

Canada and Global Knowledge Networks

May 15-16, 1997
Ottawa, Canada

Search Conference Summary Report

On May 15 and 16, 1997, the International Institute for Sustainable Development (IISD), the International Development Research Centre (IDRC), and the North-South Institute (NSI) convened a search conference of approximately 35 leaders in knowledge networks drawn from the private sector, non-governmental organizations (NGOs), research institutions, universities and government (see [Appendix A](#)). The purpose of the meeting was to build on conclusions from a November 1996 report, *Connecting with the World: Priorities for Canadian Internationalism in the 21st Century*.

A distinguished Task Force, headed by Maurice Strong, prepared the report at the request of the three convening organizations (see [Appendix B](#)). *Connecting with the World* recommends

"that knowledge, and the communication and information technologies that can advance knowledge, be placed front and centre in Canadian foreign policy and Canada's international outreach."

It further recommends that

"work begin immediately on the creation of information-based networks both real and virtual that can link institutions concerned about Canada's international outreach with each other and with counterpart networks and institutions in the developing world and beyond."

Connecting with the World raised several key questions about Canada's future capacity for international development and for our own transition to a knowledge-based economy.

- How should we re-orient our traditional commitment to development?
- How can we mobilize the wide range of elements in our society to enhance our well-being and that of others through new investments in and uses of knowledge networks and information and communication technologies (ICTs)?
- How can Canada become a leader in global knowledge sharing?

The search conference was the first event in a process to identify concrete strategies and actions which could be applied nationally, and by various organizations. A Steering Committee, established to direct the process, designed and participated in the search conference and will assist in implementing further action (see [Appendix C](#)).

During the conference, in small groups and then in plenary sessions, participants first discussed trends to the year 2010, assuming business as usual. They then examined a desirable future for Canada in the same period, if Canada begins now to redesign its future towards a knowledge-based approach to sustainable development, along the lines recommended by the Strong Task Force. After reviewing constraints to achieving the desirable future, the group examined ways to deal with them and defined significant opportunities. Finally, a plan of action was developed for implementation. The principal conclusions of the search conference are outlined below.

1. The conference supported the key recommendation of the Strong Task Force: "that knowledge and the communication and information technologies that can advance knowledge, be placed front and centre in Canadian foreign policy and Canada's international outreach."
2. The conference recommended that a much more extensive dialogue be launched in Canada to develop new investments in and uses for information technology and knowledge networks. It supported the Task Force recommendation that work begin immediately on the creation of new information-based networks, and the reinforcement of existing networks, to link Canadian and overseas institutions. By 2010, Canada should have developed an enhanced capacity to conduct public dialogue and to develop networks, partnerships and learning communities that link Canadians with people in all parts of the world. These networks should include citizens, governments, private sector organizations, NGOs, aid recipients and other partners. The networks should strengthen the information base required for Canadian well-being and help meet knowledge needs in developing regions.
3. Canada has a reputation for an ability to resolve conflict and to improve dialogue across borders. It should further develop these skills, to reduce polarization and to promote greater equity, both in Canada and internationally.
4. A plan of action should be developed to implement these recommendations, guided by the following "Ten Commandments":
 1. Build on what is going on in Canada. Inventory current policies, programs, and practices; develop ways to learn from both successes and failures and then show the world that we practice what we preach.
 2. Find ways to work with the private sector on issues where there are common goals.
 3. Build up a national strategy on knowledge and ICTs through stakeholder processes. The *Projet de Société* process provided useful lessons. The Acacia project at IDRC examines national strategies, policies, technology and infrastructure as the first step in wider stakeholder involvement.
 4. Open up the discussion to the public. Involve the media; they have a stake in these issues and are also a channel to the public.
 5. Incorporate programs for continuous learning and evaluation through the universities.
 6. Develop twinning arrangements among groups, networks, projects and communities in Canada and the developing world.
 7. Develop a Network of Centres of Excellence or build on existing ones.

8. Build all of this into the foreign policy agenda for international fora in which Canada assists in developing global policies.
9. Develop programs for youth such as a Netcorps.
10. Use innovation and imagination to develop new, less bureaucratic ways of operating.

