## 4th E Practice Guide

Integrating Environmental Considerations in Performance Audit Work

Revised May 2011



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Cat. No. FA3-63/2011E-PDF ISBN 978-1-100-18821-8

### **Table of Contents**

Preface	ii
Introduction	•
Background	•
Purpose	1
Section 1—One-Pass Planning: Identifying Environmental Risks	5
Completing the Environmental Risk Profile for One-Pass Planning	
Determining next steps	•
Assessing the significance of environmental risks	•
Entity Environmental Risk Profile for One-Pass Planning	Ç
Section 2—Performance Audit: Identifying Environmental Issues Related to	
the Audit Topic During the Survey Phase	11
Completing the Environmental Risk Screening Tool for Performance Audit	1
Environmental Risk Screening Tool for Performance Audit	14
Appendix 1—Key Resources	28
Appendix 2—Potential Impact of Human Activities on the Environment	34
Appendix 3—Sustainable Development and the Office of the Auditor General	2-
of Canada	37

### **Preface**

The Office of the Auditor General of Canada is committed to ensuring that our auditors systematically consider environmental risks when they prepare their long-term audit plans (one-pass plans) and carry out their survey work for individual performance audits. All teams engaged in performance audit work are required to apply the tools in this guide.

The 4th E Practice Guide was designed for our audit staff. However, we also wish to share it with others in the audit community and the general public. Important information about federal environmental and sustainable development policies, guidelines, and authorities is presented in the appendices as well as links to key documents. Note that some of the online resources may not be accessible outside the Office or the Government of Canada.

"Our office has an important role to play in helping to ensure that the federal government's policies, programs and activities foster sustainable development . . .

We audit most areas of the Government of Canada. We are thus in a good position to inform parliamentarians and Canadians about whether departments and agencies are considering the environmental consequences of their activities appropriately. We also make recommendations for improvement. This is where we can make the biggest difference for Canada's sustainable development prospects."

Message from the Auditor General
Sustainable Development Strategy of the Auditor General of Canada 2003-06

### Introduction

### **Background**

At the Office of the Auditor General of Canada (OAG), we audit significant issues and report what we find to Parliament. In our audits, we include cases where the government has failed to give due regard to the environmental impact of its policies and activities.

Our mandate requires us to routinely and consistently assess the environmental risks associated with the entities we audit. At the OAG, we refer to the environment as the 4th E.

#### The "4th E"

Economy, efficiency, and effectiveness have always been known as the three Es of performance auditing.

In 1995, amendments to the Auditor General Act added a fourth E: The environment.

When conducting an audit, the auditor may ask the following questions:

- · Has money been spent with due regard to economy?
- · Has money been spent with due regard to efficiency?
- Are procedures in place to measure and report on the effectiveness of programs?
- · Has money been spent with due regard to the effects on the environment?

During the preparation of long-term audit plans (one-pass plans) and during the survey phase of performance audits that do not focus on environmental issues, we are required to apply the 4th E Practice Guide. In our 2007–2009 Sustainable Development Strategy, we made a public commitment to do so and to report on our progress in our annual performance report.

### **Purpose**

The purpose of this guide is to help auditors with little or no environmental expertise to identify and assess environmental risks that could be associated with the programs and activities of entities they audit.

The guide is organized as follows:

- **Section 1** helps auditors identify environmental risks during one-pass planning.
- **Section 2** helps auditors determine whether there are any environmental issues related to their audit topic during the survey phase of a performance audit.
- Appendices 1 and 2 include resource information and links to key documents and resources.
- **Appendix 3** provides information on the OAG's mandate for sustainable development matters.

#### Introduction

The Office's Internal Specialist—Environment and Sustainable Development is available to support teams when they use the guide. Auditors are expected to be familiar with the Office's Quality Management Framework, which includes audit policies and practice requirements.

While not specifically designed for special examinations or annual attest work, this guide could help auditors identify environmental risks and liabilities for Crown corporations. In addition, The Canadian Institute of Chartered Accountants (CICA) offers guidance for addressing environmental liabilities in financial attest audits.

# Section 1—One-Pass Planning: Identifying Environmental Risks

Assessing an entity's major risks is where effective long-term audit planning (one-pass planning) begins. During one-pass planning, auditors consider environmental risks along with other business risks.

A systematic approach to performing high level assessments of entities' environmental risks includes

- identifying strategic outcomes and related key activities, policies, programs, and operations;
- identifying potential associated environmental effects; and
- assessing the risks to determine whether they are significant.

Teams complete the <u>Environmental Risk Profile for One-Pass Planning</u> (see end of Section 1). If any significant environmental risks are identified, they are incorporated into the overall risk profile for the one-pass plan.

**Note:** Some teams find it useful to review the <u>Environmental Risk Screening Tool for Performance Audit</u> (see end of Section 2) when they analyze environmental risks for their one-pass plans.

### Completing the Environmental Risk Profile for One-Pass Planning

### Step 1: Review key documents and resources

To become familiar with environmental issues and authorities that may be relevant for an entity, the following should be considered:

- the entity's sustainable development strategy;
- physical infrastructure projects;
- facilities and other aspects of government operations;
- policy, plan, or program proposals that require the approval of a minister or Cabinet;
- funding and other financial assistance activities;
- international environmental commitments;
- environmental petitions submitted to the OAG by Canadian residents; and
- potential impact of specific activities on the environment.

Note: <u>Appendix 1</u> includes more information on these topics and helpful links to key documents and electronic resources. Guidance on human activities and their potential impact on the environment is included in <u>Appendix 2</u>.

### Step 2: Summarize strategic outcomes and related program activities and sub-activities

• Enter the entity's strategic outcome and related program activities in column 1 of the Environmental Risk Profile. Use as many rows as required.

- Enter related program sub-activities in column 2.
- Summarize key related policies, programs, projects, or operations for each program sub-activity. Focus only on major initiatives, and describe them very briefly in column 3.

**Note:** If there is more than one strategic outcome, consider using a separate sheet for each of them.

### Step 3: Identify potential environmental effects

Determine which environmental effects may result from the programs and related projects, activities, and operations. Review columns 4 to 10 of the risk profile and mark those that could be relevant with an "x" or checkmark.

In general, human activities may have an impact on the environment in the following ways:

- releasing substances into the environment (e.g. emissions, discharges, and waste production);
- · changing and degrading water, land, and habitats; or
- using and depleting resources.

