider the potential environmental effects on physical and cultural heritage and to any structure, site, or thing that is of historical, archaeological, paleontological or architectural significance that would result from environmental changes associated with the project.

In assessing for effects on heritage, the EA should

- ensure the preservation and protection of sites and objects formally recognized at the international, national, provincial, and municipal levels;
- ensure that the consideration of heritage resources in the EA is consistent with existing laws and policies on heritage relevant within the project area;
- recognize that a heritage site may have a cultural value greater than the apparent value of the site's physical components;
- take into account the unique cultural interests and values of aboriginal peoples.

In addition, the assessment must consider

- cumulative environmental effects on physical and cultural heritage resources;
- the significance of the effects on these resources;
- technically and economically feasible measures that would mitigate any significant adverse effects on these resources.

For more information, review the reference guide "Determining Environmental Effects on Physical and Cultural Heritage" (in preparation) in Part III.

Examples of effects on heritage

- loss of an archaeological site because of excavation or site preparation for an industrial park or plant
- damage to a historic burial site during pipeline construction

---

Examples of effects of the environment on the project

- river flooding causing washout of a bridge
- iceberg damage to a small-craft harbour

Examples of effects on the current use of lands and resources

- for traditional purposes by aboriginal persons
- flooding of traditional trapping lines by a hydroelectric dam
- reduction in subsistence fishing as a result of a river-dredging project

1.6 Step 3: Mitigating Environmental Effects

The third step in a self-directed EA is to identify technically and economically feasible measures that will mitigate a project's likely environmental effects. Mitigation is the elimination, reduction, or control of a project's adverse environmental effects, including restitution for any damage to the environment caused by such effects through replacement, restoration, compensation, or any other means.

The Act requires that mitigation measures be developed to address significant effects. As well, mitigation measures are considered part of the project when determining the significance of any adverse environmental effects under the Act.

More generally, mitigation is used to address all adverse environmental effects, whether or not subsequent analysis determines that the effects are significant. In practice, the development of mitigation measures should not begin after the assessment of environmental effects. Rather, mitigation measures are typically part of the project design, developed during a project's feasibility study, defined in the project plan, and refined as the assessment progresses and the project's likely environmental effects become clear. Mitigation measures are often part of the industry's or department's code of good practice.

Mitigation measures can be identified and developed in a variety of ways. Some kinds of projects, such as road construction, have well-established mitigation measures, although practitioners must take into account site-specific circumstances. Other projects may require a more formalized approach to developing mitigation measures, such as involving specialists or obtaining information from local residents through public consultation.

Common mitigation measures for road construction

- scheduling culvert installations to avoid sensitive life cycles of fish and wildlife
- avoiding migratory bird staging and nesting areas
- avoiding fish spawning areas
- housing work crews in camps
- prohibiting work crews from hunting and fishing

| Previous page | Table of contents | Next page |

Environmental Assessments
Public Participation
How to do Environmental Assessments
Legislation & Regulations
Training Opportunities
Research & Development
Strategic Environmental Assessment
Publications
Frequently Asked Questions

Canadian Environmental Assessment Registry
CEAR Main »

A primer for Industry
Will your project need a federal EA? More »

Search our site

| Previous page | Table of contents | Next page |

1.7 Step 4: Determining the Significance of Adverse Environmental Effects

The fourth step in a screening or comprehensive study is to determine whether or not the project is likely to cause significant adverse environmental effects, taking into account mitigation measures. This determination directly affects whether the RA can take a course of action with respect to the project, or whether further review is needed through mediation or a panel review.

1.7.1 The question

Taking into account the implementation of any mitigation measures the RA considers appropriate, the question is whether the project is likely to result in significant adverse environmental effects. This means that the screening or comprehensive study must determine whether

- the environmental effects are adverse;
- the adverse environmental effects are significant; and
- the significant adverse environmental effects are likely.

In addressing these three points, the RA should keep in mind that only those environmental effects as defined in the Act and included in the scope of the assessment can be considered in the determination.

1.7.2 The role of the public

The conclusions with respect to the determination of significant adverse environmental effects must be based on sound scientific evidence and analysis (including traditional ecological knowledge). But that is not to say that public input has no role to play orthat significance is an issue for scientists alone. On the contrary, public input can play an important role in the determination, as well as in the overall EA process.

By its nature, scientific analysis, although objective, is frequently open to different interpretations. The public perspective on these interpretations is an entirely valid one. Public input into the determination of significant adverse environmental effects must, however, limit itself to questions related to scientific analysis and interpretation. The public, for example, could provide new evidence, offer a different interpretation of the facts, or question the credibility of the conclusions.

Issues that are not directly linked to the scientific analysis of environmental effects, such as long-term unemployment in a community or fundamental personal values, cannot be introduced into the determination at this step. Such public concerns and values are given prominence elsewhere in the EA process. Under the Act, serious public concerns can warrant referral of the project to a public review through either mediation or a public panel review. That is, public concerns -- that may or may not have to do with scientific issues -- can prompt the EA process to take a closer look at the project. Only after a public review can it be determined whether significant adverse environmental effects are justified in the circumstances, a determination that may well look at such factors as unemployment and public values.

Objective conclusions

The conclusions of the screening report and comprehensive study report with respect to the significance of the adverse environmental effects are "objective" in the sense that they are based on scientific evidence and analysis, and do not stem from the opinion of either the Minister or the RA.

1.7.3 Applying the criteria

Practitioners must apply different sets of criteria to determine whether the environmental effect is adverse, significant, and likely.

(For more information on the three sets of criteria and their application, review the reference guide "Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects" in Part III.)

Are the environmental effects adverse?

The most common way of determining whether the environmental effects are adverse is to compare the quality of the environment before the project with the predicted quality of the environment with the project in place, using relevant criteria from the list. This approach requires information on baseline environmental conditions.

Criteria for determining adverse effects include

- loss of rare or endangered species;
- reductions in species diversity;
- loss of critical/productive habitat;
- transformation of natural landscapes;
- toxicity effects on human health;
- reductions in the capacity of renewable resources to meet the needs of present and future generations;
- loss of current use of lands and resources for traditional purposes by aboriginal persons;
- foreclosure of future resource use or production.

Are the adverse environmental effects significant?

Environmental standards, guidelines, and objectives are commonly used to establish significance. They typically specify threshold levels, such as maximum acceptable ground-level concentrations of air pollutants. Where no such threshold standards or guidelines exist, other methods, such as risk assessment, may need to be applied.

Criteria for determining significance include

- magnitude;
- geographic extent;
- duration and frequency;
- irreversibility;
- ecological context.

Are the significant adverse environmental effects likely?

Criteria for determining likelihood include

- probability of occurrence;
- scientific uncertainty.

Whenever possible, the assessment should try to apply statistical methods to determine significance. Where such methods are not feasible, practitioners will need to use a qualitative approach to determining likelihood, based on

professional judgement.

Factors used in determining whether or not environmental effects are adverse

Environmental changes:

- negative effects on the health of biota including plants, animals, and fish
- threat to rare or endangered species
- reductions in species diversity or disruption of food webs
- loss of, or damage to, habitats, including habitat fragmentation
- discharges or release of persistent and/or toxic chemicals, microbiological agents, nutrients (e.g., nitrogen, phosphorus), radiation or thermal energy (e.g., cooling wastewater)
- population declines, particularly in top predator, large, or long-lived species the removal of resource materials (e.g., peat, coal) from the environment
- transformation of natural landscapes
- obstruction of migration, or passage of wildlife
- negative effects on the quality and/or quantity of the biophysical environment (e.g., surface water, groundwater, soil, land and air)

Effects on people resulting from environmental changes:

- negative effects on human health, well-being, or quality of life
- reduction of the quality or quantity of recreational opportunities or amenities
- detrimental change in the current use of lands and resources for traditional purposes by aboriginal persons
- negative effects on historical, archaeological, paleontological, or architectural resources decreased aesthetic appeal or changes in visual amenities (e.g., views)
- loss of, or damage to, commercial species or resources
- foreclosure of future resource use or production
- loss of, or damage to, valued, rare, or endangered species or their habitats

1.8 Step 5: Preparing the Environmental Assessment Report

In the fifth step of a self-directed EA, the RA must prepare (or ensure the preparation of) a screening report or comprehensive study report based on the results of the EA. The report should sufficiently explain how the assessment arrived at its conclusion. It should also provide a clear description of any proposed mitigation measures, and outline any requirements for follow-up that the RA believes are necessary.

Sample outline for an EA report

The RA can develop its own simple format for a screening report or comprehensive study report. Following is a sample outline:

- Name of proposal
- Brief description (location, cost, etc.)
- Nature of effects identified
- Proposed mitigation measures
- Federal/provincial agencies consulted
- Public advised (list methods as applicable)
- Approximate date of implementation
- Conclusion and rationale
- Departmental/agency contact (name and telephone number)

1.8.1 The screening report

The screening report must be included in the public registry established for the project.

As a minimum, the screening report should include

- **description of project activities**: a list of activities and their locations, scheduling details, and estimates of their magnitude or scale (quantified, if possible);
- **description of the environment**: identification of the environmental components in the study area, their interrelationship, and documentation or discussion of their sensitivity to disturbance;
- **environmental effects**: a summary of the effects, including cumulative environmental effects and the effects of malfunctions or accidents, of project activities on those components of the environment considered at risk;
- **proposed mitigation measures**: a list and description of any mitigation measures, referenced to the environmental effects they are designed to eliminate or reduce, that in the opinion of the RA, are required to prevent orreduce significant adverse environmental effects;
- **determination of significance**: a statement of whether the adverse environmental effects, taking into account appropriate mitigation measures, are significant or uncertain;
- **screening conclusion**: a statement and rationale of the screening conclusion;
- **departmental/agency contact**: name and telephone number of person to contact for more information.

The RA also has the discretionary power to require consideration of other factors appropriate to the nature and complexity of the project, including

- **the need for the project**;
- **alternatives to the project**;
- **alternative means of carrying out the project**: a description of the alternative means, the environmental effects of any such alternative means, and a rationale explaining why the alternatives were rejected;
- **expert department consultation**: a record of consultations with expert federal departments, and a discussion of any unresolved issues raised during these consultations;
- **public consultation**: a description of any public consultation during the screening, the results of the consultations, and an outline of any future consultation program;
- **follow-up programs**: details on monitoring programs to evaluate the effectiveness of mitigation measures as well as to determine the accuracy of the EA;
- **supporting information**: a summary and interpretation of technical and environmental studies, maps, or other information used in making the screening decision;
- any other matter relevant to the screening.

Future use of a screening report

Besides forming the basis of the decision on the project, an RA's screening report will become a source of information on environmental effects and mitigation for future screenings, and eventually may be used as a class screening report. Some departments may want to establish a database of completed screening reports that is easily accessible to those responsible for screening.

1.8.2 The comprehensive study report

The comprehensive study report must be included in the public registry established for the project. As a minimum, the report must include

- **description of project activities**: a statement of the purpose, a list of activities and their locations, scheduling details, and estimates of their

magnitude or scale (quantified, if possible);

- **alternative means of carrying out the project**: a description of any technically and economically feasible alternative means, the environmental effects of any such alternative means, and a rationale explaining why the alternatives were rejected;
- **discussion of the scope of the environmental assessment**: a discussion of how the scope of the project and scope of the assessment were determined;
- **description of the environment**: identification of the environmental components in the study area, their interrelationship, and documentation or discussion of their sensitivity to disturbance;
- **environmental effects**: a summary of the effects of project activities on those components of the environment considered at risk, including a consideration of cumulative environmental effects and the effects of malfunctions or accidents that may occur;
- **effects on sustainable use of renewable resources**: a consideration of the capacity of renewable resources likely to be significantly affected by the project to meet present and future needs;
- **proposed mitigation measures:** a list and description of any mitigation measures, referenced to the environmental effects they are designed to eliminate or reduce, that, in the opinion of the RA, are required to prevent or reduce significant adverse environmental effects;
- **determination of significance:** a statement of whether the adverse environmental effects, taking into account appropriate mitigation measures, are significant or uncertain;
- **conclusion**: a statement and rationale of the conclusion;
- **expert department consultation**: a record of consultations with expert federal departments, and a discussion of any unresolved issues raised during these consultations;
- **public comments**: an identification of the public groups with an interest in the project, comments received from the public during the course of the EA, a discussion of how those comments have been incorporated into the comprehensive study report and a discussion of why some of those comments may not have been incorporated, a description of any public consultation during the EA as well as the results of the consultations, and an outline of any future consultation program;
- **follow-up programs**: a discussion of the need for and the requirements of a follow-up program to evaluate the effectiveness of mitigation measures and todetermine the accuracy of the EA;
- **supporting information**: a summary and interpretation of environmental studies, maps, or other information used in the EA;
- **departmental/agency contact**: name and telephone number of person to contact for more information.

The RA also has the discretionary power to require a consideration of other factors appropriate to the nature and complexity of the project, such as the **need for** and **alternatives to** the project.

Record of consultation with expert federal departments

- evidence that the comprehensive study has been reviewed with all relevant expert federal departments and agencies
- should include a summary of the expertise provided by these departments and agencies, together with a discussion of any remaining technical concerns or issues that they have raised, or any unresolved issues

| Previous page | Table of contents | Next page |

Environmental Assessments
Public Participation
How to do Environmental Assessments
Legislation & Regulations
Training Opportunities
Research & Development
Strategic Environmental Assessment
Publications
Frequently Asked Questions

Canadian Environmental Assessment Registry
CEAR Main »

A primer for Industry
Will your project need a federal EA? More »

Search our site

| Previous page | Table of contents | Next page |

1.9 Step 6: Review of the Environmental Assessment Report

When a self-directed EA is completed, the report may be subject to an outside review. In a screening, the RA has the option of allowing public review and comment on the screening report. In a comprehensive study, however, the Agency must ensure that the comprehensive study report is reviewed and available for comment.

1.9.1 The screening report

The RA will want to ensure that all relevant expert federal departments have had an opportunity to provide specialist information and expertise during the screening or to comment on the scientific and technical accuracy of the report.

Public involvement is discretionary in a screening. When the RA believes that public participation is appropriate, however, it should provide the public with an opportunity to examine and comment on the screening report before making any decision on whether to provide federal support to the project. In addition, the public will be given an opportunity to review and comment on all proposed class screening reports.

For more information on public involvement, review the reference guide "Public Involvement" (in preparation) in Part III.

1.9.2 The comprehensive study report

As in the case of a screening, the RA should ensure that all relevant expert federal departments have had an opportunity to provide specialist information and expertise during preparation of the comprehensive study report, and comment on the scientific and technical accuracy of the report.

The completed comprehensive study report must then be submitted to the Minister of the Environment and the Canadian Environmental Assessment Agency.

Review by the public

When it has received the comprehensive study report, the Agency must publish a notice setting out

- when the report will be available to the public;
- where copies of the report may be obtained;
- the deadline for filing comments on the conclusions and recommendations of the report.

Prior to the deadline set out in the notice, any person may file comments with the Agency about the conclusions, recommendations, and any other aspect of the comprehensive study report. The RA must ensure that the comprehensive study report and public comments are filed in the public registry.

Review by the Agency

The Agency has several responsibilities with respect to the comprehensive study report. These include

- ensuring the report is reviewed;
- publishing a notice to facilitate public comment on the report;
- receiving and reviewing any public comments forwarded to the Agency;
- making recommendations to the Minister, based on the Agency's review of the report and public comments.

The Agency's review will address such issues as:

- Was the comprehensive study undertaken and conducted in accordance with the procedural requirements and intent of the Act?
- Were all the relevant expert federal authorities consulted and all concerns adequately resolved?
- Were there appropriate and sufficient opportunities for public involvement in the comprehensive study and are there any outstanding public concerns?

When the Agency has reviewed the report and all comments received from the public and expert federal departments, it must provide a recommendation to the Minister concerning the next step in the EA.

1.10 Step 7: Decision by the Responsible Authority and the Minister

When the review of the EA report is completed, a determination must be made whether the RA can provide federal support to the project (that is, whether to proceed as proponent, or to grant the funds, licence, or interest in lands needed by the project). In the case of a screening, this determination is made by the RA. Upon completion of a comprehensive study, however, the Minister determines the next step in the EA process.

1.10.1 Public concerns

Public concerns about a project can trigger a public review. Therefore, they must be explicitly addressed upon completion of the self-directed EA report. Ideally, public involvement programs conducted during the scoping and assessment steps will have identified public concerns and helped identify ways in which they can be resolved.

In the case of a screening, the RA must consider whether public concerns warrant referral to mediation or a panel review. In a comprehensive study, the Minister will make the determination, on the advice of the Agency and RA. (From a practical perspective, the RA can ask the Minister to refer the project directly to a public review at any time before completion of the screening or comprehensive study if it is clear from the outset that public concerns about the project are unlikely to be adequately addressed in a self-directed EA.)

The *Point Aconi* decision of the Federal Court of Canada has provided guidance to RAs in using their discretionary powers in response to public concerns. (*Cantwell and others v. Minister of the Environment and others* (1991), 41 F.T.R. 18). In reviewing a decision by a federal Minister not to refer a project to a review panel, even though there was (in the Court's words) "widespread" public concern about the project, the Court noted factors that are likely to be relevant and irrelevant in deciding whether public concerns warrant a referral to a mediator or panel.

As a general guide, the Court stated that discretion with respect to interpreting the phrase must be exercised "reasonably and in good faith taking into account relevant considerations (and) having regard to the purposes of the legislation."

Relevant factors identified in the decision included

- the level and extent of public concern about the project;
- the general conclusion of the EA that expressly refers to public concerns;
- the evidence of widespread public concern about the project and interest in a public review, as reflected in the EA report and other documents;
- advice to the Minister that environmental effects over which members of the public have expressed concern are considered to be insignificant or mitigable with known technology;
- lack of likely effectiveness of a panel in recommending changes in the project that would address concerns expressed by the public.

Factors that were found to be irrelevant in determining the need for a referral included

- considerations of expediency or practicality;
- the fact that construction had begun on the project;
- that a provincial government, having concluded its own assessment, would be unlikely to agree to participate in a public review.

Public concerns

Public concerns, if not addressed sufficiently in the screening or comprehensive study, can warrant a referral to a public review either through mediation or panel review. Public concerns can be expressed in many ways:

- correspondence and telephone calls to the Minister, local MPs, the Agency, or the department
- media coverage of public concerns
- community events, such as demonstrations or meetings about the project;
- formal interventions
- informal communication

RAs should not necessarily rely on numbers when judging the importance of public concerns. Even a few letters or calls may express public concerns, particularly if they are from people who will be most directly affected by a project.