Next Steps: Toward a Plan of Action to Build on the Task Force Report

1. IISD, IDRC and NSI should continue to take the lead in developing and implementing a plan of action. CIDA should become a partner. Early action should focus on fields such as health, education, environment and governance and the reinforcement of virtual institutions to tie together expertise across Canada. The strategy should include an approach to packaging and delivering products, processes and models.
2. Health provides an especially good example of a field in which Canada has an unusual set of experiences, highly relevant to other countries but not promoted nor widely known. Led by relevant organizations such as CIDA and the National Council on International Health, Canada should develop ways to package its knowledge and models for use around the world. The focus should be on capacity building. Such a package should respond to and encourage demand; it should have a tracking system to identify opportunities, it must have a financing process and it should include all Canadian initiatives.
3. A second Canadian "package of knowledge" could draw upon Canada's collective experience with the development of environmental laws, regulations and market-based mechanisms; its expertise in environmental technologies, environmental assessment, co-management of resources, environmental health etc.; and its participation in international environmental negotiations. Three principal elements of a framework to move forward could be (1) the sustainable management of renewable resources, (2) national compliance with international protocols on biodiversity, ozone, etc. and (3) climate change.
4. Another Canadian strength is good governance and public participation. Governance processes in Canada, including their strengths and weaknesses, should be documented. We should synthesize what we have learned about multistakeholder dialogue and apply it in a public consultation with Canadians on governance issues.
5. Canada has considerable experience with the development of information policies and regulations, the development of communications systems and software. It also has an enviable record of nurturing and stimulating its own cultural industries and it understands the role of traditional media and multi media in the democratization process. These experiences could provide one or several exportable packages.
6. Three major initiatives were proposed around the theme of "learning":
 - o "Meta fora" are frameworks for addressing issues by linking people around a common theme through use of on-line dialogue plus face-to-face meetings. A series of "meta fora" should be organized in fields such as business, health, education, environment, to explore Canada's future role in global development and to design a plan for international action. Each

forum will be designed collaboratively or in a consortium with the sector involved.

- Capacity building in networking, knowledge management and in the ability to work with ICTs is necessary in order to be an active participant at any level in the 21st century. Canada is already doing good work but could have a greater impact both at home and internationally with a quantum increase in resources and a more holistic approach. We should play a leading role in the world by supporting a program to develop capacity in ICTs and knowledge networking. Such a program would be targeted at: a) ICT infrastructure capacity development; b) capacity development in knowledge management technologies; and c) development of individual and organizational work capacity. All elements of the education system should make ICT part of basic education. Partnerships with organizations such as IDRC could help to build the capacity of NGOs to adapt to the knowledge-based society.
 - Primary education is a universal need. Canada should develop a learning demonstration using best-practice models. Organizations such as IDRC, CIDA, the Aga Khan Foundation, SchoolNet, BRAC (an educational NGO in Bangladesh), and the Tele-learning Network of Centres of Excellence should be involved, in collaboration with the private sector. This learning demonstration would provide information on best practices to educators in North and South. Such a project could have a significant development impact both in Canada and internationally. The next step could be for CIDA to provide a short proposal to BRAC or similar organizations to see if there is an interest in collaboration.
7. The private sector is an essential partner. The Steering Committee should be expanded to include private sector members. Agendas must be developed cooperatively so that private sector concerns are incorporated from the outset.

Appendix A: Search Conference Participants

First Name	Last Name	Organization
David	Balson	Executive Director Bellanet International Secretariat c/o IDRC 250 Albert St., PO Box 8500 Ottawa, ON K1G 3H9
Pierre	Beemans	Vice-President, Corporate Services International Development Research Centre 250 Albert St., PO Box 8500 Ottawa, ON K1G 3H9
Andrew	Bjerring	President and CEO Canadian Network for the Advancement of Research, Industry and Education CANARIE Inc. 410 Laurier St. West, Suite 470 Ottawa, ON K1P 6H5
Tim	Brodhead	President and CEO McConnell Family Foundation 1002 Sherbrooke St. West, 18th Floor Montreal, PQ H3A 3L6
Heather	Creech	Program Director, Information and Communications International Institute for Sustainable Development 161 Portage Ave. East, 6th Floor Winnipeg, MB R3B 0Y4
Wendy	Cukier	Professor, Department of Administration and Management Ryerson Polytechnic University 350 Victoria St. Toronto, ON M5B 2K3
Roy	Culpeper	President and CEO North-South Institute 200 - 55 Murray St. Ottawa, ON K1N 5M3

John	Evans	Chairman Torstar Corporation 1 Yonge St., 6th Floor Toronto, ON M5E 1P9
Jocelyn	Ghent Mallett	Member of the Chairman's Executive Council Newbridge Networks Corporation 580 Prospect Ave. Ottawa, ON K1M 0X7
Langston J.	Goree	Managing Director, Reporting Services International Institute for Sustainable Development c/o Earth Negotiations Bulletin 212 E. 47 St., Apt. 21F New York, NY 10017 - 2125 USA
Christopher	Greenshields	Director, Economic Relations with Developing Countries Division (EEA) Department of Foreign Affairs and International Trade Lester B. Pearson Building 125 Sussex Drive Ottawa, ON K1A 0G2
Arthur	Hanson	President and CEO International Institute for Sustainable Development 161 Portage Ave. East, 6th Floor Winnipeg, MB R3B 0Y4
David	Hopper	2136 Cathedral Avenue NW Washington, DC 20008-1502 USA
Ruth	Hopper	Attorney at Law 2136 Cathedral Avenue NW Washington, DC 20008-1502 USA
Joseph	Ingram	Program Manager Office of the Director Economic Development Institute The World Bank 1818 H Street NW

