

“Ecohealth & Watersheds in Northern BC”:

Improving Social and Environmental Determinants of Health
through Integrated Health Governance

Executive Summary Report

Report Contents:

Executive Summary	Page 2
Project Overview	Page 6
List of Participants	Page 6
Agenda (Project Launch and Workshop)	Page 8
Project background	Page 11
References/Resources	Page 12
Appendix 1: Meeting Notes	
Appendix 2: Evaluation Form	
Appendix 3: Participant Bios	

Meeting Convened by:

Dr. Margot Parkes, Canada Research Chair
in Health, Ecosystems & Society, School of Health
Sciences, University of Northern British Columbia
(UNBC), and Northern Medical Program (UBC).

<http://www.unbc.ca/parkes/home.html>

In Collaboration with:



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“Ecohealth & Watersheds in Northern BC” Knowledge to Action Project Executive Summary of June 1-3 Project Launch Event

From June 1st-3rd, 2011, participants from academic, policy, government, and non-governmental backgrounds convened for the launch of the “Ecohealth & Watersheds in Northern BC: Improving Social and Environmental Determinants of Health through Integrated Health Governance” Knowledge to Action project. Focusing on integrated water governance as a vehicle to improve the social and environmental determinants of health, the purpose of this study is to strengthen capacity for intersectoral action in order to improve water-related determinants of health in northern BC.

Converging health impacts from socio-economic, environmental and demographic change in northern, rural, and remote communities within BC demand new levels of collaboration and integration in order to optimise limited resources, where issues of concern range from the sources, supply and safety of drinking water through to the role of water resources as a foundation for sustaining livelihoods, food security, economies and cultural values. By recognizing the particular need for intersectoral action at the nexus of water governance and the determinants of health, this project enables a diverse range of researchers and knowledge-users to collectively design, apply and evaluate collaborative tools, knowledge-to-action workshops, and specific case-study initiatives to facilitate the translation of critical insights. The project presents a unique opportunity to build understanding of knowledge integration, multi-stakeholder participation and collaborative learning, with conceptual and methodological implications ranging from the emerging field of ecohealth, to demands for scholarship of integration, engagement and application.

June 1st, 2011: Knowledge to Action Project Launch Event, (5:30-8:30pm)



The project launch took place at the Two Rivers Art Gallery in Prince George, highlighting the importance of innovation and creativity in this project as well as direct links with the project themes. Participants were welcomed to Leidlhi T'enneh traditional territory by elder Frank Frederick Sr., followed by opening remarks from Dr. Gail Fondahl, Vice President of Research at the University of Northern British Columbia (UNBC), Dr. Ronald Chapman, Chief Medical Officer of Health, and Cathy Ulrich, Chief Executive Officer, both of the Northern Health Authority (NH). The project overview and context were presented by project lead Dr. Margot Parkes, of UNBC, who highlighted how characteristics of Northern BC pose unique opportunities, as well as barriers

to, intersectoral collaborative efforts and integrated water governance.

Opening remarks were followed by interactive introductions and orientations, aimed at familiarizing participants with each other. The launch sought to orient the participants to the project's **faces** (research, government, watershed and community partners), **places** (Northern Fraser River Basin, Northern Health, QRRC, Northern watersheds), and **spaces** (specifically the gaps between 'knowledge' and 'action', jurisdictional gaps and opportunities for integration in water governance in Northern BC). To gain a sense of common questions, concerns and collective capacities, three topological maps of British Columbia (BC) were provided demarcating the NHA health delivery boundary and the watershed boundary of the Fraser River Basin. In addition, six large sheets of paper adorned the gallery walls, labelled with keywords associated with the project: 'health', 'governance', 'ecosystems', 'watersheds' 'knowledge', and 'action'. Participants were asked to outline and/or illustrate their understanding, questions, and concerns on the maps and the word banners within small working groups based on different affiliations: a.) UNBC/NHA/Local resident; b.) Northern watershed researcher; c.) Member of a network



affiliated with the project. The energy and enthusiasm expressed by participants during these interactions and exercises served to set the tone, as well as catalyze strong working relationships, for the remainder of the meeting and workshop.

