

Indigenous Knowledge and Environmental Remediation in Extractive Development



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Remediation at legacy extractive sites

- **remediation: cleanup and/or restoration of former industrial sites**
 - **technical aspects and inventories of sites**
 - **potential economic benefits of remediation**
- **key challenges:**
 - **political and socio-economic dimensions of remediation poorly understood**
 - **local/Indigenous community knowledge and participation in remediation planning**



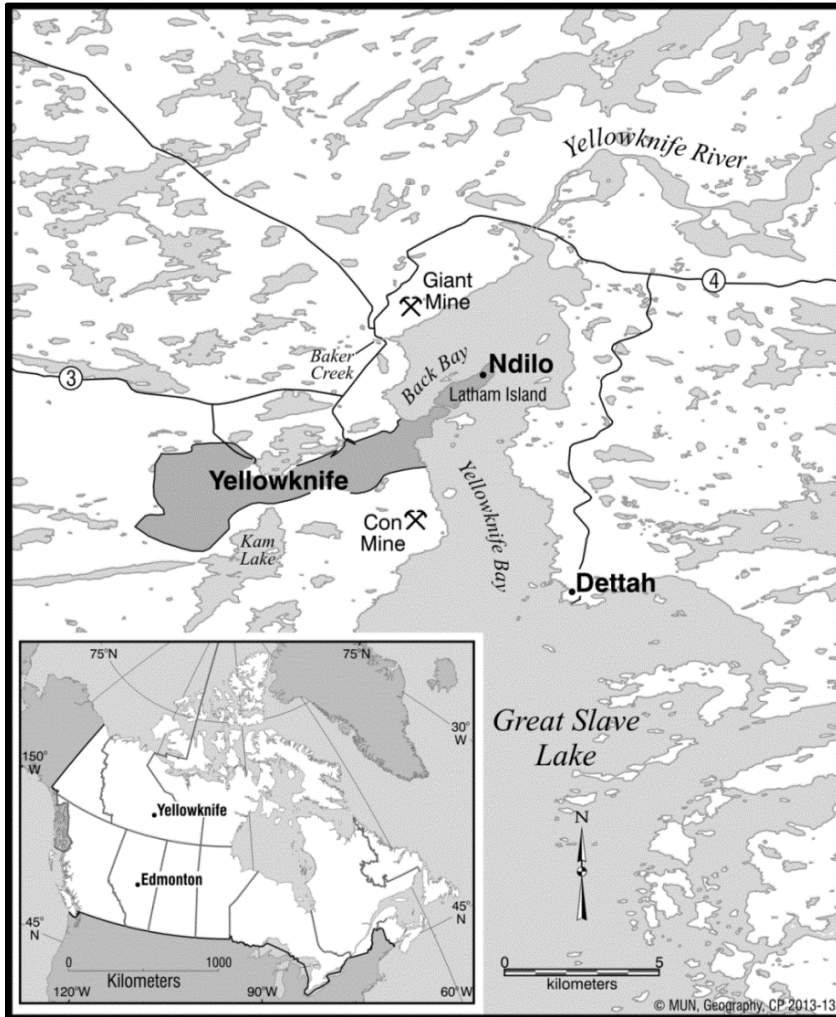
Remediation and Indigenous Knowledge

- environmental assessment and remediation planning: often highly technical exercises
- “co-management” tends to favour Western science over Indigenous Knowledge and experience
- “containment” of IK to renewable resources and environmental questions
- politics of scale: IK as inherently “local” knowledge (vs. “universal” Western scientific knowledge)

Giant Mine Environmental assessment technical sessions, 2011 (photo by Kevin O’Reilly)



