

UNBC & Northern Health “Ecohealth & Watersheds in Northern BC” Knowledge to Action Project

Improving Social and Environmental Determinants of Health through Integrated Watershed Governance



*Getting Our Hands Wet and Dirty:
Engaging with Watersheds as
Settings for Intersectoral Health
Action*

Dr. Margot Parkes and Dr. Ronald Chapman,
November 28th, 2011
Public Health Association of BC Conference



Presenters/Co-Chairs of a 'knowledge to action' project

- **Margot Parkes**

UNBC, Canada Research Chair in Health, Ecosystems and Society
Health Sciences, Cross-appointed
Northern Medical Program

'knowledge push' →

- **Ronald Chapman**

Northern Health; Chief Medical
Officer, Regional Director of the
Northern Cancer Control Strategy

→ 'knowledge pull' (action)



Overview



- A new era of Intersectoral Action?
- “Knowledge push”: Why Ecohealth & Watersheds?
 - Linking ‘**health**’, ‘**ecosystems**’ & ‘**society**’
 - Ecosystem ‘settings’ for health and sustainability
- “Knowledge pull” Learning and Working together across boundaries:
 - Initial insights from our Knowledge to Action Project”





Health & Environment
linked via:
..soil? water? air? food?
... natural resources?
... ecosystems?
... future generations?

Where is
health in this
picture?

“Knowledge push”:

Watersheds as Settings for Intersectoral Action?

Q. How (where? when?) do we foster connections for **Health** (Wellbeing), **Ecosystems** (environment) & **Society** (community)?

→ **A. Watersheds** offer a setting to ‘join the dots’ among health/wellbeing, socio-economic and environmental concerns



“reciprocal maintenance - to take care of each other, our communities and our natural environment”.
(Ottawa Charter)



→ Shifting our attention from ‘hazards’ to ‘home’

Why consider Watersheds as 'settings'

(aka Catchments, River Basins, cuenca hidrografica...)



Watersheds as 'Settings' for Health and Sustainability

'Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love' (Ottawa Charter, 1986)

- Healthy cities... workplaces... schools... islands...
- Creating healthy environments, "health in all policies"...

→ 'Ecological'? but where are the Ecosystems?

Why consider Watersheds as 'settings'

(aka Catchments, River Basins, cuenca hidrografica...)



... The centrality of water

Watersheds as:

- self-organised biophysical units;
- social-ecological systems;
- units of natural resource management, administration and (intersectoral) governance;
- settings to link rural sustainability and health;

(See Parkes & Horwitz, 2009; Parkes *et al* 2008, 2010)

PAST & PRESENT

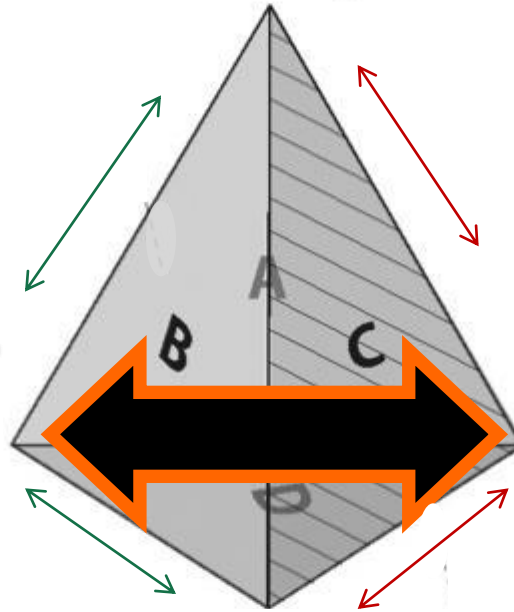
driving forces of change within

WATERSHEDS

“Hazards”??

“Home”??

ECO-
SYSTEMS
(PLACE)



SOCIAL
SYSTEMS
(PEOPLE)

HEALTH & WELLBEING

→ Connecting **health**, **environment** & **community** brings in health issues well beyond hazards and contaminants

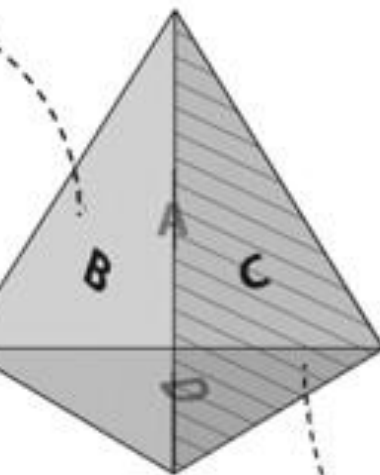
(Adapted from Parkes et al 2010. The Watershed Governance Prism)

