Indigenous data governance for transdisciplinary climate resilience research

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A brief history of science research

• Indigenous science research era
  (research *by* Indigenous communities)

• Colonial research era
  (research *on/”for”* Indigenous communities)

• Emerging shift in research practice
  (research *by/with* Indigenous communities)
Indigenous science research era

- Intergenerational longitudinal studies
- Place-based understandings
- Relational (*all our relations*)
- Dynamic (adapted, tested, refined)
- Diverse (thousands of Indigenous languages & ways of knowing)

(e.g., Berkes, 2008; Cajete, 2000; Kawagley, 1993)
Colonial research era

- Disruption in knowledge transmission (genocide, slavery, assimilation policies, language loss)
- Ethical misconduct (eugenics, sterilization, biopiracy)
- Extractive research methods
- “Savior” research
Emerging shift in research

• Recognition and inclusion
• Transdisciplinary research
• Codes of ethics for human rights
• Indigenous data sovereignty
OUR PEOPLES HAVE ALWAYS BEEN DATA EXPERTS
WHAT ARE **INDIGENOUS DATA**?

Data, information and knowledge, in any format, that impacts Indigenous peoples, nations, and communities at the collective and individual levels:

**Data about our Resources and Environments**
- Land, water, geology, titles, air, soil, sacred sites, territories, plants, animals, etc.

**Data about Us as Individuals**
- Administrative, legal, health, social, commercial, corporate, services, etc.

**Data about Us as Collectives – Nations and Peoples**
- Traditional and cultural information, archives, oral histories, literature, ancestral and clan knowledge, stories, belongings, etc.

Informed by British Columbia First Nations Data Governance Institute - BCFNDGI.COM

USINDIGENOUSDATA.ORG | @USIDSN
The right of Indigenous peoples and nations to govern the collection, ownership, and application of their data.

1. Rights to govern peoples, lands, and resources.
2. Genesis in traditions, roles, and responsibilities.
3. Human rights framework and court cases, treaties, and/or recognition.
4. Collective rights:
   • Data for governance
   • Governance of data.

For more information see the US Indigenous Data Sovereignty web site usindigenousdata.arizona.edu.


USINDIGENOUSDATA.ORG | @USIDSN
INVOLVEMENT OF LOCAL PEOPLE AND THEIR LOCAL, TRADITIONAL, OR INDIGENOUS FORMS OF KNOWLEDGE IN DECISION MAKING IS CRITICAL FOR ENSURING THEIR SECURITY

Adger et al., 2014, IPCC Working Group II

INDIGENOUS, LOCAL, AND TRADITIONAL KNOWLEDGE SYSTEMS AND PRACTICES ... ARE A MAJOR RESOURCE FOR ADAPTING TO CLIMATE CHANGE

(ROBUST EVIDENCE, HIGH AGREEMENT)

Field et al., 2014, IPCC Working Group II
EFFORTS Aimed AT THE TRANSLATION OF CLIMATE INFORMATION AND ASSESSMENTS INTO MEANINGFUL ACTIONS SHOULD SUPPORT INTEGRATION OF INDIGENOUS PERSPECTIVES IN A SUSTAINED WAY THAT BUILDS RESPECTFUL RELATIONSHIPS AND EFFECTIVELY ENGAGES INDIGENOUS COMMUNITIES

Maldonado et al., 2015, Indigenous Peoples Climate Change Working Group
HOW ARE CLIMATE RESEARCH STUDIES ENGAGING INDIGENOUS KNOWLEDGE SYSTEMS AND COMMUNITIES WHO HOLD THEM?
Indigenous data governance

