

***THE ROLE OF HEALTH PROFESSIONALS
IN ENVIRONMENTAL ASSESSMENT
CONSOLIDATED WORKSHOP PROCEEDINGS***

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EXECUTIVE SUMMARY

This document consolidates and summarizes the proceedings of six regional, multi-sectoral workshops on the role of health professionals in environmental assessment (EA), held between the Fall of 1995 and the Spring of 1996 and sponsored by the Federal, Provincial, Territorial Committee on Environmental and Occupational Health's Taskforce on Health Impact Assessment. The workshops' objectives were:

- to consider the approaches, procedures and methods used to incorporate health into EA;
- to examine the factors that facilitate the integration of health into EA; and
- to identify current priorities and emerging needs to further clarify the role of health professionals in EA.

This was done by identifying the issues associated with including health in EA, reviewing a discussion paper on a national guide on health and EA, considering case studies and examining the priorities and needs for including health in EA.

The workshop participants identified many issues associated with including health in EA. The main ones were:

The Scope of Health in EA

Participants agreed that although it may not be necessary to do a detailed health assessment in every EA, it is important to consider whether or not projects will have any effects on health at the beginning of each EA. This should include socio-cultural effects on health and well-being and occupational health.

Roles and Responsibilities

There was a consensus that health professionals have a vital role to play in EA because they have a longstanding tradition of working with communities and are perceived as being neutral and independent. However, health professionals must accept any constraints associated with the EA process (time, resources and the scope of the health assessment) and provide clear and consistent advice.

Information, Indicators, and Methods

Workshop participants stressed the need for baseline community health information, including information on socio-cultural health and well-being. There is a need for tools to interpret data, such as more health-based standards, guidelines and objectives.

Public Participation and Risk Communication

There was a consensus that early and ongoing public participation in EA can help to resolve health issues. There was also agreement that better long-term risk communications strategies are needed.

There was a consensus at all of the workshops that national guidance material on health and EA is needed in Canada and that it should include advice on assessing effects on socio-cultural health and occupational health as well as physical health. This would be consistent with the World Health Organisation's definitions of health and the known determinants of health. It was suggested that because different people have different levels of familiarity with the issues associated with including health in EA, there may be a need to prepare more than one guidance document. These could include a background discussion paper on the issues and a technical 'how to' guide containing advice and suggestions on methods and indicators. Participants stressed that the guidance material should be flexible and adaptable to circumstances in different provinces and that it should not be prescriptive.

At each of the workshops there was a plenary discussion on the key priorities and needs for including health in EA. There was consensus that the role of health in EA should be strengthened, but that this should not impose an unreasonable new burden on proponents or EA regulators. Workshop participants discussed the need to strengthen the scientific basis of the health component of EA particularly with respect to baseline community health information, commonly accepted indicators and methods for measuring effects on socio-cultural health and methods for assessing health in small populations. It was also agreed that government agencies should establish and encourage ongoing mechanisms for public participation in decision-making and long-term risk communication strategies, not linked to particular projects or EAs. Finally, it was agreed that there is an urgent need to 'work smarter' and to strengthen collaboration and coordination between health and EA professionals.

INTRODUCTION

This document consolidates and summarises the proceedings of a series of six regional workshops on the role of health professionals in environmental assessment (EA), held between the Fall of 1995 and the Spring of 1996. A national workshop is scheduled for the Winter of 1996. These multi-sectoral workshops have been sponsored by the Federal-Provincial-Territorial Committee on Environmental and Occupational Health and its Taskforce on Health Impact Assessment.

The purpose of the workshop series was to clarify the role of health professionals in EA by examining current roles, evaluating the changes that have occurred since the previous workshops in this subject (held between 1987 and 1990) and to identify emerging needs.

The workshops' objectives were:

- to consider the approaches, procedures and methods used to incorporate health into EA;
- to examine the factors that facilitate the integration of health into EA; and
- to identify current priorities and emerging needs to further clarify the role of health professionals in EA.

Workshops were held in Dartmouth, Winnipeg, Montreal, Toronto, Vancouver and the National Capital Region. Each workshop lasted for three days, except for the one in the National Capital Region which was one day. Proceedings were prepared and distributed to all participants following each workshop, except in the National Capital Region. This document brings together and synthesizes the key points raised at all six workshops, noting the common trends across regions and discussing the differences.

The workshop logistics are shown in Appendix A of this document. Appendix B contains brief summaries of the six workshops. Appendix C contains a summary of the results of a pre-workshop questionnaire that was distributed to all the invitees.

Historical Overview

Between 1987 and 1990, a series of workshops on the role of health in EA was organised by the Canadian Environmental Assessment Research Council, the Canadian Environmental Assessment Agency (previously the Federal Environmental Assessment Review Office), Health Canada and several other co-sponsoring organisations. These workshops recommended that the role of health in EA should be strengthened in Canada and that guidance material on how to include health in EA should be developed.

In recent years, the role of health in EA has become more prominent. This is because all provinces and the federal government now have requirements for health to be included in EA and the public concerns raised in EAs are increasingly related to health and the quality of life.

In 1992, the Federal, Provincial, Territorial Committee on Environmental and Occupational Health established a Taskforce on Health Impact Assessment. The Taskforce decided to act on the recommendations of the previous workshops and to prepare a discussion paper on a national guide on health and EA. The two main objectives of the discussion paper are:

- to encourage and provide advice on the incorporation of health in EA; and
- to promote national consistency in how health is included in EA, while recognizing the diversity of Canadian EA legislation and regional differences.

After the preparation of a discussion paper and its review by the Committee on Environmental and Occupational Health, the Taskforce on Health Impact Assessment organised this series of six multi-sectoral regional workshops. Copies of the Taskforce's discussion paper were distributed to all invitees in advance, together with a pre-workshop background paper and a questionnaire.

DETERMINANTS OF HEALTH

The first plenary session at each of the workshops included a presentation on the determinants of health and their relevance to EA. The presentation described the determinants of health and how they can provide a basis for a population health approach. It also used the proposed National Accord on Health and Environment as an example of applying a population health approach and considered how work on a national guide on health and EA is consistent with, and supports, population health and the proposed National Accord.

What Makes People Healthy?

- \$ *Income and social status*
- \$ *Social support networks*
- \$ *Education*
- \$ *Employment and working conditions*
- \$ *Physical environments*
- \$ *Biology and genetic endowment*
- \$ *Personal health practices and coping skills*
- \$ *Healthy child development*
- \$ *Health services*
(Advisory Committee on Population Health, 1994).

ISSUES ASSOCIATED WITH INCLUDING HEALTH IN EA

Workshop participants discussed the issues associated with including health in EA in breakout groups. Many issues were raised including:

The Scope of the Health Issues in EA

All of the workshops identified the scope of the health issues in EA as a key challenge. Most participants agreed that any health issues should be identified as early as possible in an EA, preferably at the 'scoping' stage. Although it may not be necessary to do a detailed health assessment in every EA, especially for small projects, it is important to consider whether or not a project will have any effects on health at the beginning of all EAs. Several participants at the National Capital Region workshop suggested that health should be included in all federal departmental guides or EA, as a way of ensuring that health is considered during scoping.

All of the workshops discussed the types of health issues that could be included in EA and there was agreement that a common, practical definition of health would be helpful. Most participants agreed that such a definition should include socio-cultural effects, as well as physical effects on health. It was pointed out that the World Health Organisation's definitions of health and the health determinants model have been accepted by Canadian government agencies, and that therefore, federal and provincial EA processes should consider the socio-cultural dimensions of health, when appropriate.

There was some concern expressed, particularly by industry representatives that the implications of including socio-cultural considerations in EA should be carefully thought through in advance, especially in terms of the methods, indicators, time and resources needed to assess a project's socio-cultural effects.

Workshop participants also agreed that occupational health should be included in EAs to the extent possible. It was recognised, however, that there are regulatory requirements for occupational health that can only be dealt with in project planning, design and licensing which usually occurs after the completion of the EA process.

The World Health Organisation has defined health as "a state of complete physical, mental and socio well-being and not merely the absence of disease or infirmity" (1967) and as "the extent to which an individual or group is able, on the one hand to realise aspirations and to satisfy needs, and on the other to change or cope with the environment" (1984).

Roles and Responsibilities

Most of the workshops considered the roles and responsibilities of health professionals in EA. There was a consensus that health professionals have a vital role to play in EA because they have a longstanding tradition of working with communities and they are usually perceived as being independent and neutral. There was also a consensus that there is a need for better collaboration and coordination between health and EA professionals in Canada. At the Winnipeg workshop participants recommended that health professionals should be equal partners in EA, even though this may require procedural or regulatory changes. It was also recommended that health professionals should accept any constraints associated with EA processes (time, resources, and the scope of the health assessment) and provide clear and consistent advice.

One participant at the Vancouver workshop observed that the public trusts medical doctors as a source of health information more than any other. This suggests that physicians have an important role in communicating information on environmental health risks to the public.

At the Toronto workshop there was some discussion of the need to ensure that there is sufficient capacity among local health units to deal with environmental health issues. As provincial governments devolve responsibilities to the local level, it will be vital to ensure that staff with local health units are appropriately trained and educated and have sufficient support from experts.

Information, Indicators and Methods

All of the workshops discussed the need for health information, indicators and methods. In particular, the need for baseline community health information was stressed. Furthermore, it was agreed that baseline community health information should include socio-cultural health and well-being, as well as physical health. In addition to collecting information, however, workshop participants agreed that there is a need to develop tools to interpret data, including more health-based standards, guidelines and objectives. Such tools are essential if information on health is to be useful in EAs.

Participants at one of the workshops suggested that communities themselves should determine what factors are important to maintain and enhance their health and that these indicators of health should be used in EA.

Participants at all of the workshops agreed that there is an urgent need to develop common, agreed-on methods and indicators to assess a project's socio-cultural effects. The workshops in Dartmouth and Vancouver agreed that the determinants of health and the World Health Organisation's definitions of health should be used as a basis for identifying indicators of health and well-being that could be used in EA.

Some people were of the opinion that social scientists have already developed appropriate methods and indicators for assessing socio-cultural effects, and that they are not being used in EA. If this is so, then it is important to establish closer links among health and EA professionals and social scientists. Consistent with this, two of the workshops - Toronto and Vancouver - agreed that there is also a need to develop methods to study health and well-being in small populations.