Washington, DC 20433 USA

Sam	Lanfranco	Senior Program Specialist Bellanet International Secretariat c/o IDRC 250 Albert St., PO Box 8500 Ottawa, ON K1G 3H9
Margo	Langford	Vice-President and General Counsel Istar Internet Inc. 250 Albert St. Ottawa, ON K1P 6M1
Pierre	Lebel	Communications Officer International Centre for Human Rights and Democratic Development 63, rue de Brésoles Montreal, P.Q. H2Y 1V7
Michael	McCracken	Chariman and CEO Informetrica 130 Slater St., 11th floor Ottawa, ON K1P 6E2
Rob	McLean	Executive Director IFIAS 39 Spadina Rd. Toronto, ON M5R 2S9
Sharmila	Mhatre	CIET Canada 478 Rideau St., #3 Ottawa, ON K1N 5Z4
Sue	Milne	Analyst, University and College Research Policy Industry Canada 235 Queen St. Ottawa, ON K1A 0H5
Maureen	O'Neil	President International Development Research Centre 250 Albert St., PO Box 8500 Ottawa, ON K1G 3H9
Thérèse	Paquet- Sévigny	Secrétaire-Générale Orbicom

800 De Maisonneuve East, Rm 7915
Montreal, PQ H2L 4L8

Pierre	Pichette	Director, Communication Strategies and Planning Department of Foreign Affairs and International Trade Lester B. Pearson Building 125 Sussex Drive Ottawa, ON K1A 0G2
John	Robinson	Vice President, Policy Branch Canadian International Development Agency 200 Promenade du Portage Hull, PQ K1A 0G4
Steve	Rosell	President The Meridian International Institute 1 Sansome St., Suite 2100 San Francisco, CA 94104 USA
David	Runnalls	Program Director, Trade and Sustainable Development, IISD c/o IDRC 250 Albert St., PO Box 8500 Ottawa, ON K1G 3H9
Rodger	Schwass	Search Conference Facilitator Box 51 Tara, ON N0H 2N0
Ian	Smillie	Development Consultant 618 Melbourne Ave. Ottawa, ON K2A 1X1
Rieky	Stuart	Program Manager Canadian Council for International Cooperation 1 Nicholas St., Suite 300 Ottawa, ON K1N 7B7
Robert	Valantin	Chief Scientist, Information International Development Research Centre 250 Albert St., PO Box 8500 Ottawa, ON K1G 3H9

Jim

Wall

Director General, International and Economic Issues,
Environment Canada
Les Terrasses de la Chaudière
10 Wellington St., Room 2232
Hull, PQ K1A 0H3

Appendix B: Connecting with the World: Priorities for Canadian Internationalism in the 21st Century

Members of the International Development Research and Policy Task Force

Maurice F. Strong (Chairman)

Jack Austin

Tim Brodhead

Margaret Catley-Carlson

John Evans

Yves Fortier

Gerald K. Helleiner

Pierre Marc Johnson

Janice Gross Stein

Summary of Recommendations (November 1996)

1. Knowledge, and the ICTs that can advance knowledge, should be placed front and centre in Canadian foreign policy and Canada's international outreach. Canada should position itself for the coming century as a creator and broker of knowledge for sustainable development.
2. Strong institutions and linkages between strong institutions will be essential to the creation and brokering of knowledge. Urgent action should be accorded to the institutional requirements of an effective knowledge system.
3. Canadian intervention should centre on our historical (and emerging) values and comparative advantages: support for democracy and good governance, human rights, peace and the rule of law; special emphasis on sustainable development; and reliance upon a confluence of skills, institutions, and industries combining knowledge, ICTs, and Canada's long history of international engagement and goodwill.
4. Work should begin immediately on the creation of information-based networks that can link institutions concerned about Canada's international outreach with each other and with counterpart networks and institutions in the developing world and beyond.
5. The value added in a new Canadian approach should revolve around the practicality of the knowledge, who captures it, and the uses to which it is put. The system should be based on the most up-to-date ICTs and be dynamic, participatory, and multidirectional.
6. A broader group should be assembled to design a Canadian program for knowledge-based networks.
7. Innovative funding mechanisms that might provide greater leverage for public investments should be developed.
8. By 1999, at least 15 percent of Canada's official development assistance should be allocated to knowledge and knowledge-related development programs, and this amount should thereafter increase.

9. Over a reasonable time period, recipient organizations should be required to commit themselves to a dollar-for-dollar match against ODA contributions. Such leverage of public grants should become one of the comparative advantages of institutions such as the three sponsors of the study.
10. The three sponsoring organizations (IISD, IDRC, and NSI) should set an example of leadership by establishing a joint communications program which could be extended over time to other institutions.
11. A priority for government and for joint action should be creating opportunities for youth and building international and policy-related capacity in the coming generation.
12. The three sponsoring organizations should be at the forefront in advising Canadian efforts on knowledge-based initiatives in the years ahead. This will mean greater cooperation between the three, as well as greater interaction with other sectors of society.