1.10.2 Screening

In the case of a screening, one of three decisions by the RA is possible, taking into account appropriate mitigation measures:

- the RA may provide federal support to the project if the project is not likely to cause significant adverse environmental effects;
- the RA must not provide federal support to the project if the project is likely to cause significant adverse environmental effects that cannot be justified;
- the RA must request that the Minister refer the project to a public review if
  - it is uncertain whether the project is likely to cause significant adverse environmental effects;
  - the project is likely to cause significant adverse environmental effects, and a determination must be made whether these effects are justified in the circumstances;
  - public concerns warrant a public review.

If the Minister refers the project to a public review, then the RA must not provide federal support to the project until the public review is completed.

1.10.3 Comprehensive Study

The possible decisions under a comprehensive study are identical to those under a screening, except for the important difference in the role of the Minister of the Environment. Upon completion of a comprehensive study, it is the Minister who is responsible for determining the next step in the EA process, based on the findings of the comprehensive study report and public comments received.

The Minister will refer the project back to the RA for action, if, taking into account appropriate mitigation measures

- the project is not likely to cause significant adverse environmental effects, in which case the RA may provide federal support to the project; or
- the project is likely to cause significant adverse environmental effects that cannot be justified, in which case it may not provide any federal support to the project.

The Minister will refer the project to a mediator or review panel, if, again taking into account appropriate mitigation measures

- it is uncertain whether the project is likely to cause significant adverse environmental effects;
- the project is likely to cause significant adverse environmental effects and adetermination must be made whether these effects are justified in the circumstances;
- public concerns warrant the referral.

If the Minister refers the project to a public review, then neither the RA nor any other federal authority may provide federal support to the project until the public review is completed.

1.11 Step 8: Post-Decision Activity

The final step in the self-directed EA process addresses the RA's obligations following completion of the screening report or comprehensive study report and its determination about whether to provide federal support to the project. These obligations fall into three general categories:

- providing public notice about the course of action;
- deciding whether a follow-up program is appropriate;
- ensuring the implementation of appropriate mitigation measures.

1.11.1 Public notice

The RA must provide public notice regarding its course of action, regardless of whether it determines that it may provide federal support to the project.

If it does not provide federal support, the RA must file a notice of that course of action in the public registry. If it does provide federal support, the RA must advise the public of

- the RA's course of action;
- any mitigation measures to be implemented with respect to the project's adverse environmental effects;
- any follow-up program that is implemented;
- any results of the follow-up program.

The type of public notice should be appropriate to the circumstances of the project and reflect the public involvement effort that has been undertaken. Examples include newspaper advertisements, news releases, community bulletin boards, and public meetings. All documents should be included in the public registry. At this time, public notification cannot be achieved by filing the

EA on the federal EA index. The index may be enhanced in future, however, to include this function.

The RA's obligation to advise the public of the above information is a service designated for the use, benefit and information of the public. As a result, an RA has responsibilities to communicate this information to the public in accordance with the Official Languages Act (OLA).

The public notice must be in both official languages when the EA is administered in an area designated as bilingual. These designations include

- the RA's head office, which, as the central office of a federal institution, is designated bilingual under the OLA;
- an office or facility located within the National Capital Region;
- an office or facility located in a region designated as bilingual under the OLA under Treasury Board's "significant demand" criterion.

Written notices may be bilingual, or produced in separate but equal versions. In the latter case, each version must clearly indicate the availability of the information in the other official language.

1.11.2 Follow-up program

Under the Act, a follow-up program

- verifies the accuracy of the EA; and/or
- determines the effectiveness of any mitigation measures that have been implemented.

When a follow-up program may be appropriate

The RA should develop a follow-up program for a project when the circumstances warrant. Examples include situations where

- the project involves a new or unproven technology
- the project involves new or unproven mitigation measures
- an otherwise familiar or routine project is proposed for a new or unfamiliar environmental setting
- the assessment's analysis was based on a new assessment technique or model, or there is otherwise some uncertainty about the conclusions
- project scheduling is subject to change such that environmental effects could result

---

Screening

The need for and requirements of a follow-up program need not be considered during preparation of the screening report. If, on completion of the report, however, the RA determines that it may provide federal support to the project, it must make a decision about whether a follow-up program is appropriate. If so, it must ensure that one is designed and implemented.

Comprehensive study

A comprehensive study must explicitly consider the need for and requirements of a follow-up program during preparation of the report. If the RA determines it may provide federal support to the project, it must then decide whether to implement the follow-up program.

The critical question regarding implementation of a follow-up program is one of uncertainty or unfamiliarity -- in either the analysis and predictions of the environmental assessment, or in the mitigation measures. The assessment

must consider, for example, whether a new modelling technique or an untried mitigation measure introduces a level of uncertainty into the project and, if so, what are the corresponding risks of an inaccurate analysis or ineffective mitigation measure?

1.11.3 Mitigation measures

If the RA has determined that it may provide federal support to the project, and that the proponent is proceeding, the RA must ensure that any mitigation measures it considers appropriate are implemented.

RAs have powers other than those given under the Act that allow them to ensure implementation of mitigation measures -- for example through the issuance of conditional approvals, the holdback provisions of funding arrangements, and contractual arrangements. The RA should determine the most appropriate means of ensuring the implementation of mitigation measures.

Examples of ensuring compliance with mitigation measures

compliance statement or conditions of approval in contract with project proponent performance bond by proponent site visits

1.12 The Self-directed Environmental Assessment Checklists

This section provides checklists for RAs in conducting a self-directed EA under the Act. Tables 1-3 and 1-4 summarize the key obligations and decisions related to a screening and comprehensive study, respectively.

Table 1-3

Screening Checklist

Have you

	Yes	No
1. Reviewed your obligations under the Act?	O	O
2. Established a public registry for the project?	O	O
3. Determined the scope of the project?	O	O
4. Determined the factors to be considered in the EA?		

O O

5.

Determined the scope of the assessment?

O O

6.

Determined whether the project has been previously assessed?

O O

7.

Determined whether all or part of a class screening report can be applied to the assessment?

O O

8.

Identified all RAs involved?

O O

9.

Identified a lead RA, if required?

O O

10.

Determined, if a provincial government is involved, whether there is a federal-provincial agreement in place?

O O

11.

Reviewed your information needs and identified any gaps?

O O

12.

Determined how any information gaps will be filled?

O O

13.

Identified whether public input is appropriate?

O O

14.

If yes, developed a public involvement program?

O O

15.

Considered all environmental effects?

O O

16.

Identified appropriate mitigation measures?

O O

17.

Monitored public concerns about the project?

O O

18.

Prepared a screening report in full compliance with the Act?

O O

19.

Made a determination about whether the RA may

provide federal support to the project?

O O

20.

Provided public notice of the course of action on the project?

O O

21.

Determined how the implementation of any mitigation measures,

if appropriate, will be ensured?

O O

22.

Filed all relevant documents and materials in the public registry?

O O

23.

Considered the need for a follow-up program if the project is proceeding?

O O

24.

Ensured the design and implementation of a follow-up program, if appropriate?

O O

Table 1-4

Comprehensive Study Checklist

Have you

Yes No

1.

Reviewed your obligations under the Act?

O O

2.

Established a public registry for the project?

O O

3.

Determined the scope of the project?

O O

4.

Determined the factors to be considered in the EA?

O O

5.

Determined the scope of the assessment?

O O

6.

Determined whether the project has been previously assessed?

O O

7.

Identified all RAs involved?

O O

8.

Identified a lead RA, if required?

O O

9.

Determined, if a provincial government is involved, whether there is a federal-provincial agreement in place?

O O

10.

Reviewed your information needs and identified any gaps?

O O

11.

Determined how any information gaps will be filled?

O O

12.

Consulted with all relevant expert federal departments?

O O

13.

Developed a public involvement program?

O O

14.

Considered all environmental effects?

O O

15.

Identified appropriate mitigation measures?

O O

16.

Monitored public concerns about the project?

O O

17.

Considered the need for a follow-up program?

O O

18.

Prepared a comprehensive study report in full compliance with the Act?

O O

19.

Submitted the report to the Minister and Agency for review?

O O

20.

Made a determination about whether the RA may

provide federal support to the project?

O O

21.

Provided public notice of the course of action on the project?

O O

22.

Determined how the implementation of any mitigation measures,

if appropriate, will be ensured?

O O

23.

Ensured the design and implementation of a follow-up program, if appropriate?

O O

24.

Filed all relevant documents and materials in the public registry?

O O

| Previous page | Table of contents | Next page |

Last Updated: 2003-10-07 Important Notices

Chapter 2: The Public Review: Mediation and Panel Review

- 2.1 The Public Review
  - 2.1.1 Mediation
  - 2.1.2 Panel review
- 2.2 Roles and Responsibilities
- 2.3 Key Steps
  - 2.3.1 Step 1: Determining whether mediation is appropriate
  - 2.3.2 Step 2: Establishing terms of reference
  - 2.3.3 Step 3: Appointing a mediator or panel
  - 2.3.4 Step 4: Public review by the mediator or panel
  - 2.3.5 Step 5: Report of the mediator or panel
  - 2.3.6 Step 6: Decision by the responsible authority
  - 2.3.7 Step 7: Post-decision activity
- 2.4 The Public Review Checklists

2.1 The Public Review

In a public review, members of the public are given a greater opportunity to participate in the conduct of the environmental assessment (EA). The *Canadian Environmental Assessment Act* (Act) provides three options for the public review of projects: mediation, panel review, or a combination of the two. The Minister of the Environment can order a public review at any time during a screening or comprehensive study. The responsible authority (RA) may also request such a review from the Minister at any time.

Mediation and panel reviews are advisory rather than decision-making procedures, and the RA must still determine whether it may provide federal support to the project.

A referral to a public review is made because

- it is uncertain whether the project is likely to cause significant adverse environmental effects;
- the project is likely to cause significant adverse environmental effects and a determination must be made whether these effects are justified in the /circumstances; or
- public concerns about the project and its possible environmental effects warrant further investigation of the project.

A project can be referred to mediation or a panel review in any one of the following situations:

- after a screening;
- after a comprehensive study;
- at any time before completion of a screening or comprehensive study (in the case of a screening, a project can be referred to a public review only when the RA believes that the project is likely to cause significant adverse environmental effects or that public concerns warrant a referral);
- **before** the screening or comprehensive study actually begins, if it is clear from the outset that a public review will be necessary.

The Minister decides whether the project will proceed to either mediation or a panel review.

Where mediation is inappropriate or unsuccessful, the EA review is conducted by an independent panel. In certain cases, a panel review may be conducted jointly with another jurisdiction.

2.1.1 Mediation

Mediation is a voluntary process of negotiation in which an independent and impartial mediator helps the interested parties resolve their issues. It is a formal step in the EA process, applied either on its own or to support a panel review. It is characterized by a non-adversarial, collaborative approach to solving problems and generating agreements where consensus is possible. It may also help to identify and clarify the issues where agreement is not possible.

In mediation, members of the public participate as representatives of interested parties, along with representatives of the RA, the proponent, and other groups as appropriate. Meetings or hearings open to the general public, as are held in a panel review, usually are not part of a mediation.

Mediation is an appropriate choice whenever all of the interested parties are willing to participate and a consensus appears possible. It is particularly effective where the issues involve a small number of interested parties and the environmental issues are limited in scope and number. It can be sensitive to local concerns and less costly than a panel review in terms of time and resources. Participants also gain a sense of having contributed to the resolution of a problem.

In this process, a mediator is appointed by the Minister after consulting with the RA and the other parties to the mediation. The mediator assists the participants in reaching a consensus, but does not make decisions for them.

Mediation can address all or part of an EA. For example, it may be used to resolve specific issues that may not be suitable for resolution by a review panel, such as determining the most effective mitigation measure.

Successful mediation reflects the following guiding principles:

- Participation must be voluntary; participants must see the value of such an approach.
- All legitimate stakeholders must be allowed to participate.
- The mediator must be independent and impartial.
- The mediator must be acceptable to all the parties involved.

If the mediation is successful in reaching an agreement, the RA must make a determination, based on the mediator's report, about whether it may provide federal support to the project.

2.1.2 Panel review

Where mediation is not appropriate or successful, the public review is conducted by an independent panel. The panel review, however, like mediation, is an advisory process and not binding on the RA.

The Minister appoints the panel and establishes its terms of reference after consulting with the RA. In certain cases, a panel review may be conducted jointly with another jurisdiction. (For a discussion on harmonization of federal and provincial EA systems, refer to section 1.3.5.)

Panel reviews are conducted in compliance with the Act and according to the following guiding principles:

- Information available to the panel is also made available to the public, with the exception of information that must remain confidential due to privacy or security concerns.

- Parties with a legitimate interest are encouraged to participate.
- Panel reviews involve informal but structured meetings.

In conducting a public review, the panel must

- ensure that the information required for the EA is obtained and made available to the public;
- convene hearings in a manner that offers the public an opportunity to participate;
- prepare a report setting out the rationale, conclusions, and recommendations of the panel, including any mitigation measures and follow-up program, as well as a summary of comments received by the public;
- submit the report to the Minister and the RA.

The Minister may also allow another federal process to be used as a substitute for a review panel under the Act. If the Minister determines that an EA process used by a federal authority under another federal Act or used by a body established under a lands claim agreement would be an appropriate substitute, a review panel may not be appointed under the Act.

Before allowing the substitution, the Minister must be satisfied that

- the substitute process includes a consideration of those factors required under the Act for a panel review;
- the public will be given an opportunity to participate in the EA;
- a report will be submitted to the Minister at the end of the EA;
- the report will be published;
- the process meets any other relevant criteria for the substitution established by the Minister.

When the panel's report is completed, the Minister refers the project back to the RA for action. The RA must then make a determination, based on the report of the review panel, about whether it may provide federal support to the project.

2.2 Roles and Responsibilities

There may be as many as nine key participants in a public review:

- the RA;
- the proponent;
- the mediator;
- the panel;
- the Agency;
- the Minister;
- expert federal departments;
- other federal authorities;
- the public.

Tables 2-1 and 2-2 summarize the roles and responsibilities of these participants in mediation and a panel review, respectively.

2.3 Key Steps

The public review process consists of seven basic steps (see Figure 2-1).

Table 2-1

Roles and Responsibilities of Participants

in a Mediation

The RA

- must not provide federal support to the project until completion of the EA;
    - advises the Minister on the terms of reference for the mediator;
    - provides background information;
    - participates in the mediation process;
    - maintains a public registry prior to the referral to a mediator and from the time the mediator's report has been submitted to the Minister and the RA until the completion of any follow-up program;
    - determines, after a successful mediation, and taking the recommendations of the mediator's report into account, whether it may provide federal support to the project;
    - provides public notice of its course of action, including the extent to which the mediator's recommendations have been adopted;
    - ensures that all appropriate mitigation measures are implemented for any project that is proceeding;
    - ensures that, when appropriate, a follow-up program is developed and implemented.

The Proponent

- provides, at the mediator's request, background information and detailed project proposal;
- participates in the mediation process;
- follows all conditions imposed by the RA, such as those related to the implementation of mitigation measures and a follow-up program, should the project proceed.

The Mediator

- oversees and manages the mediation process;
- may allow additional interested parties to participate;
- prepares and submits a report to the Minister and to the RA.

The Agency

- recommends to the Minister whether mediation is an appropriate option;
- provides advice to the Minister at all steps of the mediation process,
- provides administrative support to the mediator, as required;
- maintains a public registry for the project from the appointment of the mediator, until the mediator's report is submitted to the Minister and the RA;
- provides procedural advice to the RA and other participants, as required.

The Minister

- determines whether mediation is appropriate;
- establishes the terms of reference for the mediator, including the scope of the project, the scope of the assessment, and the scope of the factors to be considered, after consulting with the RA and other participants;
- appoints a mediator, after consulting with the RA and other interested parties;
- receives the mediator's report and makes it available to the public;
- refers all or part of the project to a panel review if the parties are unable to reach an agreement in mediation, or when one party to the mediation process decides against continuing the process.

Expert Federal Departments

- make expert information or knowledge available;
    - participate in the mediation process, when required;
    - must not provide federal support to the project until the EA has been completed.

Other Federal Authorities

- must not provide federal support to the project until the EA has been completed.

The Public

- representatives of parties having an interest in the project may participate in the mediation.

Table 2-2

Roles and Responsibilities of Participants

in a Panel Review

The RA

- must not provide federal support to the project until completion of the EA;
  - ensures that an environmental impact statement (EIS) is prepared in accordance with the guidelines established by the panel (if the screening report or comprehensive study report has not been prepared, or if additional information is requested);
  - ensures that any information deficiencies in the EIS, identified by the panel, are addressed by the proponent;
  - participates in the panel's public hearings;
  - maintains a public registry from the time the panel's report has been submitted to the Minister and the RA until the completion of any follow-up program;
  - determines, based on the recommendations of the panel, whether it may provide federal support to the project;
  - provides public notice of the course of action, including the extent to which the recommendations of the review panel have been adopted;
  - ensures that all necessary mitigation measures are implemented for any project that is proceeding;
  - ensures that, when appropriate, a follow-up program is developed and implemented.

The Proponent

- provides, at panel's request, background information and detailed project proposal;
- prepares the necessary documentation for the EA (such as the EIS); v
- participates in the panel's public hearings;
- follows any and all conditions imposed by the RA;
- implements any mitigation measures and follow-up program.

The Panel

- develops the guidelines for the EIS;
- prepares an EIS deficiency statement, if necessary;
- provides opportunities for public involvement throughout the panel review;
- convenes public hearings;
- reviews the EIS;
- prepares and submits a report, with recommendations, to the Minister.

The Agency

- provides administrative support and procedural advice to the panel;
- maintains a public registry for the project from the appointment of the

panel until the panel's report is submitted to the Minister and the RA;
- provides financial support to eligible participants through the Participant Funding Program;
- provides procedural advice to the RA and other participants, as required;
- provides procedural advice to the Minister at all steps of the panel review.

The Minister

- determines whether a joint panel or substitute process is applicable, if an agreement was not reached in mediation, or if mediation is not appropriate;
- establishes the terms of reference for the panel, including the scope of the project, the scope of the assessment, and the scope of the factors to be considered, after consulting with the RA;
- establishes a public review panel for the project, if neither a joint panel nor substitute process is applicable; v
- appoints the chair and panel members, after consulting with the RA;
- refers to a mediator, as appropriate, any issue or issues before the panel that may be resolved by mediation;
- receives the panel's report and makes it publicly available.

Expert Federal Departments

- make expert information or knowledge available;
    - review the EIS;
    - participate in public hearings as required by the panel;
    - must not provide federal support to the project until the EA has been completed.

Other Federal Authorities

- must not provide federal support to the project until the EA has been completed;
    - may not provide any federal support for a project where an RA has concluded that the project will cause significant adverse environmental effects that cannot be justified in the circumstances.

The Public

- provide input and comments throughout the panel process;
- participate in public hearings convened by the panel.

