



Brucejack Mine - Photo credit: Pretivm

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NORTHERN BRITISH COLUMBIA



**northern health**  
the northern way of caring



Environment  
Community  
Health  
Observatory  
Network

## Visual Tools and Processes for Engaging Intersectoral Partners on the Health Impacts of Resource Development

*Dr. Raina Fumerton and Sally Western*

# NH Office of Health and Resource Development

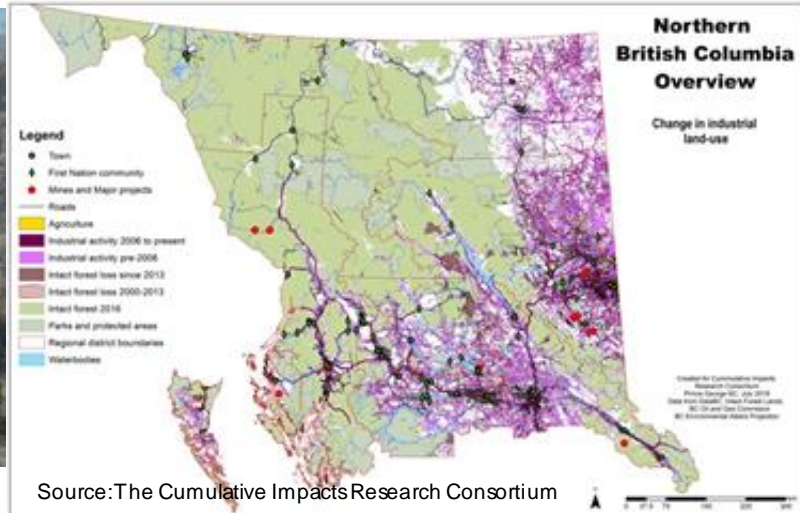
With a guest appearance from **Dr. Margot Parkes**, Associate Professor at UNBC, and Director of the Environment and Community Health Observatory (ECHO)

## Today's Presentation

1. NH Background, Context, Challenges
2. Findings
  - the impacts of resource development
  - leading practices for assessment and monitoring
3. Development of Knowledge Translation Tools
4. Examples of our application of these learnings into practice
5. Successes, challenges and lessons learned.
6. Next Steps

**April 18, 2019:** [Paradox of Wealth and Health: Resource Development and Social Determinants of Health](#) (presented by Barbara Oke and Melissa Aalhus, Health and Resource Development Office, Northern Health)

# Northern Health Context



# Office of Health and Resource Development





**What are the impacts?**

**Where's the evidence?**

**How does it apply to my project?**

**Why does health care relate to housing, poverty, etc. ?**

**How do we assess these impacts**

**What indicators should be used?**

**What are leading practices?**





Northern First Nations Caucus  
of Sub-regional Engagement S...

Health and Resource Development Impacts

Fall 2015  
Full Report

First Nations Health Authority  
health through wellness

northern

The social determinants of health impact  
resource extraction and development in  
northern communities: A summary of  
promising practices for assessment a...

Prepared by Melissa Aarhus  
Prepared for Northern Health and the  
Provincial Health Services Authority

Version 1.0  
January 2016

Towards more robust and locally meaningful  
indicators for monitoring health and the  
social determinants of health related to  
resource extraction and development  
across Northern BC

A report produced as the result of a research collaboration between  
Northern Health, the University of Northern British Columbia and the BC Provincial Health  
Services Authority

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BSERVATORY  
Population & Public Health

Consultative Oversight  
Research Committee

Office of Health and  
Resource Development

BC Centre for Disease Control



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**Réseau  
observatoire sur  
l'environnement  
les communautés  
et la santé**