Appendix C: Members of the Steering Committee

Tim Brodhead	President and CEO, McConnell Family Foundation
Roy Culpeper	President and CEO, North-South Institute
Arthur J. Hanson	President and CEO, International Institute for Sustainable Development
Maureen O'Neil	President, International Development Research Centre
Thérèse Paquet-Sévigny	Secrétaire-Générale, Orbicom
David Runnalls	Program Director, Trade and Sustainable Development, IISD
Janice Stein	Harrowston Professor of Conflict and Negotiation, Department of Political Science, University of Toronto

Appendix D: Search Conference Notes

Introduction

On May 15 and 16, 1997, the International Development Research Centre (IDRC), the International Institute for Sustainable Development (IISD) and the North-South Institute (NSI), convened a workshop of 35 leaders from the private sector, NGOs, research institutions, universities and government, to discuss and recommend action on *Connecting with the World*, the November 1996 report of the International Development Research and Policy Task Force. The Task Force was sponsored by the three convening organizations and chaired by Maurice Strong.

The meeting was intended to seek practical application of Task Force recommendations. For this process, a Steering Committee was formed, consisting of the Presidents of the three sponsoring organizations, several members of the Task Force, and several interested individuals. The Steering Committee members designed and participated in the search conference and will assist in implementing follow-up to it.

A Search Conference format was used. It is a technique which assists people from diverse backgrounds to grapple with complex issues where there is rapid change and where many conflicting influences must be taken into account in developing a plan of action. Background materials were sent to all participants to provide information about Canada's role in relation to the emerging global knowledge networks.

During the search conference, in small groups and then in plenary sessions, participants first discussed the present situation and where it is likely to lead by the year 2010 if present trends continue. They then examined a desirable future for Canada in the same period, if Canada begins now to redesign its future along the lines recommended by the Strong Task Force. After reviewing constraints, the group examined ways to deal with them and defined significant opportunities which would become possible. Finally, a plan of action was developed for implementation by the three organizing bodies and other interested organizations.

This is the report of the search conference discussions. Further details can be obtained from any of the sponsors.

Opening Session

Arthur Hanson, President and CEO of IISD, noted in his opening remarks that globalization has meant the emergence simultaneously of rapid and inexpensive means for knowledge sharing, public understanding and new forms of cooperation, a widening gap between the information haves and the have-nots, and a long, slow decline in development cooperation.

As the Task Force pointed out, Canada will lose its place as one of the seven largest economies in the world and may well have difficulty remaining in the top 15 by early in

the next century. Canada's role in the world and the well-being of Canadians is directly tied to our capacity to understand and act on a complex, evolving set of knowledge bases, derived from an equally complex set of domestic and international relationships. The funding and organizational base to build this capacity may be eroding.

He noted that while *Connecting with the World* provided the springboard for the discussion, participants will want to amplify and perhaps move beyond the content of the report. It recommends "that knowledge, and the communication and information technologies that can advance knowledge, be placed front and centre in Canadian foreign policy and Canada's international outreach". The conference participants need to develop ideas on how to mobilize the much wider range of elements in Canadian society to enhance both Canadian well-being and the well-being of others through new investments in and uses of information technology and knowledge networks. The Task Force recommended that "work begin immediately on the creation of information-based networks both real and virtual that can link institutions concerned about Canada's international outreach with each other and with counterpart networks and institutions in the developing world and beyond." This is a key idea that needs to be carefully explored, given the significant investment already made by people attending the meeting and others involved in information sharing.

Several members of the Task Force who were present then provided an overview of the report. *Connecting with the World* raised several questions which the workshop might try to address:

- What role should Canada play with its diminishing resources devoted to international development?
- How do we build on our intellectual capital?
- How can more resources be devoted to the creation of knowledge?
- Sharing knowledge creates new knowledge. How can Canada become a leader in global knowledge sharing?
- How can Canadians outside the governmental system be involved?
- How could we bridge the new knowledge gap between 'knows' and 'know-nots' in Canada and elsewhere?

CIDA's Vice-President for Policy gave an overview of the Global Knowledge '97 Conference on Knowledge for Development in the Information Age, which was held in Toronto, June 22-25, 1997. The themes are: 'understanding the information revolution', 'sharing strategies, experiences and tools' and 'building new partnerships that empower the poor'. CIDA's focus will be on relating these themes to sustainable development. Questions to be addressed include; 'how do we ensure that benefits of the information revolution accrue to the marginalized in society', 'how do we partner and with whom' and 'how does the knowledge and information revolution affect sustainability'?

CIDA is concerned that, while the global knowledge revolution empowers those with access to its benefits, half the people of the world have never used a telephone. While some less developed countries (LDCs) may leap ahead, others could be left even further

behind. Other concerns are that information overload, communications confusion and an international information caste system will be created. On the other hand, information technology improves prospects for better health care, improved distance education, and overall democratization, provided that local knowledge can be combined with global knowledge. How can the new technologies be used to provide, for example, universal education in a country rather than just providing Internet hookups for a few universities?