Public Participation and Risk Communication

All of the workshops discussed the importance of public participation and risk communication in EA. There was a consensus that early and ongoing public participation in EA can help to resolve many concerns about health. There was also a consensus that better long-term risk communication strategies are needed. A high level of concern was expressed at most of the workshops that scientifically-determined risks can be quite different from community perceptions of risk. This is frequently a source of problems for health professionals in EA. Workshop participants were of the opinion that this issue can be dealt with through early and ongoing public participation and good risk communication strategies. It was agreed that trust and openness are critical ingredients of effective participation and communications, and that these take time to develop. Some industry representatives expressed concern about early public participation because this can involve the release of confidential business information.

REVIEW OF THE DISCUSSION PAPER

There was a consensus at all of the workshops that there is a need for a national guide on the role of health in EA and that the discussion paper is a good first step. The following points were discussed:

There was almost unanimous support at all workshops that national guidance material on the role of health in EA should be prepared as soon as possible.

Structure

Workshop participants agreed that there are several audiences for guidance material on health and EA including health professionals, EA practitioners, the general public, proponents and consultants. Different people have different levels of familiarity with the issues, therefore there may be a need to prepare several documents.

Five of the workshops suggested preparing two or more documents on health and EA. Suggestions included a background discussion paper and a more technical 'how-to' guide. The workshop in the National Capital Region advocated a single document with several

different sections that would discuss the background issues and provide more detailed advice.

Several provinces, including Quebec and Alberta, have already developed their own guides on health and EA. These guides are specific to provincial EA requirements.

Approach

There was a consensus that national guidance material on health and EA should be based on a definition of health that includes socio-cultural well-being and occupational health, as well as physical health. It was also agreed that national guidance material should be adaptable to meet the needs of individual provinces and EAs. Thus, it is critical for the material to offer practical, feasible and cost-effective advice and suggestions, rather than being a prescriptive code of practice.

Contents

There were many detailed suggestions made about the contents of the guidance document(s). Specifically, it was suggested that a **background discussion paper** could include issues such as:

- the benefits of including health in EA;
- how including health in EA contributes to sustainable development;
- how the determinants of health, a population health approach and the World Health Organisation's definitions of health can be used in EA;
- the roles and responsibilities of health professionals and other stakeholders in EA;
- how EA processes in Canada and internationally address health;
- assessing cumulative effects on health; and
- the importance of assessing the health effects of policies, programs and plans, as well as projects.

It was also suggested that a technical '**how-to**' **advisory guide** could include advice and suggestions on:

- how to identify which health issues should be addressed in EA, and that this should include socio-cultural health and occupational health;

- approaches, methods and indicators for assessing effects on socio-cultural health and well-being, as well as physical health;
 - mechanisms and approaches for early and ongoing public participation on health issues in EA;
 - approaches for assessing the beneficial as well as the adverse effects on health and well-being; and
 - sources of further information.
- Four of the six workshops suggested that a 'how-to' guide should contain a 'scoping filter' to determine if a more extensive health assessment is needed.*

Style

A reader-friendly question and answer format was suggested by participants at several of the workshops, with the key points being summarised in text boxes, graphics and illustrations. There was also strong support for the inclusion of case studies, based on a sectoral approach.

Process

Participants suggested that there should be opportunities for different stakeholders to review the national guidance materials and that they should be seen as 'evolving documents' that may require revising and updating in the future. The National Capital Region workshop suggested that the guide(s) should be marketed using EA bulletin boards and other means.

CASE STUDIES

Two case studies were presented and discussed at each workshop - one federal and one provincial, except at the National Capital Region workshop.

WORKSHOP	FEDERAL CASE STUDY	PROVINCIAL CASE STUDY
Dartmouth	Environmental health monitoring for the Pictou Landing MicMac related to the Boat Harbour effluent treatment system	Health impact assessment of a proposal to construct a Fundy regional landfill
Winnipeg	Environmental health impact assessment: The NWT Diamond Mine project	Louisiana-Pacific Canada Ltd: Oriented Strand Board Plant
Montreal	Health effects of Sainte-Marguerite-3 hydro-electric project	Health risk assessment of a cogeneration project in Quebec
Toronto	Elliot Lake mines tailings management areas	Stony Creek landfill site
Vancouver	Kemano completion project	Hypothetical role-playing environmental assessment

Discussions following the case study presentations focused on five main issues:

- The need to scope health issues carefully and to include socio-cultural concerns if and when appropriate;
- Health professionals often deal with community perceptions of risk that are different from scientifically-determined risks. Perceptions of risk should not be ignored but dealt with through public participation and risk communication;
- Early and ongoing public participation can resolve health concerns. EA regulators and proponents should initiate and encourage public participation;
- Better baseline health data and methods for assessing health effects in small populations would improve the scientific basis of health assessments; and
- Close coordination and collaboration between health and EA professionals is essential.

PRIORITIES AND NEEDS

At each of the workshops there was a presentation on the opportunities for including health in EA, followed by a plenary discussion on priorities and needs.

The Role of Health and Health Professionals in EA

There was a consensus that the role of health in EA should be strengthened, but that this should not impose an unreasonable new burden on proponents or EA regulators. The Dartmouth workshop agreed that health professionals should promote the benefits of incorporating health in EA as a means of improving population health. The Winnipeg workshop discussed how EAs evolving into a process to support sustainable development, so that it will become even more important to ensure that human health and well-being are considered in EA at the same time as economic and environmental concerns.

Manitoba's proposed Sustainable Development Act contains requirements for 'sustainable development assessments' that incorporate environmental, social and economic analyses. It also requires the health effects of development projects be assessed.

Strengthening Science

There was agreement that there is a need to improve the scientific basis of the health component of EA. In particular, there are needs for better baseline community health information, commonly-accepted indicators and methods for effects on socio-cultural health and improved methods for assessing health in small populations.

Public Participation and Risk Communication

Participants agreed that there is a need for ongoing mechanisms for public participation in decision-making and for risk communication strategies. Such mechanisms and strategies should be long-term in nature and would not necessarily be linked to particular projects or EAs. By establishing an atmosphere of trust and openness, ongoing risk communication could help to resolve health issues before they develop into major problems. Starting public participation or risk communication programs after an EA has been initiated may be too late.

Working Smarter

There was a consensus that there is a need for health and EA professionals to 'work smarter' on the health component of EA. Additional resources are unlikely to be provided to strengthen the role of health in EA and there will probably be continuing financial constraints. Therefore, health and EA professionals must learn 'how to do more with less'. Possible options include further work on harmonising federal-provincial EA processes, sharing resources and expertise inter-provincially, promoting secondments, strengthening

Participants at the Montreal workshop suggested that universities could contribute to 'working smarter' by providing knowledge and expertise on the health component of EA. Universities also have a key role in training and education.

coordination and collaboration between health and EA professionals, promoting national consistency on the health component of EA and linking health and EA with other environmental management and audit initiatives.

CONCLUSIONS AND RECOMMENDATIONS

1. The Federal, Provincial, Territorial Committee on Environmental and Occupational Health's Taskforce on Health Impact Assessment should develop guidance material on the role of health in EA in Canada. There may be need to prepare several documents because different audiences have different needs. Possible documents include a background discussion paper and a technical 'how to' advisory guide.
2. The guidance material should be based on a definition of health that includes socio-cultural well-being and occupational health, as well as physical health. The guidance material should also be adaptable for use in different provincial EAs and provide suggestions and advice, rather than being a prescriptive code of practice.
3. The advisory guide should provide suggestions and advice on practical, feasible and cost-effective methods, approaches and indicators on how to include health in EA, especially for small projects. This should include a checklist or similar method on how to identify whether or not there are any health issues at the scoping stage of EA.
4. Health professionals should promote understanding of the determinants of health and population health approaches among other disciplines and sectors, especially EA practitioners.
5. There is a need to further strengthen the mechanisms for collaboration and coordination between health and EA professionals.

APPENDIX A:
WORKSHOP LOGISTICS

Locations, Dates and Co-chairs
Generic Agenda
Overview of Participants

WORKSHOP LOCATIONS, DATES AND CO-CHAIRS

Location	Dates	Co-Chairs
Dartmouth, Nova Scotia	September 18-20, 1995	<p>Mark Allen Community & Environmental Health Health & Community Services P.O. Box 5100 Fredericton, New Brunswick E3B 5G8</p> <p>Sharon Chard Health Protection Branch Atlantic Region Health Canada P.O. Box 1060 Dartmouth, Nova Scotia B2Y 3Z7</p>
Winnipeg, Manitoba	November 1-3, 1995	<p>Jerry Spiegel Pollution Prevention Branch Manitoba Environment Building 2, 139 Tuxedo Avenue Winnipeg, Manitoba R3N 0H6</p> <p>Donna-Mae Burgener Health Protection Branch Health Canada 510 Lagimodiere Boulevard Winnipeg, Manitoba R2J 3Y1</p>

<p>Montreal, Quebec</p>	<p>November 21-23, 1995</p>	<p>Michèle Belanger Direction de la santé publique Ministère de la Santé et des Services sociaux 1075 chemin Ste-Foy, 16e étage Québec (Québec) G1S 2M1</p> <p>Alain Bérubé Santé Canada 1001, St-Laurent ouest Longueuil (Québec) J4K 1C7</p>
<p>Toronto, Ontario</p>	<p>December 12-14, 1995</p>	<p>Patricia Powell Senior Inspection Consultant Environmental Health & Toxicology Unit Ministry of Health 5700 Yonge Street, 8th Floor North York, Ontario M2M 4K5</p> <p>Colin Broughton Regional Director Health Protection Branch Health Canada 2301 Midland Avenue Scarborough, Ontario M1P 4R7</p>

Vancouver, British Columbia	January 23-25, 1996	Ray Copes Environmental Health Assessment Community and Family Health Ministry of Health 7-1, 1515 Blanshard Street Victoria, B.C. V3W 3C8 Greg Smith Regional Director Health Protection Branch Health Canada 3155 Willingdon Green Burnaby, B.C. V5G 4P2
Ottawa	March 13, 1996	Roy Kwiatkowski Chief, Office of Environmental Health Assessment Room 136, 0801D1 Environmental Health Centre Health Canada Tunney's Pasture Ottawa, Ontario K1A 0L2

