

Final e-Dialogue and e-Forum NWMO Series - Final Report, October 19-24, 2009

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Royal Roads University

nwmo

NUCLEAR WASTE
MANAGEMENT
ORGANIZATION

SOCIÉTÉ DE GESTION
DES DÉCHETS
NUCLÉAIRES



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Nuclear Waste Management Organization

The Nuclear Waste Management Organization (NWMO) was established in 2002 by Ontario Power Generation Inc., Hydro- Québec and New Brunswick Power Corporation in accordance with the *Nuclear Fuel Waste Act (NFWA)* to assume responsibility for the long-term management of Canada's used nuclear fuel.

NWMO's first mandate was to study options for the long-term management of used nuclear fuel. On June 14, 2007, the Government of Canada selected the NWMO's recommendation for Adaptive Phased Management (APM). The NWMO now has the mandate to implement the Government's decision.

Technically, Adaptive Phased Management (APM) has as its end-point the isolation and containment of used nuclear fuel in a deep repository constructed in a suitable rock formation. Collaboration, continuous learning and adaptability will underpin our implementation of the plan which will unfold over many decades, subject to extensive oversight and regulatory approvals.

NWMO Dialogue Reports

The work of the NWMO is premised on the understanding that citizens have the right to know about and participate in discussions and decisions that affect their quality of life, including the long-term management of used nuclear fuel. Citizens bring special insight and expertise which result in better decisions. Decisions about safety and risk are properly societal decisions and for this reason the priorities and concerns of a broad diversity of citizens, particularly those most affected, need to be taken into account throughout the process. A critical component of APM is the inclusive and collaborative process of dialogue and decision-making through the phases of implementation.

In order to ensure that the implementation of APM reflects the values, concerns and expectations of citizens at each step along the way, the NWMO plans to initiate a broad range of activities. For each of these activities, reports are prepared by those who designed and conducted the work. This document is one such report. The nature and conduct of our activities is expected to change over time, as best practices evolve and the needs and preferences of citizens with respect to dialogue on nuclear waste management questions is better understood.

Disclaimer:

This report does not necessarily reflect the views or position of the Nuclear Waste Management Organization, its directors, officers, employees and agents (the "NWMO") and unless otherwise specifically stated, is made available to the public by the NWMO for information only. The contents of this report reflect the views of the author(s) who are solely responsible for the text and its conclusions as well as the accuracy of any data used in its creation. The NWMO does not make any warranty, express or implied, or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information disclosed, or represent that the use of any information would not infringe privately owned rights. Any reference to a specific commercial product, process or service by trade name, trademark, manufacturer, or otherwise, does not constitute or imply its endorsement, recommendation, or preference by NWMO.

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Introduction

Royal Roads University has led a series of e-Dialogues on behalf of the Nuclear Waste Management Organization's (NWMO), and the last on-line real-time conversation was held on October 19, 2009, followed by a week long e-forum until October 24, 2009.

The e-Dialogue research project led by [Dr. Ann Dale](#), was created in 2002 to increase public literacy and education about critical public policy decisions. They are deliberately designed synchronous on-line spaces that bring together leading-edge researchers and practitioners who bring diverse perspectives to bear on public policy issues, specifically sustainable community development (www.e-Dialogues.ca). They are expertly moderated or co-moderated by Dr. Dale and her colleagues, who ensure that underlying tensions and differing perspectives are revealed through the course of the conversation.

Methodology

This e-Dialogue was designed to bring as many diverse perspectives as possible around four key questions on the draft siting plan for used nuclear fuel. The panel experts were Dr. Nola-Kate Seymoar, President of the International Institute for Sustainable Development; Jamie Doyle, Doctoral Student, Chemical and Environmental Toxicology, University of Ottawa; Dr. Robin Cox, Associate Professor, Disaster and Emergency Management, Royal Roads University; Dr. Art Hanson, Former President, International Institute for Sustainable Development, Lisa Hardess, manager of Building Sustainable Communities, Centre for Indigenous Environmental Research; and Dr. Lenore Newman, Assistant Professor, School of Environment Sustainability, Royal Roads University; and Dr. Marilyn Hamilton, President of Integral City Meshworks and TDG Global Learning Connections. In addition to their respective expertise, they are all experienced in engaging communities in a diversity of fora.