June 2, 2011- Meeting and Workshop Day 1- (8:00am-4:30pm)

The two day meeting was initiated with an introduction by project Lead Dr. Margot Parkes, as well as an orientation to the questioning framework that directed the overall flow of the meeting (see Agenda, p.8). The guiding questions of **‘what should be’**, **‘what is’**, **‘what could be’**, and **‘what can be’** are informed by the work of Val Brown and others in applying collective learning to address complex problems at the interface of health and sustainability issues, and other ‘wicked problems’¹. The overall intent of the first day was to introduce participants to the each other and to commence the collective learning process, by working through the first of these three questions.

An initial round of introductions familiarized participants with each other, their links with the project, and also provided a chance to identify burning questions, specific insights, and areas of interest. The plenary discussion was initiated by Lucy Beck, Regional Director Environmental Health and Public Health Protection for the Northern Health Authority, who acknowledged the inherent challenges associated with conducting integrated intersectoral work, and her interest in processes that can foster the creative and imaginative leaps required for successful collaborative partnerships, which lead to practical contributions toward integrated water governance.

Following this orientation, the group was challenged to address the workshop themes with a collective consideration of **‘what should be’**. To achieve this, Dr. Hank Venema and Dr. Martin Bunch of the Network for Ecosystems, Sustainability and Health (NESH) co-facilitated a back-casting exercise that oriented to the ideals and principles of **‘what should be’**, by asking participants to imagine their desired future and identify how this project could facilitate the achievement of this vision. Their initial prompt stated: **“Imagine (not you) but someone you**

have influenced, in 25 years. They are working with an organization that successfully integrates social determinants of health on a watershed basis. This prompt was followed by critical reflection points, such as: **1.)** What does this organization do?; **2.)** How does the community express health? What does this look like?; **3.)** What does the watershed look like?; **4.)** How does this organization relate to the watershed?; and **5.)** How does the organization relate to people in the watershed?



This session generated far-ranging discussion and visions for the future, with overarching themes emphasizing the need for multi-scaled and

multi-stakeholder collaboration and knowledge translation, as a means to achieve multiple priorities. Specifically, priorities included the ability to: **i.)** Monitor and report on environmental trends, in conjunction with watershed and public health indicators in a manner that is accessible to a variety of audiences and transferable to multiple scales of analysis; **ii.)** Utilize technology, media, and education to acknowledge issues of public and watershed health, while primarily focusing on the promotion of positive descriptions of health and wellness, in order to develop meaningful connection to place; **iii.)** View watersheds as socio-ecological systems that evolve in relation to a multi-dimensional understanding of conservation and complex systems understanding which couples human, animal, and watershed needs; **iv.)** Create space for discussion and debate that takes into account the simultaneous management of both social and ecological needs; and **v.)** Organize partnerships and reform that

¹ See for example: Brown, V.A. 2010. Collective Inquiry and It's Wicked Problems. In *Tackling Wicked Problems: Through the Transdisciplinary Imagination*. , edited by V. A. Brown, J. A. Harris and J. Russel: Earthscan and Brown, V. 2007. Collective Decision-Making Bridging Public Health, Sustainability Governance and Environmental Management. In *Sustaining Life on Earth: Environmental and Human Health through Global Governance*, edited by C. Soskolne, L. Westra, L. J. Kotzé, B. Mackey, W. E. Rees and R. Westra: Lexington Books.

“Ecohealth & Watersheds in Northern BC:”

Improving Social and Environmental Determinants of Health through Integrated Health Governance

plan for, as well as assess, downstream effects from a hierarchical bio-regional perspective: community /watershed/ basin levels (For details, see Appendix 1).

The second phase of this back casting exercise shifted attention to ‘**capacities**’ to meet this future vision. Participants were asked to brainstorm responses to the prompt: ***In 2014, the current 'Knowledge to Action' Project is winding up (what collective capacities have we cultivated toward fulfilling our 2014 vision in Northern BC? & beyond?*** Responses to this activity highlighted the latent capacity of participants involved in the project to work together and build intersectoral partnerships, but also called attention to the need for specific capacities that are relevant to place, context, time, in different watersheds, whereby flexible partnerships can combine ‘next generation’ surveillance and monitoring with practical actions. Participants emphasised the importance of effective communication to maximise the capacity of this project to fulfil its objectives, underscored by the need for a clear understanding of roles and responsibilities of project partners and participants. Project partners were challenged to use language accessible both to the community and policy makers, especially when seeking integration and collaboration within different watershed initiatives.