GENERIC WORKSHOP AGENDA

DAY 1	13:30	Introduction (plenary) Welcome Workshop objectives Overview of agenda Introductions and personal objectives
	14:15	Overview of health determinants and the role of health professionals in EA (plenary)
	15:00	Coffee
	15:15	Issues Associated with Incorporating Health into EA (breakout groups)
DAY 2	08:45	Report Back from Breakout Groups (plenary)
	09:30	Overview of 'The National Health Guide for Environmental Assessment: A Discussion Paper' and Results of the Questionnaire (plenary)
	10:30	Coffee
	10:45	Review of 'The National Health Guide for Environmental Assessment: A Discussion Paper'(breakout groups)
	12:00	Lunch
	13:30	Report Back from Breakout Groups (plenary)
	14:00	First Case Study (plenary)
	14:45	Coffee
DAY 3	15:00	Second Case Study (plenary)
	15:45	Discussion of Case Studies (plenary)
	08:45	Opportunities for Incorporating Health into EA (plenary)
	09:15	Priorities and Needs for Incorporating Health into EA (plenary)
	10:30	Coffee
	10:45 11:30	Priorities and Needs (continued) Recommendations and Conclusions

OVERVIEW OF PARTICIPANTS¹

Workshop	Federal Health	Federal Env't	Provincial Health ²	Provincial Env't	Occupat'l Health	Other Gov't Dep'ts	Industry	Academics	Consultants	Public Interest	TOTALS
Dartmouth	7	-	10	4	1	4	-	1	1	-	28
Winnipeg	6	1	7	11	4	1	3	3	1	-	37
Montreal	10	-	8	6	1	1	2	6	3	-	37
Toronto	6	2	5	4	2	2	7	3	2	1	34
Vancouver	10	2	6	3	1	2	3	-	4	-	31
NCR ³	6	2	-	-	-	9	-	-	1	-	18
TOTAL	45(24%)	7(4%)	36(19%)	28(15%)	9(5%)	19(10%)	15(8%)	13(7%)	12(6%)	1(0.5%)	185(100%)

¹ These numbers include three workshop organisers (two from Health Canada and one consultant) who attended all of the workshops.

² Includes participants from local and regional health units.

³ This workshop was for federal departments.

APPENDIX B:
SUMMARIES OF WORKSHOP
PROCEEDINGS

Dartmouth
Winnipeg
Toronto
Montreal
Vancouver
National Capital Region

THE ROLE OF HEALTH PROFESSIONALS IN ENVIRONMENTAL ASSESSMENT

SUMMARY OF WORKSHOP PROCEEDINGS DARTMOUTH, SEPTEMBER 18-20, 1995

THE DETERMINANTS OF HEALTH

The first plenary session of the workshop included a presentation on the determinants of health by Mark Allen, based on the report 'Strategies for Population Health: Investing in the Health of Canadians' (1994), prepared by the Federal, Provincial, Territorial Advisory Committee on Population Health. In his presentation, Mr. Allen discussed the key determinants of health and outlined how they can be used as the basis for a population health approach. To conclude, he used the proposed National Accord on Health and Environment as an example of applying a population health approach and described how the work on a national guide on health and EA is consistent with, and supports, a population health approach and the proposed National Accord.

ISSUES ASSOCIATED WITH INCLUDING HEALTH IN EA

The participants were divided into two breakout groups to discuss the issues associated with including health in EA. Several different issues were discussed including:

Procedural Issues

- The importance of early and ongoing participation of health professionals in EA and the need for better communications between health and EA professionals.
- The role of health professionals as independent participants in EA, providing unbiased, factual information.
- The importance of early and ongoing public participation in EA.
- The need to include the socio-cultural aspects of health, whenever appropriate.
- The need to strengthen follow-up activities on the health component of EA, such as monitoring.

Information Needs and Expertise

Both breakout groups agreed that better health information, especially baseline data, is needed if the role of health in EA is to be strengthened. This includes information methods and indicators on socio-cultural health.

Both groups also discussed whether there is sufficient expertise on health and EA available in Canada, although no consensus was reached on this point.

Determinants of Health

Both groups agreed that the determinants of health could provide a basis for incorporating health in EA, because they deal with physical and socio-cultural effects on health, as well as beneficial and adverse ones. Furthermore, the determinants model has been accepted by the federal and provincial Ministers of Health.

REVIEW OF THE DISCUSSION PAPER ON A NATIONAL HEALTH GUIDE FOR EA

The breakout groups agreed that there is a need for a national guide on health and EA, but that several documents should be prepared rather than just one guide. These documents should include:

A **discussion paper** for people not familiar with the issues associated with including health in EA that would emphasise the advantages of including health in EA and encourage multi-disciplinary approaches for including health in EA;

A technical '**how to**' **guide** containing advice on methods and indicators for assessing health, focussing on small projects;

A **short overview** of health and EA for senior managers; and

A **discussion paper** on assessing the health effects of policies, programs and plans (strategic assessment).

CASE STUDIES

Two case studies were presented and discussed:

- Environmental health monitoring for the Pictou Landing MicMac related to the Boat Harbour effluent treatment system; and
- Health impact assessment of a proposal to construct a Fundy regional landfill.

Key issues that were discussed following the presentations included the effectiveness of early public participation, the importance of 'quality of life' issues in EA, the value of close collaboration and coordination among government departments and the difficulty of assessing cumulative effects on health.

PRIORITIES AND NEEDS

Roy Kwiatkowski gave a presentation on the opportunities for including health in EA and after this there was a general discussion of priorities and needs. The following priorities and needs were identified:

- Promote the benefits of incorporating health in EA, emphasising it is as a preventive health measure that will improve population health and be cost-effective in the long-term;
- Promote a population health approach based on the determinants of health;
- Develop approaches, methods and indicators for assessing effects on socio-cultural health and well-being that can be used in EA;
- 'Work smarter' as a means of coping with resource constraints, for example, encourage secondments from universities;
- Further harmonise federal and provincial EA processes; and
- Link EA with other environmental management and audit initiatives, such as ISO 14000.

CONCLUSIONS AND RECOMMENDATIONS

Towards the end of the workshop, the participants discussed their conclusions and recommendations which included:

- Health professionals should promote population health approaches based on the determinants of health and ensure that senior managers in health and environmental departments are aware of the benefits of including health in EA.
- Health and environment departments should examine the feasibility of including health in other environmental approvals processes, such as licensing and permitting.
- Health and environmental departments should examine the feasibility of having

health professionals dedicated to working on EAs as well as opportunities for sharing resources and expertise inter-provincially. Regional EA Committees should include health professionals, whenever possible.

ISSUES IDENTIFIED IN BREAKOUT GROUPS

- \$ Health professionals should be involved in scoping and should be equal partners in EA. Strengthen links.
- \$ Define the role of health professionals.
- \$ Put the determinants of health into EA. Assessment and evaluation tools should be based on the determinants of health. Use the determinants as a challenge function in EA. The determinants include socio-cultural dimensions of health.
- \$ Need to link data and information systems on health and the environment.
- \$ Need a campaign to sensitise departments about the importance of including health in EA.
- \$ Need early public involvement and community-based initiatives.
- \$ Need more resources and skilled people. This will require training.
- \$ Need to follow-up on health component of EA.
- \$ Is there sufficient environmental health expertise available in Canada?
- \$ Many socio-cultural effects will be beneficial.
- \$ Refocus EA to emphasise health, less on the environment.
- \$ Public concerns about effects on health can mask deeper 'quality of life' issues.
- \$ Sources of data on socio-cultural health.
- \$ Need for baseline data.
- \$ Need to involve Aboriginal people in EA.
- \$ Proponents need criteria to interpret data.
- \$ Use the determinants of health as an appendix to the National Guide.

THE ROLE OF HEALTH PROFESSIONALS IN ENVIRONMENTAL ASSESSMENT

SUMMARY OF WORKSHOP PROCEEDINGS WINNIPEG, NOVEMBER 1-3, 1995

THE DETERMINANTS OF HEALTH

Mr. Jerry Spiegel gave a presentation on the determinants of health, based on the report 'Strategies for Population Health: Investing in the Health of Canadians' (1994), prepared by the Federal, Provincial, Territorial Advisory Committee on Population Health. In his presentation, Mr. Spiegel discussed the transition from environmental management to sustainable development and current initiatives on health care reform. He went on to describe a population health approach and the key determinants of health. He concluded his presentation by outlining the proposed National Accord on Health and Environment and discussing how work on a national guide on health and EA is consistent with, and supports, a population health approach and the proposed National Accord.

ISSUES ASSOCIATED WITH INCLUDING HEALTH IN EA

The participants were divided into two breakout groups to discuss the issues associated with including health in EA. Several different issues were discussed including:

The Scope of Health in EA

Both breakout groups discussed the scope of health issues to be included in EA. A major concern was whether or not EA should address the socio-cultural effects of development projects. Some participants were of the opinion that these types of effects are beyond the scope of EA and should be dealt with in other ways, but the majority felt that they should be included in EA, when appropriate.

The Roles and Responsibilities of Health Professionals

One of the breakout groups discussed the roles and responsibilities of health professionals in EA extensively and concluded that there should be early and ongoing participation of health professionals. Constraints to the involvement of health professionals include the large amounts of information presented by proponents which must be read and understood, the time limits inherent in many EA processes and resource limitations.

Information and Methods

One of the groups discussed the information and methods needed to assess health effects in terms of two basic questions:

- What should be measured and how should it be measured?
- What information is available and how can it be accessed?

Communications and Public Participation

Both groups discussed the need for good communications and public participation in EA. Many participants were of the opinion that some health issues can be resolved through early public participation, however, industry representatives expressed concern about the timing of early public participation. At the early stages of project planning, proponents may be concerned about releasing proprietary information. On the other hand, early public participation can resolve some health issues. No consensus was reached on this point.

Other issues that were discussed included the need for guidance material on how to include health in EA and the need to harmonise federal and provincial EA processes to the maximum extent possible.

REVIEW OF THE DISCUSSION PAPER ON A NATIONAL HEALTH GUIDE FOR EA

The breakout groups agreed that there is a need for a national guide on health and EA and made several suggestions:

Scope

The majority of participants agreed that the guidance material should deal with all types of potential effects on health, including socio-cultural effects and beneficial and adverse effects.

Audiences

It was agreed that the primary audiences for guidance material are health and EA professionals and proponents. Therefore, it may be appropriate to prepare two documents - a general discussion paper and a more technical 'how to' guide.

Style

It was agreed that guidance material should be flexible and adaptable for use in different circumstances, rather than being prescriptive. The need to emphasise indicators and methods, especially for socio-cultural health, was discussed.

Process

It was suggested that guidance material should be developed 'one step at a time', ensuring opportunities for consultation with health professionals, EA administrators and others.

Other Issues

One of the groups was of the opinion that public health legislation is neither clear nor regulatory with respect to environmental quality. Therefore, there may be a need to strengthen the legislative and regulatory basis for including health in EA.