The federal government may affect the environment directly (through its own operations and activities) or indirectly (through the control or influence it has on others through its policies and programs).

**Note:** These are not necessarily negative effects. Some government activities, such as pollution prevention, may benefit the environment. For more information about human activities and their potential impact on the environment, see <a href="Appendix 2">Appendix 2</a>, and for a list of environmental issues associated with government operations, see Part 2(c) of the <a href="Environmental Risk Screening Tool for Performance Audit">Environmental Risk Screening Tool for Performance Audit</a>.

### Environmental effects covered in the risk profile

- **Effects on air, water, and land.** These kinds of effects could result from releases into the environment (e.g. pollution) or physical changes (e.g. erosion from forestry activities).
  - **Air effects** include climate change and other air quality issues such as ozone layer depletion, smog, and acid rain. See column 4.
  - Water effects cover freshwater and the marine/coastal environments. They include changes to water quality and quantity, as well as effects on aquatic animals and plants (biodiversity), or their habitats. See column 5.
  - Land effects include changes to soil, habitats, and biodiversity as well as contaminated sites. See column 6.
- **Generation, handling, or discharge of hazardous materials.** Such actions are known to have harmful effects on human health and the environment. See column 7.
- Environmental emergencies. These include accidents that may cause releases into aquatic or terrestrial ecosystems. Some occur on land (e.g. at rail or nuclear facilities) and others on water (e.g. shipping accidents). See column 8.

- Depletion or degradation of natural resources. See column 9. Examples include
  - consumption and use of natural resources and their derivatives;
  - degradation and other changes resulting from the harvesting, extraction, or processing of these resources; and
  - the generation of waste.

**Note:** There may be other environmental issues that are not covered in the risk profile. If so, check off column 10 and describe them in the comments section.

### Step 4: Analyze the level of risk to determine significance

To assess risk, we look at the likelihood of occurrence and the severity of the resulting effects (consequences). We also take management controls into consideration. If some are in place, they might affect the level of risk.

For effects identified in the environmental risk profile, proceed as follows:

- Estimate the seriousness or severity of the environmental effect (taking any controls into account) and enter the rating (Low, Medium, or High). See column 11.
- Estimate the likelihood of occurrence (taking any controls into account) and enter the rating (Low, Medium, or High). See column 12.
- Consider these two factors together to determine if the risk is significant (check Yes or No). See column 13.

Refer to the section on <u>Assessing the Significance of Environmental Risks</u> to determine the appropriate ratings.

If different kinds of major environmental effects have been identified for a program subactivity (for example, climate change and environmental emergencies), it may be necessary to assess their level of risk separately.

**Note:** For the purposes of one-pass planning, risks are considered significant if they could result in a serious threat to human health and well-being, the environment, or natural resources.

### Step 5: Determine the degree of entity influence

Identify how much influence or control the entity has over the program outcome or activity using Exhibit 1. Enter the result in the environmental risk profile. See column 14.

Exhibit 1: Degree of entity control or influence

Level	Description							
Low	The entity has limited responsibility							
Medium	The entity is involved but shares responsibility							
High	The entity is directly responsible							

### Step 6: Provide comments

In the comments section, explain how you arrived at your conclusions about the risk ratings. In addition, include any connections to an entity's sustainable development strategy or any other information that was important to your analysis. Attach additional sheets with comments if necessary.

### Step 7: Request Internal Specialist review and sign off

Provide a copy of the completed environmental risk profile to the Internal Specialist and arrange a meeting to discuss your assessment and risk ratings.

Contact the Internal Specialist at any point to obtain advice on completing the environmental risk profile.

Note: Sign-off by the Internal Specialist is required.

### Determining next steps

It is possible that no significant environmental risks will be identified for your entity or functional area. When significant environmental risks are identified, they are assessed in conjunction with other business risks identified during one-pass planning.

The following are possible options for reflecting important environmental issues in a One-Pass Plan:

- a full performance audit of an environmental issue,
- an environmental line of enquiry (LOE) within a performance audit,
- a horizontal audit that focuses on one or more environmental issue, or
- an environmental line of enquiry within a horizontal audit.

### Assessing the significance of environmental risks

To assess risk, we consider the likelihood of a risk event occurring and the severity of any effects that may result. The overall risk rating is a product of these two factors.

If management controls are in place, we should also consider how they would mitigate or reduce the level of risk.

### Estimate the severity of the environmental effect

Factors to consider when assessing the severity of an environmental effect include

- the magnitude (ranging from little effect to loss of function);
- the location or proximity (e.g. beside important fish habitat, in a sensitive ecosystem);
- the size or scale of effect (e.g. total area, percentage of animal population affected, size of population);
- the timing (e.g. during migration, spawning, nesting season);
- the duration (e.g. short-term or long-term; reversible or irreversible); and

• the socio-economic and health implications.

Use the descriptions in Exhibit 2 to determine the severity of an effect. Consider whether there are any management controls in place. If there are, consider whether they reduce or mitigate the extent of the environmental effect, and take them into account when assigning the rating.

Exhibit 2: Severity of environmental effect

Level	Description
Low	Limited or no environmental effect
Medium	Moderate effect but not affecting ecosystem functions     Impact over the medium-term
High	<ul> <li>Serious environmental effects or impairment of ecosystem functions</li> <li>Potentially widespread or long-term impact on the environment</li> </ul>

### Estimate likelihood of occurrence

Use the definitions in Exhibit 3 to determine the likelihood of the risk event occurring. If management controls are in place that could reduce the likelihood that the risk event will materialize, they should be taken into consideration when assigning the rating.

Exhibit 3: Likelihood that a risk event will occur

Level	Description
Low	May occur but only under exceptional circumstances
Medium	Likely to occur at some time
High	Occurring or imminent

### Rate overall risk to determine significance

The overall risk rating is the product of severity and likelihood. Plot the intersection of these ratings on the risk assessment chart (Exhibit 4). Any effect that yields a risk rating in the darkest boxes of the table is considered to pose a significant environmental risk, and warrants further consideration and analysis.