“Knowledge Pull”: Different perspectives on Watershed Governance & Health



Driving forces of change in

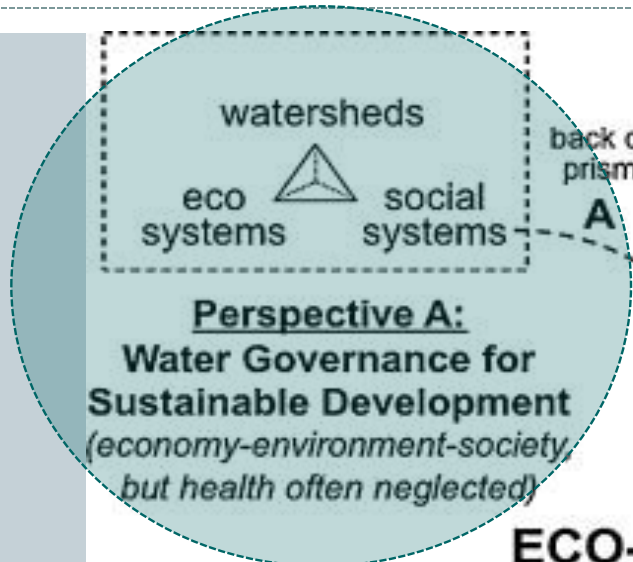
WATERSHEDS



ECO-SYSTEMS

SOCIAL SYSTEMS

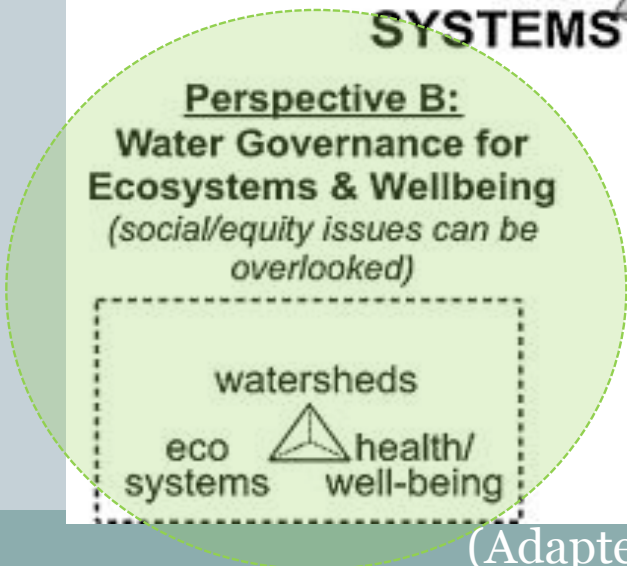
HEALTH/ WELL-BEING



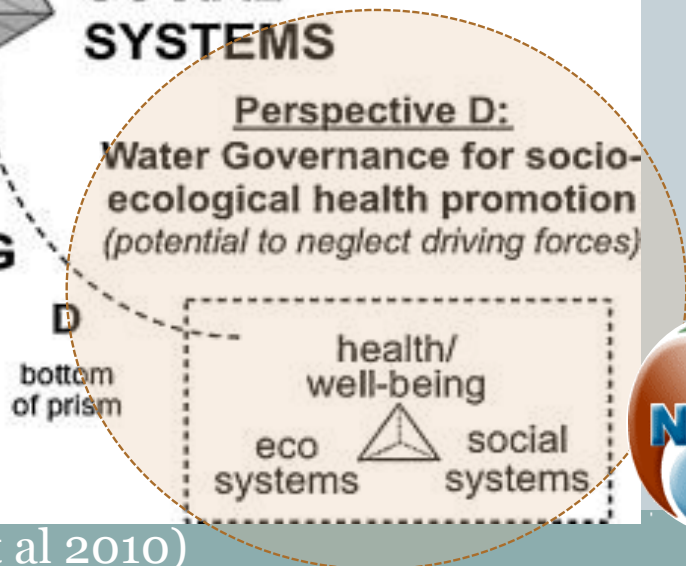
Perspective A:
Water Governance for Sustainable Development
(economy-environment-society but health often neglected)



Perspective C:
Water Governance for Social Determinants of Health
(biophysical environment can be overlooked)



Perspective B:
Water Governance for Ecosystems & Wellbeing
(social/equity issues can be overlooked)



Perspective D:
Water Governance for socio-ecological health promotion
(potential to neglect driving forces)

(Adapted from Parkes et al 2010)