CASE STUDIES

Two case studies were presented and discussed:

- Louisiana - Pacific Canada Ltd.: Oriented Strand Board Plant.
- Environmental health impact assessment: The NWT Diamond Mine project.

Key issues that were discussed following the presentations included:

- Good baseline health data are needed on all aspects of health;
- Public participation and traditional ecological knowledge can contribute valuable information on the potential health effects of projects, however, it can be difficult to include this type of information in a scientifically-based EA;
- Cooperation and collaboration between health and environment departments is critical. This can take time to develop.

PRIORITIES AND NEEDS

Roy Kwiatkowski gave a presentation on the opportunities for including health in EA and after this there was a general discussion of priorities and needs. The following priorities and needs were identified:

The Evolving Role of EA

As EA evolves into a process to facilitate sustainable development, it will be important to ensure that health issues are addressed at the same time as economic and environmental concerns.

Harmonisation

Workshop participants agreed that there should be improved federal-provincial harmonisation on EA.

The Role of Health Professionals

Nearly all of the participants agreed that the role of health in EA should be strengthened, however, health professionals should identify the critical health issues to be addressed in an EA in a timely, feasible and cost-effective manner.

Procedures, Methods and Indicators

Advice on the procedures, methods and indicators that should be used to address health in EA is needed, especially for socio-cultural effects. Methods and indicators must be practical and simple.

CONCLUSIONS AND RECOMMENDATIONS

Towards the end of the workshop, the participants discussed their conclusions and recommendations which included:

- Health professionals should be full partners in EA. This may require procedural, regulatory or even legislative changes.
- Health professionals should identify how projects can contribute to health and how any adverse effects can be minimised or eliminated. Health professionals should demonstrate that health issues can be addressed in a timely, cost-effective and useful way.
- Terms of reference for environmental impact statements should be limited to what is required to assess the project's effects on health and should not include unnecessary research.

ISSUES IDENTIFIED IN BREAKOUT GROUPS

- Timing of health involvement in EA should be early. Need time, resources, expertise to review material.
- Consistency of parameters/guidelines. EA regulators can change their demands during an EA. 'Moving target' ground rules.
- Uncertainty of information especially dose-response data, low-level chronic exposure.
- Need for communications between proponents, health professionals and EA regulators. Also, good risk communication needed.

- Availability of environmental health expertise questioned.
- Prosperity is not synonymous with economic development.
- Including socio-cultural effects. Can they be dealt with in other ways? All part of health. If not included, public will make proponents do it.
- Definition of environmental effects.
- Which health effects to include - direct/indirect. Depends on legislation.
- Measurement issues, especially for socio-cultural health. Scientifically determine risks compared to public perceptions.
- Proponents want a recipe book. Models are still in their infancy.
- Need national and global EA harmonisation.
- What does community participation mean? Difficult when information is incomplete.
- Need flexibility - extent of socio-cultural effects may vary in different regions of the Country.
- Definition of health should include socio-cultural issues.
- Include occupational health, but recognise it has a separate legislative base.
- Data
 - what/how to measure?
 - what's available and how to access it?
- Who is responsible and who pays?
- Scope of health in EA should be based on the project's life cycle. Flexibility needed on site-specific basics. The public should have a role in scoping health issues.
- Guide should be generic and comprehensive. Flexible to deal with different kinds of projects. Must be reasonable. Should not add costs or time to EA.
- Industry seems frightened of health. No, but it's difficult to handle.

THE ROLE OF HEALTH PROFESSIONALS IN ENVIRONMENTAL ASSESSMENT

SUMMARY OF WORKSHOP PROCEEDINGS MONTREAL, NOVEMBER 21-23, 1995

THE DETERMINANTS OF HEALTH

This first plenary session began with a presentation by Luc Fortin on the determinants of health, based on a report entitled "Strategies for Population Health: Investing in the Health of Canadians" prepared by the Federal-Provincial-Territorial Advisory Committee on Population Health. Mr. Fortin presented the World Health Organization's definition of health, defined the concept of a population health approach, and outlined what is known about the principle determinants of health. Emphasizing the need to involve sectors other than health, he then presented a framework, proposed by the Advisory Committee and based on the determinants of health, to guide the actions of the different levels of government in the elaboration of strategies to improve the health of the population. Lastly, he presented three strategic directions upon which the provinces, the territories and the federal government could cooperate. These strategies involve strengthening public understanding of the determinants of health and encouraging public participation in population health initiatives, enlisting the support of other government sectors, and developing intersectorial initiatives applying a population health approach.

ISSUES ASSOCIATED WITH INCLUDING HEALTH IN EA

The principle issues discussed by participants in the two breakout groups are the following:

Socio-cultural vs Physical Health

Participants in both breakout groups agreed that the definition of health must include socio-cultural as well as physical health. However, they considered that little attention is paid to socio-cultural effects in the environmental assessment of projects in Quebec. In part, this is because the methods used for analyzing socio-cultural impacts are considerably less developed than those for physical impacts and because there is no consensus concerning the validity of the methods that do exist. Environmental assessment practitioners are said to lack expertise in assessing socio-cultural impacts and the advice given concerning different projects is not consistent.

Although participants agreed on the need for better methods to analyze socio-cultural impacts, they disagreed on the need for quantitative methods.

Role of Public Participation

One breakout group discussed at length the role of public participation in environmental assessment. Public participation was seen as an element to the solution of many of the challenges that face environmental assessment.

Participants considered that public participation can lead to more comprehensive health assessments since it is generally health concerns that prompt public participation. The

public can validate the health and environmental factors that experts have chosen to evaluate in an EA. Public participation does not necessarily involve a longer or more costly EA process.

For public participation to be successful, the public must be involved from the onset of a project. To ask the public to review and comment on an environmental impact statement that was completed without its input in the early stages of the assessment is of little value and does not constitute real participation.

However, given the duration of certain environmental assessments, public participation throughout the whole process may be difficult without intervenor funding.

REVIEW OF THE DISCUSSION PAPER ON A NATIONAL HEALTH GUIDE FOR EA

Participants considered that the discussion paper provides valuable information for project proponents and newcomers to the EA field. It describes clearly the EA process and addresses all the principle issues concerning health in EA. However, several participants considered that experienced EA professionals need a more technical "how to" guide with detailed descriptions of analytical methods. Further, Quebec EA professionals already have a guide for conducting EA of major development projects.

Participants made the following suggestions concerning the discussion paper and future documents on the subject of health and EA:

- Specify the document's purpose and its target audience or audiences. Proponents have needs that are different from those of health professionals or environmental specialists involved in EA.
- EA specialists in Quebec have a need for specialized documents, notably in the areas of psycho-social health analysis, the monitoring of health impacts, and the acceptability of risk.
- In order to stimulate exchanges between specialists from different provinces, it would be interesting if the Guide were to present a brief description (the essential features) of how health issues are addressed in each province's EA process.
- Some participants suggested a document that would highlight the benefits of EA and demonstrate how assessing projects is neither as costly or time-consuming as certain proponents contend.

CASE STUDIES

Two case studies were presented:

- The Ste-Marguerite River hydro-electric development project
- The cogeneration project in Quebec City

Discussions following the presentation of the Ste-Marguerite project focused on the joint federal-provincial EA process, the issue of mercury for the local population, and ways of improving collaboration among the different parties involved in the assessment.

The presentation of the cogeneration project lead to a discussion concerning the pertinence of requiring proponents to establish environmental and social development funds as a remediation measure for projects. The resources involved in reviewing this project were also discussed.

PRIORITIES AND NEEDS

The discussions during this last part of the workshop, which were held in a plenary session, can be regrouped under the following themes:

Communications

Many participants stressed the need for more effective and ongoing communication among the different EA practitioners. They referred to communications between health and environmental specialists, between proponents and specialists working in government, and between federal and provincial government specialists.

Among other aspects, health and environmental specialists need to form a better understanding of the possibilities and limits of scientific knowledge in each field.

Intervention of Health Professionals in the (Quebec) EA Process

Participants discussed the appropriate stage within the Quebec public review process for health professionals (who often work for regional health boards) to intervene and present their advice. Discussions focused on whether they should intervene publicly at the same time as community and environmental groups during public hearings or transmit their comments to project managers at the Ministry of the Environment and Wildlife following the public hearings.

Since projects that pose important occupational health concerns also generally pose public health concerns, participants agreed that occupational health specialists should be involved in environmental assessments.

Research and Professional Development

Many stressed the need to establish networks of health and environmental assessment specialists and to strengthen the existing ones.

Currently, universities are an underused source of EA expertise. Masters and doctoral students could conduct follow up research of projects that have been implemented. However, proponents, consultants and government specialists must initiate such contacts with the university community.

Industry participants spoke of the difficulties that proponents can face in trying to meet what they consider to be unrealistic EA guidelines when preparing an environmental impact statement. While recognizing the need to "push back the frontiers of science", when drafting EA guidelines, specialists should also be realistic and take into account the current state of knowledge and scientific methods in a particular area. Cumulative impacts was an example cited of an impact that everyone considers important to analyze but for which no consensus exists regarding methodology.

CONCLUSIONS AND RECOMMENDATIONS

- Effective and ongoing communications among the principle intervenors in environmental assessment is essential.
- All agreed on the need to involve health professional at the onset of the EA process.
- The research and analysis that is requested of proponents must be feasible. Here also there is a need for effective communication between project proponents and EA specialists reviewing environmental impact statements.
- Workshops, such as the present one, to address specific topics, were proposed as a means of improving communications and training.

ISSUES IDENTIFIED IN BREAKOUT GROUPS

- Definition of health should include socio-cultural, but little attention given to socio-cultural issues. When they are evaluated, they are not linked to physical health.
- Little attention paid to socio-cultural effects because:
 - analytical methods less developed and there is not much consensus
 - staff lack training and experience
 - socio-cultural effects not 'valued' and do not have much weight
 - advice provided by experts in different projects is not always consistent

Can we require proponents to develop the needed analytical tools?

- Public participation helps to solve some of the problems inherent in health impact analysis. It is necessary:
 - it favors a more comprehensive evaluation of health issues because health issues trigger the publics' interest in environmental issues
 - permits a validation of the factors that experts have chosen to assess
 - it does not involve delays or greater costs
 - public must be involved from the beginning of a project
- The public needs financial help to participate at all stages of a project. Public involvement from the beginning can be difficult.
- The public should be involved to determine the importance of the impacts identified by the experts. Sometimes, this can allow you to settle or avoid discussion of quantitative vs. qualitative evaluation.