Exhibit 4: Risk assessment chart

	Likelihood of occurrence										
Severity of Effect		Low	Medium	High							
	Low	L/L	L/M	L/H							
	Medium	M/L	M/M	M/H							
	High	H/L	H/M	H/H							

### **ENVIRONMENTAL RISK PROFILE FOR ONE-PASS PLANNING**

Audit Team:	Instructions for completing this risk profile are found in section 1 of the 4th E Practice Guide. Please use the
Date:	comments section to provide additional information or analysis. Sign-off by the Internal Specialist—Environment
Entity/Functional Area:	and Sustainable Development is mandatory.

Program Summary				Potential Environmental Effects										Risk Analysis Entity			Entity										
1 Strategic Outcome:	2 Program Sub-activity	3 Key Policies, Programs, Projects, Operations	A	4 .ir	Ma		5 reshwat	er			6 and		Hazai Mate		Envi me Eme	iron- ntal rgen- es		Na (Extract	atural R ion and	esource	es mption	)	10 Other	11 Severity of Environ- mental Effect *	12 Likelihood of Occurrence **	13 Significant Environ- mental Risk	14 Degree of Entity Influence
Related Program Activity			Climate change	Air quality (smog, ozone depletion, acid rain, etc.)	Surface water (marine and freshwater)	Groundwater / drinking water	Biodiversity (marine and freshwater)	Habitat	Agricultural land / soil	Contaminated sites	Habitat	Biodiversity (flora and fauna)	Toxic substances / hazardous waste	New substances / organisms	Land-based	Shipping-related	Land use	Energy	Water	Marine resources	Materials (timber, minerals, etc.)	Waste	Other	High (H) Medium (M) Low (L)	High (H) Medium (M) Low (L)	Yes/ No	High (H) Medium (M) Low (L)

### \* Severity of Environmental Effect

High—Potentially widespread or serious long term effect Medium—Moderate effect over the medium term Low-Limited of no environmental effect

#### \*\* Likelihood of Occurrence

High—Effect is occurring or is imminent Medium—Effect is likely to occur at some time Low—Effect may occur but only under exceptional circumstances

### \*\*\* Degree of Entity Influence

High—Direct responsibility within its mandate Medium—Shared responsibility Low—Limited responsibility

Last Review: February 2011 Template Owner: Environment and Sustainable Development

Team Comments: (including remarks on the ratings assigned and any links to the entity's sustainable development str	ategy)
Internal Specialist assessment and sign-off:	
☐ The Internal Specialist agrees with the overall assessment.	
Comments:	
☐ The Internal Specialist recommends further analysis.	
Comments:	
Internal Specialist:	Date:
Audit PX:	Date:

Last Review: February 2011 Template Owner: Environment and Sustainable Development

### Section 2—Performance Audit: Identifying Environmental Issues Related to the Audit Topic During the Survey Phase

This section of the guide is intended to help teams determine if there are any environmental issues related to their audit topic and, if so, to evaluate whether they are significant and should be included in the audit scope. Teams identify and assess environmental risks during the survey phase, by completing the <a href="Environmental Risk Screening Tool for Performance Audit">Environmental Risk Screening Tool for Performance Audit</a> (see end of Section 2) and consulting with the Internal Specialist.

The screening tool prompts teams to consider the following:

- sustainable development strategies that are prepared by departments and agencies;
- physical infrastructure projects (which may be subject to the *Canadian Environmental Assessment Act*);
- facilities and other aspects of government operations;
- funding or other financial assistance activities;
- policy, plan, or program proposals requiring approval by a minister or Cabinet;
- international environmental commitments;
- environmental petitions submitted to the OAG by Canadian residents; and
- potential impact of specific activities on the environment.

For more information on these topics and helpful links to documents and electronic resources, see  $\underline{Appendix 1}$ , and for a list of activities and their potential impact on the environment, see  $\underline{Appendix 2}$ .

**Note:** It is a good practice to review the screening tool and other guidance when the team is starting to plan its survey work. Teams should fill out the tool after they have gained a good understanding of the audit topic.

The screening tool must be completed and sent to the Internal Specialist **before** the team starts to define the audit scope.

### Completing the Environmental Risk Screening Tool for Performance Audit

There are two parts to the screening tool. All teams complete Part 1. If all of the responses to Part 1 are "no," there may be no significant environmental issues or risks associated with the audit topic. If some answers are "yes," complete Part 2.

Follow the steps in Exhibit 5 to complete the <u>Environmental Risk Screening Tool for Performance Audit</u> and obtain the required sign-off from the Internal Specialist. The team's signed-off environmental risk screening tool should be attached to the survey report.

Complete Part 1 Answer to all Answer to any questions is No questions is Yes Complete Part 2 Copy given to Internal Specialist Specialist agrees Specialist disagrees with assessment with assessment Further assessment Sign-off is needed Further assessment is done

Exhibit 5: Process for completing the Environmental Risk Screening Tool for Performance Audit

If potentially significant environmental issues are identified by using this guide, more survey work may be necessary to determine whether they should be included in the audit scope. The Internal Specialist can provide advice on additional survey work, audit objectives, lines of enquiry, and criteria.

For example, National Defence is the custodian of over 18,000 square kilometres of land dedicated to military training and testing. Using the environmental risk screening tool, auditors might identify some of the following issues:

- potential contamination of soil and groundwater from repeated firing of munitions and other related activities.
- soil erosion and destruction of habitat from road construction or vehicle manoeuvres,
- environmental assessment requirements for construction of new buildings and other structures, and
- deforestation from land clearing.

Auditors might also find

- goals and targets in the department's sustainable development strategy (e.g. to improve environmental stewardship and land management of military training areas),
- environmental petitions that have been submitted to the OAG by Canadians, and
- National Defence responses to petitions.

For more information on environmental issues associated with military training and test areas, refer to the <u>Auditor General's April 2003 Report, Chapter 7</u>.