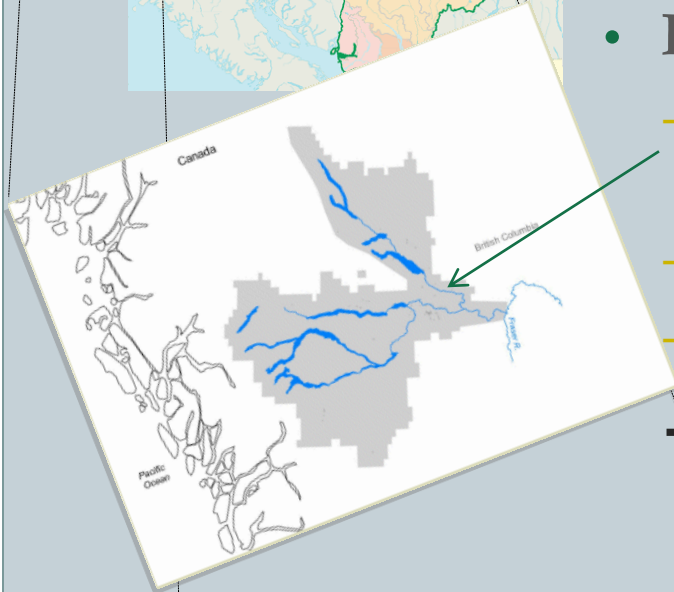


“Knowledge Pull”: A newcomer to Northern BC orients to local players & common concerns

Fraser River Basin



- Northern Health
- Regional Drinking Water Team
- Fraser Basin Council
- Gatherings: BC Water Symposium (Aug '10), CIHR 'ecohealth & watersheds' (June '11)
- Initial connections in watersheds:
 - Nechako/Murray Creek: “Linking land, waterways & healthy living” in Vanderhoof
 - Kiskatinaw (North-east, Dawson Creek)
 - Quesnel River Research Centre
- NH-UNBC ‘knowledge to action’ grant
“Improving social & environmental determinants of health through integrated water governance”



Stuart-Nechako watershed

Purpose & Guiding Questions



The **purpose** of this study is to strengthen capacity for intersectoral action to improve water-related determinants of health in northern BC

Guiding Question:

What can be learned by working together to link knowledge of the health benefits of integrated watershed governance with the experience and practice of intersectoral action for health?



Working together as a 'participatory research community'



Working together as a 'participatory research community'



Who will work together to:

- **integrate knowledge** of the health benefits of watershed governance with experience of intersectoral action for health;
- **apply this knowledge** to the development of best practices, programs and policies for health in the context of specific case-studies in Northern BC watersheds;
- establish a **systematic process of participatory research and evaluation** to inform future phases of collaboration, and
- **facilitate knowledge exchange of lessons and insights** with users beyond the team and region.

Action...Ecosystems...Knowledge, Health... Governance



“Improving Social and Environmental Determinants of Health
through Integrated Watershed Governance”

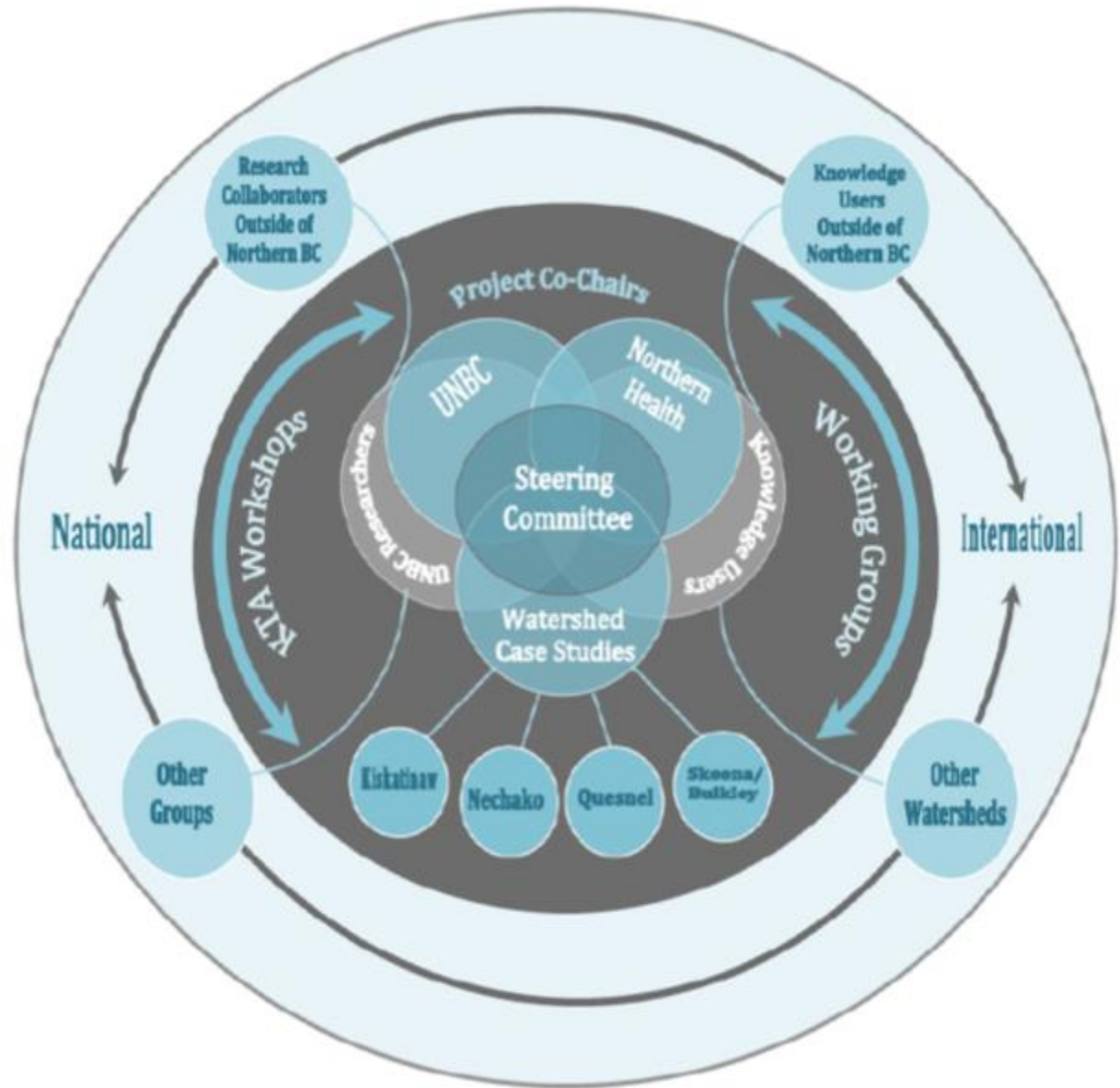
Our
participatory
research
community
gathered in
June ...