THE ROLE OF HEALTH PROFESSIONALS IN ENVIRONMENTAL ASSESSMENT

SUMMARY OF WORKSHOP PROCEEDINGS TORONTO, DECEMBER 12-14, 1995

THE DETERMINANTS OF HEALTH

The first plenary session included a presentation on the determinants of health by Patricia Powell, based on the report 'Strategies for Population Health: Investing in the Health of Canadians' (1994) prepared by the Federal, Provincial, Territorial Advisory Committee on Population Health. Ms. Powell started her presentation by discussing the World Health Organisation's definitions of health and relating them to a population health approach. She went on to discuss the determinants of health and the benefits of a population health approach. She concluded her presentation by describing the proposed National Accord on Health and Environment and outlining how work on a national guide on health and EA is consistent with, and supports, a population health approach and the proposed National Accord.

ISSUES ASSOCIATED WITH INCLUDING HEALTH IN EA

The participants were divided into two breakout groups to discuss the issues associated with including health in EA. Several different issues were discussed including:

The Scope of Health in EA

One of the breakout groups discussed whether the World Health Organisation's definitions of health can be translated into practical terms and used in EAs. The other group suggested that communities themselves could determine what is important to maintain and enhance their health, and that these aspects of health should be included in EA.

Risk Communication, the Public and the Role of Health Professionals

The following issues were discussed under this heading:

- Who represents the public in EAs? The 'silent majority' can have different opinions from activists.
- The importance of early and ongoing public consultation on health and EA.
- The need for improved risk communication on environmental health issues.

- The role of health professionals as providers of unbiased and factual health information.
- The need to strengthen the capacity of local health departments to deal with environmental health issues.

Procedures, Institutions and Harmonisation

One of the groups agreed that procedures and institutions are urgently needed to ensure that multi-disciplinarity is even more firmly embedded in EA. The other group discussed the need for further federal-provincial harmonisation.

Education and Training

It was agreed that all types of health professionals should receive more education and training on environmental issues and that Ontario's teaching health units have an important role to play in this.

Information and Data

One of the groups discussed the need for better health information that can be used in EAs, especially data on baseline health status in communities and information on socio-cultural health.

REVIEW OF THE DISCUSSION PAPER ON A NATIONAL HEALTH GUIDE ON EA

The breakout groups agreed that there is a need for a national guide on health and EA and made several suggestions including:

- There is a need for more than one document because there are several different audiences and people have different levels of familiarity with the issues;
- The documents should be descriptive and provide advice and suggestions, rather than being a 'code of practice';
- There should be a description of the provincial and federal process for including health in EA;
- The document(s) should include advice on methods and indicators, other sources of information, case studies, assessing cumulative effects, and effects on 'special' groups e.g., children, balancing beneficial and adverse effects on health and well-being, scoping health issues, establishing links with other disciplines and sectors, etc.

CASE STUDIES

Two case studies were presented and discussed:

- Elliot Lake mines tailings management areas
- Stony Creek landfill site.

Key issues that were discussed following the presentations included the role of health professionals as a source of unbiased and factual health information, the need for health professionals to deal with community risk perceptions and the need for methods and approaches to conduct environmental health studies in small populations.

PRIORITIES AND NEEDS

Roy Kwiatkowski gave a presentation on the opportunities of including health in EA and after this there was a general discussion of priorities and needs. The following priorities and needs were identified:

- There is a need for long-term and ongoing multi-stakeholder consultations on community environmental health concerns, not just as part of EA.
- There is a need to develop creative new methods to assess health effects in small populations, to examine socio-cultural health and well-being, and to evaluate the beneficial effects of projects on health and well-being.
- There is a need for information and indicators to determine baseline health status at a community level, including information and indicators on socio-cultural health and well-being.
- The evolving role of health in EA suggests that health professionals may have a larger role to play in EA than in the past. Environmental issues and EA are likely to become more of a priority in health policy and planning.

CONCLUSIONS AND RECOMMENDATIONS

Toward the end of the workshop, the participants identified their conclusions and recommendations which included:

- The federal government should support the establishment of a national unit to provide an independent advisory service on health and EA.
- Government departments should establish and facilitate ongoing multi-stakeholder committees and partnerships as a means of resolving environmental and health

concerns before EAs are initiated.

- There is a need to collect and interpret baseline health information at a community level so that it can be used in EAs. In some cases, we may be 'data rich, but information poor'.

ISSUES IDENTIFIED IN BREAKOUT GROUPS

- Use WHO's definitions of health in EA, even though they are very broad.
- Need for better risk communication and public input at the scoping stage and even before an EA begins.
- Risk management should be community specific. Must consider the needs of individual communities.
- Multi-disciplinary focus needed.
- Need to consider if a project is appropriate for the local situation. Cumulative effects of projects on a community.
- Data and monitoring needed.
- Restructuring of health care and increasing responsibilities at community level. Communities need ability to deal with new responsibilities.
- Role of public
 - community health needs assessments
 - community risk perception studies
- Need to determine a community's sense of health
- Role of the public vs. Submissions by special interest groups.
- Role of health professional - risk communication
 - ongoing provider of information to help the public make informed decisions on risk management
 - respond to health implications of projects and EAs
 - credible source of information
- Scope of determinants of health

- Quantifiables vs. Intangibles
- Socio-cultural issues - methodologies may still be in development

- Education - health and environment education needs for health professionals and other disciplines.

- Harmonisation needed
 - of indicators
 - of legislation
 - government structures and processes

- Better links are needed between Health and EA.

THE ROLE OF HEALTH PROFESSIONALS IN ENVIRONMENTAL ASSESSMENT

SUMMARY OF WORKSHOP PROCEEDINGS VANCOUVER, JANUARY 23-25, 1996

HISTORICAL OVERVIEW AND THE DETERMINANTS OF HEALTH

After the opening of the workshop, Mr. Roy Kwiatkowski provided background information on the objectives of the workshop series and the discussion paper. Following this, there was some discussion about the focus of the workshops, the nature of EA processes in Canada and the links between EA and risk assessment.

Ray Copes gave a presentation on the determinants of health. He started by discussing the World Health Organisation's definitions of health and the concept of a population health approach. He then outlined the key determinants of health, based on the report 'Strategies for Population Health: Investing in the Health of Canadians' (1994), and described the proposed National Accord on Health and Environment. Mr. Copes concluded by discussing how the work on a national guide on health and EA is consistent with, and supports, a population health approach and the proposed National Accord.

ISSUES ASSOCIATED WITH INCLUDING HEALTH IN EA

The participants were divided into two breakout groups to discuss the issues associated with including health in EA. Several different issues were discussed including:

The Scope of Health in EA

One of the breakout groups discussed the importance of agreeing on a common definition of health, including its socio-cultural dimensions, that can be used in EA. The other group discussed the importance of scoping the health issues at the beginning of an EA.

Indicators, Information and Methods

Both groups discussed the need for advice on indicators, baseline information and methods. One group suggested that a list of indicators should be developed that addressed all parts of the World Health Organisation's definitions of health. It was agreed that there is a need for better epidemiological methods to study health in small populations.

Public Consultation and the Role of Health Professionals

One group agreed that early and ongoing public consultation can facilitate the EA process and help to resolve health concerns. It was pointed out that the public trusts physicians as a source of health information more than any other. This confirms that health professionals have an important role in EA and that they should receive training and education on environmental issues.

Making Decisions

One of the groups agreed that there is a shortage of health-based standards, guidelines and objectives that can be used to determine the significance of a project's effects on health. However, making decisions about the significance of a project's effects is ultimately a responsibility of decision-makers and politicians, not health and EA professionals. There was a consensus that science (and health) is only one factor considered in decision-making, and that economic and other issues must be balanced with health and environmental concerns.

HEALTH AND EA IN BRITISH COLUMBIA

The workshop agenda was modified to include a brief presentation by Norm Hardy on health and EA in British Columbia. Dr. Hardy outlined BC's new *Environmental Assessment Act* and discussed the proposed provincial guidelines for proponents on how to assess a project's health and socio-economic effects. He concluded by discussing the roles and responsibilities of provincial and local health and environmental departments in the provincial EA process.

REVIEW OF THE DISCUSSION PAPER ON A NATIONAL HEALTH GUIDE FOR EA

The breakout groups agreed that there is a need for a national guide on health and EA and provide several suggestions:

Audiences

It was agreed that there are several audiences for a national guide, including the public, proponents, decision-makers, the media and EA reviewers. This suggests that two documents could be prepared, including a general background paper and a 'how to' guide.

Need and Purpose

One of the breakout groups agreed that a national guide(s) should promote national consistency in how health is included in EA, improve the quality of health considerations in EA and strengthen the role of health in EA. Several participants stated that a national

guide should not impose additional unreasonable work on proponents or EA reviewers.

Style

There was a consensus that any guidance material should be descriptive, rather than prescriptive, and that they should be seen as evolving documents. There should be a focus on local community environmental health issues.

CASE STUDIES

Two case studies were presented and discussed:

- \$ The Kemano completion project
- \$ A hypothetical role playing environmental assessment

Issues that were discussed following the presentation and role playing exercise included the responsibility of government regulators and proponents for ensuring early and ongoing public participation, the importance of involving First Nations people, and the need to consider all relevant health issues in EA even though this can be difficult because of data deficiencies and uncertainties.

PRIORITIES AND NEEDS

Roy Kwiatkowski gave a presentation on the opportunities for including health in EA and after this there was a general discussion of priorities and needs. The following priorities and needs were identified:

The Scope of Health In EA

Workshop participants agreed that there is a need to scope the health issues that should be included in EA, especially which socio-economic, socio-cultural and psycho-social considerations should be included and how.

Communications and Community Participation

There was a consensus that there is a need to improve communications among all stakeholders on the health component of EA. There was also agreement that proponents and government regulators should encourage early and ongoing community participation in EAs.

Strengthen the Science

Participants agreed that scientific methods for assessing health in small populations,

collecting and analysing baseline information and linking socio-economic conditions and health should be strengthened.

Keep it Simple

Participants stated that health should be integrated into EA in a simple, rational, equitable and consistent manner. Health assessment should not become a parallel process to EA and requirements for health should not impose an additional burden on proponents or EA regulators.