Having explored participants vision of ‘**what should be**’ the subsequent session was aimed at grounding the project themes within examples of ‘**what is**’ - specifically in the context of three watershed projects in Northern BC: Dawson Creek (Kiskatinaw watershed), Quesnel River Research Centre (Quesnel Watershed) and Murray Creek (Nechako Watershed).



The Dawson Creek Domestic Watershed Stewardship Program was presented by Reg Whitten, a Planning and Agrology Consultant for InterraPlan Inc., who discussed a shared water use vision and water protection initiatives as methods to maintain water stewardship, water sustainability, and healthy communities in the Kiskatinaw watershed. Stephen Dery, Associate Professor and Canada Research Chair in Northern Hydrometeorology at UNBC, provided an overview of landscape ecology research and integrated watershed-based science conducted at the Quesnel River Research Centre and discussed how

the convergence of natural, social and health science within this research was enabling a more holistic understanding of the Quesnel watershed and understanding of the Fraser River Basin. Wayne Salewski of the Murray Creek Rehabilitation Project discussed how connections to place in Murray Creek have facilitated the creation of the project’s guiding principles, objectives and partnerships, and how this has informed the project’s rehabilitation, stewardship, and educational goals. Additionally, Scott Emmons of UNBC described new tools used to integrate information within the Murray Creek Rehabilitation project, as well as introduced longer term links which are aimed at expanding this project to within the Nechako Valley. The three presentations provided tangible examples of the state of knowledge and action in three Northern BC watersheds and the potential for new opportunities when health and wellbeing were an explicit part of intersectoral considerations.

Building on these three watershed examples of ‘**what is**’, participants were challenged in the afternoon to consider ‘**what could be**’ achieved during the course of this project by connecting current efforts with the vision participants had described for the future. A guiding question for this stage of the workshop was: ***What can we share, achieve, develop, and design by working together?***

Participants were asked to consider the collective assets from watershed, community, research and policy perspectives and to discuss the potential of working groups and future ‘knowledge to action’ workshops, as vehicles to progress collective learning in particular priority areas through during the course of the project. Recognising that themes may evolve over time, three working groups (WGI; WGII; and WGIII) were initiated from the morning’s deliberations and served to as the structure the focus for the afternoon (See Appendix 1, pp.21)



WGI focused on ‘*participatory approaches to mapping watersheds which link health, environment and community priorities*’ and began their discussion by highlighting the role of mapping in categorizing and analysing of physical,

“Ecohealth & Watersheds in Northern BC:”

Improving Social and Environmental Determinants of Health through Integrated Health Governance

economic, and social narratives which can be used to educate, empower, and facilitate change to address complex issues within watersheds. **WGII** examined *‘integrative approaches to watershed governance’* and their initial discussion highlighted the dilemma’s posed by the fact that watersheds are not bounded by a comprehensive jurisdictional and/or spatial scale and the subsequent imperative for intersectoral collaboration and partnerships to negotiate across governance systems and sectoral silos. **WGIII** considered how to *‘link surface and groundwater science by integrating social, ecological, cultural dimensions’*. Initial discussion from this group emphasised that conducting context-driven science, which utilized indicators of health as primary communication tools, to enable a more holistic approach to understanding human and watershed health.

The first day of the workshop concluded with a ‘synthesis’ session where each group summarised key issues and input was provided by project participants, as well as external project participants. Pierre Horwitz, theme leader for the Ramsar Convention Wetlands ‘Healthy People, Healthy Wetlands’ project joined the afternoon conversations via Skype from Edith Cowan University in Western Australia. This discussion provided reflection on how this project could navigate from *‘what should be’* and *‘what is’* to *‘what could be’* to improve the determinants of health through integrated water governance and started to shift the discussion to orient to collective preferences for project timelines, future knowledge to action activities and events, as well as communication outputs. Day one concluded with a team Dinner at Cimo’s Mediterranean Grill in Prince George.