Figure 2-1: Key Steps of the Public Review

2.3.1 Step 1: Determining whether mediation is appropriate

The Minister of the Environment determines whether mediation is appropriate for the project. In reaching this determination, the Minister will seek the advice of the RA and the Agency. Key questions in determining the appropriateness of mediation include:

- What are the potential sources of uncertainty or disagreement? For example, do the disputes involve fundamental opposition to the proposed project, technical issues, the determination of environmental effects and their significance, or the effectiveness of mitigation measures?
- Are these disagreements negotiable? Is there room for compromise and consensus?
- Who are the main parties involved?
- Do the parties agree on the areas of uncertainty or disagreement?
- Are there representatives who can speak on behalf of the interests?
- Are the parties willing to participate in mediation?

The RA should inform the Agency as early as possible if it is considering mediation. The Agency can provide guidance in determining appropriate issues for mediation to address as well as in identifying the interested parties and their willingness to participate.

Using a facilitator The RA may want to engage the services of a skilled and impartial facilitator in the pre-mediation step. The facilitator can help all parties decide whether to proceed with a voluntary dispute-resolution process, and, if so, what the nature or ground rules of the process should be. A facilitator can help

- identify the sources of uncertainty or disagreement
- *determine whether the interested parties are willing to give mediation a chance*
- *determine the acceptability of a mediator to all parties*

assist in establishing the terms of reference.

2.3.2 Step 2: Establishing terms of reference

The Minister will establish the terms of reference for the mediator or panel review after consulting with the RA and other parties as appropriate. The terms of reference include the scope of the project, the scope of the assessment, the scope of factors to be considered, and appropriate reporting requirements.

The factors that must be considered in a mediation or panel review are the same as those for a comprehensive study:

- the purpose of the project;
- alternative means of carrying out the project as well as the environmental effects of these alternative means;
- the environmental effects of the project, including cumulative environmental effects and the effects of malfunctions or accidents that may occur in connection with the project;
- the effects on the capacity of renewable resources likely to be significantly affected by the project to meet present and future needs;
- the significance of the environmental effects;
- public comments;
- mitigation measures;
- the need for, and requirements of, any follow-up program;
- any other matter relevant to the review, such as the need for and alternatives to the project, that the Minister or RA may require.

If a screening or comprehensive study for the project has been completed, the screening report or comprehensive study report will form the basis of the proponent's EIS for the mediator or panel.

2.3.3 Step 3: Appointing a mediator or panel

Mediation

The mediator is appointed by the Minister after consulting with the RA and all those who are to participate in the mediation. The mediator may be appointed from a roster of candidates established by the Minister on the advice of the Agency. The mediator must

- be unbiased and free from any conflict of interest relative to the project;
- have knowledge or experience in acting as a mediator;
- be acceptable to all participants.

A good mediator should also have excellent interpersonal skills, such as the ability to gain and maintain trust, to listen, and to negotiate effectively.

Panel review

The Minister, in consultation with the RA, will appoint the chair and other panel members. Members may be chosen from a roster of candidates established by the Minister.

Panel members must

- be unbiased and free from any conflict of interest in the project;
- have knowledge or experience relevant to the anticipated environmental effects of the project.

2.3.4 Step 4: Public review by the mediator or panel

Mediation

Once appointed, the mediator's first task is to work with the RA and interested parties to develop protocols or "ground rules" that will govern the negotiations. For example, protocols may deal with agreements on the roles and responsibilities of the parties and the mediator, and the rules of confidentiality, including reporting back to the representative's group. Other matters to be settled include the timetable for negotiation and the requirements for a public information program.

The parties then turn to the issues and the substantive matters in dispute. The emphasis in mediated negotiations is on working through the substantive issues in an orderly, focused, and creative manner. The mediator must ensure that the discussions do not become unproductive or lapse into confrontational bargaining, and that the participating representatives maintain links with their organizations.

A mediator will typically

- establish an agenda of issues to be discussed;
- identify information requirements, sources of information, and opportunities for joint fact-finding;
- work towards a single negotiating text to focus the discussions;
- present the alternatives for mutual gain, so that important interests are considered and accommodated when formulating proposals (rather than the parties becoming deadlocked over specific issues);
- reach a final agreement with the parties.

Panel review

A panel review generally includes

- preparation of guidelines for the EIS;
- preparation of the EIS by the proponent (based on the screening report or comprehensive study report);
- review of the EIS by the panel and public;
- preparation of the EIS deficiency statement, if necessary;
- soliciting of public comments;
- convening of public hearings;
- preparation of a panel report and submission to the Minister and the RA.

The RA is a major participant in the review. It must either prepare or supervise the preparation of the draft EIS, revise it according to the guidelines issued by the panel, and appear before the panel at public hearings to answer questions.

Public involvement is a key characteristic of the panel review. Panel hearings must be public, unless the panel is satisfied that specific, direct, and substantial harm would be caused to the witness by a public hearing.

A panel may call any person as a witness and order the witness to give evidence and produce any documents or other materials the panel considers

necessary for conducting its EA. The panel's summons can be enforced by turning it into an order of the Federal Court of Canada.

2.3.5 Step 5: Report of the mediator or panel

Mediation

The mediator submits a report to the Minister and the RA at the conclusion of the mediation, whether or not an agreement has been reached. The report must not divulge any confidential information, and should be limited to a brief record of any agreements and outstanding issues. The report should include an analysis of differences among the parties only if the parties have reviewed and approved the report.

Upon receiving the mediator's report, the Minister must give public notice that

the report is available, stating how copies may be obtained.

The nature and effect of the mediator's report changes depending on whether the participants were able to reach an agreement. If an agreement was reached, the mediator's report becomes the final EA report for the project, and the RA takes appropriate action.

If agreement was not reached, the mediator's report becomes, in effect, the starting point for a panel review.

Panel review

The panel's report must set out

- the rationale, conclusions, and recommendations of the panel, including any mitigation measures and follow-up program;
- a summary of public comments.

Once the report is submitted to the Minister and the RA, the work of the panel is completed. The Minister must advise the public that the report is available, and state how copies may be obtained.

2.3.6 Step 6: Decision by the responsible authority

When the mediation or panel review is completed, the RA must decide whether it may provide federal support to the project (that is, whether to proceed as proponent, or to grant the funds, licence, or interest in lands needed by the project). The RA's decision must take into consideration the report of the mediator or panel.

The RA may provide federal support to the project if, taking into account appropriate mitigation measures,

- the project is not likely to cause significant adverse environmental effects; or
- the project is likely to cause significant adverse environmental effects that can be justified in the circumstances.

The RA must not, however, provide federal support to the project if the project is likely to cause significant adverse environmental effects that cannot be justified. In this case, as well, other federal authorities may not provide any support for the project.

If the RA is the proponent, then its decision will determine the fate of the project. If this is not the case, the withholding of federal funds, interest in land, or authorization by the RA may force the proponent to abandon the project. In

other cases, the proponent may be able to proceed without the federal action.

Table 2-3 summarizes the RA's possible conclusions and corresponding courses of action, taking into account the report of the mediator or panel.

Table 2-3

Possible Courses of Action by RA

following a Public Review

RA's Conclusion	RA's Action
1. The project is not likely to cause significant adverse environmental eff it has the potential to cause significant adverse environmental effects tha be prevented or significantly reduced by mitigation measures.	1. May exercise any power or perform any duty or function that would allow project to proceed Must ensure implementation of mitigation measures
2. The project is likely to cause significant adverse environmental effects these effects can be justified in the circumstances.	2. May eaxercise any power or perform any duty or function that would allow project to proceed Must ensure implementation of mitigation measures
3. The project is likely to cause significant adverse environmental effects these cannot be justified in the circumstances.	3. May not exercise any power or perform any duty or function that would allow project to proceed.

2.3.7 Step 7: Post-decision activity

The final step in the public review process addresses the RA's obligations following the completion of a mediation or panel review and its determination about whether to provide federal support to the project. These obligations are identical to those in a comprehensive study, and fall into three categories:

- providing public notice about the course of action;
- determining whether a follow-up program is appropriate;
- ensuring the implementation of any appropriate mitigation measures.

Public notice

If it does provide federal support to the project, however, the RA must advise the public of the following:

- the RA's course of action;
- any mitigation measures to be implemented with respect to the project's adverse environmental effects;
- the extent to which the recommendations of the mediator or review panel were adopted, along with the reasons for rejecting any of them;
- any follow-up program that is implemented;
- any results of the follow-up program.

The type of public notice should be appropriate to the circumstances of the project and reflect the public involvement effort that has been undertaken. All documents should be included in the public registry.

As in the case of public notices after a self-directed EA, the RA's obligation to advise the public of the above information is a service designated for the use, benefit and information of the public. As a result, an RA has responsibilities to communicate this information to the public in accordance with the *Official Languages Act* (*OLA*).

The public notice must be in both official languages when the EA is administered in an area designated as bilingual. These designations include:

- the RA's head office, which, as the central office of a federal institution, is designated bilingual under the *OLA*;
- an office or facility located within the National Capital Region;
- an office or facility located in a region designated as bilingual under the *OLA* under Treasury Board's "significant demand" criterion.

Written notices may be bilingual, or produced in separate but equal versions. In the case of the latter, each version must clearly indicate the availability of the information in the other official language.

Follow-up program

The report of the mediator or review panel may recommend that the RA develop and implement a follow-up program. Under the Act, a follow-up program should

- verify the accuracy of the EA; and/or
- determine the effectiveness of any mitigation measures that have been implemented.

The RA is not obliged to follow the recommendation for a follow-up program, but if it does not, it must justify the decision publicly. RAs should keep in mind that the report from a mediator or panel is the product of an open, fair, and rigorous review involving all key interests, and that the report's recommendations cannot be treated lightly.

A critical question in determining the need for a follow-up program is one of **uncertainty** or **unfamiliarity** -- in either the analysis and predictions of the EA, or in the mitigation measures. The RA must consider, for example, whether a new modelling technique or an untried mitigation measure introduces a level of uncertainty into the project and, if so, whether there are corresponding risks of an inaccurate analysis or ineffective mitigation measure.

When a follow-up program may be appropriate

The RA should develop a follow-up program for a project when the circumstances warrant. Examples include situations where

- the project involves a new or unproven technology
- the project involves new or unproven mitigation measures
- *an otherwise familiar or routine project is proposed for a new or unfamiliar environmental setting*
- *the assessment's analysis was based on a new assessment technique or model, or there is otherwise some uncertainty about the conclusions*
- *project scheduling is subject to change such that environmental effects could result*

Mitigation measures

If the RA has determined that it may provide federal support to the project, and that the proponent is proceeding, then it must ensure that all appropriate mitigation measures are implemented.

RAs have powers other than those given under the Act that will allow them to ensure implementation of mitigation measures -- for example, through the issuance of permits, the holdback provisions of funding arrangements, and contractual arrangements. The RA determines the most appropriate means of ensuring implementation of any mitigation measures.

Examples of ensuring compliance with mitigation measures

- *compliance statement or conditions of approval in contract with project proponent*
- *performance bond by proponent*
- *site visits*

2.4 The Public Review Checklists

Tables 2-4 and 2-5 provide checklists for RAs of the key obligations under the Act in mediation and panel reviews, respectively.

Table 2-4

Mediation Checklist

Y N

1. Are the sources of uncertainty or disagreement clear?
2. Are the uncertainties or disagreements negotiable?
3. Is it clear who the interested parties are?
4. Are there representatives who can speak on behalf of these parties?
5. Are the parties willing to participate in mediation?
6. Is the number of parties to a potential mediation manageable?
7. Have the representatives of the RA and proponent been identified?
8. Has the Agency been informed about the possibility of a mediation?
9. Is a facilitator needed to help determine the feasibility of mediation and develop draft terms of reference?
10. Do the mediator and other participants require background information in order to participate effectively?
11. Has the RA decided on a course of action, taking into account the mediator's report?
12. Once the RA has made a decision, has public notice been provided in the public registry?
13. Is any other public notice required?
14. Have the mediator's recommendations been adopted?
15. Has the public been informed of the extent to which the mediator's recommendations have been adopted and the reasons why any recommendations were not adopted?
16. Are there mitigation measures to implement?
17. If yes, are plans in place to ensure implementation?
18. Is a follow-up program appropriate?
19. If yes, has one been designed?
20. Has the public registry been maintained up to the appointment of the mediator, and again from the time that the mediator's report was submitted?

Table 2-5

Panel Review Checklist

Y N

1. Have the significant public concerns been identified?

2. Has mediation been attempted?
3. Are there outstanding issues that mediation is not able to resolve?
4. Has the screening report or comprehensive study report been submitted to the Agency as an EIS?
5. Has the panel identified deficiencies in the EIS that need to be addressed?
6. Have the relevant sources of information been identified to meet these deficiencies?
7. Is there a need to obtain information from expert federal authorities?
8. Is there a need to obtain information from the public?
9. Is there a need to obtain information from the other levels of government?
10. Have the representatives of the RA and proponent who will participate in the panel's public hearings been identified?
11. Has the RA decided on a course of action, >taking into account the panel's report?
12. Has public notice been provided of the RA's course of action?
13. Have the panel's recommendations been adopted?
14. Has the public been informed of the extent to which the panel's recommendations have been adopted and the reasons why any recommendations were not adopted?
15. Does the project require any mitigation measures, and if yes, are plans in place to ensure implementation?
16. Is a follow-up program appropriate?
17. If yes, has one been designed?
18. Has the public registry been maintained for the project after the panel's report was submitted to the Minister and the RA?

| Previous page | Table of contents | Next page |

Appendices*

A. The Law List

B. Exclusion List for Undertakings in Relation to a Physical Work

C. Inclusion List for Physical Activities Not Relating to a Physical Work

D. Comprehensive Study List

Reference Guide: Addressing Cumulative Environmental Effects

- 1. Introduction
- 2. The Concept of Cumulative Environmental Effects
- 3. Cumulative Environmental Effects and the Canadian Environmental Assessment Act
- 4. General Considerations
  - 4.1 Advice and Consultation
  - 4.2 Documentation
  - 4.3 Uncertainty
  - 4.4 Level of Effort
- 5. Framework for Addressing Cumulative Environmental Effects in Federal Environmental Assessments
  - 5.1 Step 1: Scoping
  - 5.2 Step 2: Analysis
  - 5.3 Step 3: Mitigation
  - 5.4 Step 4: Determining the Significance of the Effects
  - 5.5 Step 5: Follow-up
- 6. Further Reading
  - 6.1 General References
  - 6.2 References on Methods to Assess Cumulative Environmental Effects
- Appendix A: Identifying Future Projects to be Considered in an Environmental Assessment

1. Introduction

This reference guide describes an approach for addressing cumulative environmental effects under the *Canadian Environmental Assessment Act* (Act). It is one of several reference guides intended to provide the supporting documentation for the *Responsible Authority's Guide to the Canadian Environmental Assessment Act* prepared by the Federal Environmental Assessment Review Office (FEARO). All of the reference guides are complimentary to the *Responsible Authority's Guide to the Canadian Environmental Assessment Act* but go into more detail on individual issues. Specifically, this reference guide:

- reviews the concept of cumulative environmental effects;
- discusses the relevant requirements of the Act;
- outlines some general considerations;
- proposes a framework for addressing cumulative environment effects under the Act; and
- provides a list of key references on the subject.

As the practice of environmental assessment evolves, it will be necessary to update and revise both the *Responsible Authority's Guide to the Canadian Environmental Assessment Act* and the individual reference guides. These guides should be seen as evolving documents rather than as static textual materials. Any suggestions for updates or revisions should be directed to:

Director
Process Development
Policy and Regulatory Affairs
Federal Environmental Assessment Review Office
14th Floor, Fontaine Building

200 Sacré-Coeur Boulevard
Hull, Québec
KIA 0H3

2. The Concept of Cumulative Environmental Effects

The concept of cumulative environmental effects recognises that the environmental effects of individual human activities can combine and interact with each other to cause aggregate effects that may be different in nature or extent from the effects of the individual activities. Ecosystems cannot always cope with the combined effects of human activities without fundamental functional or structural changes.

Examples of cumulative environmental effects include the incremental loss of prairie wetlands caused by agricultural practices, the degradation of Great Lakes water quality by persistent toxic chemicals, global warming caused by the build-up of green house gases in the upper atmosphere, and loss of biodiversity.

For the purposes of this reference guide, cumulative environmental effects can be defined as:

> *The effect on the environment which results from effects of a project when combined with those of other past, existing and imminent projects and activities. These may occur over a certain period of time and distance.*

Over the last few years, the assessment and management of cumulative environmental effects has become a critical issue in Canadian environmental policy. Although the importance of cumulative environmental effects is undeniable, current assessment and management techniques do not always predict or control them adequately. Since cumulative environmental effects originate at the level of individual development projects, it makes sense to introduce the concept into environmental assessment.

Cumulative environmental effects should not be seen as a new type of environmental effect. The concept is simply a recognition of the complex ways in which the effects of individual projects and activities interact and combine with each other over time and distance. Thus, to address cumulative environmental effects in environmental assessments requires no more than *thinking cumulatively*. This means considering:

- The temporal and geographic boundaries of the assessment; and
- The interactions among the environmental effects of the project, and past and future projects and activities.

To a limited extent, federal and other environmental assessments already address cumulative environmental effects. For example, most examine the *baseline* environmental conditions, which include the cumulative environmental effects of past and existing projects and activities. However, consideration should also be given to the cumulative environmental effects resulting from the interactions among the environmental effects of the proposed project with those of future projects and activities.

3. Cumulative Environmental Effects and the Canadian Environmental Assessment Act

Cumulative environmental effects, and a determination of the significance of such effects, are a key component of every environmental assessment

conducted under the Act. Subsection 16(1) of the Act states:

> *"Every screening or comprehensive study of a project and every mediation or assessment by a review panel shall include a consideration of the following factors:*
>
> a. *the environmental effects of the project, including . . . and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;*
> b. *the significance of the effects referred to in paragraph (a)"*

Although the Act does not define cumulative environmental effects, it provides some guidance on what should be addressed. First, it is clear that only environmental effects, as defined in the Act, can be considered cumulatively. Subsection 2(1) of the Act defines "*environment*" as:

- *the components of the Earth, and includes*
  a. *land, water and air, including all layers of the atmosphere,*
  b. *all organic and inorganic matter and living organisms, and*
  c. *the interacting natural systems that include components referred to in paragraphs (a) and (b) above*
- and "*environmental effect*" as:
  a. *any change that the project may cause in the environment, including any effect of any 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 historical, archaeological, paleontological or architectural significance, and*
  b. *any change to the project that may be caused by the environment,*

whether any such change occurs within or outside Canada.