### **Environmental Risk Screening Tool for Performance Audit**

Audit teams use this screening tool to identify and assess environmental issues during the survey phase of an audit. It is composed of two parts. All teams complete Part 1, and if the answer to any of the questions in Part 1 is "yes", teams also complete Part 2.

is yes	, teams also complete r art 2.											
Note:	<b>Note:</b> For directions on completing this screening tool, see section 2 of the guide, and, for links to key documents and resources, see the appendices.											
Title a	and description of audit topic:											
Tablin	g date:											
Entitie	es being audited:											
Memb	ers of audit team:											
Scree	ning tool completed by:											
Date:												
Docur	ments/resources reviewed:											
		PART 1										
	Re	spond to all questions in Part 1.										
a) Ent	ity sustainable development stra	tegies—commitments										
Are the	ere any goals, objectives, or comm	itments related to the audit topic in the entity's	Yes	No								
	nable development strategy?*	·										
guide ( only to	*Consult the list of sustainable development strategies prepared by federal departments and agencies in Appendix 1 of the guide (page 30). If the current strategy was tabled recently, teams should also consult the previous strategy. This applies only to departments and agencies that prepare strategies. For general information on the strategies, see Appendix 1, topic (a).											
	answer is "yes," provide a brief sui (a). If you are unsure, explain your	mmary of these goals, objectives, or commitments and coreasons.	omplete									

b) Projects and the Canadian Environmental Assessment Act			
	Yes	No	
Does the audit topic involve projects?*			
*Projects could pose risks to the environment and an environmental assessment may be required under the Canadian Environmental Assessment Act before a project can proceed. For the purposes of the Act, "projects" generally relate to a physical work (e.g. infrastructure such as roads, buildings, and bridges). They can cover the construction, operation, modification, or decommissioning/demolition of these works. Other activities may be covered as well. See Appendix 1, topic (b), for more information.			
If your answer is "yes," provide a brief summary of these projects and complete Part 2(b). If you are explain your reasons.	e unsur	e,	
c) Government operations			
	Yes	No	
Are government operations an important focus of the audit topic?*			
*Government operations include how departments purchase goods and services, operate their buildings, run their vehicles, and manage the land they occupy.			
If your answer is "yes," provide a brief summary of these operations and complete Part 2(c). If you explain your reasons.	are uns	sure,	

d) Funding or other financial assistance			
Does the audit topic cover activities or programs to provide loans, grants, or any other kind of		No	
funding or financial assistance?*			
*Activities or initiatives that benefit from these funding activities or programs may have environmental conseq	uences.		
If your answer is "yes," provide a brief description of these financial assistance activities and completely our are unsure, explain your reasons.	ete Part	i 2(d).	
e) New policies, plans, or programs (Strategic Environmental Assessment)			
Have any policy, plan, or program proposals related to the audit topic been approved by a	Yes	No	
minister or Cabinet during the past five years?*			
*If so, the requirements set out in the Cabinet Directive on the Strategic Environmental Assessment of Policy, Plan and Program Proposals may be applicable. For information on the Cabinet Directive, see Appendix 1, topic (e).			
If your answer is "yes," provide a brief summary of these recent initiative(s) and complete Part 2(e) unsure, explain your reasons.	. If you	are	

f) International environmental commitments		
Within the context of the audit topic, are there any relevant commitments under international		No
environmental agreements for which the entity is responsible (in a lead or supporting role)?*		
*Information on international commitments is available through the website of the Department of Foreign Affairs and International Trade. By clicking on the link you can access Canada's Treaty Information service as well as a special database dedicated to Canada's international environmental commitments. We suggest that you consult both of them.		
If your answer is "yes," provide a brief description of these commitments and complete Part 2(f). If unsure, explain your reasons.	you are	•
g) Environmental petitions submitted to the OAG		
		No
Has the entity responded to any environmental petitions related to the audit topic?*		
*Environmental petitions submitted to the OAG by Canadian residents and departmental and agency responses to these petitions are published in the Petitions Catalogue on the OAG website. For information on the environmental petitions process and the petitions catalogue, see Appendix 1, topic (g).		
If your answer is "yes," provide a list of these petitions and complete Part 2(g). If you are unsure, e reasons.	explain y	our/

h) Other environmental issues			
Review the information about human activities and their potential impact on the environment (Appendix 2).		Yes	No
During your review, did you identify any environmental issues that r topic?	elate to your audit		
<ol><li>During the course of your survey work, have you identified other en aside from those already covered or identified through this screenir</li></ol>			
If the answer to any question is "yes," provide a brief description of these er Part 2(h). If you are unsure, explain your reasons.	nvironmental issues and	d compl	ete
Conclusion of Part 1			
If you answered "yes" to any question in Part 1, proceed to Part 2 of the scr Specialist is not required at this point.	eening tool. Sign-off by	the Inte	ernal
If you answered "no" to all of the questions in Part 1, there may be no significant environmental issues or risks related to the audit topic. Provide any additional comments or analysis in the section below and send the completed screening tool to the Internal Specialist. The Internal Specialist will review the screening tool and may contact you to discuss your results.			
Note: Sign-off by the Internal Specialist is mandatory.			
Comments:			
Internal Specialist assessment and sign-off			
		Yes	No
The Internal Specialist agrees with the assessment			
Comments:			
If the answer is "yes," the Internal Specialist will sign off. If the answer is "no," further consideration of environmental risks is required. Complete Part 2.			
Internal Specialist: Date:			
Audit PX: Date:			

### PART 2

Part 2 of the screening tool allows audit teams to consider potential environmental issues identified in Part 1 in more depth and assess the significance of those issues.

Only answer the questions that correspond to the questions in Part 1 to which you answered "yes." For example, if you answered "yes," to Part 1(a), complete Part 2(a).

Note: Contact the Internal Specialist if you have any questions about this part of the screening tool.

### a) Entity sustainable development strategies—commitments

For goals, objectives, or commitments in the entity's sustainable development strategy identified in Part 1 a), answer the following questions and write your conclusions in the space provided:

- What are the goals or objectives and their related commitments? Describe or insert excerpt from the strategy.
- Are they closely related to the audit topic?
- Are they auditable (e.g. concrete, time-bound, and/or measurable)?

To assess their significance, consider

- the scope and materiality (major or minor commitment in terms of effort and resources);
- the environmental issues they address and the level of environmental risk\*;
- · the consequences resulting from failure to implement; and
- the level of parliamentary or public interest in the issue being addressed by the commitment.

\*For guidance, see Assessing the Significance of Environmental Risks on page 6 of the guide.

### b) Projects and the Canadian Environmental Assessment Act (CEAA)

(i) Describe the kinds of projects you identified in Part 1(b).\*

\*Projects are generally physical works such as infrastructure (for example, roads, bridges, or pipelines). A project may involve the construction of a physical work, but could also include its modification, operation, or decommissioning. Certain other proposed activities (such as dredging) may trigger an environmental assessment under the CEAA. Some projects may be exempt (such as small-scale projects, and routine maintenance). Special regulations set out the ground rules. See Appendix 1 of the guide for more information.