June 3, 2011- Meeting and Workshop Day 2- (8:00am-4:30pm)

Dr. Margot Parkes began discussion on the second day by orienting participants to three questions that had arisen on the previous day, and which helped target specific plans and priorities for future actions and collective learning. These questions included: *(i)* How can we leave today feeling inspired?; *(ii)* How can we keep water-health connections at the fore?; and *(iii.)* How can we ‘walk our talk’ to do things better? The initial session for the day was designed to encourage cross-fertilisation and interaction among the three ‘working group’ themes and discussions initiated in Day One. Each of the three working groups reconvened to re-orient to project



priorities and assign a ‘host’ from each group to receive input and suggestions from other groups. This process served to highlight synergies and overlaps among the working groups. An overarching theme arising from this session was the importance of action, and the challenge for each working group to identify tangible outcomes and strategies to create links between health, environment and community within watershed governance.

Fuelled by interactions and suggestions from other participants, the three working groups reconvened and were challenged to identify *‘What can be’*

by distinguishing priorities for practical outcomes and concrete next steps. After separate discussions and deliberations, each working group presented their suggestion for the next phases of the project. **WGI**, whose theme centered on *‘participatory mapping’*, identified ongoing opportunities to pool participant knowledge and continue knowledge exchange about GIS and other spatial information technology as educational tools for community based learning and action with schools and community groups in watersheds. This was agreed as a priority theme for a future workshop. **WGII**, whose theme focused on *‘watershed governance’*, outlined three priorities for governance in this project including: i.) Developing knowledge to action workshops specifically focused on governance models; ii.) Mapping the internal governance of this project to include Co-Chairs (UNBC-NH), a northern ‘Steering Committee’, special advisors, a Memorandum of Understanding, Rules of Engagement, and a work plan; and iii.) To create space for ‘responsive’ working groups as the project developed. **WGIII**, whose theme was described as “joining the dots for watershed-based research” concluded that a key priority area for development was the idea of multi-stakeholder development of “watershed report cards”, as well as graphic models and mapping, as priority tools for intersectoral knowledge exchange and actions, which could usefully be developed during this project.

The final plenary discussion centred on consolidating timelines, next steps, and opportunities for future interaction. Within a one year timeline, participants agreed to: *i.)* Establish internal project governance (Steering Committee etc), and initiate tools for internal and external project communication; *ii.)* Identify and Engage with 3-4 watershed case-studies in a way that they understand why they are engaged and are interested in participating; *iii.)* Design knowledge-to-action workshop and annual meetings as opportunities to convene for discussion and professional development. A cross-cutting challenge that warrants early attention by the Steering Committee centres on creating a common language around pathways between Watersheds and Determinants of Health – this will be prioritised for upcoming interactions and workshops. The meeting concluded with the opportunity for participants to reflect upon their experiences around the circle of participants. Comments from this round table discussion reflected and re-iterated the energy and enthusiasm of participants throughout the workshop and highlighted how this project - including the proposed next steps and upcoming interactions -holds the potential to generate collective learning and action, by creating new conversations and opportunities for sharing and exchange beyond what can be achieved individually, by separate sectors, disciplines or even through learning separate watershed initiatives.

List of June 1-3 Participants

See also Appendix 3 for bios. (*) = launch only

- Lindsay Beck, UNBC Graduate Student, Masters in Community Health Sciences, Lucy Beck, Regional Director, Public Health Protection, Northern Health, and Northern Regional Drinking Water Team, Prince George BC
- Justus Benckhuysen, Murray Creek Rehabilitation Project, Vanderhoof, BC. Nechako Operations Coordinator, Rio Tinto Alcan. (*)
- Martin Bunch, NESH, Associate Professor, Faculty of Env. Studies, York University (NESH)
- Denise Canso, Health Project Officer, Research Office, UNBC (*)
- Laurie Chan, BC Leadership Chair's in Aboriginal Environmental Health, UNBC
- Ronald Chapman, Chief Medical Officer of Health, Northern Health, Prince George, BC (*)
- Stephen Déry, Canada Research Chair Northern Hydrometeorology, Assist. Professor, Env Sci & Engineering, UNBC
- Scott Emmons, GIS/RS Senior Lab Instructor, GIS Lab, UNBC
- Gail Fondahl, Vice President Research, UNBC (*)
- Bruce Gaunt, Drinking Water Planner, Public Health Protection, Northern Health, Prince George (*)
- James Haggerstone, Regional Manager for Health Information Analysis, Northern Health, Prince George
- Lars Hallström, NESH, Director, Alberta Centre for Sustainable Rural Communities, U of Alberta (NESH)
- Faye Hirschfield, UNBC Graduate Student, PhD in Hydraulic Engineering.
- Pierre Horwitz, Ramsar Convention on Wetlands, Scientific & Technical Review. Healthy Wetlands – Healthy People Theme, Associate Professor, Edith Cowan University, Western Australia
- Rodger Hunter, Coordinator, Cowichan Watershed Board, BC



