

Roundtable on Freshwater – Emerging Threats and Urgent Priorities

Continuing program of the Global Issues Project of Science for Peace and Canadian Pugwash

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1. Background

It is difficult to overstate the importance of water. The sustainability of the natural ecosystem and the progress of human civilization depend on proper water management. Natural ecosystems increasingly lack adequate water supplies and are at risk of deteriorating and dying. This lack in turn negatively impacts human populations, who rely on healthy ecosystems for adequate water supplies, food, and the functioning of industry. Billions of people lack access to adequate water and sanitation services. This lack poses serious ethical and political problems for Canada and the world. Freshwater issues cannot be confined to one segment of experience. Rather they should be seen as an integrated whole, impacting all humanity. Thus the participation of Science for Peace and the Canadian Pugwash Group is most apt. The roundtable was organized by a subcommittee of the Global Issues Project with the support of the Walter and Duncan Gordon Foundation, Trinity College, University of Toronto, IHTEC, the Ontario Ministry of the Environment, and the Harbinger Foundation. It was also endorsed by the Canadian Commission for UNESCO, Council of Canadians, and Zerofootprint.

The Roundtable addressed contemporary threats and discussed emerging priorities related to a wide range of national and international water issues.

This report represents an attempt to separate the essential elements from the myriad ideas presented and discussed at the Roundtable on Freshwater.

Over 30 scholars, researchers, government officials, and policy analysts met for the Roundtable. The speakers and organizing committee are listed in Appendix 1. The conference was a continuation of previous roundtables held by the Global Issues Project in recent years on forests, and on energy and climate change, and represents again the changing global terrain we use to situate emerging global threats and ways to deal with them peacefully and sustainably. Thus, while water was the prevailing focus, discussed were issues as disparate as ecological governance, free trade, urbanization, the role of the state, human rights, aboriginal policy, geopolitics, spirituality, and U.S. Presidential politics. As you can see, and as many participants noted, water is life.

2. *Aims and target group*

The Eric Fawcett Public Forum on the first evening was the only public part of the whole event and drew public attention to pressing Canadian and international freshwater issues.

The overall aim of the Roundtable was to provide a forum for exchanging thoughts and ideas amongst an array of Canadian and international authorities on water issues. At the outset it was determined that a Freshwater Declaration be collaboratively produced such as could be accepted by the attendees. The Declaration would be circulated widely to policy-makers at all levels of government in Canada.

3. *Project results*

- The Eric Fawcett Public Forum was widely attended, both by Roundtable participants and the general public. Maude Barlow, President, Council of Canadians, Canada's foremost water advocate and United Nations Senior Advisor on Water, Aharon Zohar from the Inter-Disciplinary Centre, Herzelia, Carmei Yosef, Israel, and Jennifer McKay, Director, Centre for Comparative Water Policies and Laws, University of South Australia, all gave wide-ranging presentations. Ms. Barlow spoke of water as a moral imperative and a gift that needs constant protection. She emphasized that water should be viewed as a commons and a public trust. Dr Zohar spoke on water problems of the Middle East, as exacerbated by population growth and rising demand per capita. He expressed hope in long-term solutions such as the efficient exploitation of solar energy to treat wastewater for re-use in irrigation, and desalination technologies to treat saltwater and brackish water. Finally, Dr. McKay spoke on the

danger of water markets as a source of distribution, referencing specifically experiences in Australia.

- The closed discussions began on Saturday. In total 35 Canadian and international participants attended and provided unique commentary on a wide range of freshwater issues. Bob Sandford, Chair, Canadian Partnership United Nations Water for Life Decade, was unable to be present at the Friday Public Forum and was therefore invited to deliver his keynote address at the beginning of the first session. He warned that, as a consequence of growing populations and increased competition for land and water, humanity will need to make extremely difficult trade-offs on a global scale. The need to provide Nature with the water it needs to perpetuate our life-support system will be in competition with agricultural production. The Saturday sitting examined four broad sub-areas: water governance, water and peace, water security, and water and ecological governance. The sessions featured 16 substantive presentations by panelists. Debate was encouraged by scheduling half of each session for this purpose.
- A software calculator for the water footprint of individual households was made available.
- On the Sunday the Roundtable featured a quantitative/qualitative modeling workshop, and a workshop on Foresight, which is the name of an organization utilizing a method of projecting futures realistically by working back from an envisioned future to the present through practicable steps.
- The next session examined water, energy and security, while the final two sessions of the Roundtable examined the rapporteur's notes and included discussions on the follow-up proposals to be pursued.
- The intended Freshwater Declaration was drafted and conditionally accepted by a majority of the participants, pending final drafting. The Freshwater Declaration will be widely disseminated to all parliamentarians in Canada, with the intention of leading to direct and concerted action on the myriad freshwater problems the country experiences.
- The workshop facilitated new contacts. Many international linkages were established, and the strengthening of national ties between Canadian NGOs, academics, and government environmental scientists was evident.