and
determined
the 'structure'
of our Project



Our participatory research community gathered in June ...

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Establish a 'participatory research community'

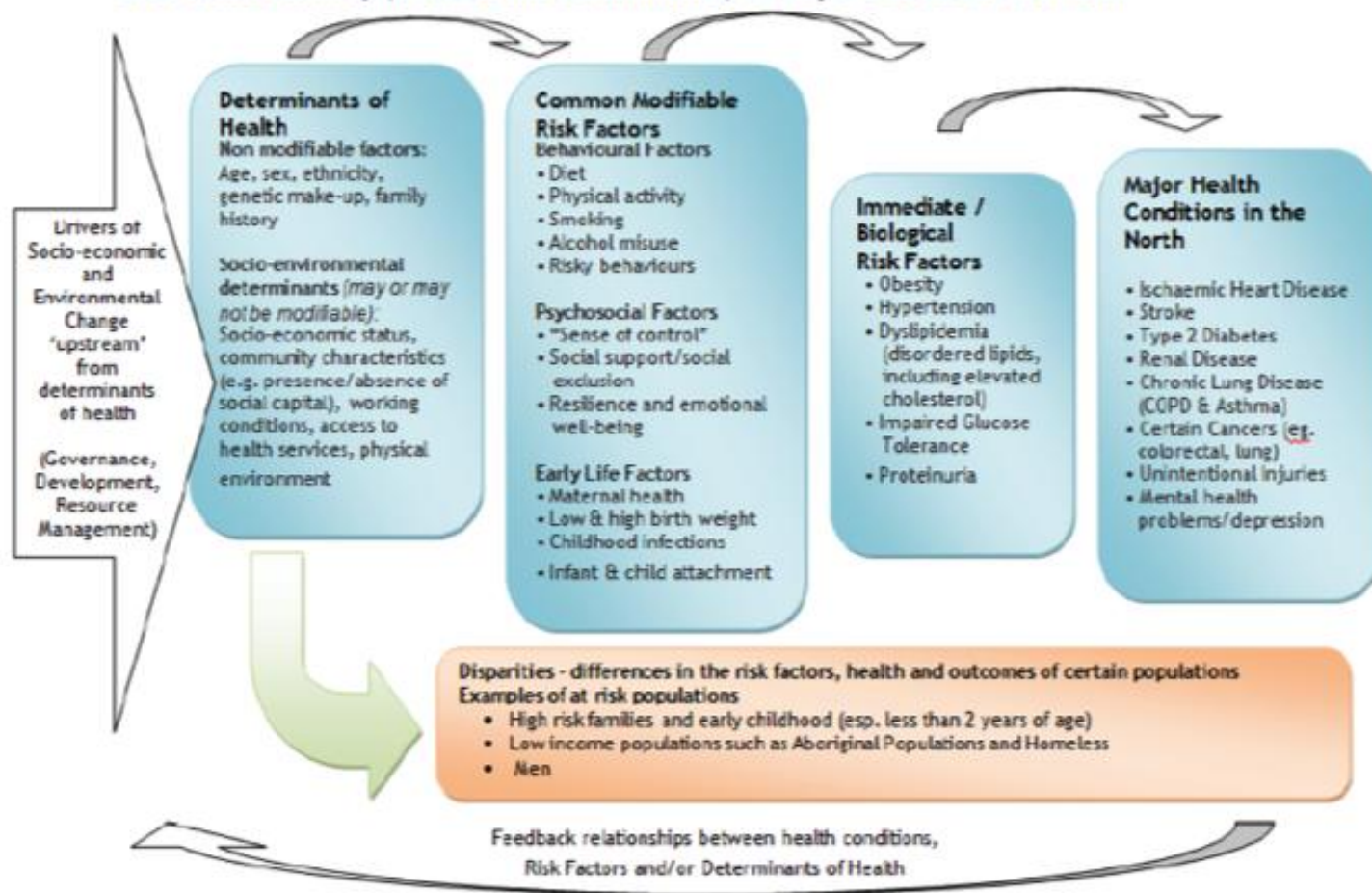


Who will work together to:

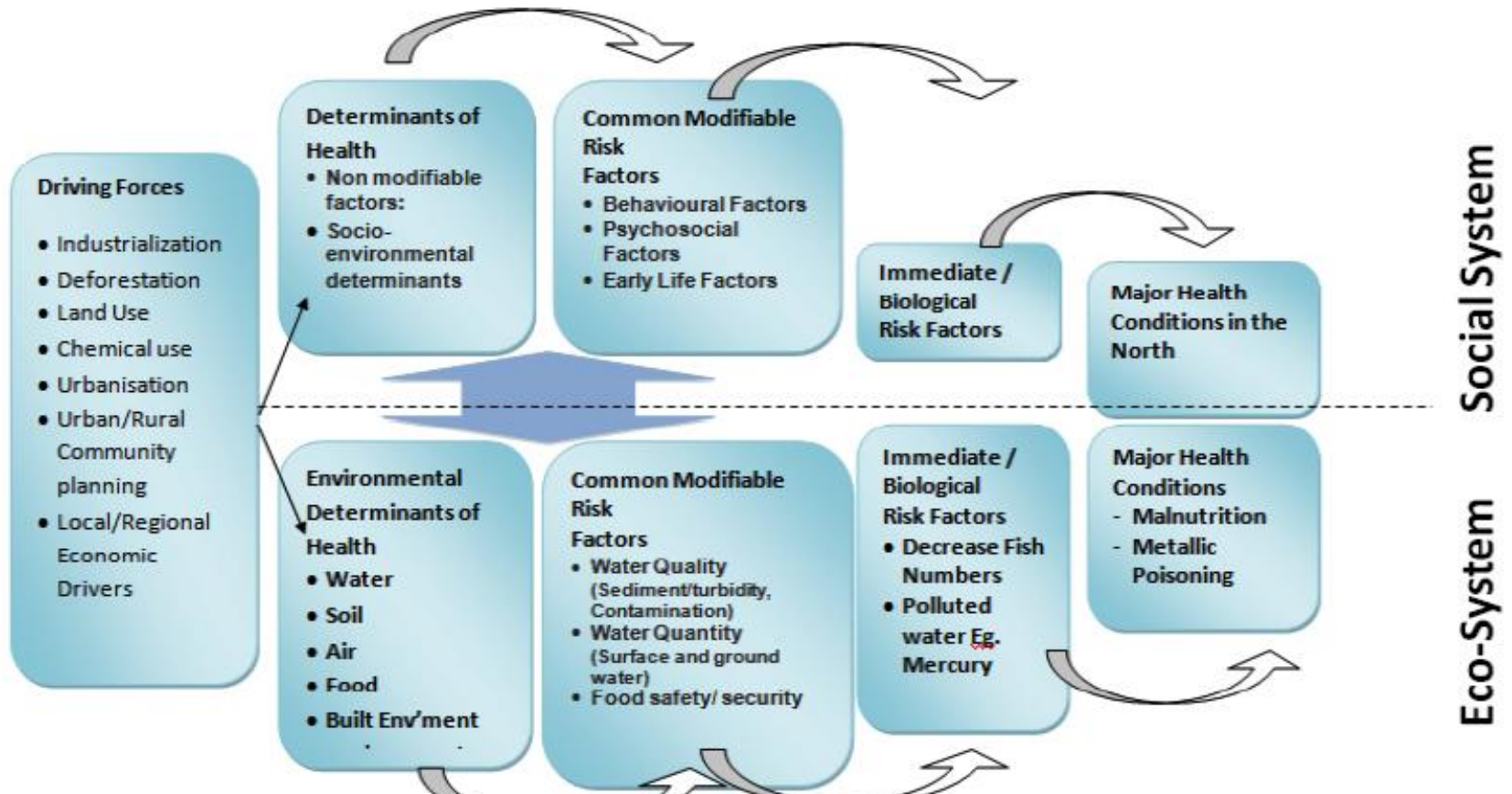
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Early Lessons: Exploring a common language... (from health to social to ecosystems)