The e-Dialogue was led and moderated by Dr Ann Dale of Royal Roads University.

All participants were given a copy of the discussion document, *Moving Forward Together: Designing the Process for Selecting a Site*, and the discussion was guided by the following four questions. Panellists were asked to be as concrete as possible in offering suggestions against any critique in order to improve the siting process whenever a gap was identified.

1. Are the proposed siting principles (outlined on pages 16 and 17) fair and appropriate? What changes, if any, should be made?
2. Are the proposed decision-making steps (outlined in brief on page 29) consistent with selecting a site and making a fair decision? What changes, if any, should be made?
3. Does the proposed process provide for the kinds of information and tools (outlined on pages 33 to 35) that are needed to support the participation of communities that may be interested? What changes, if any, should be made?
4. What else needs to be considered?

Key Points

A copy of the entire discussion is archived at www.e-dialogues.ca, as are all the other five on-line conversations in this series. Below are the key points that emerged from the two hour panel discussion, October 19, 2009.

1. The management of used nuclear fuel is one of the most intergenerational issues facing modern day society, as are most waste issues.
2. The criteria for identifying an appropriate site should be broadened to consider culturally sensitive sites as well, that is, sites that are not deemed protected, heritage, or provincial and national parks, but nevertheless have high value are by the community, particularly indigenous communities.
3. The potential impacts of the site itself, in addition to the other appropriate site considerations, have to be factored into any decisions, for example, construction and operation of the facility on the local communities. Specifically, potential changes to the fabric of the community that may occur with the increase in population that the centre of expertise would bring to the community.
4. The question of First Nations claims must be considered primordial in any siting process, including those of adjacent communities and communities involved in transportation routes.
5. The principle of fairness must be applied by willing communities to ensure that voices that are often marginalized within official community decisions are included and heard. The proposed principles, therefore, should include a suggested practice for community engagement that addresses inclusivity, participatory decision-making processes, and so forth.
6. Community engagement processes should include open and continuous dialogic processes as well as more traditional instruments as part of the “learning by doing” part of adaptive management.
7. Greater clarity has to be brought around the definition of a ‘willing’ community. What is evidence of willingness—support from a municipal council, referenda, town hall meetings? More clarity is also required around what constitutes ‘adequate’ community engagement.

8. Which is preferable: one centralized storage site or several smaller ones? A risk analysis should be conducted to determine the answer to this question, given the NWMO mandate for adaptive phased management.
9. Adaptive phased management needs to be better explained in the document.
10. In addition to the attention paid to individual communities and communities along transportation routes, attention must also be given to other government level authorities, for example, provincial.
11. In terms of the Safety Siting principles, communities may define safety quite differently than the NWMO.
12. A risk assessment of the community itself, that is, its capacity for community engagement, stability of governance, long-term security, and so forth should also be considered, specifically, a more holistic risk/hazard capacity assessment to identify and map not only the risks and benefits (fiscal, social and cultural) but also the capacity and capability of the community to engage in the long-term decision-making and review process.
13. More attention should be paid to communities of interest, a critical part of any siting effort. The report is not clear on the responsibility of the proposed site community to define communities of interest, geographically adjacent, others because of transportation routes and those that will more widely be affected, regionally and nationally.
14. Neither the Principles nor the Steps outlined in the document address what form or level or body of justice would address issues of conflict. This should be included as a principle.
15. The question of legal implications and Aboriginal rights related to transportation routes has not been addressed in the report.
16. Communities may wish to secure funding to seek an independent peer review at all steps of the process.
17. There should be a definition of the core values/principles of public participation and a minimum standard of spectrum of participation needs to be outlined as part of the community decision process.
18. Depth of community consensus should be added as a criterion.
19. Ongoing responsibility and funding by the nuclear industry for the siting process should be included as principle.