4. *Assessment of activities/programmes*

There are no plans for an edited volume of presentations and papers. However, a CD of the sessions' presentations was distributed to all Roundtable attendees. All papers, powerpoint presentations and background papers will appear on

websites of one or more of the sponsors. Below are a few of the most significant substantive issues discussed and conclusions arrived at during the Roundtable:

1. **The recognition of people vs. nature:** In Australia, the Greater Middle East, Sri Lanka, or the western world, including Canada, humans are reaching the limits of old and current technologies and governance methods in being able to cope with pressing water needs.
[\(http://www.unesco.org/water/wwap/wwdr/wwdr2/\)](http://www.unesco.org/water/wwap/wwdr/wwdr2/)
 [\(http://www.ipcc.ch/ipccreports/ar-wg2.htm\)](http://www.ipcc.ch/ipccreports/ar-wg2.htm)
2. **The distinction between hard and soft paths to water:** The soft path to water is defined by four principles:
 - a. Treat water as a service rather than an end in itself
 - b. Make ecological sustainability a fundamental criterion
 - c. Match the quality of water delivered to that needed by the end-use
 - d. Plan from the desired future back to the present

It was reiterated that water management policies must shift to multidisciplinary soft path approaches rather than continue to rely on unsustainable supply and demand management.

[\(http://www.waterdsm.org/dsm_sp.htm\)](http://www.waterdsm.org/dsm_sp.htm)

3. **The recognition of the importance of water in important geostrategic regions:** There was emphasis on Middle East problems, where population growth, growing demand per capita and unequal availability among and within countries lead to particular stresses that impact paths to peace. Solutions encouraged to alleviate these problems include the efficient exploitation of solar energy to treat wastewater, as well as the promise of saltwater desalination. . Sri Lanka provides an example where water was an important element in a situation of active conflict. Security of supply is important worldwide. The very serious water shortage in Australia was shown to be most equitably managed by effective governance. Various regulatory measures were explained. [\(http://www.unisa.edu.au/waterpolicylaw/\)](http://www.unisa.edu.au/waterpolicylaw/)
4. **The recognition that current forms of governance might be self-terminating:** It was agreed that unsustainable approaches to water and the environment are likely to lead to an exacerbation of societal stresses that may undo our trust in current forms of democracy.
5. **The ongoing importance of the water-energy nexus:** There was continued discussion throughout the Roundtable of the intimate link between water use and energy use. It was asserted that a successful

- and sustainable approach to freshwater must adopt an integrated water-energy management strategy. In particular, the B.C. Energy Plan has generally been seen as progressive, though the return of a reliance on hydropower is an important development that needed to be scrutinized. It was suggested that those concerned with water should become more actively involved in energy circles as the two issues seem increasingly tied. (http://www.powi.ca/index_nexus.php)
- 6. The current status of water as a human right:** It was suggested that water for life (i.e. drinking, cleaning) is beyond debate as a fundamental human right; but that not all uses of water should be entrenched in rights. In fact, certain uses of water might best be commodified (for example, industrial cooling), so long as it is not privately priced. In summary, the Roundtable concluded that the terminology *public trust* was the most appropriate representation. (http://www.who.int/water_sanitation_health/rightwater/en/)
- 7. The recognition of the inherent linkages between the three major contemporary crises – energy, financial, and climate:** All three are dependent on governance. We must aim for more than market efficiency and require a new Canadian water ethic that recognizes limits, as well as seeks to reconnect community to nature. This new ethic would also recognize that “governance” extends beyond government and includes new stakeholders such as universities, civil society, and business. The group assembled for the Roundtable is a perfect example. Finally, the extension of governance necessitates the building of a bridge between science and policy. Water can be viewed as the conduit through which we see the integrated natural and social ecosystem. (<http://www.ecojustice.ca/clean-water>)
- 8. Progress on a new Canadian National Water Strategy must be pursued:** Doing so will help clarify roles, address gaps in capacity and provide consistency, and ensure effective responses. The CNWS should be built upon principles of integrated watershed management. We should consider the potential for a CNWS to be seen as a model for other countries. There is a need to extend the principles of IWM (Integrated Water Management), which are very strong at the local level, to the provincial and federal levels. It was debated whether IWM can be relied on, as there are examples where it failed (e.g. Israel). (<http://www.cwra.org/ResourceDiscussion.aspx#CNWS>)

9. Water holds an important spiritual place for humanity: There was wide agreement on this fact; though questions of appropriate water management are not so widely agreed upon. In particular, the role of the aboriginal community's understanding of water was discussed. A conception of "water custodianship" over "water ownership" was emphasized. (<http://www.cier.ca/protecting-lands-and-water>)

10. Qualitative and quantitative modeling systems can play a unique and important role: Different modeling systems provide water advocates and policy-makers particular insight into the complex world of water management. Foresight technology may help us and others prepare for the future and interpret the present in ways that create a coherent and functional forward view. Furthermore, these systems may help simplify complex scientific and engineering processes so as to engender understanding among government representatives who lack scientific backgrounds.