Source: ECHO Network



# Working with Knowledge Users



Source: ECHO Network

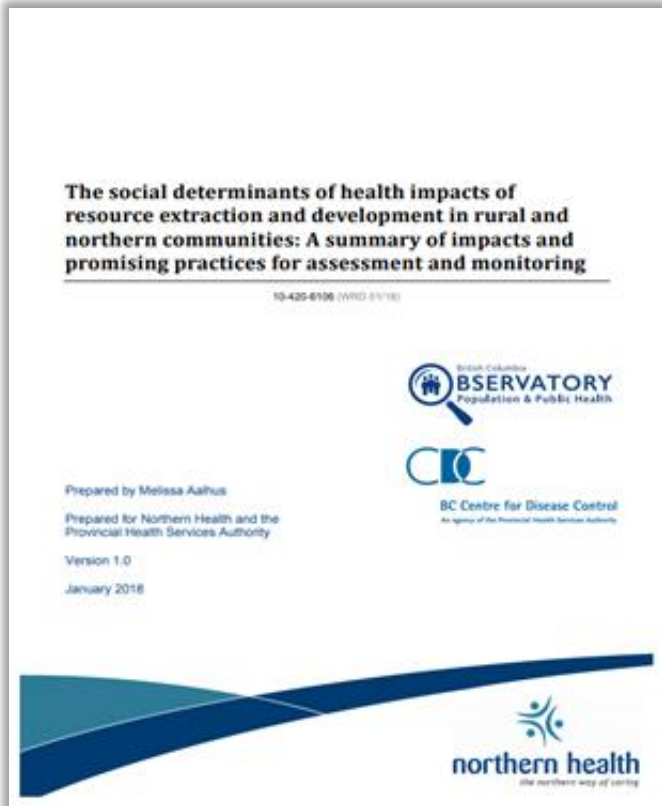


Source: ECHO Network



Source: ECHO, AB Case

# Findings – Health Impacts



Employment, income and income equities	Cultural practices & connections to culture
Formal and informal economic activities	Life control, self determination and self governance
Working conditions	Social connectedness
Food security	Mental health, substance use and family dynamics
Housing and cost of living	Community safety and crime
Pressures on health care systems	Sexual health, sex work and sex trafficking
Education	Gender-related impacts
Connections to lands and waters	Etc.

# Leading Practices for Assessments and Monitoring

## Leading Practices for Assessments & Monitoring

- ✓ Meaningfully engage communities & incorporate local/traditional knowledge
- ✓ Capture positive & negative impacts
- ✓ Comprehensive baseline reflecting regional context over time
- ✓ Attentiveness to equity dynamics
  - Considering vulnerable populations, different genders & life stages, etc.
- ✓ Standardized indicators & indicators that reflect what is relevant/important to communities and subpopulations
- ✓ Consider Indigenous rights & human rights
- ✓ FPIC & OCAP principles
- ✓ Consider needs of future generations and cumulative impacts that accumulative across time/space
  - Sustainable development principles
- ✓ Include both quantitative & qualitative information
- ✓ Iterative mechanisms for monitoring/management (active learning)

# Knowledge Translation Issues/Challenges

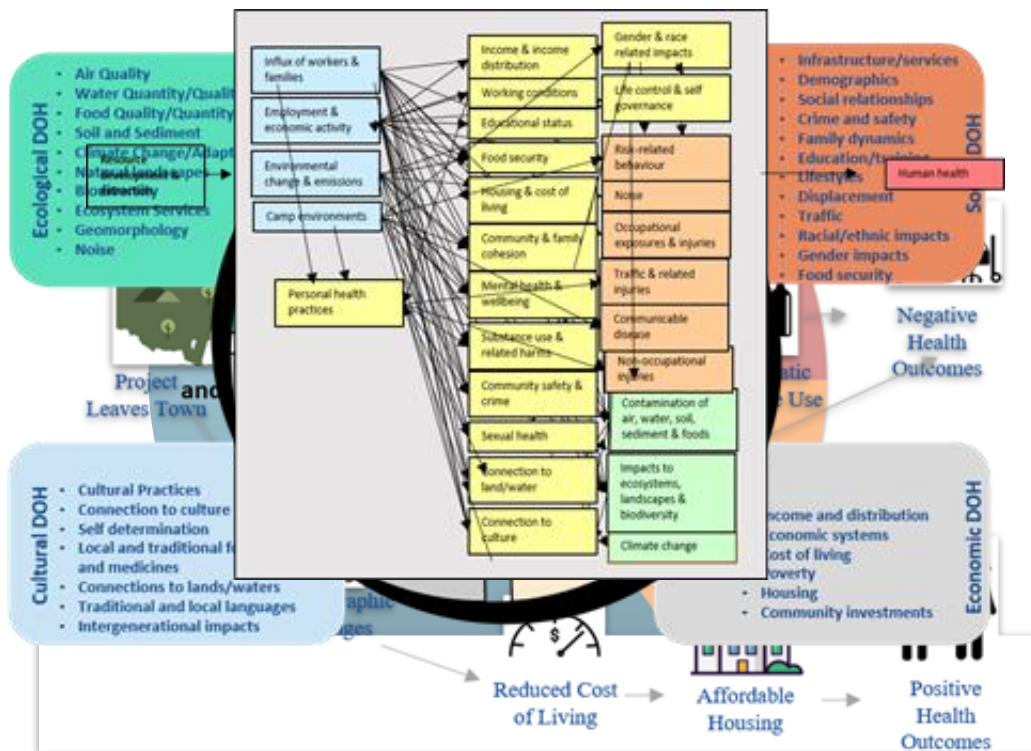
Towards more robust and locally meaningful indicators for monitoring health and the social determinants of health related to resource extraction and development across Northern BC