Suggested additional tools, methods and sources of information

There a large number of proven and diverse tools and sources of information available for enhancing any community engagement process. The panellists suggested the following as particularly relevant tools, organisations and additional sources of information. It was felt that all of these could potentially improve, or support a community engagement process by any proposed and subsequently approved site community.

1. Socio-ecological and stakeholder mapping by any community to ensure a majority of stakeholders and social groups will be represented in the

- engagement process and to demonstrate capacity for holding a meaningful community engagement process (step 3)
2. Search conferences for community identification
 3. Planning charettes and community green mapping after site selection could help to ensure that the location of the above surface components of the site were included in a way that is sympathetic to the values the community places on its landscape and existing facilities (step 3)
 4. Knowledge feedback tool that formalises the incorporation of community values, perceptions and ideas into site planning, construction and operation on a continuous basis (step 3)
 5. Centre of Excellence beyond just technical, scientific aspects of site selection, but integrative in its approach, besides covering complex science, community engagement and development, and monitoring the broader impacts on both the community and the region
 6. Regional analysis and considerations
 7. Travel money to support field trips, study tours and exchanges with other communities in other countries
 8. Money for a community consultant directly accountable to them
 9. Scenario planning is a tool that allows visioning and increases learning on the impacts of a variety of different options and potential future events (step 3)
 10. <http://www.iap2.org/> International Association for Community Participation
 11. Consultation guidelines for the New Zealand Ministry of Health relating to the provision of health and disability services
<http://www.moh.govt.nz/moh.nsf/49ba80c00757b8804c256673001d47d0/6f050665da7e6246cc256c2b0077d71d?OpenDocument>
 12. Aboriginal consultation tools, <http://www.cier.ca/information-and-resources/publications-and-products.aspx?id=900>
 13. Government of New Brunswick table differentiating between dialogue and consultation, www.gnb.ca
 14. Ecoregion planning, that is, assuming a wide definition of community based on eco-regions¹
 15. Small open houses in the approved site community throughout the entire life of the project to ensure continuous learning and literacy
 16. Values-chain mapping, especially for communities of interest

Outstanding Questions

The expert panel raised a number of questions throughout the course of the discussion, which are listed below. These questions were posted in the subsequent e-forum and were asked on-line by NWMO staff.

¹ Ecoregions are areas that have distinctive, recurring patterns of vegetation and soil development, that are determined and controlled by local climate and geology. Also called natural regions, ecoregions differ from each other in their combinations of plant communities, landscapes, geology, and other features.

1. How does one address continuity of community interest?
2. How will community leader(s) within interested communities be defined/identified?
3. What kinds of disclosures would be needed to identify the interests of these leaders, what are their values/motivations?
4. What are the internal governance processes in the community: who will appoint the leaders to inquire and/or express interest?
5. At what point in the process should communities of interest be identified: as part of the expression of interest by a willing community?
6. Should communities of interest be limited to only people resident in Canada?
7. What is the role of Canadians spread across the country, who may have an interest, but no actual attachment to the area? What boundaries should there be on their input, if any?
8. How does a First Nation community make an informed decision?
9. When and how do First Nations rights and accommodations and legal requirement to consult come into play, especially with communities along a transportation route?
10. What are the requirements to communicate to the media, and should there be requirements to Gazette any of these stages?
11. Have sites near large urban centres been disadvantaged by this report?
12. Can a community withdraw at any stage in the process?
13. Is the agreement between the community and NWMO guaranteed by the Federal Government?
14. How will this process re integrated with the consultation process required under the Canadian Environmental Assessment Act?
15. What are the best practices from other sectors that could be applied here?