(ii) Triggers for environmental assessment of projects under the CEAA	Yes	No
Is the entity acting as a project proponent (undertaking or proposing the projects)?		
Is the entity taking any of the following actions to enable these projects to be carried out?		
Providing grants or other forms of financial assistance		
Selling, leasing, or otherwise transferring control of federal land		
Issuing a licence, permit, or approval		
If the answer to any question is "yes," provide additional details.	•	
		NI-
	Yes	No
(iii) Is the entity involved in a significant number of projects (for the area being audited)?		
(iv) Are these major projects (e.g. large-scale and/or long-term, involving significant expenditures)?		
(v) Are environmental assessments of these projects being conducted?*		
*Projects undergoing an environmental assessment are posted on the CEAA Registry, which is available on Canadian Environmental Assessment Agency website.	the	
If the answer is "yes," provide additional details.		
Note: The Internal Specialist can help audit teams confirm whether environmental assessments a	re requi	red.

c) Government operations		
(i) Are any of the following areas relevant to the audit topic?	Yes	No
Procurement of goods and services		
Buildings and infrastructure (new construction, renovation, or demolition)		
Vehicle fleet		
Energy consumption (including energy use, conservation, and greenhouse gas emissions)		
Facilities management		
Real property (purchase, sale, or lease)		
Land management (including management of ecological values on federal land such as wetlands and endangered species)		
Contaminated sites		
Fuel storage tanks (aboveground and underground)		
Water usage		
Solid waste (including reducing, recycling, and reusing)		
Hazardous waste (handling, storage, and disposal)		
Waste water discharges		
Other pollution releases/emissions		
Equipment operation		
Hazardous substances, such as	Yes	No
solvents (such as those used in laboratories, maintenance yards)		
<ul> <li>asbestos, lead paint, and polychlorinated biphenyls (PCBs) (often present in older buildings)</li> </ul>		
ozone-depleting substances (in cooling and refrigeration systems)		
Indoor air quality		
Drinking water quality		

If the answer to any of the above is "yes," provide additional details.		
	Yes	No
(ii) Do operational activities feature significantly in the audit topic?		
If the answer is "yes," provide additional details.		
d) Funding or other financial assistance		
Describe the funding or other forms of financial assistance provided by the entity that you identified	l in Part	1(d).*
*If funding or financial assistance supports specific projects see Part 2(b).		
(i) Describe the various activities that the entity supports through its funding or other financial assis programs.	stance	
	Yes	No
(ii) Has the entity integrated environmental considerations into its funding activities?		
(iii) Has the entity developed environmental review criteria?		

If the answer to any question is "yes," provide additional details. If unsure, please explain.		
e) New policies, plans, or programs (Strategic Environmental Assessment)		
According to the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program P federal departments and agencies are required to assess the potential environmental impact of prop initiatives bound for Cabinet or ministerial approval. A strategic environmental assessment is to be c when a proposal may result in important environmental effects, either positive or negative.*	osed	
*The Directive does not apply if a proposal is a matter of routine government practice or human resources, finar administrative procedures.	ncial, o	or
For policy, plan, or program proposals that you identified in Part 1(e), summarize the subject matter	and so	cope.
(i) Were environmental considerations discussed in the submissions or memoranda to Cabinet or a minister?	Yes	No
If the answer is "yes," please describe the issues.		
	Yes	No
(ii) Was a strategic environmental assessment prepared?		
If the answer is "yes," provide additional details. If unsure, please explain.		

### f) International environmental commitments

For the international environmental commitments that you identified in Part 1(f), answer the following questions:

- What is the name of the agreement containing the commitments?
- What did the government commit to (nature of commitments)?
- Are the commitments closely related to the audit topic?
- Are the commitments auditable (e.g. are they concrete, time-bound, and/or measurable)?

To assess their significance, consider

- the scope and materiality (major or minor commitment in terms of effort and resources);
- the environmental issue they address and the level of environmental risk\*;
- the consequences resulting from failure to implement; and
- the level of parliamentary or public interest in the issue being addressed by the commitments.

Write your responses in the space provided.

\*For guidance, see Assessing the Significance of Environmental Risks on page 6 of the guide.

### g) Environmental petitions submitted to the OAG

Provide a brief summary of the major issues addressed in the environmental petitions you identified in Part 1(g).

	Yes	No
(i) Do the issues or commitments in the petition or entity response(s) strongly relate to the audit topic?		
(ii) Did the entity make any commitments for future action in its petition response(s)?		

If the answer to any of the above is "yes," provide additional details.

- (iii) Assess the significance of the environmental petitions by considering
  - the scope and materiality (major or minor commitment in terms of effort and resources);
  - the environmental issue addressed and the level of environmental risk\*;
  - · the consequences resulting from failure to implement; and
  - the level of parliamentary or public interest in the issue.

Write your conclusions in the space provided.

\*For guidance, see Assessing the Significance of Environmental Risks on page 6 of the guide.

### h) Other environmental issues

Please describe the environmental issues that you identified in Part 1(h) and provide an estimated rating of risk.\*

\*For guidance, see Assessing the Significance of Environmental Risks on page 6 of the guide. Consult the Internal Specialist if you require assistance.

Issue	Risk evaluation
	Severity: Likelihood: Rating (significant or not significant):
	Severity: Likelihood: Rating (significant or not significant):
	Severity: Likelihood: Rating (significant or not significant):
	Severity: Likelihood: Rating (significant or not significant):

Issue	Risk evaluation		
	Severity: Likelihood: Rating (significant of significant):	or not	
	Severity: Likelihood: Rating (significant of significant):	or not	
	Severity: Likelihood: Rating (significant of significant):	or not	
	Severity: Likelihood: Rating (significant or not significant):		
Conclusion of Part 2			
		Yes	No
Are there potentially significant environmental risks or issues associated with	the audit topic?		
If you are unsure, discuss the environmental issues you identified with the Int answer this question.	ernal Specialist, who	can hel	p you
If your answer is "yes," summarize the important risks/issues that you have identified and ask the Internal Specialist for advice to further explore significance and auditability, and to develop a line of enquiry, if appropriate.			
If your answer is "no," explain your rationale.			
Comments:			
Note: After Part 2 has been completed, review and sign-off by the Internal Sp	pecialist is mandatory	'.	