Thus, the assessment of cumulative environmental effects must consider:

- changes in the environment caused by the project;
- the effects of any such changes on:
- health and socio-economic conditions;
- physical and cultural heritage;
- current use of lands and resources for traditional purposes by aboriginal persons; or
- any structure, site, or thing that is of historical, archaeological, paleontological, or architectural significance
- any change to the project caused by the environment.

For example, a socio-economic effect (such as job losses) could be considered as a cumulative environmental effect only when it is caused by a change in the environment, as defined in the Act (such as loss of fish habitat) caused by a project. If the job losses are caused by something else (such as a re-allocation of funding caused by the project), they cannot be addressed as cumulative environmental effects.

Second, the Act states that environmental assessments must consider the cumulative environmental effects that are likely to result from the project in combination with other projects or activities. Thus, it is necessary to decide which projects and activities will be addressed. In this regard, the Act defines a "*project*" as:

a. *in relation to a physical work, any proposed construction, operation, modification, decommissioning, abandonment or other undertaking in relation to that physical work, or*

b. *any proposed physical activity not relating to a physical work that is prescribed or is within a class of physical activities that is prescribed pursuant to regulations made under paragraph 59(b)"* (subsection 2(1)).

"*Activities*", however, are not defined in the Act, but could include any human activity considered to be relevant to the assessment, for example, fishing or hunting near the project.

Third, the Act states *"in combination with"* other projects and activities. To be assessed, then, the effects must result, at least in part, from the project, and only

those environmental effects of other projects and activities that accumulate or interact with the environmental effects of the project in question should be included in the assessment. If the environmental effects of other past or future projects are not likely to act in combination then they should not be included in the cumulative environmental effects assessment of the project.

For example, if the construction of a bridge affects the fish population in the river it traverses, then other stressors on that same fish population, such as those from a nearby mill could be included in the project EA.

Fourth, the Act states that projects or activities that have been *or will be* carried out must be considered. As mentioned above, many environmental assessments already consider the cumulative environmental effects of the project in combination with those of past and existing projects. What is new is that the environmental effects of projects or activities *"that will be carried out"* must now be examined in combination with the environmental effects of the project being proposed. This implies that, at a minimum, (only) projects or activities that have already been approved must be taken into account. The environmental effects of uncertain or hypothetical projects or activities need not be considered. Nevertheless, it would be prudent to consider projects or activities that are in a government approvals process as well. Environmental assessments can take a long time to complete, and approvals for other projects and activities may be given during the assessment of the project in question.

Where projects and activities are not subject to a formal government approvals process but are relevant to the assessment (for example pesticide spraying), they should also be considered if there is a high level of certainty that they will occur. It should be noted that this interpretation of future projects and activities will, in most cases, preclude consideration of a project's growth inducing potential.

When there is insufficient information on future projects or activities to assess their cumulative environmental effects with the project being proposed, best professional

judgement should be used. It is not necessary to predict the environmental effects of future projects and activities in detail, but to the extent that is feasible and reasonable under the circumstances. For example, if a plan for a future project has been approved, but the design details and hence the environmental effects are not yet known, then, it is sufficient to give a general idea of the types of cumulative environmental effects that are anticipated.

Fifth, the Act recognises that not everything can be known about how the environmental effects of other projects or activities will combine with the environmental effects of the project. It says *"cumulative environmental effects that are likely"*. Only *likely* cumulative environmental effects need to be considered.

Finally, paragraph 16(1)(b) of the Act requires that every screening, comprehensive study, mediation and assessment by a review panel consider the significance of the

environmental effects including cumulative environmental effects. See the document entitled, *Determining Whether a Project is Likely to Cause Significant AdverseEnvironmental Effects, A Reference Guide for the Canadian Environmental Assessment Act* (available from FEARO).

These six points provide a basis for considering which cumulative environmental effects should be addressed in federal environmental assessments.

The Act also requires that a class screening report must be adjusted to take into account any cumulative environmental effects not otherwise addressed:

> *"Where a responsible authority uses or permits the use of a class screening report, it shall ensure that any adjustments are made to the report that are necessary to take into account local circumstances and any cumulative environmental effects that may result from the project in combination with other projects or activities that have been or will be carried out"* [subsection 19(5)].

When a class screening report is used for a particular project within the class, the report must be revised to address any cumulative environmental effects specific to that project.

4. General Considerations

4.1 Advice and Consultation

To assess cumulative environmental effects, relevant individuals, organisations and government departments and agencies should be consulted. The extent of advisory and consultation activities will depend on the nature of the project; however, the following points should be considered:

- expert departments, regional inter-departmental environmental assessment committees, and other similar committees could be used as a source of advice and information about past and future projects and activities and their cumulative environmental effects;
- when seeking advice or conducting a consultation, specific questions about the cumulative environmental effects of past and future projects and activities should be asked;
- advice and consultation will be particularly helpful to assess the cumulative environmental effects of the project on socio-economic conditions;
- multi-stakeholder, multi-disciplinary and inter-departmental consultation, when appropriate will allow discussion of a broad range of issues and facilitate access to all relevant scientific, community and traditional information and knowledge.

4.2 Documentation

The consideration and analysis of cumulative environmental effects should be adequately documented in the assessment report. This could be done in two ways:

- as a separate section summarizing the methodological approach taken and the result of the analysis; or
- as an integral part of the analysis.

In many cases, it would be relevant to consider cumulative effects as an integral part of the analysis and still have a separate section to summarize the

likely cumulative environmental effects or to discuss particular cumulative effects issues or analysis.

Consideration of cumulative effects can be reflected in the scope of assessment, the methodological approach taken for the analysis, the results of the analysis, the mitigation measures and the follow-up program.

In routine screening reports using matrices or check lists, it may be sufficient to add a section on cumulative environmental effects or provide elements that would identify:

- the interaction and combination of the effects of the project; and
- the interaction and combination of the effects of the project with other past and imminent projects and activities.

4.3 Uncertainty

There will always be some uncertainty associated with any environmental assessment. Uncertainty could be related to scientific methods and techniques, data availability and accuracy, new or unproven technology, new or unfamiliar environmental setting, etc.

Another source of uncertainty when assessing the cumulative environmental effects of a project, is in relation to future projects. For example, what future projects should

be considered in the assessment? When will that project actually proceed? Plans may be revised, cancelled or delayed at any time, even after all necessary government approvals have been obtained. In fact, many "approved" projects do not proceed for economic, technical or other reasons. The decision to include or exclude a future project from the environmental assessment should be based on the "weight of evidence", i.e. are there strong indications that a project will proceed? (See Appendix "A" for further guidance).

When the details of future projects, (e.g. design, technology, mitigation measures) are unknown or the information is not accessible, it adds to the uncertainty about

the environmental effects of future projects and how these effects will interact with those of the project in question. Available information and best professionalknowledge and judgement should be used. In most cases, only qualitative assessments of cumulative environmental effects will be possible.

Any uncertainty, whether it arises from information gaps, selected methods, etc., should be explicitly stated in the assessment report.

4.4 Level of Effort

When assessing cumulative environmental effects, it is important to ensure that the level of effort is appropriate to the scope of the project and its anticipated effects. The effort in assessing the cumulative environmental effects of a small project with little anticipated effects, such as a routine dredging operation, is obviously much less than that necessary to assess the cumulative environmental effects of a *mega-project* with likely significant effects on the environment.

5. Framework for Addressing Cumulative Environmental Effects in Federal Environmental Assessments

The following framework outlines how cumulative environmental effects can be considered at each stage of an environmental assessment.

- Step 1 Scoping
  - Identify the environmental effects to be considered
  - Identify likely cumulative environmental effects
  - Set appropriate geographic and temporal boundaries
- Step 2 Analysis
  - Assess the status of the receiving environment
  - Assess the cumulative environmental effects of the project
  - Assess the cumulative environmental effects of the project in combination with future projects and activities
- Step 3 Mitigating
  - Identify mitigation measures for cumulative environmental effects
- Step 4 Determining Significance
  - Consider existing environmental standards, guidelines and objectives
  - Where possible, consider the carrying capacity, tolerance level or assimilative capacity of the natural system(s)
- Step 5 Follow-up
  - Evaluate the accuracy of the assessment of cumulative environmental effect
  - Evaluate the effectiveness of mitigation measures for cumulative environmental effects

5.1 Step 1: Scoping

The assessment of cumulative environmental effects largely depends on effective scoping, i.e. setting the boundaries of the assessment and focus of the analysis. This section describes how to ensure that the cumulative environmental effects are adequately scoped, as part of scoping the factors to be considered in the assessment.

Scoping should include:

- identifying environmental effects to be considered;
- identifying likely cumulative environmental effects within those limits;
- setting the spatial and temporal boundaries for the assessment.

Identifying the environmental effects to be considered

Please refer to Section 1.4 of the RA's Guide for information on identifying environmental effects.

Identifying likely cumulative environmental effects

In identifying the cumulative environmental effects that are likely to result from a project in combination with other projects or activities that have been or will be carried out, the following factors must be considered:

- the environmental effects resulting from the project;
- the environmental effects of past and existing projects and human activities which may interact with those of the project;
- the likely environmental effects of future projects and human activities in the area. There is often a degree of uncertainty related to which environmental effects from which future projects and activities should be included in the assessment. The Act states that projects and activities that "*will be carried out*" must be considered. At the minimum, projects and activities that have been approved should be included in the assessment. Further guidance on this matter is provided in Appendix "A".

All relevant types of future projects and activities for which the environmental effects are likely to act in combination with the environmental effects of the project (i.e., not just those in the same resource sector as the project) should be considered.

For example, an environmental assessment for a hydro-electric project should consider

- *the potential environmental effects of the project; e.g. changes in the water level and flow patterns, disturbance of fish habitats.*
- *the environmental effects of relevant past and existing projects and activites; e.g. another paper mill discharging chlorine upstream may also be affecting the fish population; a dam located upstream affects the water level and flow patterns and consequently fish habitats.*
- *future projects and activities; e.g. a proponent has recently received a permit to extend a marina; another proponent is considering the exploitation of a gravel pit situated one kilometer uptream but has not yet applied for any permit. The former project should be considered further in the assessment while the latter may be excluded because there is little evidence that it will proceed. Effects from the marina that could be included in the assessment are limited to those that can be shown to interact with those of the hydro-electric project.*

Possible sources of existing information on past, existing and future projects and activities include:

- federal, provincial and municipal government departments and agencies, especially land use planners and environmental staff;
- the public registry under the Act;
- registries or files of environmental assessments maintained by provincial departments and/or agencies;
- project owners and/or operators;
- local academic and research institutions;
- local residents and community and environmental groups;
- environmental reports;
- land use maps, air photos, and satellite images;
- records of official plan or zoning by-laws;
- fire insurance maps;
- local chambers of commerce;
- assessment records; and
- industrial directories.

Setting the Spatial and Temporal Boundaries

Defining the spatial and temporal boundaries establishes a frame of reference for assessing cumulative environmental effects and facilitates their identification. Such boundaries can also influence the assessment in a variety of ways. If large boundaries are defined, only a superficial assessment may be possible and uncertainty will increase. If the boundaries are small, a more detailed examination may be feasible but an understanding of the broad context may be sacrificed. Proponents may perceive assessments with large boundaries as onerous or unfeasible, whereas the public may think small boundaries do not adequately encompass all of the project's environmental effects. Also:

- Different boundaries may be appropriate for different cumulative environmental effects. For example, the boundaries selected for cumulative environmental effects on air quality might be quite different than those chosen for effects on a particular wildlife species;
- Spatial boundaries should extend beyond a project's immediate site to include the area likely to be affected;
- Temporal boundaries may extend beyond the timing of construction and operation to include the period of occurrence of the effects.

Spatial and temporal boundaries should be established using the following criteria (listed in order of importance):

- The size and nature of the project and its potential effects;
- The availability of existing data and knowledge about the project and its environmental effects and the feasibility of collecting new data and knowledge if there are data or knowledge gaps;

- The size, nature and location of past and future projects and activities in the area, and the significance of their adverse environmental effects;
- Relevant ecological boundaries, including physiography, vegetation, land use, habitat, soil and surface materials and climate;
- Relevant aquatic boundaries, including watersheds, sub-watersheds, drainage basins, and hydrogeological discontinuities; and
- Relevant jurisdictional boundaries, including municipal, county, township or regional boundaries.

For assessments considering effects in aquatic environments, watershed, sub-watershed or sub-sub-watershed boundaries are often used.

Most importantly, the boundaries of an assessment should be reasonable. In many cases, it will be appropriate to consult with the affected public in making this determination. Obviously, the form of such consultation will depend on the size and nature of the project and its environmental effects. When screening small projects, it may be sufficient to discuss the boundaries with a few relevant people. For public reviews of large projects, it may be necessary to consider the matter at one or more public scoping sessions. Whatever boundaries are set, they may influence the determination of significance, because a cumulative environmental effect may be very significant locally, but of little significance regionally.

5.2 Step 2: Analysis

The objective of the analysis is to identify the environmental effects of a project and determine the significance of these effects. It is only when a project's effects are known and understood that it is possible to determine and implement effective mitigation measures, and to make an informed decision about supporting the project.

Analysis should include an assessment of:

- the status of the receiving environment, including its important characteristics and other stressors (e.g. how have past projects and activities affected or stressed the environment)?
- the cumulative environmental effects of the project, including:
    - interactions among effects the project may cause in the environment, such as those between effects on water quality and effects on fish resulting from sedimentation and destruction of the shoreline vegetation cover;
    - interactions among any effects on:
    - health and socio-economic conditions;
    - physical and cultural heritage;
    - current use of lands and resources for traditional purposes by aboriginal persons;
    - any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, caused by changes in the environment; and
    - interactions among changes to the project caused by the environment.

As well, a consideration of the *combined* environmental effects of all aspects of the project should be included. For example, if the creation of a dam is dividing a small community into two parts and affecting fish and wildlife used for subsistence activities, the interaction and total sum of these effects on the community should be assessed.

As with environmental assessment in general, there is no one approach or methodology for all assessments of cumulative environmental effects. Different circumstances, such as location of project and type of potential environmental effects will dictate appropriate methodologies. Modelling, expert systems and

geographic information systems are being increasingly used. However, where information is lacking, qualitative approaches and *best professional judgement* are used.

An environmental assessment of low level air defense training in New Brunswick evaluated the potential interactions among the various components of the project and the identified valued ecosystem components. Interactions were assessed using a rating system to indicate the magnitude, duration, geographic extent and probable frequency of occurrence of expected interactions.

5.3 Step 3: Mitigation

Prior to determining the significance of any cumulative environmental effects, the need for technically and economically feasible mitigation measures that could reduce or eliminate the effects should be considered [paragraph 16(1)(d)].

Mitigation measures could include:

- avoiding sensitive areas such as fish spawning areas or areas known to contain rare or endangered species;
- adjusting work schedules to minimise disturbance;
- engineered structures such as berms and noise attenuation barriers;
- pollution control devices, such as scrubbers and electrostatic precipitators; and
- changes in manufacturing, process, technology, use, or waste management practices, such as substituting a hazardous chemical with a non-hazardous one, or the re-cycling or re-use of waste materials.

Cumulative environmental effects identified in a screening of a pulpwood agreement in B.C. were mitigated by adjusting the rate-of-cut, constructing streamside buffers and varying the cut block size.

5.4 Step 4: Determining the Significance of the Effects

After taking into account any appropriate mitigation measures, the likelihood and significance of the cumulative environmental effects must be determined. Relevant

environmental standards, guidelines and objectives, such as the Canadian Water Quality Guidelines, should be helpful in the determination of significance. As well, it may be helpful to consider the carrying capacity, tolerance level or assimilative capacity of the area, even though it may not be possible to quantify them.

The determination of significance consists of three general steps:

- Step 1: Deciding Whether the Environmental Effects are Adverse
- Step 2: Deciding Whether the Adverse Environmental Effects are Significant
- Step 3: Deciding Whether the Significant Adverse Environmental Effects are Likely

Criteria for determining the adversity, likelihood and significance of environmental effects are discussed in a separate document entitled *Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects, A Reference Guide for the Canadian Environmental Assessment Act* (available from FEARO). These criteria should be used in making this determination for cumulative environmental effects.

The key difference between determining the significance of environmental effects and determining the significance of *cumulative* environmental effects is the influence of other projects and activities. Thus, the incremental cumulative environmental effects of certain projects may be deemed to be significant, when considered in the broader context of the effects of other projects and activities.

The significance of cumulative environmental effects of a project may depend on the existing condition of the environment. For example, the cumulative environmental effects of a hydro-electric dam in an area of rare mixed prairie grassland, already degraded by past activities, may be significant, whereas in another type of ecosystem they may not.

5.5 Step 5: Follow-up

In the case of comprehensive studies, mediations and panel reviews, the need for a follow-up program should be considered as part of the assessment. A follow-up program should monitor:

- The accuracy of the environmental assessment with regard to its assessment; and/or
- The effectiveness of any mitigation measures.

A follow-up program to monitor cumulative environmental effects may be appropriate when:

- The project is likely to cause new or different cumulative environmental effects;
- The project involves new or unproven mitigation measures whose ability to reduce cumulative environmental effects is uncertain;
- An otherwise familiar or routine project is proposed for a new or unfamiliar environmental setting;
- Where there is some uncertainty about the conclusions of the assessment of cumulative environmental effects;
- Project scheduling or operational details are subject to change such that the cumulative environmental effects could be different from those described in the EA.

Follow-up programs should take account of using and/or supplementing existing programs that monitor cumulative environmental effects.

6. Further Reading

6.1 General References

Canadian Environmental Assessment Research Council. 1986. Cumulative Environmental Effects: A Binational Perspective. Canadian Environmental Assessment Research Council. Hull, Quebec.

Irwin, F. and Rodes, B. 1991. Making Decisions on Cumulative Environmental Impact: Conceptual Framework. World Wildlife Fund. Washington, D.C.

Odum, E.P. 1982. Environmental Degradation and the Tyranny of Small Decisions. Bioscience 33(9): 728-729.

Peterson, E.B., Y.H. Chan, N.M. Peterson, G.S. Constable, R.B. Caton, C.S. Davis, R.R. Wallace and G.A. Yarranton. 1987. Cumulative Effects Assessment in Canada: An Agenda for Action and Research. Canadian Environmental Assessment Research Council. Hull, Quebec.

Sonntag, N.C., R.R. Everitt, L.P. Rattie, D.L. Colnett, C.P. Wolf, J.C. Truett, A.H.J. Dorcey and C.S. Holling. 1987. Cumulative Effects Assessment: A

Context for Further

Research and Development. Canadian Environmental Assessment Research Council. Hull, Quebec.

U.S. Conservation Foundation. 1990. Choosing Appropriate Scales for Making Decisions on Cumulative Impacts: A Guide for Managers. Prepared for the Council on Environmental Quality. Washington, D.C.

