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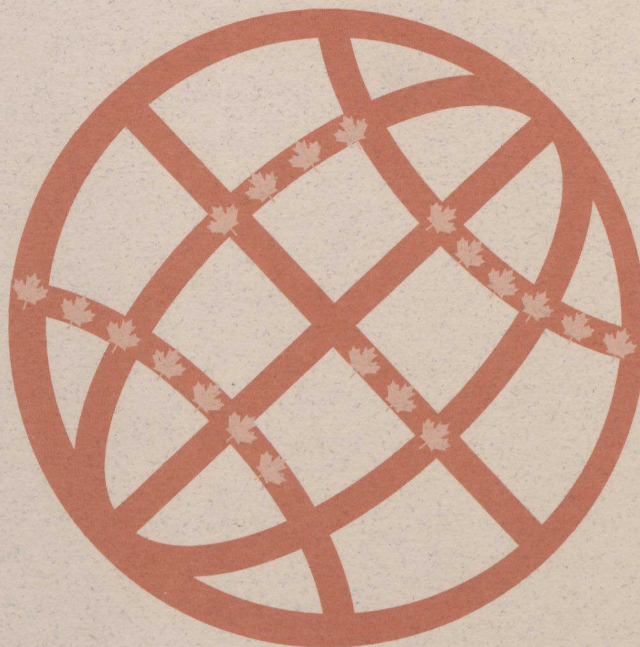
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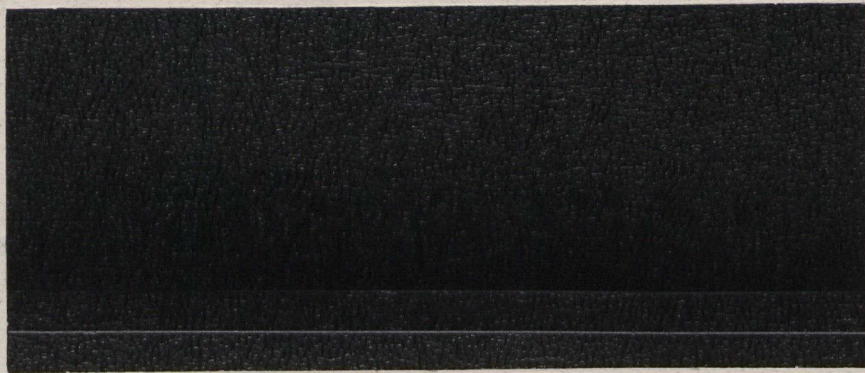


Centre canadien  
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**REPORT FROM THE ROUND TABLE ON  
*HUMAN SECURITY AND  
WATER-RELATED CONFLICT***

Ottawa  
April 13, 1999











125 Sussex Dr. Ottawa, Ontario K1A 0G2

## AGENDA

### Roundtable on Human Security and Water-Related Conflict

April 13, 1999

**Goals:** To assess the impact of water scarcity and conflicts over water on human security.

9:00 a.m. - 9:15 a.m. Welcoming remarks:

Chair: Steve Lee

National Director - Canadian Centre for  
Foreign Policy Development

Eric Hoskins

Policy Advisor - Office of the Minister of  
Foreign Affairs

9:15 a.m. - 9:30 a.m. Roundtable Introductions

#### PART 1

9:30 a.m. - 9:45 a.m. Opening Presentation - State of the World's Water  
Ralph Daley - UNU/TWEH McMaster University

9:45 a.m. - 10:15 a.m. Discussion

10:15 a.m. - 10:30 a.m. Canadian Experiences and Expertise  
Jennifer Moore - Director General - Eco Systems and Environmental  
Resources - Environment Canada

10:30 a.m. - 10:45 a.m. Nutrition Break

10:45 a.m. - 11:00 a.m. Water Management  
Richard Denham - RV Anderson Associates Ltd. Consulting  
Engineers

11:00 a.m. - 11:15 a.m. Conflict Resolution  
Stephen Owen QC - Director - Centre for Dispute Resolution  
University of Victoria