Internal Specialist assessment and sign-off			
		Yes	No
The Internal Specialist agrees with the overall assessment.			
Comments:			
		.,	
		Yes	No
Further survey work is recommended.			
Comments:			
Internal Specialist	Date:		
Audit PX :	Date:		

### Appendix 1—Key Resources

The background information on environmental issues and authorities as well as the electronic links will help you identify and assess environmental risks for your one-pass plan or performance audit topic.

Topics covered in the appendix include

- sustainable development strategies, which are prepared by departments and agencies;
- physical infrastructure and other projects, which may be subject to the *Canadian Environmental Assessment Act*;
- facilities and other aspects of government operations;
- funding or other financial assistance activities;
- policy, plan, or program proposals that require approval from a minister or Cabinet (strategic environmental assessment);
- international environmental agreements and commitments;
- environmental petitions, which are submitted to the OAG by Canadian residents; and
- environmental management systems.

For more information on any of these topics, please consult the Internal Specialist.

**Note:** For detailed information on human activities and their potential impact on the environment, see <u>Appendix 2</u>.

#### a) Sustainable development strategies

Most federal departments and agencies are required to table a sustainable development strategy in Parliament once every three years.

By reviewing an entity's sustainable development strategy, we can learn about a department's activities and the opportunities it has identified to further sustainable development under its mandate. The strategies outline its sustainable development goals and objectives and the way it intends to achieve them (specific targets and commitments). The strategies are intended to

- make departments and agencies systematically take environmental, economic, and social considerations into account in their decision making;
- lead to changes in policies, programs, and operations that further sustainable development;
   and
- provide the benchmarks against which departments can measure their progress.

In most cases, department profiles and issue scans were undertaken by entities when they prepared their first and second strategies (SDS I and SDS II).

The new <u>Federal Sustainable Development Act</u> calls for the development of a Federal Sustainable Development Strategy. The government tabled the first <u>federal strategy</u> in the House of Commons in October 2010. In future, strategies that are prepared by departments and

agencies will be required to comply with the federal strategy and contribute to the attainment of its objectives.

Exhibit 6: Entity sustainable development strategies

Departments/agencies required to prepare sustainable development strategies and respond to environmental petitions						
Departments and agencies	SDS I (1997-2000)	SDS II (2000- 2003)	SDS III (2003- 2006)	SDS IV(2007 -2009)		
Agriculture and Agri-Food Canada	I	II	III	IV		
Atlantic Canada Opportunities Agency	I	II	III	IV		
Canada Border Services Agency	N/A	N/A	N/A	IV		
Canada Economic Development for Quebec Regions	ı	II	III	IV		
Canada Revenue Agency * Revenue Canada ** Canada Customs and Revenue Agency	1*	**	III	IV		
Canadian Heritage	I	II	III	IV		
Canadian International Development Agency	I	II	III	IV		
Citizenship and Immigration Canada	I	II	III	IV		
Environment Canada	I	II	III	IV		
Finance Canada, Department of	I	II	III	IV		
Fisheries and Oceans Canada	I	II	III	IV		
Foreign Affairs and International Trade Canada	I	II	III	IV		
Health Canada	I	II	III	IV		
Human Resources and Skills Development Canada * Human Resources Development Canada **Human Resources and Social Development Canada	*	II *	III *	IV **		
Indian and Northern Affairs Canada	I	II	III	IV		
Industry Canada	I	II	III	IV		
Justice Canada, Department of	I	II	III	IV		
National Defence	I	II	III	IV		
Natural Resources Canada	1	II	III	IV		
Parks Canada	N/A	II	III	IV		
Public Health Agency of Canada	N/A	N/A	N/A	IV		

Exhibit 6: Entity sustainable development strategies (Continued)

Departments/agencies required to prepare sustainable development strategies and respond to environmental petitions							
Departments and agencies	SDS I (1997-2000)	SDS II (2000- 2003)	SDS III (2003- 2006)	<u>SDS IV</u> (2007 -2009)			
Public Safety Canada * Solicitor General Canada ** Public Safety and Emergency Preparedness Canada	1*	II *	**	IV			
* Public Service Human Resources Management Agency of Canada (the new Office of the Chief Human Resources Officer (part of the Treasury board of Canada Secretariat) has assumed responsibility for the agency's functions)	N/A	N/A	N/A	IV *			
Public Works and Government Services Canada	I	II	III	IV			
Transport Canada	I	II	III	IV			
Treasury Board of Canada Secretariat	I	II	III	IV			
Veterans Affairs Canada	I	II	III	IV			
Western Economic Diversification Canada	I	II	III	IV			
Federal organizations that voluntarily prepare strategies							
Canadian Environmental Assessment Agency	I	II	III	IV			
Correctional Service Canada	I	II	III	IV			
Office of the Auditor General of Canada	I	II	III	IV			
Royal Canadian Mounted Police	I	II	III	IV			

### b) Physical infrastructure and other projects: the Canadian Environmental Assessment Act

The construction, modification, and demolition or decommissioning of physical infrastructure (e.g. roads, buildings, and harbours) can pose a variety of environmental risks. Under the <u>Canadian Environmental Assessment Act</u>, environmental assessments may be required for certain proposed projects, such as those that are undertaken or supported by federal departments and agencies and Crown corporations. This assessment process is intended to ensure that potential environmental effects are identified and considered in decision-making before a project proceeds.

An environmental assessment may be required for a proposed project if a federal department or agency is the proponent of a project or is in a position to enable a project to proceed by

- providing financial assistance;
- selling, leasing, or otherwise transferring control or administration of land; or
- providing certain licenses, permits, or approvals.

Regulations under the Act specify the applicable licenses, permits, or approvals that would trigger the environmental assessment of a proposed project (<u>Law List Regulations</u>).

Certain other proposed activities aside from physical works or other infrastructure may pose inherent risks to the environment (such as dredging or drilling). They may also trigger the need for an environmental assessment. These activities are described in the <a href="Inclusion List Regulations">Inclusion List Regulations</a>. Certain exclusions apply (such as small-scale projects and routine maintenance) and are listed in the <a href="Exclusion List Regulations">Exclusion List Regulations</a>.

Note: Projects being undertaken in the territories may be subject to different requirements.