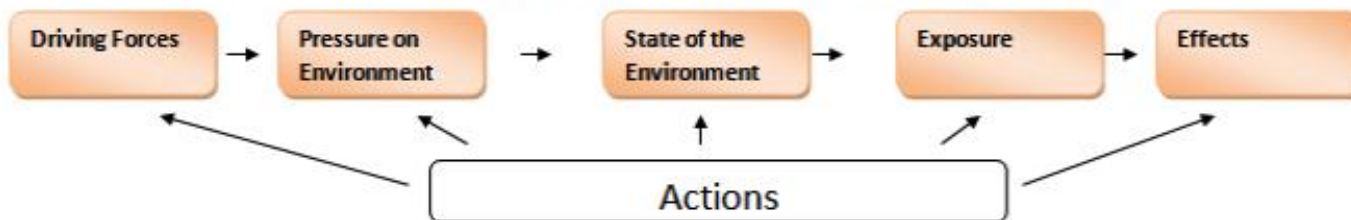
2. b. Causal Pathway (includes the determinants) for Major Diseases in the North



Early Lessons: Exploring a common language... (from health to social to ecosystems)



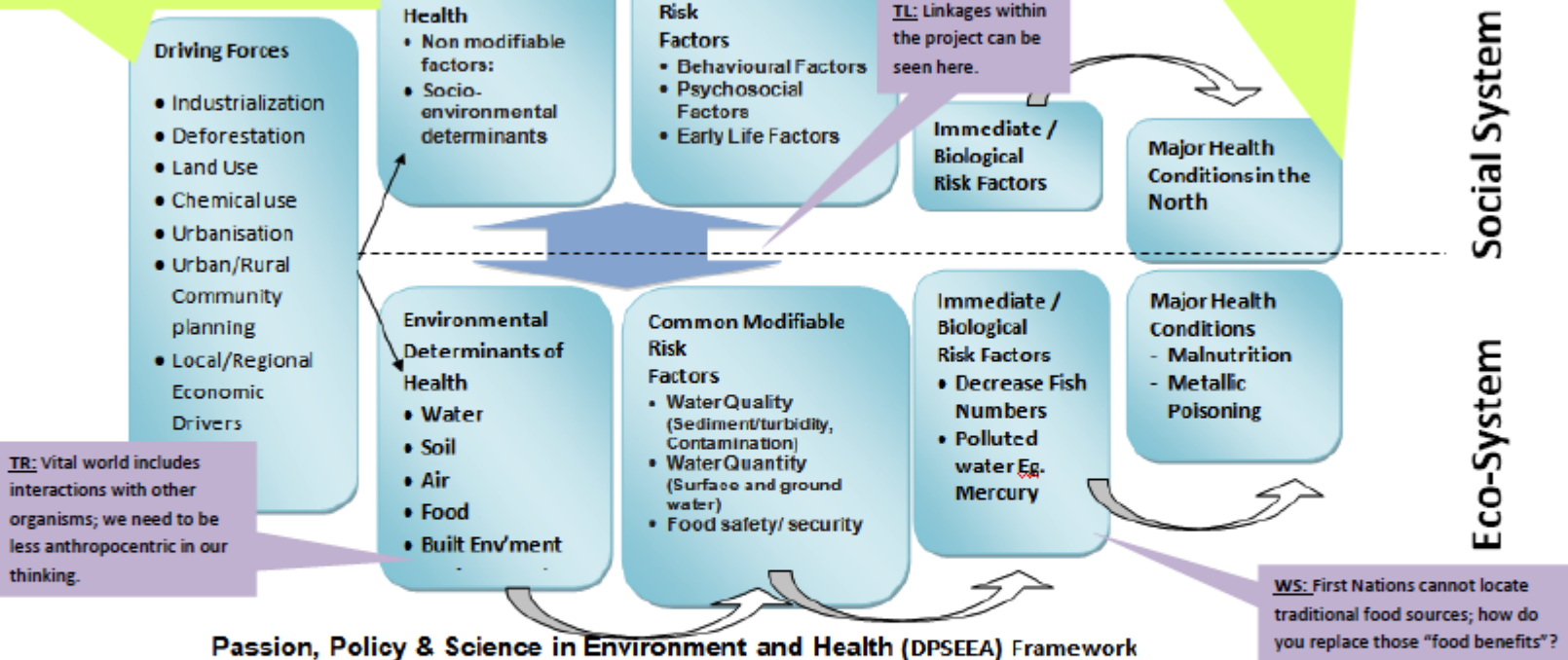
Passion, Policy & Science in Environment and Health (DPSEEA) Framework



Early Lessons: Connections get messy..!