The Canadian International Information Strategy (CIIS) was described by a representative of the Department of Foreign Affairs and International Trade (DFAIT). The idea is to create a strategy that will lead to a sustained economic presence for Canada in the world. Minister Lloyd Axworthy has Cabinet approval for the new strategy, which involves three areas: broadcasting, electronic networking and education and development. DFAIT is working with a consultant to flesh out the strategy, using focus groups and with participation from the private sector. The three-pillared foreign policy (security, prosperity, values) is popular among the consulted public.

Many smaller countries (Brazil, Portugal, Korea) have already developed a sustained electronic presence and several others are at about the same stage as Canada. DFAIT is now looking at existing mechanisms such as TV, Radio Canada international, the Internet, etc. It is expected that a plan will be ready for Cabinet in the fall.

The Present Situation and Where It Will Lead by 2010

The first task in the search conference was to explore the present situation and to extrapolate present trends into the future. The year 2010 was chosen as a target date for the projection. When the groups reconvened in plenary session, they reported the following observations.

Canada's role in the world economy will shrink as countries with larger population achieve 'development'. China will become the world's largest economy, followed by countries such as Brazil, Indonesia, India, etc. This could be good for everyone, and Canada should still enjoy a fair share of a much larger global economy. There will be larger markets for Canadian goods, even though Canada will have a smaller share of the market. Global Gross Domestic Product (GDP) should increase dramatically unless it is constrained by resource or environmental limits.

Canada will remain a major trading power. However, its renewable resources face limits (timber, fish, food production, energy) and exports cannot grow indefinitely if Canadian needs are to be met. Even so, Canada is capable of becoming a global power in the export of knowledge, especially since it is a leader in Information and Communication Technology (ICT).

Canada has an excellent international reputation for fairness and generosity. Through its role in mediation and peacekeeping and as a result of long-term aid programs, Canada is seen as a supporter of global equity. However, despite polls which show continuing strong support for aid from Canadians, the Federal aid budget has declined sharply in the

past five years. This is in line with trends in many but not all countries of the Organization for Economic Cooperation and Development (OECD). Flows of private capital, however, have increased sharply to some countries such as China, India, Indonesia and parts of Latin America. Major private investments are being considered, even for certain African countries. All the same, the gap between rich and poor continues to grow, both internationally and within Canada itself. The future prosperity and welfare of Canadians will continue to depend on a prosperous and sustainable world.

The capacity of government to influence policy and to manage change is shrinking. Globalization and free trade have removed many of the levers that governments traditionally used to manage and govern. The new agents of change are entrepreneurs and innovators (usually large multinationals, but increasingly, small, micro-providers). There are new conflicts between globalization and decentralization/localization. New relationships between governments and the private sector must be developed. ICTs support both globalization and localization and permit new forms of organization and new kinds of relationships between government and the private sector. At the same time, there are significant risks in the 'privatization of knowledge'.

From the discussion, the following questions arose to be addressed in the next session:

- Even if Canada has and can maintain a competitive advantage in knowledge, does it have the potential for a global leadership role?
- Is Canada in a position to acquire, use and disseminate the knowledge?
- Who are the clients likely to be?
- How can the capacity of potential users be developed?
- How can we build on what we have, e.g., an excellent education system?
- Can improved knowledge-brokering help us to improve, for example, our health system?
- Can it improve our ability to extend its best aspects to other countries?
- Is this really the basis for future export growth?

The Desirable Future: Canada's Potential Role in the 21st Century

In the next session, the three groups discussed a more desirable future for Canada, which could be achieved by the year 2010 if immediate action is initiated. The groups produced three reports, which were discussed in plenary session. The following is a summary of the main ideas.

By the year 2010, the desirable future should include an enhanced capacity to create and conduct public dialogue and to develop networks, partnerships and learning communities across boundaries both within Canada and globally. These networks will need to include citizens, governments, private sector organizations, NGOs, recipients of aid and other partners.

Important aspects of the desirable future will include the ability to develop new approaches to resolving conflict and new institutions and practices to improve dialogue

across boundaries. Ways will need to be found to reduce polarization and to promote greater equity, both in Canada and internationally.

A desirable future would include enhanced human security (physical, environmental, health, culture). It would include a stronger, knowledge-based economy and a well developed information infrastructure. New models of partnership would be developed between public and private sectors. Canada's best current example might be the Canadian Network for the Advancement of Research, Industry and Education (CANARIE). New models of non-profit public interest organizations are needed.

Other elements in a desirable Canadian future would be enhanced capacity to translate data and information into 'knowledge', greater capacity for multistakeholder processes and greater trust between the private sector, non-governmental organizations (NGOs) and government.

With respect to Canada's prospects to continue to be a model for the world, it is essential that Canadians get it right at home even as we export our values and models; that we practice at home what we preach internationally; that we achieve greater equity and reduced polarization in Canada before trying to achieve it internationally; and that as a culture, we try to achieve greater connectedness among groups.

The highest priority in a desirable future for Canada should be given to: education, governance, health, environment and culture and entertainment industries.