Consult with the Internal Specialist if you require further information on the application of the Act.

### c) Government operations

As the single largest enterprise in Canada, the federal government has a significant environmental footprint in its own right. For example, when the federal government purchases goods and services, leases and operates buildings and facilities, and operates its fleet of vehicles, the following may occur:

- natural resources, energy, and water are consumed;
- emissions are released;
- · waste is generated; and
- · hazardous substances need to be managed.

The Office of Greening Government Operations (OGGO) was created within Public Works and Government Services Canada in 2005. Its mandate is to accelerate the greening of the government's operations by working closely with other federal departments, particularly the Treasury Board of Canada Secretariat and Environment Canada.

The following three priority areas for greening of government operations were identified in 2006:

- building energy (energy efficiency and reductions in emissions of greenhouse gases and other emissions),
- · vehicle fleet, and
- green procurement (the government's <u>Policy on Green Procurement</u> was released in 2006).

The following are some key environmental issues related to government operations:

- **Greenhouse gases.** The following 11 departments and agencies account for roughly 95 percent of federal emissions:
  - Agriculture and Agri-Food Canada,
  - Correctional Service Canada,
  - Environment Canada,
  - Fisheries and Oceans Canada,

- National Defence,
- National Research Council Canada,
- Natural Resources Canada,
- · Parks Canada.
- Public Works and Government Services Canada,
- · Royal Canadian Mounted Police, and
- Transport Canada.
- Contaminated sites. Over 17,000 federal contaminated sites have been identified across the country. Various policies, guidelines, and funding programs are in place to support departments and agencies as they assess, remediate, or manage these sites. Improper fuel storage accounts for approximately 65 percent of all federal contaminated sites in Canada. These sites are listed in the Treasury Board's Federal Contaminated Sites Inventory.

Other environmental issues associated with government operations are listed in the <u>Environmental Risk Screening Tool for Performance Audit</u> (Part 2(c)).

### d) Funding or other financial arrangements or support

Federal entities can indirectly cause environmental effects by providing others with funding, loans, or other forms of financial assistance. The activities or initiatives that benefit from these arrangements may have environmental consequences.

## e) Policy, plan, and program proposals: The Cabinet Directive on Strategic Environmental Assessment

Integrating environmental considerations in the decision-making process for policies, plans, and programs is the subject of a Cabinet directive. According to the <u>Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals</u>, a strategic environmental assessment should be performed for a policy, plan, or program proposal when the following two conditions are met:

- A proposal is submitted to an individual minister or to Cabinet for approval (e.g. memoranda to Cabinet or Treasury Board submissions).
- The implementation of the proposal may result in important environmental effects, either positive or negative.

In order to determine whether a strategic environmental assessment has to be performed, a preliminary environmental assessment (scan) has to be conducted for every proposal.

### f) International Environmental Commitments

Canada is a party to over 130 international agreements that address environmental and sustainable development issues. Obligations assumed through these legally binding agreements must be met domestically, and the federal government has responsibility for matters under federal jurisdiction. The OAG developed an electronic database, the <a href="Database of Canada's International Environmental Commitments">Database of Canada's International Environmental Commitments</a>, which lists most key agreements and

commitments as well as the departments responsible for meeting those commitments. The database, which is currently managed by Foreign Affairs and International Trade Canada (DFAIT), has not been updated since late 2002. Nonetheless, it contains useful information on almost 100 binding environmental agreements. By clicking on the link above you can also access DFAIT's Canada Treaty Information service.

### g) Environmental petitions from Canadian individuals, groups, and other organizations

Under the provisions of the <u>Auditor General Act</u>, Canadians can submit environmental petitions to the OAG. Federal departments and agencies are responsible for responding to these petitions within a set time frame. Petitions address a wide range of environmental and sustainable development issues that are the responsibility of the federal government. Petitions and responses are listed in the <u>Petitions Catalogue</u>.

### h) Environmental management systems

Some federal departments have environmental management systems to address the environmental effects of their operations and to meet their sustainable development commitments. When they develop their environmental management system, they start by preparing an environmental risk profile—an important source of information about operational risks.

## Appendix 2—Potential Impact of Human Activities on the Environment

Within the context of your audit topic or One-Pass Plan, examine the information on activities that have an impact on the environment. Think about how your entity's policies, programs, projects, and activities may affect the environment, directly (through its own operations) or indirectly (through the control or influence that the entity exerts on the activities of others).

In general, human activities may have an impact on the environment by

- releasing substances into the environment (e.g. emissions, discharges, and waste production);
- · changing and degrading water, land and habitats; and
- using and depleting resources.

These are not necessarily negative effects. Some activities, such as pollution prevention, may benefit the environment. Consider ways that entities could avoid or minimize their impact on the environment.

### a) Overview of activities

The following is an overview of activities that have an impact on the environment:

- Energy—exploration, development, distribution, processing, management, consumption, or use (oil, gas, nuclear, other)
- Natural resources—development, management, harvesting, or consumption (e.g. fisheries, aquaculture, forestry, hunting and trapping, mining)
- Agriculture/food production—land cultivation, animal husbandry, food processing and distribution
- Physical infrastructure—creation or use of infrastructure, such as roads, housing, bridges, ports, buildings, railways, sewage, or waterworks
- Transportation of people and goods—road, marine, rail or air transportation, and all related activities and infrastructure
- Toxic or hazardous substances and materials—generation, manufacture, use, management, transportation, or disposal (e.g. toxics and pesticides)
- New substances and organisms—development, deployment, and regulation (e.g. new chemicals, genetically modified organisms)
- New products and technologies—development and deployment
- Industrial activity—e.g. resource processing and manufacturing
- Urban development
- Military activities—training, equipment, materials, natural disasters and other emergencies (e.g. preparation and response)
- Waste generation or management (including hazardous waste)

- International trade (export and import)
- Occupational or workplace hazards
- Cleanup or remediation of contaminated sites
- Procurement and consumption of goods

**Note:** For detailed examples of activities that have an impact on the environment and the potential impact of these activities, refer to Exhibit 7.