11:15 a.m. - 12:15 p.m. Discussion

12:15 p.m. - 1:00 p.m. Lunch

## PART 2

1:00 p.m. - 1:15 p.m. Assessing Scarcity and Possible Conflicts  
Ken Macartney - Director - Environmental Relations  
Department of Foreign Affairs and International Trade

1:15 p.m. - 2:00 p.m. Discussion

2:00 p.m. - 3:00 p.m. Thinking Ahead, Canada's Human Security Agenda and Water  
Next Steps

### Event Organizers:

John Hannigan - Consultant  
Penny Kerrigan - CCFPD  
Dr. Magda Opalski - Forum Eastern Europe

### Rapporteurs:

Marketa Geisler - CCFPD  
John Hannigan - Consultant

## REPORT FROM THE ROUND TABLE ON HUMAN SECURITY AND WATER CONFLICT

*The Canadian Centre for Foreign Policy Development, at the request of the Foreign Affairs Minister, Lloyd Axworthy, organised a round table in Ottawa on April 13, 1999, on Human Security and Water Conflicts. Participants included specialists on water-related issues, engineers, NGOs, conflict resolution experts, IJC experts, students as well as officials from the Department of Foreign Affairs and International Trade, Canadian International Development Agency, and Environment Canada. The round table addressed key water-related issues (water-resources, water-management, water-conflicts) in the broader framework of human security. The following is a report from the day-long discussion.*

### SUMMARY OF PRESENTATIONS

Following welcoming and introductory remarks by **Steven Lee**, National Director of the Canadian Centre for Foreign Policy Development, **Ralph Daley** of UNU opened the discussion with a brief presentation on the *State of the World's Water*. Professor Daley contended that growing water shortages from uneven distribution, wastage, and pollution coupled with rising water demand due to population growth have contributed to intensifying competition for fresh water resources. (20% of the world's population, concentrated in 30 countries, face water shortages -- a figure that will rise to 30% of the world's population, in 50 countries, by 2025. Meanwhile, water demand is increasing at twice the population growth rate). This competition is reflected in tensions over the purpose of water use (i.e., for household, industrial, or agricultural use), transboundary disputes over water quality and quantity, as well as past and present conflicts/wars.

Growing water scarcity has serious health and ecological implications and endangers the quality of water. If no action is taken to address these issues we may be faced with reduced resilience in human and ecological systems, increasing climate change, water-related diseases, salinisation, water pollution, collapse of aquatic ecosystems and water supplies, mass refugee migrations as well as escalating armed conflict.

Daley estimated the total cost for sanitation and safe water to be \$25 billion per year for 10 years. The best ways of dealing with the global water problem, he pointed out, would be through integrated water management (holistic, ecosystem-based, managed at the river basin level, aimed at reconciling the competing water demands with supply) and capacity building (including the social capacity to educate and train; the scientific capacity to monitor and assess the aquatic environment; the institutional capacity to plan, legislate, regulate and achieve compliance; and the economic capacity to provide sustainable services and products).

The next speaker was **Jennifer Moore** from Environment Canada. She spoke about how

Canada could contribute to resolving the global water problems. She pointed out that Canada has a wealth of experience and expertise in water-related issues including: 1) institutional arrangements for shared water management, 2) science/monitoring, and 3) capacity building. Areas that required some policy attention were: building a coherent network of "water players," building international capacity, as well as promoting opportunities for Canadian business and technology transfers.

Moore argued that there is a need to move beyond strategising towards implementing practical and pragmatic solutions. She pointed out that there exists currently room to address water related issues since the key players perceive a clean environment as a necessary condition for human security. There are 44 countries globally with 80% of their total areas within international basins. As well, there are more than 300 internationally shared basins. This situation should contribute to the development of an international cohesive water management strategy aimed at averting conflict.

She also brought up the issue of water export gaining momentum and the mixed record Canada has had in terms of fresh water management. Canada is the 2nd highest per capita user of fresh water in the world. Pollution in Canada continues to remain a threat to human health. Toxic substances and acid rain continue to damage Canadian ecosystems.