“Ecohealth & Watersheds in Northern BC:”

Improving Social and Environmental Determinants of Health through Integrated Health Governance

- Larry Joseph, Forum for Research and Extension in Natural Resources (FORREX)
- Steve Litke, Program Manager, Fraser Basin Council, Vancouver, BC
- Tim Lambert, Executive Director, Health Protection, Ministry of Health Victoria, BC
- Courtney LeBourdais, UNBC Graduate Student Master of Arts, Natural Resources and Environmental Studies Program (Geography Stream), Research Assistant CoPEH-Canada
- Steve Litke, Program Manager, Fraser Basin Council, Vancouver, BC
- Jessica Madrid, Public Health Nurse, Northern Health, Masters in Community Health Sciences, UNBC (*)
- Pouyan Mahboubhi, UNBC Graduate Student, PhD NRES; Instructor, Northwest Community College
- Lorna Medd, Cowichan Watershed Board, Vancouver Island, BC
- Karen Morrison, Assistant Professor, Dept of Population Medicine, U. Guelph (NESH, CoPEH-Canada)
- Philip Owens, Research Chair in Landscape Ecology, Associate Professor, Environmental Science, UNBC
- Margot Parkes, Assistant Professor, School of Health Sciences, UNBC (NESH, CoPEH-Canada)
- Carlos Passos, Assistant Professor, Universidade de Brasilia Planaltina, DF – Brasil, CoPEH-LAC.
- Siddhartho Shekhar Paul, UNBC Graduate Student, MSc Environmental Science, UNBC
- Jamie Reschny, Research Program Manager for the School of Health Sciences, UNBC
- John Rex, Ministry of Forests & Range, Adjunct Professor, Geography Department, UNBC
- Terry Robert, Manager, Upper Fraser Region, Fraser Basin Council, Prince George, BC.
- Chris Rose, UNBC Graduate Student, Masters in Natural Resources and Environmental Studies.
- Johanne Saint-Charles, Directrice, Centre de recherche interdisciplinaire sur la biologie, la santé, la société et l'environnement, Associate Professeure, Université du Québec à Montréal, QB (CoPEH-Canada)
- Wayne Salewski, Murray Creek Rehabilitation Project, Vanderhoof BC.
- Kallie Smith, UNBC undergraduate student, Biology Program. Organising team for CIHR meeting
- Craig Stephen, Director, Centre for Coastal Health, Nainaimo and Faculty of Veterinary Medicine, University of Calgary, BC/AB (CoPEH-Canada).
- Loraina Stephen, Population Health Dietitian for the Northern Health Authority, and a regional lead for External Food Policy and Schools. (*)
- Celine Surette, Associate Professeure au Dépt de chimie et biochimie Université de Moncton, NB (CoPEH-Canada).
- David Tamblyn, Public Health Engineer, Northern Health Authority
- Cathy Ulrich, President and Chief Executive Officer of Northern Health (*)
- Henry Venema, Director, Sustainable Natural Resources Management, International Institute for Sustainable Development, Winnipeg, MB (NESH)
- Chelton van Geloven, Source Water Protection Hydrologist, Dam Safety Officer, BC Ministry of Natural Resource Operations. He is also Chair of the Northern Regional Drinking Water Team, Prince George, BC.
- David Waltner-Toews, Professor, Dept of Population Medicine, U. Guelph, ON (NESH, CoPEH-Canada)
- Jennifer Webb, National CoPEH-Canada Coordinator, Montreal, QB (CoPEH-Canada)
- Reg Whiten, Watershed Steward, City of Dawson Creek, BC.