### b) Opportunities to minimize the impact on the environment

Examples of ways to help avoid or minimize negative environmental effects include the following:

- consider environmental issues in the early stages of decision making (e.g. when planning new projects, policies, and programs and developing products);
- reduce energy consumption and/or increase use of renewable energy sources through increased efficiency (e.g. enhanced fuel efficiency for vehicles, reduced electricity consumption by household appliances) and green building design (new buildings) or retrofitting;
- advance, develop, and employ green technologies;
- reduce consumption of resources;
- increase reuse and recycling, which will reduce resource consumption and waste production and disposal;
- improve eco-efficiency;
- promote green procurement—purchasing more environmentally friendly goods and services;
- prevent pollution by avoiding the use of hazardous/toxic materials and by using cleaner fuels, clean emissions technologies for engines, and using cleaner or zero emission energy sources (e.g. solar and wind power);
- improve emergency response and preparation;
- use environmental management systems (EMS); and
- develop environmental training programs.

Exhibit 7: Human activities and examples of potential impact on the environment

Examples of activities	Land	Transportation infrastructure (roads, highways, bridges)     Forestry and mining activities Agriculture (e.g. soil tilling, livestock grazing, fertilizers and pesticides)     Spreading of manure and sewage sludge     Storage and distribution of fuels and other hazardous materials (e.g. storage tanks)     Landfilling of waste     Spills and accidental releases     Military training and testing (use of training areas)     Fires and explosions		Land	Depletion of renewable and non-renewable resources     Soil and groundwater     contamination     Erosion or desertification     Reduction or removal of wildlife habitat     Reduction in biodiversity (soil organisms, plants, wildlife)     Increased surface water runoff or storm water runoff     Mining waste     Opening of remote areas
	Coastal areas/marine	bischarges of sewage or wastewater     Energy (exploration, production, distribution)     Commercial fisheries     Dredging     Ocean dumping     Boating and shipping     (e.g. disharge of fuel, ballast water)     Aquaculture     Urban development (removal of coastal vegetation, including wetlands)     spills and accidental releases		Coastal areas/marine	Alteration or degradation of quality of fish and other marine habitat     Depletion of fish populations     Increased disease and pathogens affecting fish     Impairment of water quality—     e.g. pollutants, including petroleum products, pathogens, bacteria, nutrients     Introduction of exotic, invasive species
	Groundwater	Provision of water for drinking and household uses     Water for industrial activities     Irrigation     Manure management     (e.g. collection, storage, disposal, or spreading)     Fuel storage, distribution, and refuelling     Waste disposal     Urban development (removal of vegetation, increase in hard surfaces)     Fires and explosions	Examples of potential impact	Groundwater	Reduced groundwater quality (e.g. from pollutants, toxins, hydrocarbons, pathogens, bacteria) Impairment of drinking water quality Need for increased water treatment Reduced groundwater quantity Surface water effects (reductions in quality and quantity)
	Surface water (e.g. lakes, rivers)	Forestry and mining     Collection, storage, and disposal of agricultural wastes     Application of pesticides     Sewage discharges     Industrial and other discharges     Industrial and other discharges     Industrial and processing)     Manure management     Spills and accidental releases of pollutants     Boating and shipping     Reaching and shipping     Reaching and shipping     Reaching and shipping     Puel storage, distribution, refuelling     Draining and removal of wetlands     Development of infrastructure     Re. G. dams and bridges)		Surface water (e.g. lakes, rivers)	Reduction in quality of habitat for fish and other aquatic organisms Increased runoff and erosion Depletion of fish populations Impairment of water quality (pollutants, pathogens, bacteria, nutrients)  Need for increased water treatment Increased algal growth/blooms Decreased alogiversity Increased biodiversity Introduction of exotic, invasive species (e.g. zebra mussels)
	Air	Fransportation (all modes)     Energy (production, refining, and distribution)     Generation of electricity     (e.g., burning of coal, natural gas)     Use of refrigerants and coolants (ozone-depleting substances)     Metal smelting and other industrial activities (e.g., pulp and paper, chemical manufacturing, and other heavy industries)     Mining of aggregates     Application of pesticides     Waste incineration     Use of various volatile chemicals     Heating (e.g. with wood, oil)		Air	Releases of carbon dioxide and other greenhouse gases which contribute to global warming Depletion of the ozone layer Impairment of air quality Smog (including particulates, ground-level ozone) Effects on human and wildlife health (e.g. upper respiratory problems and higher rates of hospitalization) Acidification of lakes and rivers (acid rain) Deposition of air pollutants on land

# Appendix 3—Sustainable Development and the Office of the Auditor General of Canada

### a) Amendments to the Auditor General Act

The Office of the Auditor General of Canada has a specific environment and sustainable development mandate. It was established through amendments to the <u>Auditor General Act</u>, which took effect in 1995, and included

- creating the position of Commissioner of the Environment and Sustainable Development
  within the OAG. The Commissioner heads a group of auditors dedicated to the auditing of
  environmental and sustainable development issues;
- adding environmental effects to what the Auditor General takes into account when determining what to report to Parliament (the 4th E); and
- creating the environmental petitions process, which provides an avenue for Canadians to raise concerns about environment and sustainable development issues under federal jurisdiction. The OAG receives petitions and ministers are required to respond to them.

The Commissioner also monitors and reports on the extent to which departments and agencies have met the objectives and implemented the action plans set out in their sustainable development strategies. The Commissioner will also be monitoring the extent to which entities have contributed to meeting the targets set out in a new Federal Sustainable Development Strategy, which will be completed in 2010 and renewed every three years. See <a href="Appendix 1">Appendix 1</a> for more information on sustainable development strategies.

#### b) Sustainable development as defined in the Auditor General Act

Section 2 of the <u>Auditor General Act</u> includes the classic definition of sustainable development from the 1987 report of the World Commission on the Environment and Sustainable Development, *Our Common Future*, also known as the Brundtland Report:

Sustainable development means development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (Section 2 of the Act)

Section 21.1 of the Act expands on this definition:

Sustainable development . . . is a continually evolving concept based on the integration of social, economic and environmental concerns, and which may be achieved by, among other things,

- the integration of the environment and the economy,
- protecting the health of Canadians,
- protecting ecosystems,
- · meeting international obligations,
- promoting equity,

- an integrated approach to planning and making decisions that takes into account the environmental and natural resource costs of different economic options and the economic costs of different environmental and natural resource options,
- preventing pollution, and
- respect for nature and the needs of future generations.

Improving quality of life and well-being, integrated decision making, and equity are three of the foundations of sustainable development.