ISSUES IDENTIFIED IN BREAKOUT GROUPS

- Lack of standards/guidelines. Lack of data to base standards on and to answer questions being asked in EA.
- Who should pay for collecting new data?
- How should health parameters be compared with socio-economic health and well-being?
- The importance of assessing indirect health effects.
- Need to gain the trust of the community and meet with them often and in advance.
- Need to commit time and resources to live in a community before doing an EA.
- What are appropriate indicators of health. Use of medical databases may have limitations.
- Age-old questions:
 - Industry to regulator: Tell us exactly what you want
 - Regulator to industry: Tell us what you can provide
- Regulator should specify an appropriate level of information for a specific EA.
- Need cost-effective approaches to get government and industry working together and include the public.
- Who requires more data - insurers/banks or regulators?
- The importance of cumulative effects.

- Measurability of physical health effects, hard science, objectivity. We have tools (toxicology and epidemiology) and trained professionals. Can measure 1ppq. But, it is only a snapshot and there can be conflict over the same data set.
- Perceptions - socio-cultural effects feelings, intuitions, self-reported health, subjectivity. We don't have tools or trained professionals. Can't measure community breakdown. But increasing interest in Europe and acceptance at the federal level.
- What can we measure re: non-physical health?
 - BC/Alberta population health goals, objectives and indicators
 - Food warnings, diet patterns
 - Alaska highway experience
- Informing the decision-making process. What do decision-makers need? Science is only part of the process. Others include economy, media, polls, lobbying. Public polling bridges the gap between science and policy making.
- Incorporating health professionals in EA - important.
 - Designate who
 - Training
 - Modify epidemiological research to fit the issues
 - Involve health professionals at the start to devise the questions to be asked in the health assessment
- Priorities
 - Resolve whether/how to include mental, spiritual, emotional, social impacts
 - Agree on a definition of health
 - Develop list of indicators for the WHO definitions of health
 - Make data more accessible at the community level
 - Communities to choose their own indicators
 - Strengthen epidemiologic tools
 - Improve training for health professionals in environmental health assessments

THE ROLE OF HEALTH PROFESSIONALS IN ENVIRONMENTAL ASSESSMENT

SUMMARY OF WORKSHOP PROCEEDINGS

NATIONAL CAPITAL REGION, MARCH 13, 1996

HISTORICAL OVERVIEW AND THE DETERMINANTS OF HEALTH

The first plenary session of this one-day workshop opened with a presentation by Roy Kwiatkowski on the activities that led up to the preparation of the Discussion Paper on the National Health Guide for Environmental Assessment and on the determinants of health.

Mr. Kwiatkowski outlined the chronology of events and discussed the role and mandate of the Federal-Provincial-Territorial Committee on Environmental and Occupational Health's Health Impact Assessment Taskforce. He outlined the Taskforce's two main objectives in preparing the Discussion Paper:

- to encourage the incorporation of health concern into environmental assessment (EA); and
- to promote national consistency in how health is included in EA, recognizing the diversity of Canadian EA legislation and regional differences.

He then discussed the determinants of health, as described in the report 'Strategies for Population Health: Investing the Health of Canadians' (1994), prepared by the Federal, Provincial, Territorial Advisory Committee on Population Health and he examined how the incorporation of health into EA can be used to address most of the key determinants of health. He concluded his presentation by discussing the proposed National Accord on Health and Environment and how it supports the inclusion of health in EA.

Following the presentation, there was some discussion about the role of health in strategic assessments, the need for improved risk communication and the effects of wage-based economies on Aboriginal communities.

ISSUES ASSOCIATED WITH INCLUDING HEALTH IN EA

The participants were divided into two breakout groups to discuss the issues associated with including health in EA. The two groups identified several different issues including:

The Need to Strengthen the Role of Health in EA

It was agreed that there is a need to strengthen the role of health in EA and that this could be done by including health in all federal departmental guides on the *Canadian Environmental Assessment Act*, further strengthening collaboration and coordination between health and EA practitioners, improving Health Canada's visibility as an 'expert

department', establishing stronger links with provincial departments, health associations, industry and municipalities and by preparing and distributing general educational material on health, the environment and EA.

Health Effects Should Be Considered in Scoping

There was a consensus that although it may not be necessary to do a health assessment in all EAs, especially at the screening level, it is important to consider whether or not a project will have any effects on health in the scoping stage (ie. at the beginning) of all EAs.

There Can Be a Mismatch Between Community Values and Science

There was agreement that scientifically-determined risks can be quite different from community perceptions of risk. Multi-stakeholder committees, such as those used in BC, can be helpful to deal with this issue.

It Can Be Difficult to Define Health in EAs

Most participants agreed that the health issues considered in EA should go beyond physical health effects and include socio-cultural effects, when appropriate. But the implications of including socio-cultural effects should be carefully thought through in advance, especially in terms of the methods, indicators, time and resources needed.

Health Should be Included in Strategic EAs

It was recognised that including health in project-level EA is only part of what is needed. There is also a need to ensure that policies, programs and plans support health and are consistent with the determinants of health. This could be facilitated by incorporating health into strategic EA.

REVIEW OF THE DISCUSSION PAPER ON A NATIONAL HEALTH GUIDE FOR EA

Everyone agreed that there is a need for a national guide and many suggestions were made about how to improve the guide including:

Audience

Workshop participants agreed there are several audiences or user groups for a national guide including the general public, health professionals and EA practitioners.

Structure

One of the breakout groups proposed that the guide(s) should contain different sections on background information, procedural aspects (simplifying what is in the discussion paper), the roles of health professionals and others, methods and an appendix with information on how individual, provincial and federal EA processes address health.

Contents

It was suggested that the guide(s) should focus on EAs of small projects and provide a scoping 'filter' to determine if a more extensive health assessment is needed. Also, the guide(s) should stress the benefits of including health in EA and mention cumulative effects on health.

Style

A reader-friendly question and answer format was suggested, with the key points being emphasised at the beginning of each section or chapter. One group discussed the need for full length (3-5 pages) case studies and incorporating a sectoral approach into the guide. Electronic and 'three-ring binder' versions of the guide were endorsed, including an index and a list of contacts.

Marketing

One of the breakout group suggested that the guide should be marketed on EA bulletin boards, etc.

PRIORITIES AND NEEDS

Roy Kwiatkowski gave a presentation on the opportunities for including health in EA and after this there was a general discussion about priorities and needs. Much of the discussion focussed on the need to improve risk communication on issues related to health and the environment in general, as well as in EAs. Participants agreed that there is a need to involve communities in decision-making about projects, so that they are part of the process, rather than being outsiders. If community perceptions are ignored people can feel angry, frustrated and alienated. The example of Health Canada's Community

Animation Program was discussed as means of promoting dialogue about environmental health risks. It was agreed that health professionals have an important role to play in helping to communicate information about environmental health risks.

ISSUES IDENTIFIED IN BREAKOUT GROUPS

- Health to be include in departmental CEAA manuals.
- Identify when health needs to be included in screening.
- Increase Health Canada visibility.
- Need to involve professional associations and municipalities.
- Importance of strategic EA.
- Use multi-stakeholder committees, e.g., in BC for public participation.
- Community values vs. Science. Role of traditional knowledge in EA.
- Health Canada to improve linkages:
 - provincial
 - health officers
 - health associations
 - industry
- Coping with shrinking resources. Need to make assessment of intangibles more feasible.
- Importance of scoping health issues early.
- Improve collaboration between health and EA professionals.
- Need general education on health and environmental issues.
- Need to expand the definition of health to include socio-cultural effects but consider cost, methods, indicators, etc. in advance.

APPENDIX C:
RESULTS OF THE QUESTIONNAIRE

A series of multi-stakeholder workshops on the role of health professionals in environmental assessment were held across Canada (Dartmouth, Montreal, Toronto, Winnipeg, Vancouver and Ottawa) between September 1995 and March 1996. Prior to the workshops, participants were provided with a number of background documents to assist them in the formulation of their ideas and concepts regarding the role of health professionals in environmental assessment. One of these documents was a pre-workshop questionnaire. The purpose of the questionnaire was to solicit written ideas and suggestions from participants on their individual experiences with incorporating health in project-level environmental assessment and on the paper entitled "*National Health Guide for Environmental Assessment - A Discussion Paper*". Approximately 340 questionnaires were sent out and 108 completed questionnaires were received. The questionnaire was divided into three general areas: general questions on vocation, experience and location of work; opinion questions on the role of health in environmental assessment; and, specific questions on need for and quality of the National Health Guide. An overview of the analyses done to establish if there were any significant differences among vocation, experience or location of work, with opinions on the role of health in environmental assessment, or the need and quality of the National Health Guide is provided in this Annex. Nine questionnaires were received from the National Capital Region after the analyses was completed. A re-analysis was not done, however a review of the nine questionnaires reveals that only question 12 was significantly changed. This change is noted in the text below.

Part 1: General Questions

1. In which region of Canada do you live and work? Please tick one:

	<u>n</u>	<u>%</u>
Atlantic	10	9.3
Quebec	20	18.5
Ontario	24	22.2
Prairie and Northern (Man., Sask., NWT)	27	25.0
Pacific and Yukon (Alberta, B.C., Yukon)	16	14.8
<u>National Capital</u>	<u>11</u>	<u>10.2</u>
Total	108	100.0

2. How would you describe yourself or your organisation? Please tick one:

	<u>n</u>	<u>%</u>
Federal government staff	38	35.5
Provincial/territorial government staff	39	36.6
Regional/municipal government staff	8	7.5
Health/environmental/labour NGO	3	2.8
Industry/industry association	7	6.5
Consultant	4	3.7
Aboriginal	2	1.9
<u>Other</u>	<u>6</u>	<u>5.6</u>
Total	107	100.0

3. What is your primary field of experience and knowledge? Please tick one:

	<u>n</u>	<u>%</u>
Health	39	36.5
Environment	39	36.4
Occupational Health	11	10.3
Other	9	8.4
<u>Combination*</u>	<u>9</u>	<u>8.4</u>
Total	107	100.0

* Some respondents selected more than one field.

**4. How would you describe your current level of activity on health and EA?
Please tick one:**

	<u>n</u>	<u>%</u>
None	12	11.3
Minimal (less than 5 days a year)	22	20.8
Moderate (5 - 100 days a year)	41	38.7
<u>Extensive (more than 100 days a year)</u>	<u>31</u>	<u>29.2</u>
Total	106	100.0

Part 2: The Role of Health in Environmental Assessment

5. In your opinion, what are the most important reasons for including health in EA? Please rank 1 - 6 in order of importance, 1 being the most important and 6 being the least important:

In order of average rank	Average rank	n =
Anticipating and preventing potential effects on health	1.48	102
Balancing beneficial and adverse effects on health, the environment and the economy	2.39	99
Providing information and data on health to politicians and other decision-makers	3.73	99
Ensuring compliance with legislation, standards, guidelines and objectives	4.08	97
To satisfy public concerns	4.14	96
Educating the public	4.79	96

Five respondents suggested additional reasons for including health in EA:

- Public concern about health of self and family.
- Help direct public health programs related to environmental health.
- Epidemiologic investigation.
- Better coordination among different levels of government, doctors and disciplines.
- To contribute directly to decision-making.