Education

A desirable future would include far broader access to education through information technologies and a shift to a culture of lifelong learning. Canada would develop a world class 'learnware' industry. Access routes to learning would be broadened for all Canadians and a better balance would be developed between liberal and technological education. Education for citizenship would be more important than it is today. Canada would be a pioneer for education in a multicultural society and would in this field become a model for the world. Canada would implement a full system for early childhood education. There would be greater community ownership and control of education systems.

Governance

A desirable future would include a broader sharing of knowledge in society, with a narrower gap between the 'knows' and the 'know-nots' in society. Actions of governments would be consistent with the core values of the society and there would be greater 'soft power' in NGOs and at the community level, exercised by women and groups now excluded from power.

Health

A desirable future would include greater empowerment by providing people with more information about the choices they make which affect their health. It would include the development of alternative and complementary healing systems and remedies drawn from around the world as well as from the medical model of the richest countries. It would include a vast change in pharmaceuticals, with the introduction of many traditional remedies. It would include improvements in policy design, care practices and health promotion at the community level. It would include far greater empowerment for women.

Environment

A desirable future would include a dramatic reduction in carbon emissions, major technological changes in energy conversion and use, major improvements in efficiency of use of natural resources and major changes in lifestyles which will permit a reasonable and sustainable standard of living for a much larger global population.

Culture

A desirable future would incorporate new approaches and tools to preserve and nurture Canadian culture and it would include a proactive strategy to preserve cultural diversity in the face of globalization. The entertainment industry will be one of the driving forces of the 21st century economy and will play a much greater role in providing information to society.

Constraints and Opportunities

In the search process, after developing a desirable or 'model' scenario for the future, it is important to recognize the constraints which must be dealt with to achieve it. It is also important to identify specific opportunities which could be significant in achieving the desirable future.

Knowledge Brokering

The most difficult concept in *Connecting with the World* is 'knowledge brokering'. The possible future role of Canada as 'honest broker' or packager and purveyor of information emerges as a cornerstone of the Task Force recommendations. Is this an appropriate way to consider the dissemination of research, which is based on the free flow of information? Many participants argued that in a 'wired world', any effort to 'broker' between sender and receiver or to act as 'gatekeeper' may be regarded with suspicion and hostility.

Others argued in favour of knowledge brokering. Their view was that knowledge brokering is merely filtering information, much of which is low quality, and determining how to package it so it can be used more effectively. Knowledge brokering implies a close relationship with the user, and creates opportunities to involve sectors that have not been much involved to date. It can be a very active and valuable function.

The group could see a role for knowledge brokering in projects with significant technical elements. Partners could buy knowledge through a broker arrangement.

However, it was agreed that the brokerage function is only part of the opportunity. We should build the learning structures to enable people to use the information.

Involving the Private Sector

A major constraint to involving the private sector is the present structure of the discussion. The agenda is still set by the public sector. Participants from the private sector pointed out that the meaningful participation of business will only occur when the agenda is set jointly. Until then, the private sector is likely to be a driver of technology but not a collaborative partner. If shared objectives can be developed, though, the private sector can make a creative and complementary contribution.

It was noted that the private sector contains a wide variety of organizations, from multinationals to local. What kind of private sector do we want to involve: multinationals, or small-scale, dynamic, bottom-up businesses? Or is it necessary to draw any such line?

Other Constraints

The world is moving toward more open systems where sender and user of information do not require 'knowledge brokers'. As one participant noted, people are looking for better access to information, not necessarily knowledge brokering. That term has a negative connotation in the private sector. Alternative terms would be 'synthesizer', 'packager' or 'producer', as in the movie industry.

Another constraint is that the power of computing has increased a millionfold in the past 25 years. In dealing with this pace of change, predicting how we will process information in 2010 is impossible.

Finally, we need greater connectedness among Canadian NGOs. Some NGOs do not understand how to use information technology. They need to understand the organizational changes that are necessary. Others are highly sophisticated in use of such technology but do not bridge across various themes or sectors.

Other Opportunities

Information and knowledge are the natural resources of the 21st century. Canada has specific expertise that can be shared around the world. We need to decide on areas of greatest strength, where we have the most suitable models for use in other parts of the world. Once we have identified the knowledge, experience and expertise that must be shared - technology is just the mechanism. However, we need to build trust, quality and access to the information.

A major aim of foreign policy is to create rule-based transparent systems for trade, environmental protection, travel, and so on. Canada should utilize ICTs as one means of achieving its foreign policy. We have a significant comparative advantage in this area because we may be trusted more than the US and other leading countries. Knowledge-based networks are independent of the GDP or power of a country.

A potential model for using networks to advance Canadian interests in certain areas and for knowledge brokering is the International Model Forest Network (IMFN), which was developed as part of the post-Rio process. It was established as a network of Canadian and international partners to generate new ideas and on-the-ground solutions to sustainable forest management issues. The IMFN Secretariat, based in Ottawa, facilitates the exchange of knowledge between model forests.

It was observed that IDRC has been a knowledge-based network since the beginning. ICTs are transforming the way such networks operate. Do ICTs eliminate the need for a Canadian-based knowledge network? So if we do not want to eliminate our Canadian-based knowledge network, what should we do? We should investigate how to use ICTs to do a better job.