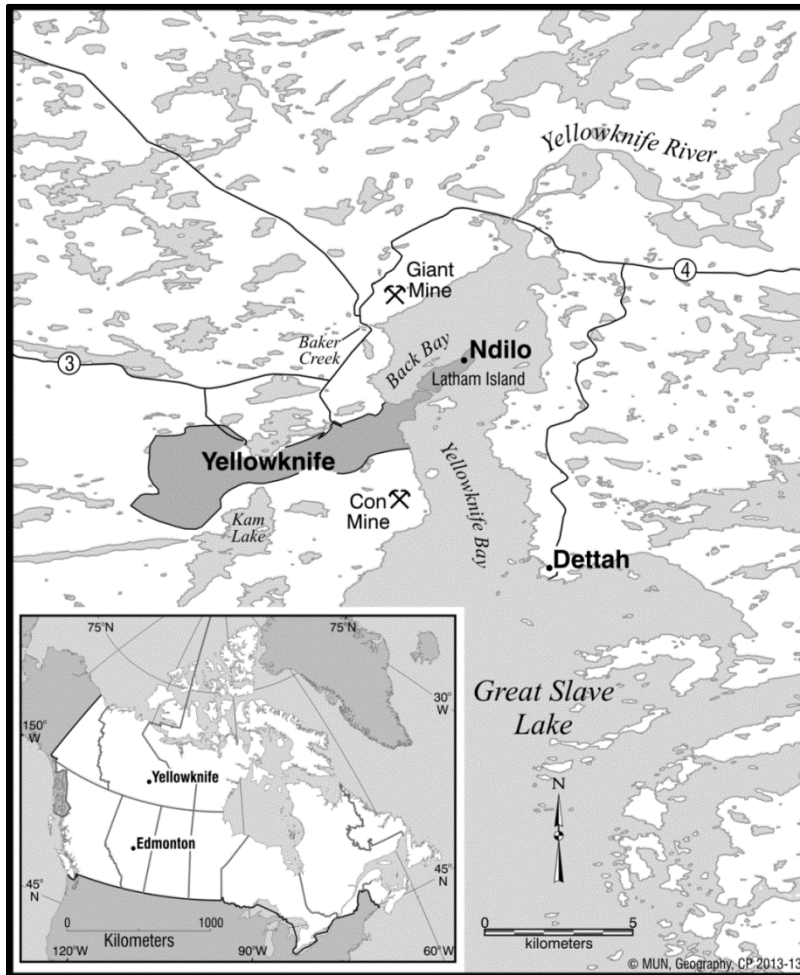
Toxic Legacies project



Map by Charlie Conway

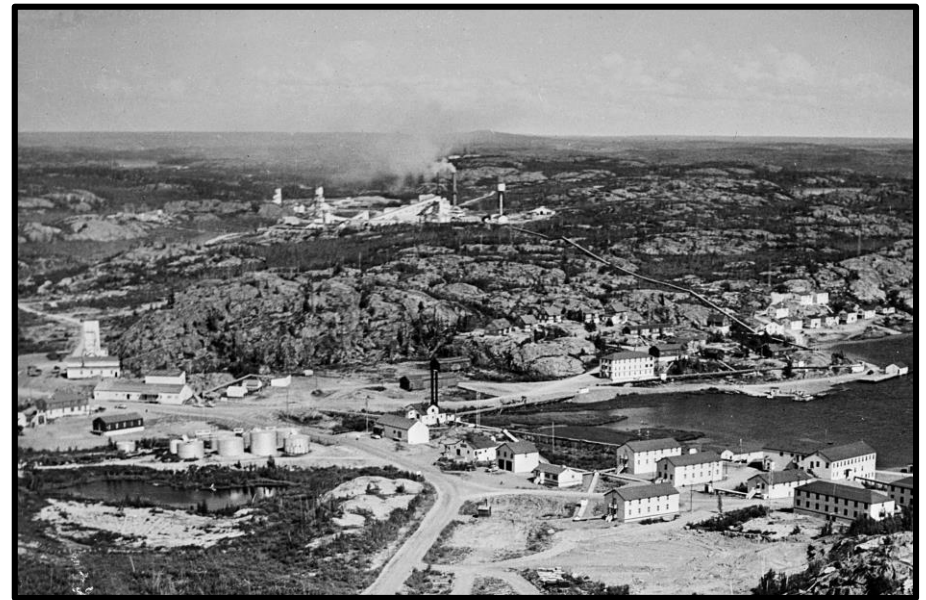
- **Community—university research partnership**
 - Yellowknives Dene First Nation (Goyatiko Language Society)
 - Alternatives North (NGO)
- **Giant Yellowknife gold mine, NWT**
- **237,000 tonnes of arsenic trioxide stored underground in old mine**
- **Federal contaminated site; est. cleanup cost >\$1 billion**
- **Environmental assessment, Indigenous Knowledge, and environmental justice**

Background: Giant Mine history



Map by Charlie Conway

- historical gold producer, 1948-2004
- widespread local environmental contamination
- 1951: death of Dene boy



Aerial view, Giant Yellowknife Mine headframe and buildings nearby, 1955 [Credit: Busse/NWT Archives/N-1979-052-1927](#)

Cleaning up Giant Mine

- mine closure and reversion to INAC
- proposal: stabilize underground arsenic using frozen block method, treat and dispose of mine water
- controversial EA process 2008-12



Thermosyphon test plot, Giant Mine (author photo)