Apologies:

- Charl Badenhorst, Chief Medical Health Officer, Northern Health, Prince George BC
- Margo Greenwood, Director, National Collaborating Centre for Aboriginal Health, UNBC
- Travis Holyk, Director of Research, Carrier Sekani Family Services, Prince George, BC
- Ellen Petticrew, Research Chair in Landscape Ecology, Professor, Geography, UNBC.
- Gary Theissen, Mayor of the District of Vanderhoof

“Ecohealth & Watersheds in Northern BC:”

Improving Social and Environmental Determinants of Health through Integrated Health Governance

Agenda: Project Launch, June 1st, 2011

Two Rivers Gallery, 725 Civic Plaza, Prince George.

Meeting Convened by: Margot Parkes, Canada Research Chair in Health, Ecosystems & Society, School of Health Sciences, University of Northern British Columbia (UNBC), and Northern Medical Program (UBC).

In collaboration with: University of Northern British Columbia, Northern Health, Northern Regional Drinking Water Team, Fraser Basin Council, National Collaborating Center for Aboriginal Health, Network for Ecosystem Sustainability and Health, Canadian Community of Practice in Ecosystem Approaches to Health, and others.

Funded by: Canadian Institute for Health Research, Knowledge Translation Branch

17:30 pm	Welcome to Leidlhi T'enneh traditional territory
17:45 pm	Welcoming remarks: Gail Fondahl (Vice President Research, UNBC) Ronald Chapman (Chief Medical Officer of Health, Northern Health) Cathy Ulrich (Chief Executive Officer, Northern Health) Other Project partners
18:00 pm	Overview of the project, evening, and June 2-3 planning meeting Margot Parkes (Canada Research Chair, University of Northern British Columbia: Research lead)
18:15 pm	Finger-food and Cash Bar UNBC and partner 'posters' and materials available for browsing
18:45 pm	Interactive introductions and orientations Ice-breaker and orientation activities around project faces (research, government, watershed and community partners) , project places (Northern Fraser River Basin, Northern Health, QRRRC, Northern watersheds) project 'spaces' (the gaps between 'knowledge' and 'action', 'knowledge-push' vs 'knowledge pull', jurisdictional gaps and opportunities for integration) → Gain a sense of common questions, concerns and collective capacities
20:30 pm	Close

The Canadian Institutes for Health Research have provided funding to establish a 'knowledge to action' partnership between UNBC, Northern Health, other government agencies, NGO's and community groups across Northern BC with a focus on "Improving social and environmental determinants of health through integrated water governance". UNBC and Northern Health are the primary partners for this project - with direct connections to the Northern Regional Drinking Water Team and a variety of community, government, and research-driven watershed initiatives already underway in Northern BC.

On June 2 & 3 UNBC will host a working/planning meeting to orient to the national, provincial, and local partners in this project and to work together on key areas of ongoing activity for the new project.

The overall goal of this meeting is to learn about what can be shared, developed and designed by working together toward 'improving social & environmental determinants of health through integrated water governance'

"Ecohealth & Watersheds in Northern BC:"

Improving Social and Environmental Determinants of Health through Integrated Health Governance

Specifically this meeting aims to:

1. provide project participants an opportunity to get to know diverse project team and collective capacities, as the basis for a 2-year project, with opportunities for future interactions among government, watershed, community and research partners;
2. orient to three specific Northern BC examples (Nechako, Kiskatinaw, Quesnel River Watersheds);
3. identify and develop specific areas of interest for working group activities – including papers, projects, proposals and themes for future knowledge-to-action workshops (proposed working groups/topics include: Integrative approaches to research and knowledge generation, Integrative approaches to mapping; Integrative approaches to governance);
4. plan for next steps for recently funded CIHR Knowledge to Action grant and potential additional proposal development.

Agenda: June 2nd to 3rd Workshop

June 2: UNBC Conference Centre Room 6-205/211 (morning)