Another example of the kind of role Canada can play is ACJNet. This web site brings together Canadian statutes pertaining to Internet law. It was established thanks to funding from the Canadian Department of Justice, partly as a response to the US-based International Internet Lawyers' Association.

Yet another example of a Canadian niche might be in influencing global negotiations. The Earth Negotiations Bulletin (ENB), has built up a trust relationship that might not have developed if it was a US-based institution. ENB has developed an ability to filter a huge amount of information each day. Part of our challenge is to figure out what is important and how to do this effectively and with value added.

Significant copyright issues exist and will be an important issue in relation to future knowledge network initiatives. Trade and sustainable development concerns will have to address such matters. Wide distribution of information and "value-added" competition in the transformation of information to knowledge are key matters at stake.

Soon there will be measures of the quality of information available from each country in the world, which could favour countries like Canada. The International Monetary Fund (IMF) is developing a measure of the quality of information being published by various countries.

Development of a Plan of Action

The group considered how one government could influence other governments and the role of ICT. One means could be by negotiated agreements which in theory represent a coalescence of Canadian views and a projection of Canadian values. The Rio process was a model of civil society involvement with governments and international organizations.

The Massachusetts Institute of Technology, Dalhousie and Carleton have developed centres with expertise on electronic negotiations on global issues. A possible next step might be to summarize what has been done in Canada for different ministries and what was learned from the Rio process which might assist in the development of future agreements.

The group then considered how Canada could project its values onto the world stage. This is constrained by the lack of receiving technology in developing countries. However, most countries have some technology through which Canada can access citizens and organizations. Radio Canada International, for example, if provided with greater resources, could reach most of the world. The Internet will gradually extend networks to communities and individuals far beyond the current reach.

With respect to Governance, there is a need for a good text on governance processes in Canada, including their strengths and weaknesses and broader applicability, which could be used as a base for public conversations both in Canada and abroad. In particular, we need to show what we have learned about dialogue among different interest groups and apply it in a public consultation with Canadians on governance issues.

With respect to Information and Communication, there is a need for mechanisms for maintaining Canadian leadership in communications theory and practice, including corporations, multimedia, etc. We need to learn how to retrofit institutions. Universities need to adopt information technology and all levels of the university system need to make ICT part of basic education, like literacy and numeracy.

Canadian NGOs need to be sensitized and trained by institutions such as IDRC, which have taken a lead in the field. The Acacia project at IDRC could be generalized more widely through a participatory process involving other Canadian institutions.

The Ten Commandments for Canada might be:

- i. Build on what is going on in Canada. Inventory what is going on; develop ways to learn from both successes and failures and then show the world that we practice what we preach.
- ii. Find ways to work with the private sector on issues where there are common goals.
- iii. Build up a national strategy in this area through stakeholder processes. The *Projet de Société* process provided useful lessons. The Acacia project at IDRC examines national strategies, policies, technology and infrastructure as the first step in wider stakeholder involvement.
- iv. Open up the discussion to the public and involve the media. They have a stake in these issues and are also a channel to the public.
- v. Incorporate programs for continuous learning and evaluation through the universities.

vi. Develop twinning arrangements among groups, networks, projects and communities in Canada and the developing world.

vii. Develop a network of Centres of Excellence or build on existing ones.

viii. Build all of this into the foreign policy agenda for G-7 Summits and other international conferences in which Canada assists in developing global policies.

ix. Develop programs for youth such as Netcorps.

x. Use innovation and imagination to develop new, less bureaucratic ways of operating.

The Canadian Government should coordinate among its various units. It could become the role model by involving the Prime Minister's Office (PMO), the Privy Council Office (PCO), DFAIT, other agencies and departments, and key organizations and private sector leaders in developing a future oriented strategy for use of ICT.

Participants discussed elements for a possible virtual organization for knowledge networking which could be created by CIDA and the three Task Force Sponsors, working with relevant organizations such as (for health) the National Council for International Health. The activities and focus of such a knowledge network would be stimulated by *country client demand*. It would need a mechanism for *identifying opportunities and sources of finance*, and would be supported by an *international communications node*. *Capacity building* would be a key element.

The discussions that followed centred on health, environment, and learning and education.

Health

Health was cited as an example where Canada has an unusual set of experiences, highly relevant to other countries but not as well promoted or widely known as it should be. A wide variety of organizations are involved, from local to national levels and involving every Canadian and every level of government. Various models of health care and health delivery have been tried, evaluated and adapted.

Canada needs a way of packaging its ideas, such as universal health care, for use in other parts of the world. The package needs to be attractive to encourage demand, it needs to have a tracking system to identify opportunities, it must have a financing process and it needs to include the major Canadian initiatives in its data base. It should include capacity building components.

CIDA should have an important role alongside the three venture partners which have sponsored this workshop. The group should add key national institutions, such as the National Council on International Health. The sponsoring institutions could take the

initiative to bring people together to facilitate the development of a plan for packaging and delivering the product.