Vlachos, E. 1982. Cumulative Impact Analysis. Impact Assessment Bulletin 1: 60-70.

6.2 References on Methods to Assess Cumulative Environmental Effects

Bedford, B.L. and E.M. Preston (eds.). 1988. Cumulative Effects on Landscape Systems of Wetlands: Scientific Status, Prospects and Regulatory Perspectives. Springer International. Available from Ecosystems Research Centre, Cornell University. Ithaca, N.Y.

Bedford, B.L. and E.M. Preston. 1988. Developing the Scientific Basis for Assessing Cumulative Effects of Wetland Loss and Degradation of Landscape Functions: Status, Perspectives and Prospects. Environmental Management 12 (5): 751-771.

Brinson, M. 1988. Strategies for Assessing the Cumulative Effects of Wetland Alteration on Water Quality. Environmental Management 12(5): 655-662.

Cada, G.F. and C.T. Hunsaker. 1990. Cumulative Impacts of Hydropower Development: Reaching a Watershed in Impact Assessment. Environmental Professional 12(1): 2-9.

Childers, D.L. and G.L. Gosselink. 1990. Assessment of Cumulative Impacts to Water Quality in a Forested Wetland Landscape. Journal of Environmental Quality 19(3): 455-464.

Coburn, J. 1989. Is Cumulative Watershed Effects Analysis Coming of Age: Journal of Soil and Water Conservation 44: 267-270.

Contant, C.K. and L.L. Wiggins. 1991. Defining and Analyzing Cumulative Environmental Impacts. Environmental Impact Assessment Review 11: 297-309.

Gosselink, J.G., G.P. Schaffer and L.C. Lee. 1990. Landscape Conservation in a Forested Wetland Watershed - Can We Manage Cumulative Impacts? Bioscience 40: 588-600.

Harris, L.D. 1988. The Nature of Cumulative Impacts on Biotic Diversity of Wetland Vertebrates. Environmental Management 12(5): 675-693.

Hemond, H.F. and J. Benoit. 1988. Cumulative Impacts on Water Quality Functions of Wetlands. Environmental Management 12(5): 639-653.

Klock, G.O. 1985. Modelling the Cumulative Effects of Forest Practices on Downstream Aquatic Ecosystems. Journal of Soil and Water Conservation 40: 237-241.

Lee, L.C. and J.G. Gosselink. 1988. Cumulative Impacts on Wetlands: Linking Scientific Assessments and Regulatory Alternatives. Environmental Management 12(5): 591-602.

Preston, E.M. and B. Bedford. 1988. Evaluating Cumulative Effects on Wetland

Functions: A Conceptual Overview and Generic Framework. Environmental Management 12(5): 565-583.

Stakhiv, E.Z. 1988. An Evaluation Paradigm for Cumulative Impact Analysis. Environmental Management 12(5): 725-748.

U.S. Environmental Protection Agency. A Synoptic Approach to Cumulative Impact Assessment. A Proposed Methodology. October 1992.

Webster, T. and P. Connett. 1989. Cumulative Impacts of Incineration on Agriculture - A Screening Procedure for Calculating Population Risk. Chemosphere 19: 597-602.

Appendix A: Identifying Future Projects to be Considered in an Environmental Assessment

Introduction

To identify which future projects should be considered in an assessment of cumulative environmental effects conducted under the Act, best professional judgement and consultation should be used. There is no simple rule that can be applied to include or exclude future projects from the environmental assessment of the project in question.

In general, when building permits have been issued or when there have been amendments or adjustments made to land use plans, it is relatively certain that the future project will proceed.

Other types of project approvals, such as issuing permits, licenses, leases or easements, the completion and acceptance of an environmental assessment and land use plans can be considered as sufficient evidence that a future project will proceed, depending on the circumstances.

Other information indicating that a future project will proceed, especially information from local developers or builders or the owners and operators of existing facilities should also be considered, especially when it is in writing and is consistent with other indications that a future project will proceed. For example, if the owners of a local industry intend to expand in the next five years and work on an environmental assessment or a permit is underway, then it would be wise to consider the expansion as a future project that will proceed for the purposes of the Act.

Similarly, if an environmental assessment has been completed and accepted and a lease, permit or license has been issued, then it would be wise to assume that the future project will proceed.

In these cases, the decision should be based on the 'weight of evidence' that a future project will proceed. 'Weight of evidence' decisions usually take into account:

- **The quality of the evidence:** Are the indications that a future project will proceed strong or weak?
- **The quantity of the evidence:** Is there one indication that a future project will proceed, or several?

In most cases, future projects that may result from the project's `growth' inducing ability', unless they have been approved, or are in an approvals process will not be considered as part of the cumulative effects analysis.

Whatever future projects are included in assessments of cumulative environmental effects, the reasons and relevant information supporting the decision should be presented in the environmental assessment report.

Types of Approvals

There are many different types of government approvals processes for projects. Municipal, provincial and in some cases federal approvals may have to be obtained, depending on the nature and location of the project. It would be virtually impossible to describe all of the approvals required for all different types of projects in all locations in Canada. Instead, this section outlines the major types of approvals.

It should be noted that the provinces often delegate their authority for land use planning to municipalities. Thus, in most cases, municipalities often have primary responsibility for project approvals, even if provincial licenses and permits are required. There are, however, two major exceptions to this where the federal government often has primary jurisdiction for land use planning and project approvals. These are federal Crown lands and the territories. Federal Crown lands include airports, national parks and wildlife area, ports and harbours, canals and national defence facilities.

Building Permits: Most municipalities require proponents to obtain a building permit before construction can be started. Building permits are issued following a review of building specifications, designs and plans to ensure compliance with Building Code and other requirements. Obtaining a building permit is usually the final step before construction. Future projects with building permits are therefore virtually certain to proceed. For projects on federal Crown lands or in the territories, building permits may be required. Building permits are a very strong indicator that a future project will proceed.

Amendments or Adjustments to Land Use Plans: In many cases, projects will require amendments or adjustments to land use plans. Possible amendments and adjustments include Official Plan Amendments and Re-zoning. These approvals are usually municipal and are given prior to the issuance of a Building Permit. There are various terms used to describe this type of approvals process, depending on the circumstances and the requirements of the land use legislation. Amendments or adjustments to land use plans are a strong indication that a future project will proceed.

Other Types of Permits and Licenses: Sometimes, projects will require federal and/or provincial licenses and permits. Licenses and permits are required for many

activities. Some types of facilities, such as nuclear power plants, require operating licenses and others may require permits for effluent discharges. For example, a federal permit under the Fisheries Act may be required if the project involves

discharges to the aquatic environment. Similarly, a provincial permit, such as a Certificate of Approval under Ontario's Environmental Protection Act, may be required to emit pollutants to the atmosphere.

The federal government issues many different types of permits and licenses that allow activities on federal Crown lands or in the North. They include timber harvesting permits, land use permits and National Energy Board licenses.

The issuing of federal and provincial licenses and permits should be taken as a good indication that a future project will proceed. Permits that allow a change in environmental conditions, such as permits to discharge to air or water may be helpful in identifying the environmental effects of future projects.

Leases and Easements: The federal government can lease Crown lands to an individual, a corporation or other types of organisations. Similarly, it can grant easements over Crown lands. Leases are often issued for the management of facilities, such as ports and harbours. They provide a good indication that a future project will proceed.

Environmental Assessments: Environmental assessments can also be used as an indication that a project will proceed. However, it should be noted that environmental assessment is not a decision making process, except in Ontario. Elsewhere in Canada, environmental assessment is an aid to decision-making, rather than being a project approvals process. Nevertheless, the completion and acceptance of an environmental assessment by the relevant jurisdictional department or agency indicates that a future project is likely to proceed.

Land Use Plans: Federal, provincial or municipal land use plans are another indication of future projects, but they are probably the least definite indicators of future projects. For public facilities and projects, such as roads and buildings, land use plans should contain details of the location and timing of future projects. However, for private developments such as residential, commercial and industrial construction, land use plans are likely to be more vague. Zoning restrictions may provide a general idea of the types of future projects that would be permitted, but not in sufficient detail to assess cumulative environmental effects.

Other Indications of Future Projects: In addition to the approvals process outlined above, land sales can be used as an indication that a future project will proceed. For example, if Crown land is sold to a developer then a future project is likely to proceed.

Other sources of information about future projects that will be carried out include:

- Local developers and builders;
- Local residents and community groups, and
- The owners and operators of existing facilities in the area.

Wherever possible, these people and any other person that can provide relevant information should be contacted. Written information from reliable and authoritative sources that can be included in the environmental assessment of the project in question is preferable to anecdotal evidence or hearsay.

| Previous page | Table of contents | Next page |

Reference Guide: The Public Registry

- 1. Introduction
- 2. The Public Registry and the Canadian Environmental Assessment Act
  - 2.1 The Concept
  - 2.2 General Obligations of a Responsible Authority
- 3. The Public Registry Framework
  - 3.1 Benefits to the RA
  - 3.2 Federal EA Index
  - 3.3 RA Document Listings
  - 3.4 EA Documents
- 4. Guidelines for Responsible Authorities
  - 4.1 Coordination with Other RAs
  - 4.2 Document Clearing
  - 4.3 Cost Recovery
  - 4.4 Responding to Requests
  - 4.5 Official Language Obligations

1. Introduction

This reference guide describes an approach for maintaining a public registry for projects as required under the *Canadian Environmental Assessment Act (Act)*. The reference guide:

- reviews the purpose of the public registry;
- highlights the public registry obligations of responsible authorities (RAs);
- details the public registry framework established by the Canadian Environmental Assessment Agency (CEAA/Agency);
- provides guidelines for RAs in five important areas:
  - coordinating with other RAs;
  - document clearing;
  - cost recovery;
  - responding to requests;
  - official language considerations.

The reference guide is intended to assist environmental assessment (EA) practitioners and others responsible for preparing, reviewing, or managing documents related to EAs conducted under the Act. Technical information on operating the public registry, including detailed listings of information requirements and "hands-on" instructions for using public registry software programs, is presented in *The Federal Environmental Assessment Index* (in preparation).

This reference guide should be considered an evolving document, rather than a static text. As the practice of EA under the Act evolves, it may be necessary to update and revise the information provided here. Suggestions for updates or revisions should be directed to:

Director, Process Development
Federal Environmental Assessment Review Office
14th Floor, Fontaine Building
200 Sacre-Coeur Boulevard
Hull, Quebec
K1A 0H3

2. The Public Registry and the *Canadian Environmental Assessment Act*

2.1 The Concept

The Act is based in large part on the principle of public participation:

> *"... And whereas the Government of Canada is committed to facilitating public participation in the environmental assessment of projects ... and providing access to the information on which those environmental assessments are based ..."* (Preamble)
>
> *"The purposes of this Act are ...*
>
> *(d) to ensure that there be an opportunity for public participation in the environmental assessment process."* (S.4)

To realize the goal of public participation, the Act provides public access to the information upon which the EAs are based, through means of a public registry.

2.2 General Obligations of a Responsible Authority

The Act imposes two main obligations on RAs with respect to the public registry (s. 55(1)):

- to establish a public registry for the purpose of facilitating public access to the records relating to EAs;
- to operate such a registry in a manner to ensure convenient public access.

A public registry must be maintained in respect of every project for which an EA is conducted, regardless of whether the project undergoes a screening, comprehensive study, panel review or mediation.

The RA is responsible for maintaining the public registry throughout the entire EA of a project. (However, administrative arrangements are in place so that when a project is referred to mediation or a panel review, the registry is maintained by the Agency from the time of the referral until the report of the mediator or panel is submitted to the Minister of the Environment and the RA.)

Section 4 of the reference guide provides guidelines for the RA in meeting these obligations.

3. The Public Registry Framework

The Agency has established a public registry framework within which all RAs can fulfil their public registry obligations. The framework seeks to provide all Canadians convenient access to complete information about EAs carried out under the Act. It also will ensure consistency across the federal government, and allow RAs to meet their public registry obligations in an efficient and convenient manner.

The framework consists of three components:

- the Federal EA Index, an electronic database listing all EAs conducted under the Act;
- RA document listings, maintained by each RA, of all publicly available documents relating to their respective EAs;
- the EA documents themselves.

3.1 Benefits to the RA

The public registry framework established by the Agency to be used in all EAs conducted under the Act provides several important benefits to RAs:

- The system allows all RAs to meet their registry obligations in a consistent, cost-effective manner that ensures convenient, low or no cost public access to information.
- RAs do not have to develop their own procedures for operating the public registry.
- RA tasks are streamlined so as to minimize workload requirements.
- Many of the tasks build on current practices so as to minimize costs and workload requirements for RAs.
- Procedures make practical and effective use of technology whenever possible, further reducing the RA's workload and costs.

Improvements in the framework's software and procedures will be based on continuous consultation by the Agency with RAs.

3.2 Federal EA Index

The Federal EA Index is an electronic listing of all EAs conducted by all RAs under the Act. It contains information on the "who, what, when, where, and why" of federal EAs, and provides contacts for further information on the EAs and related documents.

The RA (or, in the case of multiple RAs, one designated RA) is responsible for the collection and input of information for the database, and the electronic transfer of information to the Agency each month. (Technical details on these tasks are provided in *The Public Registry User Manual*, in preparation.)

A specific EA is listed on the index from its start until the completion of any follow-up program. Information on completed EAs is automatically archived in a separate component of the index. (These historical data are an important source of information for the Agency in fulfilling its obligations under the Act to monitor and report on the federal environmental assessment process.)

The Agency will operate and maintain the index. Specific Agency tasks include:

- designing version 1 of the index software;
- ensuring the availability of this software and its design specifications to RAs;
- ensuring the integrity of information in the index;
- operating and maintaining the "roll up" of information from RAs each month;
- providing public access to the index through cost effective, user-friendly means, such as walk-in access to major libraries and federal offices, and on-line access through various computer network information systems.

The index provides significant benefits to the public:

- It provides "one window" access on the key information of any EA conducted under the Act.
- It directs the public to contacts and documents related to a specific EA;
- It is electronic and therefore convenient, quick, and inexpensive.
- It eliminates the need to request information on EAs through the *Access to Information and Privacy Act* (*ATIP*).

3.3 RA Document Listings

The second component of the public registry framework is the listing of all available documents relating to each EA being conducted under the Act. Each RA maintains a listing for each of its respective EAs. (The Agency maintains the listing if the project is undergoing a public review.)

For each document on the public registry, the RA should maintain the following

information:

- an identifier (or file) number;
- format;
- media;
- title/subject;
- author;
- date;
- language;
- number of pages;
- primary document location;
- alternate document location.

The RA may maintain its document listings in electronic form (through the Federal EA Index software) or hardcopy form.

Requests by the public for the RA document listings and associated documents will be through the EA contact noted on the Federal EA Index. This contact should be able to access all relevant RA document listings. RAs are free to determine the most cost effective, convenient approach for meeting this objective consistent with the principles of convenience and low (or no) cost.

3.4 EA Documents

The third component of the public registry framework consists of the EA documents produced by, collected by, or submitted to the RA with respect to an EA. EA documents must be managed by the RA in accordance with Treasury Board Management of Government Holdings policy and procedures, and archived according to the *National Archives of Canada Act*.

Section 4 of this reference guide provides guidance on managing documents listed in the public registry

4. Guidelines for Responsible Authorities

This section provides detailed guidance and procedures for RAs on meeting their public registry obligations under the Act in five key areas:

- coordination with other RAs;
- document clearing;
- cost recovery;
- responding to requests;
- official language considerations.

4.1 Coordination with Other RAs

The same project may have two or more RAs. To ensure that only one EA is conducted for each project, rather than each RA conducting its own EA, one of the RAs could be designated as the lead RA, or the RAs could coordinate their assessment in a team or working group structure.

Public registry obligations should be clarified within this overall coordinated approach, as well. RAs should be guided by two principles:

- *one project, one EA entered on the Federal EA Index*
  - RAs should ensure that each EA is entered only once on the Federal EA Index to avoid duplication of effort and confusion among those requesting documents. RAs should jointly determine the most effective procedures for coordinating this responsibility over the life of the EA.
- *single point-of-contact for any request for documents*
  - Similarly, RAs should jointly establish a coordinated, single point-of-contact approach to handling requests for documents from the

public. Members of the public will, in most cases, request documents through the contact listed in the Federal EA Index. This contact should clarify and confirm the documents that the requester wants, and then undertake to obtain them from the appropriate RAs and forward them to the requester. This approach will be efficient only if the contact has ready access to the document listings maintained by the other RAs. Members of the public should not be referred to other contacts in other departments.

4.2 Document Clearing

The Act requires the RA conducting an EA to establish and maintain a public registry of the records (documents) related to the assessment. The purpose of the registry is to ensure convenient public access to this information. Since the registry can only contain records accessible by the public, this determination must be made by the RA for each record prior to placing it in the registry.

Documents Produced by the RA

For many EAs, the most common documents that will need to be entered in the public registry are those produced by the RA or at its request. As the source of such documents, the RA has an opportunity to greatly simplify the document clearing procedures, and reduce the time and effort that might otherwise be required to clear documents.

By ensuring that key considerations are addressed before a document is produced, the RA can eliminate the need to follow all eight document clearing procedures afterwards.

The most important consideration relevant to produced documents is whether the document includes information that must be exempted from the public registry (such as Cabinet documents or trade secrets). If the document contains no exempted information, the entire document must be entered on the public registry. If the document does contain exempted information, then the document must still be entered on the public registry, but with the exempted information blacked out (removed). (The entire document will be exempted from the registry only if it does not make sense after the exempted information has been removed.)

To reduce workload demands for clearing documents, the RA should ensure that those responsible for producing EA documents on its behalf are aware of the exemptions, so that the need to review the detailed clearing procedures never arises. (See Steps 5 and 6 below for details on the categories of exempted information.)

Even this consideration is essentially "business as usual" for RAs producing documents. No RA, for example, would knowingly include in its EA documents trade secrets, Cabinet documents, or information relating to national security or criminal investigations. It is simply a matter of incorporating these exemptions into the RA's operating practices as it carries out an EA.

The detailed procedures outlined below may serve as a guide to RAs wishing to develop this capacity for built-in pre-determination of its produced documents. The procedures remain valid, however, for all documents relating to an EA, regardless of whether the document has been produced by the RA or not. If there are any questions about whether a particular document should be in the public registry, the RA should refer to the detailed procedures for guidance or seek the advice of their Access to Information and Privacy (ATIP) expert or legal services.

Proposed Clearing Procedures

The proposed document clearing procedures consist of six steps. The "yes/no"

answer at each step determines whether the RA should proceed to the next step, or whether the particular document is excluded from the public registry. The procedures apply, with only minor variances, to all documents relating to an EA, regardless of whether the document has been produced, collected or submitted.