08:00am	Breakfast - RM 205/211
08:45am	Welcome and agenda: building on project launch <i>Goals: Introduce participants, orient to meeting design, commence list of collective capacities</i>
Facilitators: MP	Round of Introductions - how does your work relate to the meeting themes? Key hopes or questions based on project 'faces', 'places' and 'spaces' from June 1 st .
	WHAT SHOULD BE? (Ideals, principles)
09:15am	Back-casting exercise: a desired future and how this project could get us there? <i>Goals: generate common principles and language informed by collective capacities....</i>
Facilitators: MB+HV	Proposed prompts: → In 2021, we have been successful in "Improving social and environmental determinants of health through integrated water governance" (<i>What would this look like?</i>) → In 2014, the current 'Knowledge to Action' Project is winding up (<i>what collective capacities have we cultivated toward fulfilling our 2014 vision in Northern BC? & beyond?</i>)
10:30am	Break
	WHAT IS? (Facts, Parameters, Examples)
11:00am	Watershed examples of where we are at now <i>Goals: provide points of reference for meeting discussions through regional watershed examples</i>
Facilitators: MP + KM	Brief presentations of Regional Watershed project examples: Kistkatinaw Watershed (Reg Whitten) Quesnel River Research Centre (Stephen Dery) Murray Creek and the Nechako initiatives (Wayne Salewski); Discussion of three watershed examples and proposals for emerging 'working group' themes
12:30pm	Lunch (provided)

June 2: UNBC Conference Centre Room 6-205/211 (afternoon)

	WHAT COULD BE? (Ideas, Potential, Design...)
13:30pm	Identify and commence working groups discussions <i>Goal: Collectively identify and clarify three to four 'integrated' working group themes</i>
Facilitators: LH+MP	What can we share, achieve, develop, design by working together?

"Ecohealth & Watersheds in Northern BC:"

Improving Social and Environmental Determinants of Health through Integrated Health Governance

	Focus on collective assets from watershed, community, research and policy: 'knowledge push', 'knowledge pull' and 'knowledge gaps' specific areas of interest for working group activities – future papers, projects, proposals and themes for future 'knowledge-to-action' workshops guiding questions for each group to address
14:00pm In Groups Break/ Coffee available	<u>Goal:</u> Commence working group discussions Proposed integrative working group themes (open for development/refinement): <u>Participatory approaches to mapping watersheds</u> (<i>Integrative approaches to mapping</i>) – linking health, environment and community priorities... <u>Working together for watershed governance</u> (<i>Integrative approaches to governance</i>) overcoming sectoral/disciplinary/jurisdictional boundaries... <u>Joining-the-dots in generating new knowledge</u> (<i>Integrative approaches to knowledge</i>) – linking surface and groundwater science, integrating social, ecological, cultural dimensions...
	SYNTHESIS (connecting what should be, what is & what could be...)
15:30pm Facilitators: LH+MP	Plenary feedback from working groups and discussion. <u>Goal:</u> Synthesise key lessons and priorities from the day, link with 'external' participants External project colleagues will be 'online' to hear proposals and provide feedback Revisit priorities for tomorrow.
16:30pm	Close
18:30pm	Meet for Group Dinner at Cimo's Mediterranean Grill~ 601 Victoria Street, Prince George, BC All welcome!

June 3: UNBC Conference Centre Room 6-205/211 (morning)

08:00am	Breakfast - RM 205/211
09:00am Facilitator: MP	Interactive 'open space' working group session: <u>Goal:</u> Exchange and 'cross-fertilization' from June 6 th activities. Orient new arrivals. 15 min: Working groups reconvene to identify priorities and assign theme 'host'; 15 min: Working group 'host' receives 1 st round of 'visitors' and presents themes from previous day. 'Visitors' provide feedback and suggestions about that theme, cross-fertilise from their own working group discussions 15 min: Repeat above with 2 nd round of 'visits'. 15 min: Plenary discussion in relation to Project Objectives...
10:00am	Continue working groups discussions <u>Goal:</u> Re-orient working from What 'could' be? (good ideas) to what 'can' be? (who?when? how?) Consider: future papers, projects, proposals and themes for future 'knowledge-to-action' workshops (throughout project and beyond)
10:45am	break
	WHAT CAN BE? (Actions, Practice, Specific Plans...)
11:00am	Continue working groups discussions <u>Goal:</u> Shift to specific plans and priorities for future actions and specific plans priority-setting for achievable outcomes from this meeting and future activities Testing ideas, focusing on concrete next steps for different participants

“Ecohealth & Watersheds in Northern BC:”

Improving Social and Environmental Determinants of Health through Integrated Health Governance