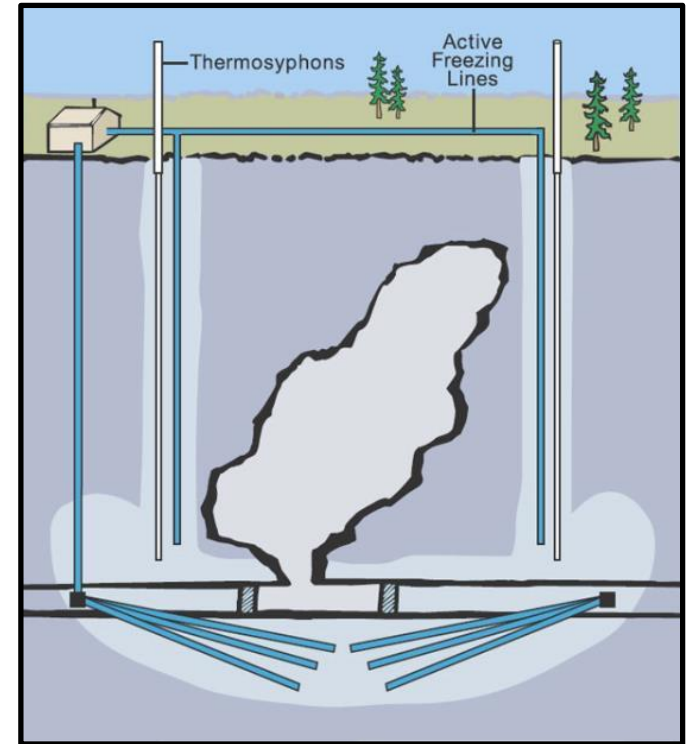
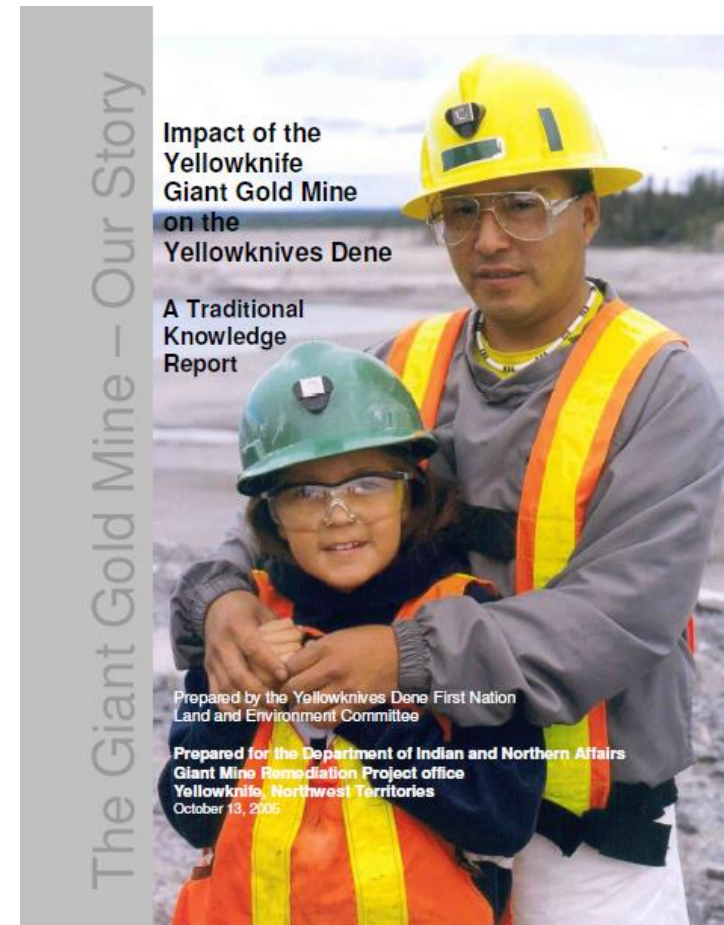


Illustration of “frozen block” method of containing arsenic underground

IK and Giant remediation

- Mackenzie Valley Environmental Impact Review Board (MVEIRB): co-management of industrial impacts in NWT
 - half of review board are Aboriginal LCO appointees
 - IK considered “on the same footing as scientific knowledge for Board decision-making.”
- Giant remediation Developer’s Assessment Report includes TK report



Scoping of issues in the EA

- **key YKDFN demands: recognition of historical impacts, full restoration, compensation and apology**
- **tight focus of EA on remediation: historical and cumulative impacts of mining “scoped out”**



Roaster complex being dismantled (photo by John Sandlos)

Contemporary remediation issues

- **Pollution and remediation standards**
- **Perpetual care and knowledge transfer to future generations**
- **Independent environmental oversight**



Above: Baker Creek (photo by John Sandlos)



Left: Giant Mine test underground freezing (photo by Kevin O'Reilly)

Conclusions from Giant EA

- key issues “scoped out”:
compensation, historical and cumulative impacts
- IK still confined to realms of historic harvesting rather than contemporary management
- Exclusions of IK from technical processes reinforced mistrust
- EA unable to address the issues of restorative justice



Giant Mine Healing Ceremony (photo on website of Wendy Bisaro, MLA
<https://bisaromlaframelake.wordpress.com/2013/06/18/giant-mine-june-newsletter/>)

Political ecology of remediation

- remediation: a neglected dimension of extractive development
- remediation may reawaken or reproduce injustices associated with past developments
 - ongoing impacts of “slow violence” of arsenic contamination
 - “scoping out” of historical experience and “containment” of IK
 - “epistemic injustice”



Giant Mine water treatment ponds (KOR)



Perpetual care workshop, Yellowknife (KOR)

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For full paper, see:

Sandlos, J., and Keeling, A. (2016) Aboriginal Communities, Traditional Knowledge, and the Environmental Legacies of Extractive Development in Canada. *The Extractive Industries and Society* 3,2:278-287

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