Step 1: Document related to an EA?

The RA must first determine if the document has been produced, submitted, or collected with respect to an EA conducted under the Act.

- A produced document is any document prepared by a RA, panel or mediator or which has been produced for or at the request of the RA, panel, or mediator. This category will cover most documents related to an EA, particularly a screening. Examples of produced documents include screening reports and guidelines.
- A submitted document is any document sent to the RA, panel, or mediator by a person or organization for an EA. Examples include comments, letters, studies, research by non-governmental organizations, and proponents' documents.
- A collected document is a document which already exists and which is requested by the RA, panel, or mediator for an EA. Examples include studies not applicable to any specific EA, academic articles, and published documents.

If yes: Proceed to Step 2.

If No: Do not put in the public registry.

Step 2: Should document be returned to sender?

The RA must next consider whether there is any reason that the document should be returned to the sender. For example, an individual has submitted a document and requested that it not be made public. In such a case, the RA must not take control of the document (by copying it or placing it in a file, for example),a nd must immediately return it to the sender.

If yes: Do not take control of the document; return it to sender.

If no: Proceed to Step 3.

Step 3: Is document a record?

In Step 3, the RA must determine if the document is a record, as defined by the Act. Under the Act, a record can be, but is not necessarily restricted to, the following:

- any correspondence, memorandum, book, plan, map, drawing, diagram, pictorial or graphic work, photograph, film, microform, sound recording, videotape, machine readable record, and any other documentary material, regardless of physical form or characteristics, and any copy thereof.

This is a broad definition, and includes anything that can be received and copied. It does not, for example, extend to samples of living or dead animals, fish, plants or insects, or parts of these things. Nor does it extend to samples of water, mud, rocks or minerals, etc. However, the results of tests or analyses conducted on any of these things are considered records.

If yes: Proceed to Step 4.

If no: Do not put in the public registry.

Step 4: Already been made available?

The document must be entered in the public registry if it has already been made available to the public in some way. These could include, for example: official releases; government publications mailed directly to the public or available through outlets such as the Post Office, Canada Employment Centres, and commercial publications; and publications placed in a public institution, such as the National Library, or the National Archives.

A document can be made available to the public in any one of a variety of formats, such as a book, magazine, or pamphlet, on audio or video tape, in a database, or on microfiche.

If yes: Put the document in the public registry.

If no: Proceed to Step 5.

Step 5: Document contains Queen's Privy Council confidences?

In Step 5, the RA must determine if the document contains confidences of the Queen's Privy Council for Canada. (Such documents would be expected to appear in documents produced by the RA, rather than submitted by another party.) Documents in this category include:

- memoranda to Cabinet (MCs);
- background discussion papers providing explanations, analysis or policy options for consideration in decision-making;
- agenda or records of deliberation or decision-making;
- communications between Cabinet ministers on matters relating to government decision-making or the formulation of government policy;
- briefing notes in relation to matters before or proposed to be brought before Cabinet or Cabinet committees
- draft legislation, including draft regulations, guidelines, orders-in-council, and other statutory instruments which require Cabinet approval.
- any record which contains information about the contents of any of the above kinds of records.

If yes: PCO will advise as to whether all or part of the document can be included in the public registry.

If no: Proceed to Step 6.

Step 6: Document contains information that must be exempted?

The Act, in conjunction with the *AIA*, prohibits the RA from disclosing some records through the public registry and also allows the RA to withhold a record or part of a record from the public registry in some circumstances.

An RA may believe that certain information that would otherwise be exempted is in the public interest because the public needs it to participate effectively in the EA. In such a case, the RA may place that information on the public registry. Special conditions apply for third party information (see below).

If an RA concludes that a document contains information that must be exempted, it must attempt, wherever possible, to place any part of the record which does not contain exempted information in the public registry. The RA blacks out the information which cannot be disclosed, then checks to see if the document still makes sense. If it does, it is included in the public registry.

Fourteen categories of permitted or required exemptions are explained briefly below.

(1) Third party information

The *AIA* (and s.55(4) and s.55(7) of the Act) require an RA to protect trade secrets or confidential financial, commercial, scientific and technical information belonging to or affecting third parties from disclosure. For the purposes of public registries, a third party is any person, corporation or group which provided the above types of information on a confidential basis to any government institution. This would include information provided to federal organizations such as Crown corporations to which Act might not otherwise apply.

If the record contains information that might be considered third party, the RA should follow established procedures contained in Sections 27,28, and 44 of the *AIA*. These same procedures should be implemented if the RA has identified third party information and determines that placing it on the public registry is in the public interest because it is required in order for the public to participate effectively in the EA.

(2) Trade secret

The RA must prevent the disclosure of records which fulfil the following criteria:

- the record contains information that should remain confidential, known only by a relatively small number of persons;
- the person who possesses the information intended to keep the information secret;
- the information has an industrial or commercial value to the person who possesses it.

(3) Personal information

An RA cannot put any record into the public registry which contains information about an identifiable individual that is recorded in any form. Personal information includes any information which could identify an individual, such as:

- the individual`s name where it appears with other personal information relating to the individual or where the disclosure of the name itself would reveal information about the individual;
- information relating to the individual`s educational or employment background;
- any identifying number or symbol assigned to the individual, such as a membership number or code;
- correspondence sent to or from a government institution and that contain personal information.

In some circumstances, it will include other identifying characteristics, such as handwriting, or identification of membership in a group or community.

An RA may place personal information in a public registry if:

- the individual concerned provides direct and informed consent to the disclosure of the personal information; the fact that the comments were provided in response to an invitation to comment during an environmental assessment is not sufficient to infer the individual's consent to disclosure of the information;
- the information has otherwise been made available to the public through, for example, a letter or advertisement published in a newspaper, or a petition tabled in Parliament.

Personal information does not include:

- information about an employee of a government institution which relates to the position or function of the individual, such as the title, business address and telephone number of the employee or the personal opinions and views of the individual given in the course of employment;
- information about an individual performing services under contract for the government institution, including the terms of the contract, the name

of the individual and the opinions or views of the individual given during the course of performing these services.

(4) Information subject to solicitor-client privilege

An RA does not have to put communications between itself and a lawyer in a public registry, if these communications were made in order to obtain legal advice. The right to protect these records from disclosure belongs to the RA, not the lawyer, so the RA can choose to disclose the documents if it wishes. For example, an RA may decide to place a document in the public registry because it is in the public interest to do so. Before waiving the privilege the RA should consult its lawyer in order to assess the impact of the waiver of the privilege prior to the disclosure of the opinion. Waiving the privilege for one option might have an impact on other operations of the RA or on other government institutions.

In order to be exempted, the communication must be made in a good faith effort to obtain legal advice, and be made in a confidential manner, with the intent that the communication should remain confidential.

As long as the above criteria are met, the position or title of the person requesting the legal opinion is irrelevant in determining whether the communication can be protected from disclosure. However, an RA cannot withhold a document simply because it has been transmitted to a lawyer -- the communication must meet the above criteria. For example, if an environmental report was prepared for the purpose of obtaining legal advice from a lawyer and was treated as confidential by the federal authority, the document would be privileged. However, if this document was prepared for other reasons, and sent to the lawyer for general information purposes, it would not be privileged.

(5) Information obtained "in confidence"

An RA cannot place a record in the public registry if the entity which supplied the information has stipulated that the confidential information cannot be divulged beyond the government institutions which have a need to know the nformation. This includes information obtained from:

- the government of a foreign state or any of its institutions;
- an international organization of states or any of its subsidiary institutions;
- the government of a province or any provincial institution;
- a municipal or regional government or any municipal institution.

The RA may disclose information obtained "in confidence" from these governments or organizations if the body consents to the disclosure, or makes the information public itself.

(6) Federal-provincial affairs

An RA may refuse to put into the public registry any record that contains information that could be injurious to federal-provincial affairs. Examples of this include information on federal-provincial consultations or deliberations, and on Government of Canada strategy relati ng to the conduct of federal-provincial affairs.

(7) International affairs, defence, and national security

A government institution may refuse to put any record into the public registry that contains information which would be expected to be injurious to:

- the conduct of international affairs, including state to state affairs, and commercial, cultural or scientific links established by citizens with counterparts in other countries;
- the defence of Canada or any state with which Canada has concluded

formal alliances or treaties, or to which Canada may be linked for trade or other purposes;
- the detection, prevention, or suppression of subversive or hostile activities.

(8) Law enforcement, investigations and security of penal institutions

An RA may refuse to put any record in the public registry that contains information:

- that was legally obtained in the course of criminal or security investigations, including information obtained by the RCMP while performing policing services for a province or municipality, if the document was created less than twenty years before the request;
- that relates to investigative or criminal methods and techniques, a particular investigation, or a confidential source of information;
- that relates to the security of a penal institution, particular buildings, structures and systems such as computer or communication systems, or technical information relating to weapons;

The above exemptions may be applied if the information was obtained or prepared by any of the following institutions listed in Schedule I to the *Access to Information Act Regulations*:

- Canada Ports Corporation Police & Security, Transport Canada;
- Canadian Forces Military Police;
- Canadian Security Intelligence Service;
- Director of Investigation & Research, Department of Consumer & Corporate Affairs Intelligence Division, Department of National Revenue (Customs & Excise);
- Preventive Security Division, Securities Branch, Canadian Penitentiary Service
- Royal Canadian Mounted Police;
- Special Investigations Division, Department of National Revenue (Taxation);
- Special Investigations Unit, Department of National Defence.

(9) Safety of individuals

An RA may refuse to put any record into the public registry that contains information which could threaten the safety of individuals.

(10) Economic interests of the Government of Canada

An RA can refuse to put any record into the public registry that contains, for example:

- valuable trade secrets belonging to the Government of Canada;
- sensitive information pertaining to the financial interests of Canada, such as information about Canadian currency;
- changes contemplated in tariffs or taxes;
- a contemplated sale or acquisition of land or property.

(11) Operations of Government

An RA may refuse to put into the public registry any record that contains:

- advice or recommendations prepared for a government institution or a Minister. This does not include, for example, guidelines for interpreting legislation or exercising discretion, instructions from Ministers to government officials;
- consultations or deliberations involving employees of a government institutions, a Minister or the Minister's staff, such as memoranda, answers to a Minister's request, or minutes of a meeting;

- negotiating plans or positions developed for use by the Government of Canada;
- administrative or personnel management plans which have not ye tbeen put into operation.

This category does not apply to records that are a statement of reasons for an adjudicative or discretionary decision which affects the rights of a person, or are a report prepared by a consultant or advisor who was not an employee or officer of a government instituion, or on a Minster's staff when the report was prepared.

(12)

Testing Procedures

An RA may refuse to put a record in a public registry if the record contains information relating to testing or auditing procedures or techniques, or details of specific tests or audits that will be conducted, if this disclosure would prejudice the use or results of the tests or audits.

(13)

Statutory Prohibitions An RA cannot disclose any record if a specific section or sections of an Act of Parliament restrict or prohibit the disclosure of information. Acts which restrict or prohibit the disclosure of information are listed in Schedule II of the *AIA*, and include:

- *Aeronautics Act*;
- *Atomic Energy Control Act*;
- *Canada-Newfoundland Atlantic Accord Implementation Act*;
- *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act*;
- *Canadian Environmental Protection Act*;
- *Canada Oil & Gas Act*;
- *Energy Efficiency Act*;
- *Hazardous Products Act*;
- *Motor Vehicle Consumption Standards Act*;
- *Transportation of Dangerous Goods Act*.

(14) Information to be published

An RA may refuse to put a record into the public registry if the record will be published by a government institution within 90 days from the time when the RA is considering its inclusion in the public registry.

If yes: Sever any exempted information. If the document still makes sense, put it in the public registry. If the document does not make sense, do not put it in the public registry.

If no: Put the document in the public registry.

4.3 Cost Recovery

This section provides guidance for RAs on determining the fee, if any, for providing copies of public registry documents to the public. This fee structure is based on that used for the AIA.

Principles

The fee structure has been developed according to the following principles:

- Simplicity
  - The process to determine costs recovered or waived should be

as simple and precise as possible to avoid variations in interpretation and to ensure the fair treatment of requesters.

- Consistency
  - The practice of recovering costs should be uniform throughout the federal government.
- Usefulness
  - Cost recovery guidelines should not inhibit convenient public access to documents. However, the guidelines should serve as a deterrent to frivolous, overly-broad or poorly-framed requests.
- Pre-payment
  - Payment for the reproduction costs (if any) must be received by the RA before the documents are to be transmitted.
- Scope
  - Charges should be limited to reasonable standard costs and should cover only the direct costs of reproducing documents in hardcopy or electronic form. Costs should not be recovered for the indirect costs associated with providing public access to documents, or for costs associated with mailing or otherwise transmitting documents.
- Level
  - There should be no minimum or maximum charge for reproducing documents. Charges will automatically be waived when the costs do not exceed $25.00.
- Exemptions
  - No costs should be charged for documents prepared for the purpose of consulting with the public, during the period of consultation.
- Format
  - For convenience and cost savings, the reproduction of documents in electronic form should be encouraged.

Procedures

The procedures for determining cost recovery charges applicable to requests for documents listed in the public registry consist of three steps.

Step 1: Determine if requested document is exempt from charges

No costs are to be charged for a copy of any document prepared and communicated to the public for consultation purposes, whether for public comment or to facilitate public participation in the EA, during the period of consultation. Such documents include:

- a screening report, if the RA has exercised its discretion under the Act to seek public comment;
- a proposed class screening report;
- a comprehensive study report;
- any reports, notices or other material prepared as part of a public consultation program by the RA or the Agency;
- terms of reference for a mediator or review panel;
- guidelines for the completion of an environmental impact statement, if the public is to be consulted prior to the guidelines being forwarded to the proponent;
- reports completed by a federal department or agency for a mediator or panel;
- a mediator's report;
- a public review panel's report; any documentation prepared by or for an RA in the post-decision stage under s. 38(2) of the Act to advise the public of:
  - its course of action in relation to a project;
  - the mitigation measures to be implemented;
  - the extent to which the mediator's or panel's recommendations have been adopted;
  - a description of its follow-up program;
  - any results of its follow-up program.

If yes: Process request immediately (see section 4.4).

If no: Proceed to step 2.

Step 2: Determine cost recovery charge

Total charges for a particular request will depend on the format in which the documents are to be provided, whether hardcopy, microfiche or electronic. For example, two hundred pages of text would cost $40.00 if provided in hardcopy format. However the same number of pages could easily be reproduced on one computer diskette for $10.00, and thus be provided to the requester free of charge. If the requester's preferred format is not clear from the request, the RA should contact the requester.

The fee schedule for the three formats are:

- Hardcopy/faxed
  - for pages of not more than 21.5 cm by 35.5 cm: $0.20 a page;
  - for pages larger than this size: on an at-cost basis;
- Microfiche
  - $0.40 per fiche;
- Electronic
  - $10.00 per 5.25" or 3.5" diskette.

If total fee $25 or less:
Process request (see section 4.4)

If total fee more than $25:
Proceed to step 3

Step 3: Inform requester of fee, if any

If the total reproduction costs of the request exceed $25.00, the RA should immediately inform the requester. In most cases, and particularly when the request is urgent, the contact should be made via telephone or fax.

The RA should inform the requester of the total fee and that the request can be processed only upon receipt of the full payment.

4.4 Responding to Requests

This section provides guidelines for RAs on what constitutes a reasonable timeframe in responding to public requests for documents that are in the public registry.

Principles

The guidelines are based on the following principles:

- *Promptness*
  - The time period between ordering of a document and its delivery should, in most cases, be less than 30 calendar days.

    Under the *AIA*, access is to be provided within 30 calendar days after a request is received. This period can be extended if the request is for a large number of documents, if the request requires a search through a large number of records, or if consultation is necessary and cannot be completed within thirty days.

    Under the Act, however, access to any document is pre-determined before any request is received. It is not necessary to

factor into the processing period any time for determining whether access is to be provided, or for searching for a document.

- *Flexibility*
  - Time periods should be flexible to account for the circumstances of each request. Longer time periods may be necessary for requests involving many or lengthy documents. Shorter time periods may be necessary because of an external constraint, such as a public participation deadline.

- *Format*
  - Electronic transmission of documents should be encouraged. This principle supports the public registry development objectives of being cost effective, minimizing workload, and making effective use of technology.

Guidelines

Consistent with the principle of using a phased approach, the following guidelines are intended to be flexible and apply in the short term until RAs have had greater experience in responding to public requests for information:

1. All time periods are measured from the date of request until the date the documents are transmitted.

   The date of request is the date on which the request is received by the RA. If the request is given by telephone, the date is the date of the phone conversation. In the case of a mailed request, the date is the date of receipt by the RA. If a document is mailed out by the RA, the date of transmission is the postmark. In the case of documents transmitted in person, by fax or other electronic format, the date is the date of the transmitting activity. In the relatively small number of cases in which there will be a fee for the documents, the date of request is the date on which full payment is received (see section 4.2 for details on cost recovery guidelines).

2. Access should be provided within 10 working days of the date of request, unless an extension (as outlined in guidelines 4 and 5 below), is warranted.

3. Priority should be given to requests from persons wanting to participate in a pending or current formal public participation process being conducted under the Act. Access should, when possible, be provided in less than 10 working days if a formal public participation or public comment deadline falls within the 10-day period.

4. Access may, if necessary, be provided within a period greater than 10 working days but less than 30 calendar days, in the following circumstances:
   - the request is for a large number of documents or for particularly lengthy documents;
   - the request requires documents to be translated or put into an alternative format;

5. Access may exceed 30 calendar days only if the requester agrees to the extension. In such cases, an alternative arrangement, such as forwarding summary pages within a shorter period of time, may be appropriate as well.

4.5 Official Language Obligations

This section outlines the conditions that must be met for meeting the requirements of the *Official Languages Act* (*OLA*) while maintaining the public

registry.

A document that is to be entered onto the public registry must be translated into the other official language *only* if it meets *all three* of the following conditions:

- the document has been prepared for the purpose of communicating with the public;
- the document originates with an RA;
- the address of the primary contact for documents (listed on the Federal EA Index) is in a designated bilingual area.

Note: The need for translation into languages other than English and French will depend on the location of the project, and can be determined only on a case-by-case basis by the RA.

Condition 1: Has the document been prepared for the purpose of communicating with the public?

First, the RA must determine whether the document has been prepared for the purpose of communicating to the public. The fact that a particular document may eventually be requested and reviewed by the public does not automatically mean that it must be translated. The critical factor is whether the document has been prepared to communicate, notify, or consult with the public.

Condition 2: Does the document originate with an RA?

Only those public registry documents that meet Condition 1 and originate from an RA may need to be translated. Such documents have either been prepared by the RA itself, or by a third party under the direction and responsibility of the RA. Documents prepared by third parties not under the direction of the RA do not have to be translated.