<table>
<thead>
<tr>
<th>Contractual</th>
<th>Consultative</th>
<th>Collaborative</th>
<th>Collegial</th>
<th>Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community members contracted to perform tasks, researchers make all decisions</td>
<td>Community members asked for opinions and consulted, decisions made by researchers</td>
<td>Community members and researchers work together, researchers have primary authority over the process</td>
<td>Community members and researchers work together, community members have primary authority over the process</td>
<td>Process is centered in Indigenous value systems &amp; historical context, community members have authority over the research process</td>
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</tbody>
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Adapted from Biggs, 1989 and Johnson, Lilja and Ashby, 2003

Decreasing LEVELS OF COMMUNITY PARTICIPATION Increasing
The vast majority (87%) of climate studies practice an extractive model in which researchers use Indigenous knowledge systems with minimal participation or decision-making authority from communities who hold them.
Levels in Indigenous Community Engagement

Level of Participation

- Collegial
- Collaborative
- Consultative
- Contractual/No Pt

Research Stage

- Design
- Implement
- Analysis
Climate studies initiated with participation of Indigenous community members maintain **higher levels of engagement throughout the length of research**.
Transdisciplinary climate studies authored with Indigenous practitioners demonstrate higher levels of community engagement in the research.

*Outliers represented two Indigenous scientists from the community.*
Quality indicators for responsible research

1. Are findings **ACCESSIBLE** to Indigenous community members?
2. Are findings reported in the context of **RELEVANT** Indigenous community concerns, issues or interests?
3. How were community members **CREDITED** for knowledge contributions (acknowledgement, co-authorship)?
4. Did the study report **ETHICAL** guidelines followed, such as free prior and informed consent (FPIC)?
5. Did the study address intellectual property rights or risks for community (to “**CAUSE NO HARM**”)?
6. Did the study report any **OUTPUTS or OUTCOMES** for the community?
QUALITY INDICATORS IDENTIFIED IN STUDIES

1. Community access to findings
2. Relevance of findings to community
3. Credit given to knowledge holders
4. Ethical guidelines/FPIC followed
5. ‘Do no harm’ (intellectual property risks)
6. Outputs/outcomes for community

Diagram showing the proportion of studies for various indicators across project initiators: O - outside researcher, M - mutual agreement, C - community.
10 Questions to Guide Responsible Research Practice with Indigenous Communities

1. Are Indigenous community members included in the decision to initiate the study?

2. To what level do Indigenous community members have authority in the research design (None/Contractual, Consultative, Collaborative, Collegial, Indigenous)?

3. To what level do Indigenous community members have authority regarding the implementation of the research?

4. To what level do Indigenous community members have authority regarding the analysis of the research?

5. Are findings accessible to Indigenous community members?

6. Are findings reported in the context of concerns, issues or interests defined by Indigenous community members?

7. How were Indigenous community members credited for their knowledge contributions and efforts (i.e., acknowledgement, co-authorship)?

8. Did the study report ethical guidelines followed, such as Free Prior and Informed Consent?

9. Did the study address intellectual property rights or risks for Indigenous communities?

10. Did the study report any outputs or outcomes for the Indigenous community?

Adapted primarily from the UN Declaration on the Rights of Indigenous Peoples; the Climate and Traditional Knowledges Workgroup Guidelines for Considering Traditional Knowledge in Climate Change Initiatives, & International Society of Ethnobiology Code of Ethics
QUALITY IN RESEARCH PRACTICE REQUIRES A SHIFT FROM THE CURRENT EXTRACTIVE MODEL TO STUDIES BY AND WITH INDIGENOUS COMMUNITY MEMBERS

THE TAKE HOME

CONSIDER HOW RESEARCH DESIGN INFLUENCES BROADER SOCIAL IMPACTS
Te Mana Raraunga - Māori Data Sovereignty Network Charter

He whenua hou, Te Ao Raraunga
Te Ao Raraunga, He whenua hou
Hahóm – thank you!

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@Indiginerd #DecolonizeScience
Reflection break.

- Reflect on what you’ve learned in this session with another person sitting near you.

- Feel free to also use this time to peer-review questions you may have for the Q & A discussion.