A report produced as the result of a research collaboration between Northern Health, the University of Northern British Columbia and the BC Provincial Health Services Authority



- Reflecting the complexity/diversity of local impacts
- Recognizing the resilience/agency of communities while also reflecting the significance of negative health impacts
- Ensuring guidance is clear and practicable





# Impacts of Resource Development on Health

Infrastructure & services, demographics & migration, social relationships, crime & safety, family dynamics, education, lifestyles, traffic, environmental justice, gender impacts, food security

Income & income distribution, jobs & employment, cost of living, housing, community investment

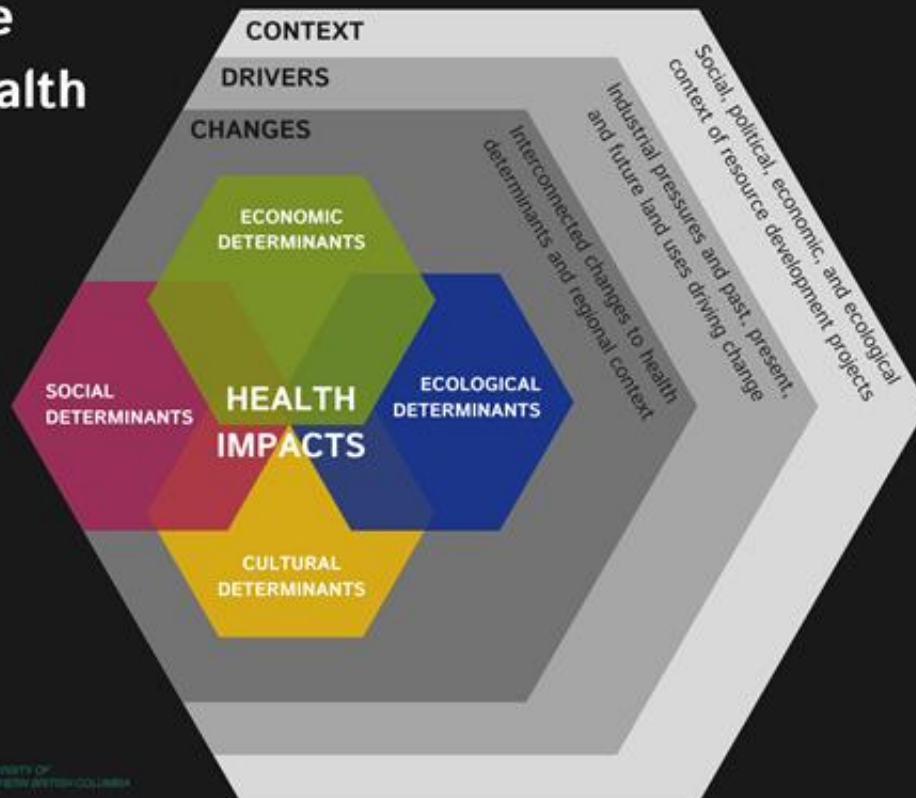
Noise, air quality, water quantity & quality, food quantity & quality, soil & sediment, climate change, landscapes, biodiversity, ecosystem services, geomorphology, wildlife health

Cultural practices tied to land, connection to culture, connection to place, self-determination, local food & medicines, language use, intergenerational impacts

#### HEALTH\* IMPACTS:

Mental health, injuries, infectious disease, substance use & related harms, sexual health, personal health practices, short- & long-term illness

\*Where Health is defined as a state of complete physical, mental & social wellbeing.