Condition 3: Is the address of the primary contact for the documents (listed in the Federal EA Index) in an area designated bilingual?

The location of an EA's public registry is considered to be the address of the primary contact person for the documents (as listed in the Federal EA Index). In most cases, this location will be where the EA is administered. Documents meeting the first two conditions above need be translated only if this address is in an area designated bilingual under the *OLA*.

Designated bilingual areas include:

- any central office (headquarters) of a federal institution;
- an office or facility located within the National Capital Region;
- an office or facility located in a region designated as bilingual under the *OLA* under Treasury Board's "significant demand" criterion. (The Official Languages and Employment Equity Branch of Treasury Board has a computerized system that can facilitate the determination of whether the "significant demand" criterion applies to any given region.)

Note: The *OLA* also applies to the RA's communications with the public about the public registry. That is, all contact with the public on registry matters, such as telephone calls and written correspondence, must be available in both official languages if the public registry is located in an area designated bilingual. This is consistent with current practices relating to the provision of federal government services across the country.

Examples

Documents that need not be translated

Examples include:

- screening reports (unless the RA has exercised its discretion under the Act to seek public comment and the public registry is located in an area designated bilingual)
- letters from the public and unsolicited reports from interest groups (because they do not originate with an RA).

Documents that may need to be translated

A number of documents always meet the first two conditions; that is, they are prepared for the purpose of communicating with the public, and they originate with an RA. These documents would need to be translated if the address of the primary contact for documents, as listed in the Federal EA Index, is in an area designated bilingual.

Such documents include:

- a model class screening report;
- a comprehensive study report;
- any reports, notices or other material prepared as part of a public consultation program by the RA;
- terms of reference for a mediator or review panel;
- guidelines for the completion of an environmental impact statement, if the public is to be consulted prior to the guidelines being forwarded to the proponent;
- reports completed by a federal department or agency for a mediator or panel;
- a mediator's report;
- a public review panel's report;
- any documentation prepared by or for an RA in the post-decision stage under s. 38(2) of the Act to advise the public of:
  - its course of action in relation to a project;
  - the mitigation measures to be implemented;
  - the extent to which the mediator's or panel's recommendations have been adopted;
  - a description of its follow-up program;
  - any results of its follow-up program.

| Previous page | Table of contents | Next page |

Last Updated: 2003-10-28 Important Notices

Reference Guide: Determining Whether A Project is Likely to Cause Significant Adverse Environmental Effects

Disclaimer: "Some electronic documents are currently available only in Adobe's Portable Document Format. For an alternative format, contact our publications department."

- 1. Introduction
- 2. The Concept of Significance
- 3. The Requirements of the Canadian Environmental Assessment Act
- 4. A Framework
  - 4.1 Step 1: Deciding Whether the Environmental Effects are Adverse
  - 4.2 Step 2: Deciding Whether the Adverse Environmental Effects are Significant
  - 4.3 Step 3: Deciding Whether the Significant Adverse Environmental Effects Are Likely
- 5. Further Reading

1. Introduction

This reference guide describes an approach for deciding whether a project is likely to cause significant environmental effects under the Canadian Environmental Assessment Act (Act). It is one of several reference guides intended to provide the supporting documentation for the Responsible Authority's Guide to the Canadian Environmental Assessment Act prepared by the Federal Environmental Assessment Review Office (FEARO). All of the reference guides are complimentary to the Responsible Authority's Guide to the Canadian Environmental Assessment Act but go into more detail on individual issues. Specifically, this reference guide:

- reviews the concept of significance;
- discusses the relevant requirements of the Act;
- proposes an approach for deciding whether a project is likely to cause significant adverse environmental effects under the Act;
- provides a list of key references on the subject.

As the practice of environmental assessment evolves, it will be necessary to update and revise both the Responsible Authority's Guide to the Canadian Environmental Assessment Act and the individual reference guides. These guides should be seen as evolving documents rather than as static textual materials. Any suggestions for updates or revisions should be directed to:

Director
Process Development
Policy and Regulatory Affairs
Federal Environmental Assessment Review Office
14th Floor, Fontaine Building
200 Sacré-Coeur Boulevard
Hull, Québec
K1A 0H3

This guide is intended primarily for responsible authorities (RAs) and the Minister of the Environment (the Minister), since under the Act, they are

responsible for determining when a project is likely to cause significant adverse environmental effects.

2. The Concept of Significance

Deciding whether a project is likely to cause significant adverse environmental effects is central to the concept and practice of environmental assessment. Whateveradverse environmental effects are addressed and whatever methods are used, the focus of environmental assessment always narrows down to a decision about whether the project is likely to cause significant adverse environmental effects.

The concept of significance cannot be separated from the concepts of "adverse" and "likely." Environmental effects that are adverse, and significant adverse environmental effects that are likely, are referred to for convenience in this guide as "the related matters."

Deciding when a project is likely to cause significant adverse environmental effects is not new to environmental assessment (EA). This concept was included in the Environmental Assessment and Review Process (EARP) Guidelines Order and can be found in most EA legislation, procedural manuals, documents and the research literature. But there is little guidance available on what to consider when determining significance and the related matters and how this should be done.

3. The Requirements of the Canadian Environmental Assessment Act

The concept of significance is extremely important in the Act. One of the stated purposes of the Act is:

> to ensure that projects that are to be carried out in Canada or on federal lands do not cause significant adverse environmental effects outside the jurisdictions in which the projects are carried out" (section 4 (c)).

The central test in the Act is whether a project is likely to cause significant adverse environmental effects. This determination is an objective test from a legal standpoint, which means that all decisions about whether or not projects are likely to cause adverse environmental effects must be supported by findings based on the requirements set out in the Act.

The definitions of "environment" and "environmental effect" are the starting point for this test . The Act defines the environment as:

- the components of the Earth, and includes
  a. land, water and air, including all layers of the atmosphere,
  b. all organic and inorganic matter and living organisms, and
  c. the interacting natural systems that include components referred to in paragraphs (a) and (b) (section 2(1)).

Environmental effect means, in respect of a project,

a. any change that the project may cause in the environment, including any effect of any 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 historical, archaeological, paleontological or architectural significance, and
b. any change to the project that may be caused by the environment, whether any such change occurs within or outside Canada (section 2 (1)).

Only environmental effects as defined in the Act can be considered in determinations of significance and the related matters. It follows that the determination of significance and the related matters can consider only:

- direct changes in the environment caused by the project;
- the effects of these environmental changes on:
  - health and socio-economic conditions,
  - physical and cultural heritage,
  - current use of lands and resources for traditional purposes by aboriginal persons,
  - any structure, site or thing that is of historical, archaeological, paleontological or architectural significance; or
- changes to the project caused by the environment.

For example, the socio-economic effects of a project may or may not be factors in determining significance and the related matters. If a socio-economic effect (such as job losses) is caused by a change in the environment (such as loss of fish habitat), which is in turn caused by the project, then the socio-economic effect is an environmental effect within the meaning of the Act and must be considered when determining significance and the related matters. If the socio-economic effect is not caused by a change in the environment, however, but by something else related to the project (for example, reallocation of funding as a result of the project), then the socio-economic effect is not an environmental effect within the meaning of the Act and cannot be considered in the determination of significance and the related matters.

Determinations of significance and the related matters must be made:

- following a screening;
- after a comprehensive study report has been completed;
- after a mediation or review panel report has been submitted.

Following a screening, the RA must decide whether or not the project is likely to cause significant adverse environmental effects, taking into account the implementation of mitigation measures (section 20(1)). If the RA decides that the project is not likely to cause significant adverse environmental effects, it may allow the project to proceed, while ensuring that any appropriate mitigation measures are implemented. If the RA decides that the project is likely to cause significant adverse environmental effects (taking into account the implementation of mitigation measures) and these effects cannot be justified in the circumstances, it must not do anything that would permit the project to proceed.

The RA must refer the project to the Minister for referral to a mediator or a review panel when:

- it is uncertain whether the project is likely to cause significant adverse environmental effects (taking into account the implementation of mitigation measures);
- it decides that the project is likely to cause significant adverse environmental effects that may be justifiable in the circumstances; or
- public concerns warrant a referral.

When a comprehensive study report is sent to the Minister and the Canadian Environmental Assessment Agency (the Agency) by an RA, the Minister is required to make a process decision about whether or not further review of the project is necessary, or whether a final decision can be made by the RA (section 23). This decision must be based on the comprehensive study report. If the Minister decides that the project, taking into account the implementation of mitigation measures, is not likely to cause significant adverse environmental effects or that it is likely to cause significant adverse environmental effects that cannot be justified in the circumstances, the Minister must refer the project back to the RA for appropriate action. If it is uncertain, however, whether the project is likely to cause any significant adverse environmental effects or that

the project will cause significant adverse environmental effects that may be justified in the circumstances, the project must be referred to a mediator or a review panel. Public concerns may also warrant referring the project to a mediator or a review panel.

After a panel review or a mediation is completed, or when a comprehensive study report of a project is referred back to the RA by the Minister, the RA must make the final determination and decide whether the project is likely to cause significant adverse environmental effects (section 37(1)). If the project is not likely to cause significant adverse environmental effects, or if it is likely to cause significant adverse environmental effects (taking into account the implementation of mitigation measures) that can be justified in the circumstances, the RA is free to provide federal support to or participate in the project. If, on the other hand, the RA considers that the project is likely to cause significant adverse environmental effects that cannot be justified in thecircumstances, it must not do anything to permit the project to proceed.

Four points merit special attention. First, with the exception of transboundary boundary reviews, the RA makes the determination about whether the project is likely to cause significant adverse environmental effects. The Minister, however, does make a process determination of significance and the related matters following receipt of a comprehensive study report from an RA. After considering whether the project is likely to cause significant adverse environmental effects, as described in the comprehensive study report, the Minister must make a decision whether further study, through a panel review or mediation, is warranted.

Second, in all cases, significance and the related matters are determined only after taking into account any mitigation measures the RA considers appropriate. In other words, no final determination can be made about the significance of the likely adverse environmental effects or the related matters unless the implementation of any appropriate mitigation measures has been considered.

Third, public input into the determination of significant adverse environmental effects must limit itself to questions related to scientific analysis and interpretation. The public, for example, could provide new evidence, offer a different interpretation of the facts, or question the credibility of the conclusions. Issues that are not directly linked to the scientific (including traditional ecological knowledge) analysis of environmental effects, such as long-term unemployment in a community or fundamental personal values, cannot be introduced into the determination at this step. Such public concerns and values are given prominence elsewhere in the EA process. Under the Act, serious public concerns can warrant referral of the project to a public review through either mediation or a public panel review. That is, public concerns -- that may or may not have to do with scientific issues -- can prompt the EA process to take a closer look at the project.

Fourth, if there is a determination that the project, taking into account the implementation of appropriate mitigation measures, is likely to cause significant adverse environmental effects, then the RA must also determine whether or not such effects can be justified under the circumstances. The Act is clear that the project may be allowed to proceed if any likely significant adverse environmental effects can be justified in the circumstances. This is the final "test" in the Act. The RA can decide that likely significant adverse environmental effects are not justified after a screening, comprehensive study report, or a public review. It can decide that they are justified, however, only after a public review in the form of mediation or a panel review.

The central question for the RA or the Minister in the process decision following submission of a comprehensive study report, remains: "Is the project likely to cause any significant adverse environmental effects?" Thus, only environmental effects that are both likely and adverse can be considered in determinations of significance. Environmental effects that are unlikely or are not adverse cannot be considered in significance decisions. It is important to note that the test is not of "significantly adverse" effects, but of adverse effects

that are significant. The "likely" applies to the environmental effects of the project that are both adverse and significant.

4. A Framework

This section provides a framework for guiding RAs in determining whether environmental effects are adverse, significant, and likely within the context of the Act.

The framework consists of three general steps:

- Step 1: Deciding Whether the Environmental Effects are Adverse
- Step 2: Deciding Whether the Adverse Environmental Effects are Significant
- Step 3: Deciding Whether the Significant Adverse Environmental Effects are Likely

Each step consists of a set of criteria that RAs and the Minister should use to address these three questions, as well as examples of methods and approaches that can be applied. To apply the criteria, the RA and the Minister must rely on information provided by the proponent. Thus, the RA or the Minister should ensure that the proponent provides the necessary information (section 18(2)), by specifying the types of information required to determine significance and the related matters when the scope of the project is defined by the RA or the Minister.

4.1 Step 1: Deciding Whether the Environmental Effects are Adverse

In making this decision, it may be helpful to separate the effects on people from the effects on the environment, recognizing of course that people are integral to most ecosystems. It is important to remember that only "environmental effects" as defined in the Act can be considered.

Table 1 lists the major factors that should be used to determine whether environmental effects are adverse. Obviously, the importance of individual characteristics will be different in different EAs. To assist the RA and the Minister in deciding whether the environmental effects are adverse, the proponent should be required to submit information on these factors.

The most common way of determining whether a project's environmental effects are adverse is to compare the quality of the existing environment with the predicted quality of the environment once the project is in place, using some or all of the criteria shown in Table 1 as variables. This method implies a need for environmental monitoring information collected over time and/or distance before the project is in place. It also assumes normal baseline environmental conditions, although this may not always bethe case (e.g., fluctuating water levels in a river). It is the proponent's responsibility to ensure that such information is put before the RA. In most cases, the proponent should be expected to collect and synthesize the available information on baseline environmental quality. In some cases where there are gaps in information, the proponent can be requested to collect new information, depending on the size and nature of the project and the proponent's resources.

Occasionally, information from other situations may be helpful in determining whether the environmental effects are adverse. For example, if there are similar or identical projects already in place in similar ecosystems, it may be helpful for the proponent to provide information on their environmental effects.

4.2 Step 2: Deciding Whether the Adverse Environmental Effects are Significant

There are several criteria that should be taken into account in deciding whether

the adverse environmental effects are significant. These are briefly discussed below:

Magnitude of the adverse environmental effect

Magnitude refers to the severity of the adverse environmental effects. Minor or inconsequential effects may not be significant. On the other hand, if the effects are major or catastrophic, the adverse environmental effects will be significant. When using this criterion, it is important to consider the extent to which the project could trigger or contribute to any cumulative environmental effects.

Table 1: Factors in determining adverse environmental effects

Changes in the Environment	Effects on People Resulting from Environmental Changes
Negative effects on the health of biota including plants, animals, and fish;	Negative effects on human health, well-being, or quality of life;
Threat to rare or endangered species	Increase in unemployment or shrinkage in the economy;
Reductions in species diversity or disruption of food webs;	Reduction of the quality or quantity of recreational opportunities or amenities;
Loss of or damage to habitats, including habitat fragmentation;	Detrimental change in the current use of lands and resources for traditional purposes by aboriginal persons;
Discharges or release of persistent and/or toxic chemicals, microbiological agents, nutrients (e.g., nitrogen, phosphorus), radiation, or thermal energy (e.g., cooling wastewater);	Negative effects on historical, archaeological, paleontological, or architectural resources;
Population declines, particularly in top visual amenities (e.g., views);	Decreased aesthetic appeal or changes in predator, large, or long-lived species;
Loss of or damage to commercial species	
The removal of resource materials (e.g., or resources; peat, coal) from the environment;	Foreclosure of future resource use or production;
Transformation of natural landscapes;	
Obstruction of migration or passage of wildlife;	
Negative effects on the quality and/or quantity of the biophysical environment (e.g., surface water, groundwater, soil, land, and air).	

Geographic extent of the adverse environmental effects

Localized adverse environmental effects may not be significant. Alternatively, widespread effects may be significant. When considering this criterion, it will be important to take into account the extent to which adverse environmental effects caused by the project may occur in areas far removed from it (e.g., acid rain and the long-range transportation of atmospheric pollutants), as well as contribute to any cumulative environmental effects.

Duration and frequency of the adverse environmental effects

Long term and/or frequent adverse environmental effects may be significant. Future adverse environmental effects should also be taken into account. For

example, many human cancers associated with exposure to ionizing radiation have long latency periods of up to 30 years. Obviously, when considering future adverse environmental effects, the question of their likelihood becomes very important.

Degree to which the adverse environmental effects are reversible or irreversible

Reversible adverse environmental effects may be less significant than adverse environmental effects that are irreversible. In practice, it can be difficult to know whether the adverse environmental effects of a project will be irreversible or not. It will be important to consider any planned decommissioning activities that may influence the degree to which the adverse environmental effects are reversible or irreversible.

Ecological context

The adverse environmental effects of projects may be significant if they occur in areas or regions that:

- have already been adversely affected by human activities; and/or
- are ecologically fragile and have little resilience to imposed stresses.

To assist the RA and the Minister in deciding significance, proponents should always be required to submit information on these criteria. All of them should be considered in deciding whether the adverse environmental effects are significant or not. Different criteria will be important in different EAs and the extent to which an individual criterion will influence the overall determination of significance will vary between assessments.

The most common method of determining whether the adverse environmental effects of a project are significant is to use environmental standards, guidelines, or objectives. If the level of an adverse environmental effect is less than the standard, guideline, or objective, it may be insignificant. If, on the other hand, it exceeds the standard,guideline, or objective, it may be significant.

Environmental standards, guidelines and objectives have been established by federal, provincial, and in some cases municipal departments, ministries, and agencies. They often define either maximum levels of emissions or discharges of specific hazardous agents into the environment or maximum acceptable levels of specific hazardous agents in the environment. They are usually based on the results of studies in the field and with laboratory animals, available technology, and/or prevailing attitudes and values.

However, environmental standards, guidelines and objectives have been established only for a relatively small number of hazardous agents, such as some chemicals, radiation, and physical parameters including acidity and acceptable levels of particulates or suspended solids. Since there are no standards, guidelines, or objectives for most environmental effects, they cannot be used to determine the significance of many adverse environmental effects, nor do they necessarily protect ecological health. In addition, standards, guidelines, or objectives are set on the basis of individual hazardous agents and do not allow for any interactions that may occur (i.e., cumulative environmental effects).

Another method of determining significance is quantitative risk assessment, which is often used to determine the significance of the risks to human health from ionizing radiation and carcinogenic chemicals. Its use is restricted to agents that have predictable dose-response (or exposure-effect) relationships. Often derived from experiments using laboratory animals, these relationships usually approximate straight lines (see below).

dose /

exposure

response / effect/ risk

The response, effect, or risk is often measured in terms of increased cancer incidence per million people exposed. In quantitative risk assessment, an "acceptable" level of risk is determined. Conventional levels for "acceptable risk" to the public are an increased incidence of between one in 10 thousand to 1 in 10 million. By using the dose-response relationship, it can be determined whether or not the dose/exposurewould result in an unacceptable level of risk. In other words, significance is determined on the basis of an "acceptable level" of a specified risk, often cancer incidence.