Following Jennifer Moore's presentation, **Richard Denham** of RV Anderson Associates addressed *Water Management Issues*. He argued that a water conflict resolution strategy could be conceptualised on a "sustainability continuum" in three categories (attached). Variables include a time horizon and methods of intervention. Positioned at the beginning of the continuum, relief efforts fall into the first category. They entail the provision of short term assistance in response to a sudden disaster and are mostly reactive. Moving along the continuum, the second category includes technical solutions that are capital intensive and rarely result in long term solutions. The last category involves conflict resolution and prevention and is the key to any sustainable solution. It is within this last category that Canada should develop a role as a skilled non-threatening facilitator in water-related disputes. He concluded by saying that the human security aspect can be dealt with only through facilitation efforts.

The next speaker, **Stephen Owen**, Director of the Centre for Dispute Resolution at the University of Victoria, addressed on water-related conflict resolution. At the outset of his presentation he pointed out that not all relationships involving water-sharing are negative and hostile. Any conflict resolution effort should tap the positive elements. Canada may contribute to the world water strategy through its own expertise with water use, land use, as well as by looking at the approach of its own aboriginal peoples to water management. He strongly stressed the necessity of collaboration among involved parties since most water disputes are 1) competing, 2) legitimate, and 3) interdependent. In some cases the range of issues in negotiations must be broadened so that all parties are able to "walk away with something." Decisions must be collective and include the public for any resolution to be sustainable. The up-stream/down-stream dichotomy does not hold since water problems are inter-related (i.e., fish may swim upstream). He further cautioned against the danger of imposing Canadian or western resolution methods on people who would otherwise approach water-related issues and disputes/conflicts



differently and perhaps more successfully. Some good examples of cooperation on water-related issues include the International Joint Commission (IJC).

The last speaker, **Ken Macartney**, Director of the Environmental Relations at DFAIT, pointed out that water-related issues impact all of the three basic pillars of Canadian foreign policy: 1) economic prosperity, 2) peace and security, and 3) Canadian values. In order to be economically prosperous resources have to be protected. Various organisations (IJC) and bilateral as well as international agreements on water sharing are integral to preventing conflict and maintaining peace -- necessary conditions of a prosperous trading system. Protecting the global commons and issues of human security as well as environmental security constitute an important part of the Canadian value system.

Mr. Macartney pointed out Canada could draw on government, NGOs, and other private and institutional support to contribute in international norm setting, offer policy advice on sustainable water management issues as well as conflict prevention. He also drew attention to the challenges of appearing too preachy when assisting countries with water problems that differ vastly in kind and scope. Other question he posed: In which context should global water issues be addressed (i.e., regionally or bilaterally)? How do we achieve coherence, coordination and cooperation in an environment of scarcity?

## **SYNOPSIS OF THE DISCUSSIONS**

The participants addressed the nature of water-related issues. Some raised the point that it is not quite clear how the topic fits within the human security context and therefore some basic definitional clarification is needed. **Until recently water-related issues have been primarily seen through the prism of water-related war/conflict (among states), putting the issues on the top of the human security agenda could prove challenging. This shift in focus should be accompanied by a shift from war/conflict terminology to that reflecting the new preoccupation with individuals and their well being. Redefining the nature of the problem naturally implies a change in strategy, leading to new dilemmas of how to approach water-related issues.** Different strategies have to be devised for different kinds of problems. For instance, the response to an armed conflict over water between states (as well as regions, communities, or nations) will be quite different than a response to a crisis brought about by natural causes or pollution. This reality poses not only conceptual but also institutional challenges. In particular, it requires coherence in foreign policy where development priorities (CIDA) become synonymous with human security preoccupations (DFAIT).

**While some argued vehemently for the human security approach to water-related issues, since there is nothing more threatening to human beings than the lack of food, water, and shelter; others pointed out the importance of seeing them in the context of environmental, ecological, and economic security.** They argued that the human security approach to water-related issues is flawed since it assumes that water-related problems occur in a vacuum and pointed out the necessity of seeing them as an integral part of a country's (region's)

economic, ecological, and environmental reality. This argument has clear implications on the strategies devised to cope with water-related problems.