MP: What are the positive features of nature?
Who benefits? Who bears the brunt?
What are the 'upstream' determinants that affect a healthy person?
We need to design interventions that aim to understand how we can engage in social processes that value nature.

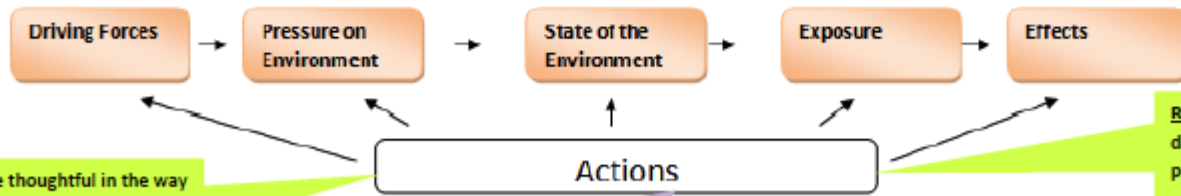
First Nations do not want to be dependent on traditional food sources, but would like them for sustenance. I find it interesting that the diagram starts on the left; most First Nations communities would start on the right with the individual. This diagram will help me to explain the interconnections of these concepts to my community.



TR: Vital world includes interactions with other organisms; we need to be less anthropocentric in our thinking.

WS: First Nations cannot locate traditional food sources; how do you replace those "food benefits"?

Passion, Policy & Science in Environment and Health (DPSEEA) Framework



PQ: We need to be thoughtful in the way that we frame our discussions with members outside of the Steering Committee to ensure that the knowledge we gather can easily be translated.

MP: We need to find a common language that speaks to the interface of health, environment, and the community at the same time. This will help us to integrate the two worlds and understand the dynamics of each better. Ecohealth does this to some extent because it is a more inclusive lens, but it is easy to lose focus of the broader connections. We can cultivate this type of learning through the design of the project

RW: we need to frame our discussion within a community project focused on:

- Management
- Treatment
- Behaviours

Early Lessons? Initial meetings & interviews

Synergies waiting to happen...



Linking **Health**, **Ecosystems**, **Community**

- **Spaces?** Creating the time and space to build “common language”...
- **Cases?** Specific Watersheds ‘cases’ will offer different insights into interconnected ‘issues’...
- **Places?** Site-visits and opportunities for informal connections make a difference
- **Faces?** Learning from different disciplines, sectors, cultures, age-groups..