# Assessment and Monitoring- Early figure



# Leading Principles & Best Practices for Assessment & Monitoring of Resource Development Impacts





# How We Are Using These Tools

## Projects

- Individual project assessments (e.g. Environmental Assessments, permitting)



## Health In All Policies

- Government policies, regulations & initiatives, such as:
  - Local land use planning
  - Provincial initiatives
  - Federal initiatives



## Building Awareness

- Newsletters and presentations



# EA Successes

## Red Mountain Gold Mine - 2018

### Condition 17. Housing Strategy

h) Means by which the Holder will assess and mitigate potential adverse effects to sub-populations in the District of Stewart who may be more vulnerable to Project related effects on housing.

### Condition 18. Social Effect Management Plan

f) How the Holder will monitor local demand for childcare and early childhood education programs and measures that the Holder will implement to ensure that there are adequate programs available for Employees and their families in the District of Stewart;



Source: IDM Mining



Source: IAAC (GeoGratis)

## Blackwater Gold - 2019

### Condition 37: Community Effects Monitoring and Management Plan

The Holder must include at least the following:

b.iii) a monitoring program for the following potential adverse effects from the Project on the communities identified related to: i.) impacts on community services; ii.) impacts on population and demographics; iii.) impacts on crime and socially disruptive behaviour; and iv.) impacts on community and family well-being;



# ECHO Outputs



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Community  
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Réseau  
observatoire sur  
l'environnement  
les communautés  
et la santé



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Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Social Science & Medicine

journal homepage: <http://www.elsevier.com/locate/socscimed>



Review article

## Storylines of research on resource extraction and health in Canada: A modified metanarrative synthesis

Ben Brisbois<sup>a,b,\*</sup>, Dawn Hoogeveen<sup>a,c</sup>, Sandra Allison<sup>a,d,e,f</sup>, Donald Cole<sup>b</sup>, Trina M. Fyfe<sup>g</sup>, Henry G. Harder<sup>a</sup>, Margot W. Parkes<sup>a,h</sup>

Open Access Article

## Addressing the Environmental, Community, and Health Impacts of Resource Development: Challenges across Scales, Sectors, and Sites

by Marget W. Parkes<sup>1,2</sup>, Sandra Allison<sup>1,3,4</sup>, Henry G. Harder<sup>1</sup>, Dawn Hoogeveen<sup>1,5</sup>, Diana Kutner<sup>1</sup>, Melissa Allison<sup>2</sup>, Evan Adams<sup>6</sup>, Lindsay Beck<sup>6</sup>, Ben Brisbois<sup>1</sup>, Chris G. Buse<sup>1,7</sup>, Annika Chiasson<sup>8</sup>, Donald C. Cole<sup>9</sup>, Shayna Dolan<sup>1</sup>, Anne Faure<sup>10</sup>, Raina Fumerson<sup>7,4</sup>, Maya K. Gislason<sup>11</sup>, Louisa Hadley<sup>1</sup>, Lars K. Hallström<sup>12</sup>, Pierre Horwitz<sup>13</sup>, Raissa Marks<sup>1</sup>, Kathleen McKellar<sup>1</sup>, Helen Moewaka Barnes<sup>14</sup>, Barbara Oke<sup>1</sup>, Linda Pillsworth<sup>1</sup>, Jamie Reschny<sup>1</sup>, Dianne Sanderson<sup>1</sup>, Sarah Skinner<sup>15</sup>, Krista Stalka<sup>1</sup>, Craig Stephen<sup>16</sup>, Céline Surette<sup>17</sup>, Tim K. Takaro<sup>11</sup>, and Cathy Vallancourt<sup>10,19</sup>

BC Enviro-Screen, Dr. Chris Buse

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## The Extractive Industries and Society

Available online 25 April 2021, 100921

In Press, Corrected Proof



Original article

## Sex, mines, and pipelines: Examining 'Gender-based Analysis Plus' in Canadian impact assessment resource extraction policy

Dawn Hoogeveen<sup>a,b</sup>, Aleyah Williams<sup>a</sup>, Alisha Hussey<sup>c</sup>, Sally Western<sup>d</sup>, Maya K. Gislason<sup>a</sup>

# Next Steps



- ❖ Bringing KT figures and information to the communities
- ❖ Ongoing feedback and knowledge exchange

# Questions?

Resource.development@northernhealth.ca




<https://www.northernhealth.ca/services/programs/office-health-and-resource-development>




<https://www.echonetwork-reseaecho.ca/>

**Presentation Contributors: Special thanks to Dr. Chris Buse, Dr. Margot Parkes, Melissa Aalhus, Barb Oke, and Aleyah Williams**







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