12:30pm	<i>Lunch (provided)</i>
	SYNERGIES
13:30pm Facilitators: MB+MP	Feedback from working groups and discussion. <i>Goal: Identify synergies and overlaps between working groups and project priorities</i> Feedback, present and share ideas across the three groups; Discussion and ‘mapping’ of project themes and priorities Concept and outcome mapping: link to future outputs and activities, including themes for future ‘knowledge-to-action’ workshops (throughout project and beyond)
14:30pm	<i>Break</i>
	SYNTHESIS & WRAP-UP
15:00 Facilitators: LH+MP	Final plenary: timelines, milestones and next steps working. <i>Goal: Consolidate next steps in terms of timelines and opportunities for future interaction</i> Revisit back-casting exercise and initial intentions regarding “knowledge push” and “knowledge pull” Highlight different priorities: for researchers? for ‘knowledge-users’ Provide clear sense of next steps, timelines, roles and responsibilities.
16:00pm	<i>Close</i>

Project Background:

Northern BC focus on ‘Ecohealth & Watersheds’ adds to Canadian and global efforts.

Over the last 5 years, the theme of ‘Ecohealth & Watersheds’ has gained increased attention from researchers, watershed groups, and policy who share interest in the re-integration of public health priorities with integrated water resources management. Several years of ‘Ecohealth & Watersheds’ research has been led by the ‘Network for Ecosystem Sustainability and Health’ (NESH), with involvement from federal, provincial, and watershed partners across Canada, and an emerging working group of the Canadian Community of Practice in Ecosystem Approaches to Health (CoPEH-Canada).

The June 1st-3rd meeting in Prince George marks a new phase of activities focused on Northern British Columbia. The Canadian Institute for Health Research have funded a meeting and a 2 year project, to establish a ‘knowledge to action’ partnership between UNBC, Northern Health, other government agencies, NGO’s and community groups across Northern BC with a focus on *“Improving social and environmental determinants of health through integrated water governance”*. Specific priority areas for action are:

- (i) exchange knowledge and best practices for integrated watershed governance that optimize health, socio-economic and environmental benefits, and facilitate engagement of relevant sectors, disciplines and non-government leaders in water and health governance in Northern BC;
- (ii) examine opportunities and barriers for Health Authorities to enhance population health and health protection programs through participation and collaboration in intersectoral watershed governance;
- (iii) collectively develop, apply, and evaluate place-based intersectoral policies, focused on integrated watershed governance as a vehicle to improve social and environmental determinants of health.

Why this project now?

The project responds to a variety of calls to consider watersheds as settings for intersectoral action to address the links between land, waterways, and the determinants of health. The meeting and project priorities build on and will contribute to a growing body of work including:

“Ecohealth & Watersheds in Northern BC:”

Improving Social and Environmental Determinants of Health through Integrated Health Governance

2007-2008: Meetings and interactions convened by NESH, bringing together watershed groups, researchers and public health professionals from across Canada;

2008: NESH publication: *Ecohealth and Watersheds: Ecosystem Approaches to Re-integrate Water Resources Management with Health and Well-being*. Available Online at www.nesh.ca and www.iisd.ca.

2009: Presentation of Ecohealth & Watersheds work at International Expo in Spain, informed by publication: *Water, Ecology and Health: Exploring ecosystems as a 'settings' for promoting health and sustainability*.

2010 -2011: NESH publications: “Towards Integrated Governance for Water, Health and Social-Ecological Systems: The Watershed Governance Prism” (in Global Environmental Change) and “Promoting health and well-being in watersheds by managing for social-ecological resilience: The potential of integrating ecohealth and water resources management approaches” (in Ecology & Society).

2010- 2011: Early research partnerships in Northern BC initiated by Margot Parkes, including a project focused on ‘Linking Land, Waterways and Healthy Living’ in relation to the Murray Creek rehabilitation Project near Vanderhoof, ongoing interactions with the Northern Regional Drinking Water Team and Northern Health, and the emergence UNBC’s ‘Integrated Watershed-based Science’ research team;

2010: August: UNBC co-hosts the Northern ‘BC Water Symposium’ in collaboration with Northern Health, Regional Drinking Water Team and Fraser Basin Council.

2011: NESH receives funding from the Public Health Agency of Canada to work with 5 watershed groups across the country to learn about “Watersheds as Settings for Health and Wellbeing”.

2011: April: Funding approved for 2 year project “Improving social and environmental determinants of health through integrated water governance”.

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