The participants collectively raised the following reasons for the world water shortage:

- **uneven distribution**
- **consumerism**
- **wastage** including leakage, theft, and poor accounting
- **inefficient use of fresh water resources** including unsustainable use of underground water
- **pollution**
- growing water demand due to **population growth** (world population will have increased from 5.8 to 8.0 billion by 2025)
  - increasing urbanisation
  - increasing agricultural irrigation
  - increasing food production
- **rising standards of living** (in some parts of the world)

Solutions offered during the discussion were based on how problems were perceived. Some proposed political solutions (i.e., facilitation of conflict), while others addressed problems by looking at global economic inequalities (i.e., western consumerism). Technical solutions were also explored (i.e., methods of exploiting under-utilised sources of fresh water, treating and re-using domestic "grey" water, collection of rain water and moisture from sea fog). Attention was paid to countering the problem of uneven distribution through the movement of water, including water exports, and movement of products that require water in their production (virtual water). The contentious idea that Canada could/should export fresh water was also brought up, raising such dilemmas as "getting the price of water right."

## **POLICY OPTIONS: CANADIAN-BASED STRATEGY**

Some participants raised the point that since Canada has a wealth of experience dealing with its own water-related issues, a Canadian-based strategy could be developed to address global water-related problems. The key resources Canada could draw on in developing such a global strategy include:

- ▶ experience and expertise in **institutional arrangements for shared water management** (i.e., Canada-U.S. relations/**International Joint Commission**, the Great Lakes Water Quality Board, Prairie Provinces Water Board)
- ▶ experience and expertise in **water management in the context of federalism** (i.e., federal/provincial shared water management practices)
- ▶ experience and expertise in **science and monitoring** (i.e., Global environmental Monitoring Systems (GEMS), a worldwide water quality monitoring system based at NWRI in Burlington, **RAISON** -- decision making for watershed management, Canadian Water Quality Guidelines, ecological monitoring and assessment, risk and environmental

- ▶ impact assessment, pollution control and management of toxic substances, database management, hydrolic applications, environmental decisions support systems)
- ▶ experience and expertise in **capacity building** (i.e., application of river basin management, ecosystem and community-based approaches, education, technology transfer -- especially low cost technology to developing world)
- ▶ The **involvement of civil society** in water-related policy was also raised as an important component of any strategy, especially by Stephen Owen, University of Victoria.
- ▶ The need to bring together the major players for better **collaboration in order to build coherent international capacity** was voiced. The problem of coherence was also raised in relation to NGOs, international organisations dealing with water-related problems as well as the Canadian government itself (CIDA, DFAIT).
- ▶ Canada could lead the necessary **move from strategising to implementing concrete practical solutions**. Many participants pointed out that despite a myriad of meetings and conferences aimed at alleviating water-related problems, little has been done to actually implement the ideas they have generated. Others addressed the general ineffectiveness of formal agreements and protocols and suggested new practical ways of approaching water-related issues have to be found.
- ▶ Canada could play a role of a **skilled "neutral" facilitator to water-related disputes and conflict**.

## CONCLUSION

The idea that Canada is in a unique position to pursue a global strategy for water was reaffirmed by Ralph Daley and others. He said that given the good reputation Canada has in the world there is room for developing a **Canadian foreign policy niche in water-related issues**. Canada could, for example, produce the annual World Report on Water.

Steven Lee pointed out that many of the strategies suggested in the discussions reflect the soft power approach to foreign policy advanced by Minister Axworthy. Through the contributions of Canadians in science and monitoring, technology, capacity building, use and sharing of institutional models as well as coordination to help develop a cohesive international water management network Canada has a unique opportunity to impact positively a world water strategy.

In order to pursue these options, there is a need for commitment by the Canadian government as well as civil society sectors and the international community. Before a Canadian-based strategy for water is developed some key and difficult questions have to be answered. Among them are, for example: Should Canada get involved and why? Does Canada have sufficient resources to pursue such a strategy? What are our ultimate goals and expectations?