Keys to the success of the project might be the establishment of 'intelligent nodes' where partner organizations and countries could receive the material; the involvement of partner organizations in capacity building and twinning arrangements; the development of a virtual organization rather than a bureaucratic one; and sufficient financial support.

Environment

A second Canadian 'package' might consist of its experience with the development of environmental laws, regulations and market-based mechanisms at home and its involvement in the negotiation of international agreements.

Canada has many international secretariats, research and policy institutes, round tables, environmental NGOs, university schools and faculties, industry-related groups, environmental law organizations, and so on. It has a quarter century of experience with environmental policies and extensive experience with environmental assessment methods, the co-management of resources, multistakeholder processes for dispute resolution, environmental law, Arctic and mountain issues, environmental health, etc. It has access to all technologies for environmental assessment from groundware to satellites and geographic information systems (GIS).

Despite all this, Canada has gone in five years from an international 'good guy' on environmental issues to an international villain as a result of its negative impact on climate change, its overuse of forests and fish and its continued role as the heaviest energy user on the planet. Canada could be perceived as an unsustainable society with declining environmental health.

A major Canadian initiative would need to involve Environment Canada and other environment and natural resources, agricultural, forestry and fisheries ministries from both national and provincial levels. In addition, key scientific institutes and key private sector organizations would have to be involved. Questions of major industrial and social restructuring would be addressed. Such an initiative might be welcomed by developing countries which are facing similar problems and are more likely to accept information from Canada than from countries which are having an even more significant impact on their resources. Canada is a rules-based power, so this initiative would be consistent with our commitment to cross-national sharing of information on how to achieve international protocols.

Three principal elements of a framework to move forward could be (1) the sustainable management of renewable resources, (2) national compliance with international protocols on biodiversity, ozone, etc. and (3) climate change.

Learning and Education

Another overarching theme was 'learning'. Three major initiatives were proposed: meta fora, capacity building, and primary education.

1. Meta fora, as proposed to the group, are dialogues crossing various boundaries based on subject matter or sector and founded on a level of trust-building among participants. They are a framework for resolving issues. Clients are specific to each forum. A combination of face-to-face meetings and on-line dialogue are used, with specific rules about process and time.
2. Capacity building in networking, knowledge management and in the ability to use ICTs is necessary in order to be an active participant at any level in the 21st century. For Canada to play a leading role in capacity building, a significant increase in resources and a more holistic approach are needed. A Canadian-based consortium should be developed, perhaps initiated by CIDA, involving the private sector and the policy community. Case studies of successful programs could be brought together in a virtual network to demonstrate lessons learned and to increase the opportunities for them to be modified locally and then applied elsewhere.
3. A learning demonstration for primary education should be developed using best-practice models from around the world. Organizations such as IDRC, CIDA, the Aga Khan Foundation, SchoolNet, BRAC (Bangladesh), and the Tele-Learning Network of Centres of Excellence should be involved, in collaboration with the private sector. Such a package should provide information on best practices to educators in North and South. This learning demonstration could have a positive effect on development education in Canada and internationally. The next step might be for CIDA to provide a short write-up to BRAC or similar organizations to see if there is an interest in collaboration.

There is great difficulty having a conversation across the public sector/private sector divide. Canada should develop new techniques for these conversations.

Next Steps

The concluding session was chaired by Arthur Hanson, President of IISD. He pledged early action by the sponsors to expand the Steering Committee and the process to include more representatives from the private sector and others not present at the search conference. The process would eventually be expanded to include potential clients from developing countries.

IISD, IDRC and NSI will continue to take the lead in developing and implementing an Action Plan. CIDA will be invited to become a core member of the group.

The Action Plan should include a focus on protocol diplomacy at the global level, as demonstrated in the environmental field. It should also include a leadership role in information and communications and the creation of virtual institutions to tie together pockets of expertise from across Canada.

The Steering Committee needs to further develop ideas on how to link Canadian capacity to international demand in fields such as basic education, health and sustainable development. In the case of health, a clear model needs to be articulated and to develop it, additional participants need to be involved. The goal should be to develop a cost-efficient way of building health care systems, using Canadian experience from both the private and public sectors.

In the case of education, the workshop has recommended a focus on primary education, distance education and tele-learning. This needs more work and consultation with existing educational institutions.

A follow-up meeting could be held in the fall, with the private sector. It is important that such a gathering be a success from the perspective of business. This will require careful planning by the Steering Committee.

The Steering Committee needs feedback from participants in this workshop on the process and substance for future events and activities. Suggestions for new relationships with the private sector are needed. The term 'knowledge broker' should be forgotten or replaced.

DFAIT will be fully briefed on workshop discussions and their relevance to the Canadian International Information Strategy, especially in relation to international development.

The three sponsors will work together to plan a schedule of steps during the summer, including meetings with the private sector. CIDA will be invited to join the sponsor group and the Steering Group will be expanded to include other key institutions. It may be useful to set up a series of specific dialogues or meta fora; a business forum, a health forum, an education forum, etc., to explore each area by having a public conversation about Canada's role in global development and to design international plans of action.