(<http://zerofootprint.net/>)

(<http://www.whatiftechnologies.com/>)

(<http://www.foresightcanada.ca/>)

11. There is a pressing requirement that we recognize nature's water needs: Canadians have tended to undervalue or underestimate instream flows. This tendency has led to many areas of neglect including overallocation, the resurgence of hydropower, and in the realm of watershed equity. Strategies to rectify this might include greater scientific participation, inside and outside government, the establishment of proactive limits, the creation of flexible institutionalization, and an emphasis on observable progress on the ground. (www.polisproject.org)

<http://www.naturequebec.org/pages/accueil.asp>

12. The 1992 Dublin Principles are an important benchmark in sustainable water management: The Dublin Principles state that

- a. Freshwater is a finite and vulnerable resource, essential to life, development and the environment;
- b. Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels;
- c. Women play a central part in the provision, management, and safeguarding of water;
- d. Water has an economic value in all its competing uses, and should be recognized as an economic good.

(<http://www.inpim.org/files/Documents/DublinStatmt.pdf>)

Future work:

1. Improvements to the draft Freshwater Declaration must be pursued. Unanimous acceptance of this statement is sought from all those who attended the roundtable.
2. It is urged that this statement be circulated not simply to Federal MPs and Senators but to elected members at all levels of government in Canada, and perhaps to other organizations, and the media — a “blanket approach.”
3. The creation of a follow-up committee was advocated, and a media coordination strategy to better circulate the ideas presented at the Roundtable to the general public.

5. Conclusion

The project was carried out according to the plans presented by the organizing committee. Feedback from many participants indicates that the expected results were exceeded and were greatly valued because of the new insights gained and establishment of new contacts that would assist and enhance ongoing work of individual participants. [Editor's note: the Freshwater Declaration has now been accomplished by the follow-up team.]

APPENDIX 1**The Global Issues Project Roundtable on Water, Nov 7 - 9, 2008****SPEAKERS:**

Maude Barlow, President, Council of Canadians; United Nations Senior Adviser on Water

Oliver Brandes, M.A., L.L.B., Director, POLIS Project on Ecological Governance, University of Victoria

David Brooks, Ph.D., Senior Adviser on Water, Friends of the Earth

James Bruce, D.E.S., D.Sc., O.C., FRSC, Chair, Expert Panel on Groundwater, Council of Canadian Academies, and first Director of Canada Centre for Inland Waters, Burlington

Randy Christensen, LL.B., Ecojustice Canada, Staff Lawyer

Ron Dembo, Ph.D., CEO, Zerofootprint Inc.

David Harries, Ph.D., Foresight Canada; Royal Military College, Kingston; Board of Directors, Canadian Pugwash

Michael Hoffman, whatIf?Technologies Inc

Marc Hudon, Director, Great Lakes and St-Lawrence program on transboundary water issues, Nature Quebec

Tony Maas, Senior Policy Adviser for Water, World Wildlife Fund Canada

Bert McInnis, Ph.D., Principle, whatIf?Technologies Inc.

Jennifer McKay, LLB, Ph.D., Director, Centre for Comparative Water Policies and Laws; University of South Australia, Fulbright Scholar

Sonya Meek, M.Sc., National President, Canadian Water Resources Association; Manager Watershed Planning Group, Toronto and Region Conservation Authority, Ecology Division

DLO Mendis, M.Sc (Agriculture), Engineer and scientist, formerly Technical Adviser, Ministry of Irrigation and Water Management, Sri Lanka. Secretary/Convener, Sri Lanka Pugwash Group

Linda Mortsch, Ph.D., Adaptation and Impacts Research Division, Environment Canada; Co-author, Part Two, 4th IPCC Report

Ralph Pentland, President, Ralbet Enterprises; Acting Chairman Canadian Water Issues Council

Merrell Ann Phare, LL.B., LL.M., Executive Director, Centre for Indigenous Environmental Resources.

Robert Sandford, Director, Western Watersheds Climate Research Collaborative, Chair Canadian Partnership United Nations Water for Life Decade

Stephen Scharper, Ph.D., Associate Professor, Centre for Environment and Centre for the Study of Religion, University of Toronto

John Smol, Ph.D., FRSC, Queen's University; Professor, Queen's University, holder of the Canada Research Chair in Environmental Change

Gordon Young, Ph.D., Formerly, Coordinator, United Nations World Water Assessment Programme and President-Elect, International Association of Hydrological Sciences

Aharon Zohar, Ph.D., Integrated Regional and Environment Planning, Inter-Disciplinary Centre, Herzelia, Carmei Yosef, Israel; consultant, water problems Middle East and North Africa

THE WATER ROUNDTABLE ORGANIZING COMMITTEE

Co-Chairs

Adele Buckley, Ph.D., D.Sc., Canadian Pugwash Group, Treasurer; formerly V.P. Technology & Research, OCETA &

Derek Paul, Ph.D., physics professor emeritus; Science for Peace, Treasurer

Members

Claus Brandes, banker (ret.)

Phyllis Creighton, M.A. (His), Faculty of Divinity, Trinity College; Board of Directors, Science for Peace

David Harries, Ph.D., Foresight Canada; Royal Military College, Kingston; Board of Directors, Canadian Pugwash

Julia Morton-Marr, DStG, B.Ed., Dip. T., founder of International Holistic Tourism Education Centre (IHTEC); Board of Directors, Science for Peace