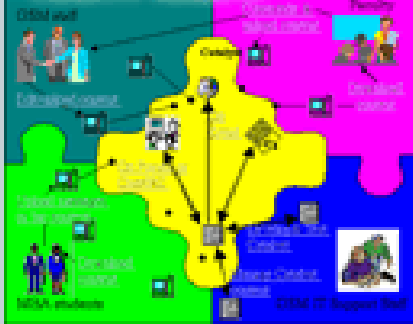


Next steps: identifying “touch-points” for intersectoral exchange & action

Influence diagrams



Rich Picture

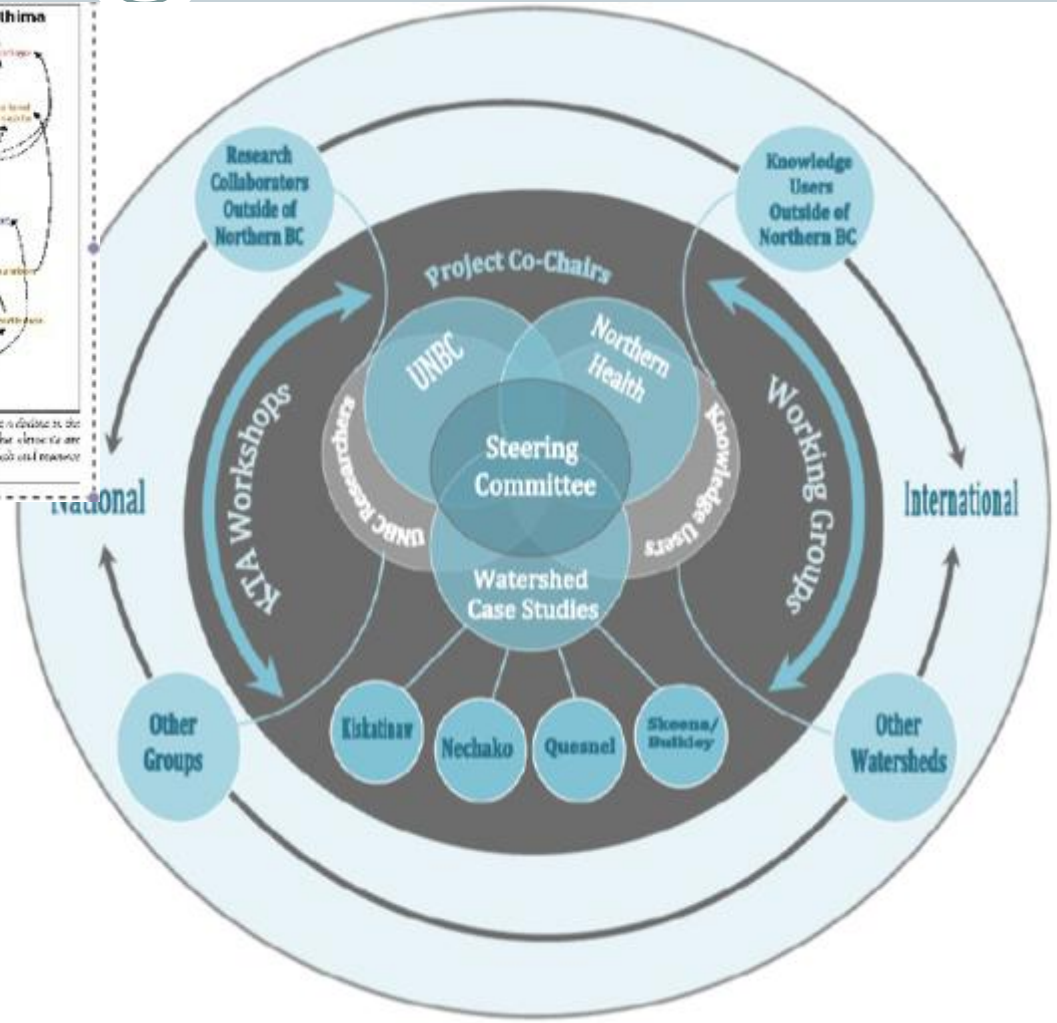


And in Gilthima valley, Fritson, Dorcas, Keesa, Doreen have a diverse set of views. And others to see those identified by the stakeholders as needs. The elements are relevant and a few are key attributes of the vision that relate to needs and resources of by villagers as large rural links between water, income, and education.

Rich pictures



Mind maps

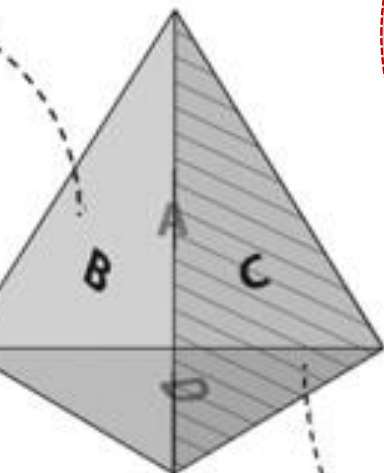


Next Steps: Working together among different perspectives on Watershed Governance & Health



Driving forces
of change in


WATERSHEDS



**HEALTH/
WELL-BEING**

**ECO-
SYSTEMS**


**SOCIAL
SYSTEMS**

watersheds
eco systems  social systems

back of
prism
A

Perspective A:

Water Governance for Sustainable Development
(economy-environment-society, but health often neglected)


watersheds
health/well-being  social systems

Perspective C:

Water Governance for Social Determinants of Health
(biophysical environment can be overlooked)


Perspective B:

Water Governance for Ecosystems & Wellbeing
(social/equity issues can be overlooked)

watersheds
eco systems  health/well-being

D
bottom
of prism

Perspective D:
Water Governance for socio-ecological health promotion
(potential to neglect driving forces)

health/well-being
eco systems  social systems



Next Steps: Being explicit about the links between ecosystems and social determinants of health



The Canadian Facts (on Social Determinants of Health)

“Why some Canadians are healthier than others” (Mikkonnen & Raphael, 2010)

Next steps: finding 'patterns' of

Integration, participation, collaboration?

Knowledges – WHAT?

People – WHO?

Action & Learning?

Communities and Cultures

Practitioners in-the-field (health, energy, env)

Diverse academic disciplines

Sectors (health, env, agriculture, forestry, energy)

Units of Governance (local – watershed – global)



Re-cap



- A new era of Intersectoral Action?
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Thank you! ~Acknowledgements



- BC Real Estate Foundation
- Canada Research Chair Program
- Canadian Institutes for Health Research
- District of Vanderhoof
- Fraser Basin Council
- Murray Creek Rehabilitation Project
- Northern Health
- Network for Ecosystem Sustainability & Health
- Northern Regional Drinking Water Team
- UNBC Colleagues



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