125 Sussex Dr. Ottawa, Ontario K1A 0G2

## Human Security and Water Conflict

### Invited Participants

Richard Ballhorn  
Director General  
International Environmental Affairs  
Department of Foreign Affairs and  
International Trade

Dr. Pierre Béland  
St. Lawrence National Institute of  
Ecotoxicology and (former commissioner)  
International Joint Commission

Nicholas Borsinger  
Advisor to the Secretary General  
Canadian Red Cross

Nicole Bosley  
Executive Director  
WaterCan

Tony Breuer  
Executive Director  
Partners in Rural Development

Prof. Mike Brklacich  
Department of Geography  
Carleton University

David Brooks  
International Development Research  
Centre

Susan Brown  
Chief, Peacebuilding Unit  
Multilateral Programs Branch  
Canadian International Development  
Agency

Mr. Charles Caccia, M.P.  
Member of Parliament

Paul Chambers  
Canadian International Development  
Agency

Ralph Daley  
UNU/IWEH  
McMaster University

Richard Denham  
RV Anderson Associates Ltd.  
Consulting Engineers

Andrew Hamilton  
Head, Science Division  
Commission for Environmental  
Cooperation

John Henderson  
Spider International

Christine Hogan  
Director International Relations  
Environment Canada

Eric Hoskins  
Policy Advisor  
Lloyd Axworthy Minister of Foreign  
Affairs

Don Hubert  
Co-ordinator of Humanitarian Affairs  
Dept. of Foreign Affairs and International  
Trade

Habib Khoury  
Hydrosult

Christine Lee  
Gordon Foundation

Judith Léveillé  
Policy Planning  
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Steve Lee  
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Cowater International Inc.

Prof. Steven Lonergan  
Department of Geography  
University of Victoria

Ken Macartney  
Director  
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Jim McCuaig  
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Jennifer Moore  
Director General  
Eco Systems and Environmental Resources  
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Stephen Owen, QC  
Professor of Law and Public Policy  
and Director Centre for Dispute Resolution  
University of Victoria

Ebyan Salah  
Som-Can Institute

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and International Water Engineering  
Centre Civil Engineering Department  
University of Ottawa

Aly Shady  
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Department of Foreign Affairs and  
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Necla Tschirgi  
International Development Research  
Centre

Kathy Vandergrift  
World Vision

Ruth Walker  
Christian Science Monitor

Regrets:

Paul Heinbecker  
ADM Global and Security Policy  
DFAIT

Anthony Clarke  
Senior Environmental Advisor  
International Joint Commission

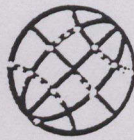
Yaprak Baltacioglu  
Director General  
International Relations  
Environment Canada

Rex Brynen  
McGill University

Prof. James Bater  
Department of Geography  
University of Waterloo

Dana Vindasius  
A/Chief  
National Water Issues Branch  
Environment Canada

Randolph Mank  
Director  
Policy Planning  
Dept. of Foreign Affairs and International  
Trade



125 Sussex Dr. Ottawa, Ontario K1A 0G2

April 1999

Dear Friends,

At the request of Foreign Affairs Minister Lloyd Axworthy, we are working with John Hannigan, Magda Opalski and others to bring together a diverse group of Canadians to address water conflicts as a global Human Security issue and to assess Canada's experience, expertise and leadership in water problems. I am pleased you can participate in this policy development roundtable to be held on Tuesday April 13, 1999 at room 214 Wellington Building, 180 Wellington St. (House of Commons), Ottawa, Ontario from 9:00 a.m. to 3:00 p.m.

Canadian experts have been invited to make short presentations to help generate a full discussion of issues and needs. The agenda, including invited presenters and the list of participants is attached. As you may know, Human Security has become a key theme and central objective of Canadian foreign policy. Promoting Human Security by addressing water-resource, water-management and water-conflicts could be a key element in Canada's interests abroad. Our roundtable provides an opportunity to assess Canadian interest, experience and expertise in water as we continue to develop Canada's Human Security approach to foreign policy. I look forward to seeing you on April 13.

Sincerely,

Steve Lee  
National Director

cc. Hoskins / Minister Axworthy  
Robinson / CIDA  
MHS  
MPH



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