6. Do you think that occupational health should be included in EA, or be dealt with in other ways (e.g., permits, licenses)? Please tick one:

	<u>n</u>	<u>%</u>
Include in EA	75	70.8
<u>Dealt with in other ways</u>	<u>31</u>	<u>29.2</u>
Total	106	100.0

Question 6 (cont'd):

Respondents were asked to explain their reply. Representative comments from those who support including occupational health in EA include:

- Occupational health is just another factor that would give a more holistic approach to EA.
- EA by definition includes impacts on humans; how can you exclude occupational health?

Typical comments from those who believe occupational health should be dealt with in other ways include:

- Most jurisdictions handle occupational health issues with separate legislation and specific regulation. EA is therefore not appropriate.
- Occupational health is primarily concerned with the workers and workplace and EA is primarily focused on the effect of the work on the rest of the environment.

Crosstabulation of: Qu. 6. (Do you think that occupational health should be included in EA, or be dealt with in other ways?) with Qu. 3. (What is your primary field of experience and knowledge?) in percent.

<u>Experience</u>	<u>include in EA</u>	<u>other ways</u>
Occupational Health	100.0	0.0
Health	73.4	26.3
Environment	53.8	46.1
Other	100.0	0.0
<u>Combination</u>	<u>77.8</u>	<u>22.2</u>

7. What sources of information are most important to you in your work on health

and EA? Please rank 1 - 6 in order of importance, 1 being the most important and 6 being the least important:

In order of average rank	Average rank	n =
Government staff (health, environmental or occupational health)	2.52	102
Consultants' reports	2.58	101
Articles published in scientific journals	2.60	102
Health professionals, including doctors, nurses, etc.	3.57	98
Electronic databases and bulletin boards	4.33	101
The media (TV, newspapers, radio)	5.36	94

Other sources of information mentioned by respondents include:

- Public input from NGOs, individuals etc. at public information meetings.
- Networking with professionals in the field.
- Site visits, analytical results of samples, etc.
- First Nations' community assessments.
- Company's records.
- Science/health library books (references), government documents.

Several respondents discussed the inaccuracy of media reporting, and the future potential of electronic databases.

Crosstabulation of: Qu. 7. (What sources of information are most important to you in your work on health and EA? Consultants' reports) with Qu. 3. (What is your primary field of experience and knowledge?).

In order of average rank	Average rank	n =
Health	2.47	38
Overall Average	2.58	101
Environment	2.60	33
Occupational Health	3.20	10

Occupational Health staff rank the importance of Consultants' reports at 3.20, significantly lower than the Overall Average of 2.58 or the rankings of Health staff (2.47), and Environmental staff (2.60).

8. What approaches and methods do you think are the most important to assess the potential health effects of projects in EA? Please rank 1 - 7 in order of importance, 1 being the most important and 7 being the least important:

In order of average rank	Average rank	n =
Analyses of human exposure pathways	2.79	95
Quantitative scientific risk assessment	2.83	94
Using health-based standards, guidelines and objectives	3.16	94
Synthesising different information	3.80	90
Reviews of scientific literature	4.26	96
Matrices	4.79	87
Checklists	5.27	89

Several respondents commented that the most appropriate methods and approaches will vary depending on the project, and that a combination of approaches is needed:

- Most of the above are important and problems should be solved by picking the best combination of the above.
- Must differentiate between local and mega projects.

Respondents also suggested other approaches and methods:

- In the field of health physics, first you do a pathway analysis, then a quantitative risk assessment on the critical group identified by the pathway analysis.
- Epidemiological studies and/or research based on actual medical cases.
- Include traditional knowledge and experience of First Nations people.
- Professional judgment and experience. Views of local residents.
- Comparison with other similar projects for which contaminant emission rates are known.
- Quantitative/qualitative triangulation (to include psycho-social determinants of health and develop a social construct of risk).

Crosstabulation of: Qu. 8. (What approaches and methods do you think are the most important to assess the potential health effects of projects in EA? Checklists) with Qu. 1. (In which region of Canada do you live and work?).

In order of average rank	Average rank	n =
National Capital	3.55	11
Atlantic	4.43	2
Quebec	5.00	13
Overall Average	5.27	89
Prairie	5.28	25
Ontario	5.89	19
Pacific	6.07	14

Ranking for Checklists varies considerably by region. The National Capital average rank is highest, at 3.55, followed by the Atlantic region at 4.43, and Quebec at 5.00. The overall average is 5.27. Prairie region is close to the overall average at 5.28, followed by Ontario at 5.89, and Pacific at the lowest ranking of 6.07.

Crosstabulation of: Qu. 8. (What approaches and methods do you think are the most important to assess the potential health effects of projects in EA? Standards) with Qu. 2. (How would you describe yourself or your organisation?).

In order of average rank	Average rank	n =
Industry/industry association	2.40	5
Aboriginal	2.50	2
Federal government staff	3.06	35
Overall Average	3.16	94
Consultant	3.25	4
Provincial/territorial government staff	3.36	33
Health/environmental/labour NGO	3.67	3
Regional/municipal government staff	3.67	6

The average ranking for Standards is 3.16; however, there is a significant difference in ranking by organisation. Industry/industry association rank Standards highest (2.40), followed closely by Aboriginal (2.50), then Federal government staff (3.06). Ranging below the average ranking are Consultants (3.25), Provincial /territorial government staff (3.36), and tied for the lowest ranking, Health/environmental/labour NGOs (3.67) and Regional/municipal government staff (3.67).

9. Based on your experience, what are the major challenges associated with the role of health in EA? Please rank 1 - 9 in order of importance, 1 being the most important and 9 being the least important:

In order of average rank	Average rank	n =
Shortages of scientific data and information	2.53	98
Identifying the health issues to be included in an EA	3.25	97
Inadequate methods or procedures	3.37	96
Insufficient financial resources	4.77	90
Difficulties in finding people with appropriate expertise	4.80	94
Lack of consistency between federal/provincial EA processes	5.99	87
Public consultation	6.08	90
Working with government departments	6.42	90
Working with proponents	6.42	84

Respondents suggested a variety of other challenges:

- Commitment by government to carry out EA for health. If government commits to active funds and cost recovery policy will follow.
- Time delays because other departments assign lower priorities or lack resources to respond quickly.
- Any government agencies that identify 'EA' as a hindrance to development and therefore would short-circuit the process or eliminate it.
- Inclusion of traditional knowledge science methods in EA.
- Skepticism of public towards government officials and technical analyses.
- Inadequate time.

- Identifying health problems to be included in EA. In particular, identifying and selecting only those that actually contribute to decision-making. We cannot do everything.
- Inadequate scientific training of staff. Make risk assessment more consistent (increase social consistency). Incorporate multi-disciplinary skills.
- The definition of the dividing line between acceptable and unacceptable risk is the greatest challenge facing health professionals in EAs, because it depends on the perception of risk. Each individual is justified in fearing a one-in-a-million risk of contracting cancer, just as in hoping to win a lottery that offers the same probability. That is the problem with quantifying risk and the challenge of communicating it.

Crosstabulation of: Qu. 9. (Based on your experience, what are the major challenges associated with the role of health in EA? Public Consultation) with Qu. 2. (How would you describe yourself or your organisation?).

In order of average rank	Average rank	n =
Industry/industry association	3.67	6
Regional/municipal government staff	4.50	6
Consultant	5.25	4
Aboriginal	5.50	2
Overall Average	6.08	90
Federal government staff	6.12	33
Provincial/territorial government staff	6.43	30
Health/environmental/labour NGO	7.67	3

The average ranking for the challenge of Public Consultation is 6.08 (7th place out of 9). However, there are some large variations by type of organization. Industry/ industry association finds public consultation more of a challenge than the other organizations (average rank of 3.67). Regional/municipal government staff follow (4.50), then Consultants (5.25), and Aboriginal staff (5.50). Federal government staff find Public Involvement less of a challenge than average (6.12), as do Provincial/ territorial government staff (6.43), and Health/environmental/labour NGOs (7.67). Notice the four-point spread between the highest ranking (3.67 for Industry), and the lowest (7.67 for NGOs).

10. What should be done to address the major challenges associated with the role of health in EA? Please tick one or more:

In order of greatest support	number of respondents in support
Training and education	73
Preparation of publication of guidance material	68
More scientific research	58
Improved co-operation between government departments	44
More resources (financial)	43
More workshops, conferences, symposia	42
Preparing and distributing case studies	42
Preparation and distribution of public information	40
Amendments to EA legislation	22

Thirty four respondents ranked question 10, instead of ticking each item they supported. The top five in each rank have been entered as tick marks (five was chosen as this is the average number of items other respondents ticked).

Respondents also suggested a variety of other actions:

- Liaison with CEAA Agency.
- Make Health Department review a mandatory component of Environmental Assessment.
- Get proponents to include health-related information in EA documents, before the licensing process is initiated.
- Better and more specific standards and guidelines.
- Training of doctors. Too many experts on issues without adequate training or experience.
- To bring scientific and traditional knowledge together better we need to focus on common criteria of objectivity, time bases, etc.
- Ensuring that affected peoples, especially aboriginal, have the capacity to analyze information and contribute to EA process.
- In addition, frequent meetings of public servants in various departments working in EA (exchange, discussion).

11. Overall, do you think that the emphasis on health in EA should be increased, is about right or should be decreased? Please tick one.

	<u>n</u>	<u>%</u>
Should be increased	81	78.6
Is about right	22	21.4
<u>Should be decreased</u>	<u>0</u>	<u>0.0</u>
Total	103	100.0

Respondents have a variety of opinions about the emphasis on health in EA:

- EA already requires assessment of health; practices should be brought into line with requirements.
- Unless the public is convinced that a situation will not adversely affect their health their support for the process will be withheld. It is essential that the human health impacts be considered both early and in-depth in any EA.
- Many times the implication or long-term health effects are never discussed.
- EAs offer a rare opportunity for national study of projects and perhaps someday policies and programs, to make them healthy public policies.
- Is the health of future generations in a healthy environment not the main principle of sustainable development? Whether we like it or not, impacts on health will occupy increasing space in EAs.