This approach assumes that there is an "acceptable" level of risk. In practice, occupational health and safety standards allow for a greater degree of risk than public exposure standards. The Delaney Clause in the U.S. Food and Drugs Act establishes zero as the acceptable or significant increased cancer risk associated with food additives. It is important to be clear on who determines acceptable risk levels as well as how they are determined when quantitative risk assessments are included in EAs. As well as determining significance, quantitative risk assessment can also be used to determine the probability of occurrence of significant environmental effects, i.e., likelihood.

If there are no relevant environmental standards, guidelines, or objectives and quantitative risk assessment is not possible, other methods and approaches must be used. In larger EAs, such as panel reviews, it may be possible to develop methods and approaches for determining significance for individual projects. In others, it will be necessary for the RA or the Minister to use a qualitative approach based on their best professional judgement.

When a project's adverse environmental effects are being compared to the adverse environmental effects of an alternative means of carrying out the project, weighting and ranking methods can assist in deciding whether the adverse environmental effects are significant. Generally, quantitative methods are used to weight or rank the individual adverse environmental effects of different alternatives which are then added to produce a total effect "score." These methods can be helpful in summarizing and comparing the effects of alternatives, but they can also hide the assumptions inherent in the weighting or ranking system. As well, weighting and ranking methods compare total effects, so that a locally significant individual effect may appear unimportant in the overall scheme. In other words, there is a loss of specificity. These problems can be at least partially resolved by ensuring that weighting and ranking exercises are conducted by those with a wide variety of experience and expertise.

Whatever methods are used to determine significance, they should be based on the criteria outlined above.

Cost-benefit analysis cannot be used to determine significance in federal EAs, because it compares the estimated environmental costs and benefits of a project, whereas the Act clearly states that only adverse environmental effects are to be considered in determining significance and likelihood. Although cost-benefit analysis could be used to justify proceeding with a project that is likely to cause significance adverse environmental effects, this justification can take place only after the likelihood of the significant adverse environmental effects has been determined.

4.3 Step 3: Deciding Whether the Significant Adverse Environmental Effects Are Likely

When deciding the likelihood of significant adverse environmental effects, there are two criteria to consider:

Probability of occurrence

If there is a high probability that the identified significant adverse environmental effects will occur, obviously they are likely. Conversely, if there is a low probability of occurrence, the significant adverse environmental effects are unlikely.

Scientific uncertainty

There will always be some scientific uncertainty associated with the information and methods used in EAs. This is often termed the "confidence limits". If the confidence limits are high, there is a low degree of uncertainty that the conclusions are accurate and that the significant adverse environmental effects are likely or not. If the confidence limits are low, there is a high degree of uncertainty about the accuracy of the conclusion. In this case, it will be difficult to decide whether the significant adverse environmental effects are likely or not. If low scientific uncertainty can lead to an unambiguous conclusion of likelihood or unlikelihood, conversely high uncertainty cannot be a basis for a clear conclusion about likelihood. In this case, only the probability of occurrence criterion should be used to determine likelihood.

To assist the RA or the Minister in deciding likelihood, proponents should be required to submit information on these criteria.

The use of confidence limits has already been mentioned as a method of determining likelihood based on scientific certainty or uncertainty. Others include a range of statistical methods that are used to determine "statistical significance," which is usually defined as the low probability of error. Although statistical methods themselves are not discussed in this paper, it is useful to note the two commonly encountered types of statistical errors. Type 1 is a false positive, that is, a false conclusion that there will be a significant adverse environmental effect. Type 2 is a false negative, that is, a false conclusion that there will not be a significant adverse environmental effect. Statistical results provided by proponents should always be required to state the probabilities of making both types of errors.

Another method used to determine the probability of occurrence is quantitative risk assessment. (See section 4.2 above.)

RAs and the Minister should require proponents to use statistical methods to determine statistical significance, whenever possible. These methods will facilitate a determination of likelihood by the RA or the Minister. In EAs where numerical methods cannot be used or are not feasible, the RA or the Minister must use a qualitative approach to determining likelihood, based on their best professional judgement.

5. Further Reading

Allelt, E.J. 1986. EIA and Decision Analysis. Journal of the Operational Research Society 37: 901-10.

Ames, G. 1978. An Approach to the Determination of Significance in the Preparation of Environmental Assessments In: Environmental Assessment: Approaching Maturity, edited by Bendix and Graham, 25-33. Ann Arbor Science Publishers Inc. Ann Arbor, Michigan.

Bacow, L.S. 1980. The Technical and Judgemental Dimensions of Impact Assessment. Environmental Impact Assessment Review 1(2): 109-24.

Bakus, G., W. Stillwell, S. Latter and M. Wallerstein. 1982. Decision Making: With Applications for Environmental Management. 6(6): 493-504.

Caldwell, L.K. 1987. The Contextual Basis for Environmental Decisionmaking: Assumptions are Predeterminants of Choice. The Environmental Professional 9: 302-08.

Duinker, P.N., and G.E. Beanlands. 1986. The Significance of Environmental Impacts: An Exploration of the Concept. Environmental Management 10(1): 1-10.

Economic Commission for Europe. 1989. Criteria for Determining the Environmental Significance of Projects. Meetings of Experts on Environmental Impact Assessment, The Hague, Netherlands, November 27-28. United Nations Economic Commission for Europe. Netherlands.

Haug, P.T., R.W. Burwell, A. Stein, and B.L. Bandurski. 1984. Determining the Significance of Environmental Issues Under NEPA. Journal of Environmental Management 18: 15-24.

Hollick, M. 1981. The Role of Qualitative Decision Making Methods in EIA. Journal of Environmental Management 12(1): 65-78.

Hundloe, T., G.T. McDonald, J. Ware, and L. Wilks. 1990. Cost Benefit Analysis and Environmental Impact Assessment. Environmental Impact Assessment Review 10(1/2): 55-68.

Matthews, W.H. 1975. Objective and Subjective Judgements in Environmental Impact Analysis. Environmental Conservation 2(2): 121-31.

Rodericks, J.V., S.M. Brett, and G.C. Wrenn. 1987. Significant Risk Decisions inFederal Regulatory Agencies. Regulatory Toxicology and Pharmacology 7(3): 307-20.

Rucklehaus, W.D. 1983. Risk and Public Policy. Science 221: 1026-28.

Sharma, R.K., J.D. Buffington, and J.T. McFadden. 1976. The Biological Significance of Environmental Impacts. Proceedings of a Conference on June 4-6, 1975 at the University of Michigan. NR-Conf 002. U.S. Nuclear Regulatory Commission. Washington, D.C.

Slovic, P. 1987. Perceptions of Risk. Science 236: 280-85.

Thompson, M.A. 1990. Determining Impact Significance in Environmental Impact Assessments. A Review of 24 Methodologies. Journal of Environmental Management 30: 235-50.

Travis, C.C., and H.A. Hattemer-Frey. 1988. Determining an Acceptable Level of Risk. Environmental Science and Technology 22(8): 873-76.

U.S. Army Corps of Engineers, Seattle District. 1983. A Guide to the Analysis of Significance. U.S. Army Corps of Engineers. Seattle, Washington.

Wolf, P.G. 1982. User's Guide to Defining Significant Impacts under the Federal EARP. Federal Environmental Assessment Review Office. Hull, Quebec.

Reference Guide: Assessing Environmental Effects on Physical and Cultural Heritage Resources [PDF - 469 kb]

Reference Guide for the Federal Coordination Regulations

| Previous page | Table of contents | Next page |

Last Updated: 2003-10-28 Important Notices

Glossary

Acronyms used in the guide

Act *Canadian Environmental Assessment Act*

CEAA Canadian Environmental Assessment Agency

EA environmental assessment

EARP Environmental assessment and review process

EIS environmental impact statement

FEARO Federal Environmental Assessment Review Office

RA responsible authority

Definitions from the Canadian Environmental Assessment Act

environment the components of the Earth, and includes

- land, water, and air, including all layers of the atmosphere;
- all organic and inorganic matter and living organisms; and
- the interacting natural systems that include the above components

environmental assessment

- an assessment of the environmental effects of the project that is conducted in accordance with the Act and its regulations

environmental effect

- any change that the project may cause in the environment, including any effect of such change on health and socioeconomic 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 historical, 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

federal authority

- a federal Minister of the Crown;
- an agency or other body of the federal government ultimately accountable to Parliament through a federal Minister of the Crown;
- any federal department or departmental corporations set out in Schedule I or II tothe *Financial Administration Act*; and
- any other body prescribed in the Act's regulations

follow-up program

- 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

interested party

- any person or body having an interest in the outcome of the environmental assessment for a purpose that is neither frivolous nor vexatious

mitigation

- the elimination, reduction, or control of the adverse environmental effects of the project, including restitution for any damage to the environment caused by such effects through replacement, restoration, compensation, or any other means

project

- in relation to a physical work, any proposed construction, operation, modification, decommissioning, abandonment, or other undertaking in relation to that physical work; or
- any proposed physical activity not relating to a physical work that is prescribed in the Act's regulations

proponent

- the person, body, federal authority, or government that proposes the project

record

- includes any correspondence, memorandum, book, plan, map, drawing, diagram, pictorial or graphic work, photograph, film, microfilm, sound recording, videotape, machine-readable record, and any other documentary material, regardless of physical form or characteristics, and any copy thereof

responsible authority

- a federal authority that is required pursuant to subsection 11(1) of the Act to ensure that an environmental assessment of the project is conducted

sustainable development

- development that meets the needs of the present, without compromising the ability of future generations to meet their own needs

---

Terms used in the guide

alternative means

- methods of a similar technical character or methods that are functionally the same; "alternative means" with respect to a nuclear power plant, for example, includesselecting a different location, building several smaller plants, and expanding an existing nuclear plant

alternatives to a project

- functionally different ways of achieving the same end; for example, "alternatives to" a nuclear power plant include importing power, building a hydroelectric dam, conserving energy, and obtaining the energy through renewable sources

Agency

- Canadian Environmental Assessment Agency

cumulative environmental effects

- 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, and imminent projects and activities

EA track

- the form of environmental assessment a project must undergo, whether a screening, comprehensive study, mediation, or panel review

expert federal departments

- any federal authority in possession of specialist or expert information or knowledge with respect to a project

federal support for a project

- the federal power, duty, or function that a federal authority exercises or performs in relation to the project, including acting as the proponent, or providing financial support, an interest in federal lands, or a federal permit or licence

interest in land

- a right, claim, title to, or legal share in land

lead RA

- where the same project has two or more RAs, one of the RAs may be designated as the lead for purposes of conducting the EA

mediator

- the individual appointed by the Minister to conduct an environmental assessment by means of a mediation

Minister

- Minister of the Environment

public registry

- a system for providing convenient public access to documents relating to an EA

public review

- for the purpose of this guide only, an environmental assessment by means of a mediation or a panel review

scope of the assessment

- a determination of: the environmental effects to be addressed; the scope of the environmental effects to be assessed; and the effects to be considered in making decisions regarding the project

scope of the project

- those components of the proposed development that should be considered part of the project for the purposes of the EA

self-directed environmental assessment

- for the purpose of this guide only, an environmental assessment by means of a screening or comprehensive study

trigger

- 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 licence, that is included in the Law List prescribed in the Act's regulations

| Previous page | Table of contents | Next page |

Last Updated: 2003-10-07 Important Notices

Environmental Assessments
Public Participation
How to do Environmental Assessments
Legislation & Regulations
Training Opportunities
Research & Development
Strategic Environmental Assessment
Publications
Frequently Asked Questions

Canadian Environmental Assessment Registry
CEAR Main »

A primer for Industry
Will your project need a federal EA? More »

Search our site

| Previous page | Table of contents | Next page |

Subject Index to the Canadian Environmental Assessment Act

Following is a keyword subject index to the *Canadian Environmental Assessment Act*. It covers the key terms and topics included in the Responsible Authority's Guide, but is not a detailed index to the Act. The numbers refer to sections and subsections of the Act.

Canadian Environmental Assessment Act (Act)

- annual report: s.71
- definitions: s.2(1)
- excluded projects: s.6
- five-year review: s.72
- projects to be assessed: s.5
- purposes: s.4

Canadian Environmental Assessment Agency (Agency)

- duties: s.63(1)
- establishment of: s.61(1)
- objectives: s.62
- powers: s.63(2)
- role in assisting when more than one RA: s.12(2)
- role in class screening: s.19
- role in comprehensive study review: s.22

Class screening

- necessary adjustments: s.19(5)
- public review: s.19(2)
- purpose: s.19(1)
- removal of declaration: s.19(6)
- request for declaration: s.19(1)
- use: s.19(4)

Comprehensive Study

- comprehensive study report: s.21(*a*)
- decision of Minister following review of comprehensive study report: s.23
- decision of RA following comprehensive study: s.37(1)
- delegation of responsibilities by RA: s.17(1)
- factors to be considered: s.16(1)(2)
- need to consider design and implementation of a follow-up program: s.38(1)
- public review of comprehensive study report: s.22
- request for referral to mediation or panel during comprehensive study: s.25
- use of previously conducted EA: s.24

Crown corporations

- EAs by: s.8

Cumulative environmental effects

- factor to be considered: s.16(1)(*a*)
- need to adjust for in using a class screening report: s.19(5)

Environment

- definition: s.2(1)

Environmental assessment (EA)

- definition: s.2(1)

Environmental effect

- definition: s.2(1)

Expert federal departments

- participation of: s.12(3)

Factors to be considered

- in a screening: s.16(1)
- in a comprehensive study, mediation, or panel review: s.16(1)(2)
- scope of: s.16(3)

Federal lands

- definition: s. 2(1)
- EA of projects with significant adverse environmental effects on: s.48

Federal-provincial agreements

- relating to joint EAs: s.41

Follow-up program

- definition: s.2(1)
- design and implementation of: s.38(1)
- factor to be considered in an EA: s.16(2)
- public notice regarding: s.38(2)

Interested party

- definition: s.2(1)
- participation in mediation: s.29(2)

Mediation

- additional participants: s.31
- appointment of mediator: s.30
- appropriateness of mediation: s.29(2)
- decision of RA following mediation: s.37
- determination of scope of factors: s.16(3)
- factors to be considered: s.16(1)(2)
- need for following comprehensive study: s.23
- need for following screening: s.20
- privilege: s.32(2)
- public notice: s.36
- public notice regarding recommendations of mediator's report: s.38(2)(*c*)

- referral to by Minister: s.29(1)
- reference to a mediator during a panel review: s.29(3)
- report of mediator: s.32(1)
- roster of persons to act as mediators: s.30(2)

Minister of the Environment (Minister)

- appointment of mediator: s.30
- appointment of panel review members: s.33
- decision following review of comprehensive study report: s.23
- establishment of joint review panel: s.40(2)
- establishment of terms of reference for mediation: s.30(1)(*b*)
- establishment of terms of reference for panel review: s.33(1)(*b*)
- provision of public notice on availability of report of mediator or panel: s.36
- referral of a project to mediation or panel review: s.29

Mitigation

- definition: s.2(1)
- ensuring implementation following screening: s.20(2)
- ensuring implementation following comprehensive study, mediation, or panel review: s.37(2)
- public notice regarding mitigation measures: s.38(2)(*b*)

Panel review

- appointment of review panel: s.33
- assessment by review panel: s. 34
- decision of RA following panel review: s.37
- determination of scope of factors: s.16(3)
- factors to be considered: s.16(1)(2)
- joint panel reviews: s.40
- need for following comprehensive study: s.23
- need for following screening: s.20
- powers of: s.35
- public hearings: s.34(*b*)
- public notice: s.36
- public notice regarding recommendations of panel's report: s.38(2)(*c*)
- referral to by Minister: s.29(1)
- reference to a panel review during a mediation: s.29(4)
- report of panel: s.34(*c*)
- roster of persons to act as panel members: s.33(2)

Project

- definition: s.2(1)
- projects requiring EAs: s.5
- projects excluded from EAs: s.7

Provincial governments

- agreements with federal government on joint EAs: s.41
- EA environmental assessment of projects that may cause significant adverse environmental effects across provincial borders: s.46

Public concerns

- warranting a reference to a mediator or review panel, after a comprehensive study: s.23(*b*)
- warranting a reference to a mediator or review panel, after a screening: s.20(1)(*c*)

Public participation

- purpose of Act: s.4(*d*)

Public comment

- on a comprehensive study report: s.22(2)
- on a screening report: s.18(3)

Public notice

- of availability of comprehensive study report for review and comment: s.22(1)
- of availability of proposed class screening report for review and comment: s.19(2)(*a*)
- of availability of screening report for review and comment: s.18(3)
- relating to projects for which the RA has taken action that enables the project to proceed: s.38(2)

Public registry

- contents: s.55(3)
- categories of information to be included: s.55(4)
- description: s.55(1)
- maintained by: s.55(2)

Responsible authority

- decision by following a comprehensive study, mediation, or panel review: s.37(1)
- decision by following a screening: s.20(1)
- definition: s.2(1)
- delegation of responsibilities in a screening or comprehensive study: s.17(1)
- determination of duties when more than one RA: s.12(1)
- determination of scope of factors to be considered: s.16(3)
- determination of scope of project: s.15
- ensuring implementation of mitigation measures following a comprehensive study, mediation, or panel review: s.37(2)
- ensuring implementation of mitigation measures following a screening: s.20(2)
- need to consider the design and implementation of a follow-up program: s.38(1)
- public registry responsibilities: s.55

Screening

- decision of RA following a screening: s.20(1)
- delegation of responsibilities by RA: s.17(1)
- ensuring implementation of mitigation measures following a screening: s.20(2)
- factors to be considered: s.16(1)
- need to consider design and implementation of a follow-up program: s.38(1)
- public comments on screening report: s.18(3)
- request for referral to mediation or panel during screening report: s.25
- screening report: s.18(1)
- sources of information: s.18(2)
- use of class screening report: s.19(4)
- use of previously conducted EA: s.24

Scope of factors

- determination of: s.16(3)
- factors not included: s.16(4)

Scope of project

- determination of: s.15(1)
- EA for related projects: s.15(2)
- proposed undertakings to be considered: s.15(3)

Significant adverse environmental effects

- role in determining Minister's decision following review of a comprehensive study report: s.23
- role in determining RA's decision following a comprehensive study, mediation or panel review: s.37(1)
- role in determining RA's decision following a screening: s.20(1)

Sustainable development

- consideration of effects on sustainability of renewable resources: s.16(2)(*d*)
- purpose of Act: s.4(*d*)

Transboundary environmental effects

- EA of projects involving significant adverse environmental effects across international borders: s.47
- EA of projects involving significant adverse environmental effects across provincial borders: s.46
- EA of projects involving significant adverse environmental effects on federal lands: s.48

| Previous page | Table of contents | Next page |