Conclusions

In general the process was considered favourably with regards to the site selection but it was felt that there were a few other aspects that a site might impact that were not being adequately considered. The precise nature of the community engagement, including time and spatial scale of the process and the methodologies being used was lacking in detail, for example:

1. insufficient consideration of the transportation routes;
2. need to consider the non-nuclear aspects of the site – i.e. impacts of the facility on the host community during the construction and operation phase – the project is likely to significantly change the socio-economic and demographic nature of the population of the host community especially in the short term.;
3. there are many tools and methods for community engagement of all types, perhaps this element of the report could be expanded; and
4. an undertaking to ensure that all groups within a willing community are genuinely supporting the process, and that they have the capacity to appreciate the

longitudinal, social and environmental impact of their commitment should be written into the process.

Dale
November 12, 2009

Appendix A: Participant Biographies

Moderator, Dr. Ann Dale



Ann Dale is a Professor at Royal Roads University, where she leads several research projects, including [e-Dialogues for Sustainable Development](#). She holds a Canada Research Chair in Sustainable Community Development, is a member of the World Academy of Art and Science, and recently received the 2009 Bissett Alumni Award for Distinctive Contributions to the Public Sector.

Expert Panel

Dr. Art Hanson



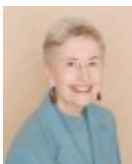
Dr. Hanson has worked with Chinese policy-makers over the past 15 years to introduce new concepts of environment and development through the China Council for International Cooperation on Environment and Development (CCICED). He is Distinguished Fellow and Past President of the International Institute for Sustainable Development. Dr. Hanson is an Officer of the Order of Canada.

Jamie Doyle



Mr. Doyle is currently a Ph.D. candidate in the Chemical and Environmental Toxicology program at the University of Ottawa. He has over 30 years experience in the nuclear and petrochemical industries. Mr. Doyle was a Principal and senior scientist at Jaques Whitford for five years where he specialized in nuclear projects and environmental assessments pursuant to CEAA. Mr. Doyle is a Project Management Professional and has contributed to international forums on nuclear waste with the International Atomic Energy Agency and environmental programs with NATO.

Marilyn Hamilton, President, Integral City Meshworks



Marilyn Hamilton is a Founding Member of the Integral Institute and Integral-Ecology. She has 25+ years of multi-sector, international organization development experience. Marilyn is Alumna of the Foundation for Community Encouragement and Past-CEO/Chair of Consulting Resource Group International Publishers.

Dr. Robin Cox, Head, Disaster Management and Planning, Royal Roads University



Robin Cox, is an Associate Professor of Disaster & Emergency Management in the Faculty of Social Science, Royal Roads University, Victoria, Canada. Her research and writing focuses on issues of community engagement and resilience in the context of disasters, climate change, and other catastrophic transitions, the psychosocial dimensions of pandemic planning, and workforce resilience. Robin is also active in the Canadian emergency response community.

Dr. Lenore Newman



Lenore Newman is a writer, teacher and researcher living in Vancouver. Lenore has a background in physics, complex systems theory, human geography, social change, and sustainability. Her research interests include sustainability at the community level and sustainable technology including biomimicry, the modeling of technology upon ecological systems.

Lisa Hardess



Lisa Hardess is the Manager of the Building Sustainable Communities program area with the Centre for Indigenous Environmental Resources (CIER), where she has worked for the past seven years. She has experience leading a variety of projects focusing on First Nation community comprehensive planning, adaptation for climate change, environmental assessment, strategic planning and visioning, community engagement and watershed planning.

Dr. Nola-Kate Seymoar



Nola-Kate Seymoar has worked in sustainable development since the late 1980s and is the President and CEO of the International Centre for Sustainable Cities ([hyperlink this](#)). Dr. Seymoar serves on UBC and SFU Advisory Boards and is a member of the Canadian Landmines Foundation and Global Urban Development (formerly the Prague Institute). She is Trudeau mentor and received the Queen's Jubilee Medal in 2002.

Dr. Chris Ling



Chris is a recent post-doctoral fellow living in Victoria, British Columbia. He is Associate Faculty at Royal Roads University and is part of the Canada Research Chair in Sustainable Community Development research team.