**Part 3: The National Health Guide for Environmental Assessment:
A Discussion Paper**

12. Based on your experience, is there a need for a national guide on the role of health professionals in EA that is NOT SPECIFIC to any particular provincial or federal EA legislation? Please tick one:

	<u>n</u>	<u>%</u>
Yes	85	82.5
<u>No</u>	<u>18</u>	<u>17.5</u>
Total	103	100.0

If no, go to Question 23.

Respondents made a variety of arguments in support and in opposition to the guide:

- Yes. A national guide would provide 'objective' information and should not be contingent upon jurisdictional issues.

- Yes. But supplement with federally/provincially specific annexes to explain detailed procedures.
- Yes. A national guide is needed to ensure that health professionals are consulted in EA.
- No. Although the National Guide offers a good consolidation of the EA process and the health issues to be explored, this information is already available and in the public domain. Different types of proposals in varying jurisdictions will require project specific guidelines.
- No. At this time, we should equip ourselves with technical and scientific tools (eg. guidelines) that specifically show procedures for assessing health risks associated with programs, policies and specific activities.

Respondents from the National Capital Region were the most supportive of a national guide that is not specific to any particular legislation (100.0%), followed by Quebec (94.7%), the Atlantic region (90.0%), Prairie and Northern region (88.5%), Ontario (81.8%), and a distant last, Pacific and Yukon region (43.7%). Support for the National Guide by the National Capital Region decreases to 90% once the additional 9 questionnaires received after the analysis was done (Number of Yes 92, number of No 20, total 112).

13. Who do you think are the most important client or user groups for a national guide on the role of health professionals in EA? Please rank 1 - 7 in order of importance, 1 being the most important and 7 being the least important:

In order of average rank	Average rank	n =
Government EA professionals	2.26	78
Government health professionals	2.57	77
Proponents or industry	3.49	75
Government labour/occupational health professionals	3.67	75
Politicians and senior managers in government	4.81	72
Non-governmental groups	5.24	74
Aboriginal people or organizations	5.86	71

Respondents also suggested the following potential client groups:

- Universities.
- Doctors/nurses.
- Public Health Service
- The general public. After EA experts, decision-makers and public health practitioners, the public will profit the most from the application of such a guide.
- The media - they will have a field day with this guide when new projects are announced.

Crosstabulation of: Qu. 13. (What do you think are the most important client or user groups for a national guide on the role of health professionals in EA? Non-governmental groups) with Qu. 2. (How would you describe yourself or your organisation?).

In order of average rank	Average rank	n =
Industry/industry association	3.33	3
Aboriginal	5.00	2
Regional/municipal government staff	5.17	6
Overall Average	5.24	74
Provincial/territorial government staff	5.27	26
Federal government staff	5.53	30
Health/environmental/labour NGO	6.00	2
Consultant	6.00	1

Industry/industry association staff felt the guide would be of more use to Non-governmental groups (average rank of 3.33) than did any other group of respondents. Most other groups clustered around the average rank of 5.24, except Health/environmental/labour NGOs, and consultants (both at 6.00). (Note that NGOs assigned the lowest rank for the usefulness of the guide to NGOs).

14. Does the discussion paper cover the most important issues that should be dealt with in a national guide on the role of health professionals in EA? Please tick one:

	<u>n</u>	<u>%</u>
Yes	66	84.6
<u>No</u>	<u>12</u>	<u>15.4</u>
Total	78	100.0

Respondents who replied “No” were asked to explain:

- Yes. Issues yes, mechanisms no. Need specific guidelines e.g. Question and answer list.
- No. Does not assist in giving direction as how some of these criterion can be measured.
- No. the focus of the paper is on full EAs. The direction taken by EA administrators is to get away from these.
- No. No clear distinction between Environmental Assessment (generic) and Risk Management (local).
- The end point is not defined, i.e., when enough is enough.

15. In your opinion how would you describe the OVERALL STRUCTURE AND ORGANISATION of the discussion paper? Please circle one:

	<u>n</u>	<u>%</u>
Excellent	10	12.3
Good	49	60.6
Average	13	16.0
Satisfactory	7	8.6
<u>Poor</u>	<u>2</u>	<u>2.5</u>
Total	81	100.0

In written comments, respondents requested more information on ‘how to’ conduct a health environment assessment. There was concern that the paper is too long, and repetitive. There were also requests for more summaries and some reorganization.

16. In your opinion how would you describe the OVERALL CONTENTS of the discussion paper? Please circle one:

	<u>n</u>	<u>%</u>
Excellent	14	16.9
Good	43	51.8
Average	17	20.5
Satisfactory	7	8.4
<u>Poor</u>	<u>2</u>	<u>2.4</u>
Total	83	100.0

In written comments, respondents requested more ‘how to’ methodology, and made numerous other suggestions to improve the guide.

17. In your opinion how would you describe the OVERALL STYLE of the discussion paper? Please circle one:

	<u>n</u>	<u>%</u>
Excellent	10	12.5
Good	41	51.2
Average	23	28.8
Satisfactory	4	5.0
<u>Poor</u>	<u>2</u>	<u>2.5</u>
Total	80	100.0

Written comments ranged from “Easy to read and well organized” to “Cumbersome, repetitive and hard to follow”. Graphics are “good, clear, visually pleasing, well laid out” according to some respondents, but others felt the tables and figures are not adequately explained.

18. How long do you think a national guide on the role of health professionals in EA should be? Please tick one:

	<u>n</u>	<u>%</u>
Longer than the discussion paper (> 75 pages)	7	8.8
About the same length as the discussion paper (about 75 pages)	34	42.5
<u>Shorter than the discussion paper (< 75 pages)</u>	<u>39</u>	<u>48.7</u>
Total	80	100.0

19. Have you got any other comments or suggestions about the overall format or contents of a national guide:

Respondents had many and varied suggestions for changes to the guide. Opposing concerns about the paper being too long, but also needing more technical detail are addressed with suggestions to create two volumes: the first a brief, summary document and the second, a detailed 'how to' manual for practitioners.

20. Do you think that a checklist(s) should be included in a national guide on the role of health professionals in EA? Please tick one:

	<u>n</u>	<u>%</u>
Yes	69	90.8
No	<u>7</u>	<u>9.2</u>
Total	76	100.0

21. For each chapter (1 - 6) in the discussion paper, how would you describe the structure/organisation, the contents and the style?

Chapter 1: Introduction

	<u>n</u>	<u>%</u>
Excellent	9	12.5
Good	46	63.9
Average	8	11.1
Satisfactory	4	5.6
Poor	<u>5</u>	<u>6.9</u>
Total	72	100.0

Written comments ranged from criticism that Chapter 1 is wordy, and is not an introduction, to praise that it is concise, easy to follow, and a good overview.

Chapter 2: Health and EA

	<u>n</u>	<u>%</u>
Excellent	10	14.3
Good	43	61.5
Average	11	15.7
Satisfactory	5	7.1
<u>Poor</u>	<u>1</u>	<u>1.4</u>
Total	70	100.0

Comments about Chapter 2 are particularly favourable about the graphics, but a number of comments on how to improve the chapter were also made.

Chapter 3: Themes

	<u>n</u>	<u>%</u>
Excellent	11	15.9
Good	41	59.5
Average	14	20.3
Satisfactory	2	2.9
<u>Poor</u>	<u>1</u>	<u>1.4</u>
Total	70	100.0

Respondents commented that the issues are well presented, and some respondents felt it is the most interesting chapter, while others question its existence.

Chapter 4: General Guidelines

	<u>n</u>	<u>%</u>
Excellent	12	17.1
Good	43	61.4
Average	11	15.7
Satisfactory	3	4.3
<u>Poor</u>	<u>1</u>	<u>1.4</u>
Total	70	100.0

Written comments included the usual variation from “very comprehensive” to “needs more examples, more technical guidance, case studies”.

Chapter 5: Public Participation

	<u>n</u>	<u>%</u>
Excellent	7	10.3
Good	39	57.3
Average	18	26.5
Satisfactory	2	2.9
<u>Poor</u>	<u>2</u>	<u>2.9</u>
Total	68	100.0

Respondent comments ranged from “excellent, concise, appropriate emphasis” to questioning why public participation gets such prominence, with its own chapter.

Chapter 6: The Role of Health in the EA of Programs and Policies

	<u>n</u>	<u>%</u>
Excellent	8	11.9
Good	39	58.2
Average	16	23.9
Satisfactory	3	4.5
<u>Poor</u>	<u>1</u>	<u>1.5</u>
Total	67	100.0

Written comments ranged from “excellent, the most important chapter”, to questioning why the chapter exists.

22. Do you have any other comments on individual chapters of the discussion paper?

A variety of additional comments on individual chapters of the discussion paper were supplied. Examples:

- Should have overall conclusion/recommendations with scenarios on how health professionals might contribute to an interdepartmental multidisciplinary EA team.
- The comments on the "psycho-social" impacts are too soft. These effects are very difficult to measure or relate to a specific project.
- Mitigation methods appear to only address physical health. Would like to see discussion of well being, i.e. retention of "green spaces", natural areas, cultural heritage values etc.
- The introduction would be of little help to less informed practitioners in identifying problem areas. The guide is not aimed at non-experts. The checklist in the preamble makes no sense. The reader does not yet know what it is about.

23. Do you have any other general comments or suggestions?

A large number of comments were received. The following is a sampling:

- The document is at times superficial and repetitive. Overall the structure of the document is cumbersome.
- Overall, consistent, clear, well thought out, thorough, a very good discussion paper. Identifies and describes issues and procedures, without taking positions or making definite recommendations.
- Need to develop concept of decision-maker's information needs, role of health professional as expert advisor not decision-maker.
- For the benefit of EA practitioners seeking advice from health professionals, a short (4-5 pages) version of the role of the health professional in EA would be of tremendous assistance.
- Excellent initiative on condition that the Guide be revised and not be treated as a Bible used to punish anyone.
- Do not understand how the present document would be useful for health, environmental or proponent people involved in EA. Occupational issues should not be included.
- Involvement of workers and worker representatives should be emphasized.
- Interesting discussion paper with good ideas and an excellent underlying concept. However, as a public health physician with many other duties on a day-to-day basis (communicable disease, sanitation, etc.), I have concerns about finding time for this scope of health assessment for most projects.

A copy of the complete (unpublished) analysis of the 108 questionnaires can be obtained (in English only) by contacting:

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