



Webinar - Mentions and measures: How are Indigenous values considered in impact assessments?

Description

In Canada's oil and gas industry, impact assessments (IAs) are used to determine the positive and negative externalities of proposed projects. These assessments tend to prioritize economic gains over the values of Indigenous communities who bear the weight of impacts. Dr. Diana Lewis and Lara Durksen discussed how Indigenous values are understood and considered alongside standardized economic measures in decision-making. This webinar presented a thematic inductive analysis of six National Energy Board (NEB) reports for project approvals in the Alberta oil and gas industry. Their findings evidence how Indigenous values shared in the IAs are interconnected to health and well-being, emphasizing the importance of Indigenous leadership in IA for informed decision-making.

Bios

Dr. Diana Lewis



Dr. Diana Lewis is a member of Sipekne'katik First Nation and Associate Professor/ Canada Research Chair (Tier II) in Indigenous Environmental Health Governance in the Department of Geography, Environment & Geomatics, University of Guelph. She is also Director of the IndigenERA Lab and a Member of the Royal Society of Canada (2025). Her research focuses on promoting understanding of Indigenous worldviews in environmental decision-making and advocating for Indigenous-led approaches to give communities baseline health data and sovereignty over the data in environmental decision-making. She is currently working with Indigenous communities across Canada to develop an Indigenous-led environmental health risk assessment approach.



Lara Durksen (M.A.)



Lara Durksen is a settler researcher, who completed her MA in Geography (2025) at the University of Guelph. Her thesis is titled "Measure vs. mention: An analysis of economic measures and Indigenous values in impact assessments of major oil and gas projects in Alberta" and explores how the economics of land-based relationships in Indigenous communities can better inform decision making in Canadian impact assessments. She also holds a BA in Environmental Governance with a minor in Sustainable Business (University of Guelph). Since 2022, Lara has worked as a Research Assistant in the IndigenERA Lab, led by Dr. Diana Lewis.

Transcript

Denica Bleau: Good morning, welcome to the webinar, *Mentions and measures: How are Indigenous values considered in Impact Assessments?* My name's Denica Bleau and I will be moderating today's webinar. We'd like to acknowledge and thank Health Canada and the Public Health Agency of Canada for their financial contributions to this report and webinar.

And before we formally begin, I'll formally introduce myself. So, tânsi, nitisiyihkâson denica, Treaty 4, oskana ka-asastêki ochi niya, Secwepemc, Puyallup mihkwâkamîw-sîpiy. So, hello, my name's Denica Bleau. I currently reside in both Secwépemc Territories and spend half my time across the Medicine Line in Puyallup territories, and I'm very grateful for the land and the peoples that steward these lands and take care of these lands where I'm a guest – I live, work, and study on these lands. I'm Métis from Treaty 4 and my maternal family is registered with Metis Nation Saskatchewan, and I'm also a PhD candidate at the University of British Columbia, where my research focuses on land-based healing from carceral trauma. I'm very excited to have Dr. Diana Lewis back again and also welcome Lara Durksen.

The NCCIH is located at the University of Northern British Columbia on the Prince George Campus and is situated on the unceded traditional territory of the Lheidli T'enneh First Nation, part of the Dakelh (Carrier) peoples' territory.

For those of you not familiar with the NCCIH, we are one of six national Collaborating Centres for Public Health that was established in 2005, with funding from the Public Health Agency of Canada. Our sister NCCs are focused on specific topic areas including infectious disease, environmental health, healthy public policy, determinants of health, and methods and tools for knowledge translation. The NCCIH is unique in that it is the only NCC focused on the health of a population. Our Centre supports health equity for First Nations, Inuit, and Métis peoples by promoting the use



of Indigenous-informed evidence to transform practice, policy, and program decision-making across all sectors of public health.

Here are just a few webinar housekeeping notes: all questions for panelists, as well as technical questions, can be submitted in the Q&A window, which you should see on your screen at the bottom. The Raise Hand feature will not function, and all attendees will be muted throughout the course of the presentation. Links to resources mentioned by speakers will be posted in the chat window, and you can find this webinar after post-production on the NCCIH website in the publication section under the Webinars menu item. Throughout the presentation, please note that attendees will be invited to participate in interactive survey polls, and responses are anonymous and will only be used during the webinar. Just to note, there may be a brief pause as we switch between presenters.

In Canada's oil and gas industry, impact assessments (IAs) are used to determine the positive and negative externalities of proposed projects. These assessments tend to prioritize economic gains over the values of Indigenous communities who bear the weights of the impacts. We will discuss today how Indigenous values are understood and considered alongside standardized economic measures in decision making. This webinar presents a thematic inductive analysis of six energy board (NEB) reports for the project approvals in Alberta oil and gas industry. The findings of evidence show how Indigenous values are shared in the IAs, are interconnected to health and well-being, and emphasizing the importance of Indigenous leadership in the IA for informed decision making.

Here are today's presenters. We welcome back Dr. Diana Lewis, who is a member of Sipekne'katik First Nation and Associate Professor/Canada Research Chair in Indigenous Environmental Health Governance in the Department of Geography, Environment, and Geomatics at the University of Guelph.

And we welcome Lara Durksen. She is a settler researcher who completed her MA in Geography at the University of Guelph. She holds a BA in Environmental Governance with a minor in Sustainable Business at the University of Guelph, and since 2002, Lara has worked as a Research Assistant in the IndigenERA Lab led by Dr. Diana Lewis.

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I'd just like to thank everyone for joining us today, and there will be a brief pause as we just switch presenters.

[brief pause]

Dr. Diana Lewis: Thank you very much for that. We have launched a webinar series about Indigenous leadership in and experiences of health impact assessment in Canada. Currently, there are no Indigenous health impact assessment guidelines. The first webinar presents a literature review and explores what an Indigenous-specific, distinction-based health impact assessment process would look like. The second seminar explores what it means to meaningfully engage with Indigenous communities more broadly. It could be on any topic of interest. This seminar explores how Indigenous values are considered in the final decision in impact assessment approvals.

Kwe, n'in teluisi Dr. Diana Lewis, tleyawi Sipeknekatik, aq Mi'kma'ki. Welalioq, tan teli pejitayoq. My name is Dr. Diana Lewis. People call me Dee. I'm from Sipekne'katik First Nation in Mi'kma'ki, which you know as the Atlantic Provinces. Thank you for coming. I'm Associate Professor and Canada Research Chair in Indigenous Environmental Health Governance at the University of Guelph and Director of the IndigenERA Lab.

Lara Durksen: I'm Lara Durksen. I'm a settler scholar. I grew up on the traditional territory of the Anishinaabe, Attawandaron, the Haudenosaunee, and the Treaty lands and traditional territory of the Mississaugas of the Credit First Nation. This is also where I did my undergrad degree in Environmental Governance at the University of Guelph and then, just in September 2025, I completed my Master's in Geography, also at the University of Guelph, with Dee as my supervisor.

Dr. Diana Lewis: Before we get started, we'd like to get a sense of who is here with us today, so we will ask a quick question: What best describes your current role?

[brief pause to complete online survey]

Dr. Diana Lewis: And so, we'll just wait while people answer and get a sense of who is in the room.

[brief pause]

Dr. Diana Lewis: And so, how long do we wait, Denica? Or, yep, Denica.

Denica Bleau: Sarah is going to share the results

Dr. Diana Lewis: Oh, okay.



Denica Bleau: No worries.

Dr. Diana Lewis: Okay, so we have 42% government, Indigenous organizations next. We have some students, researchers, and community or non-for-profit. We do have quite a large contingent of Other, so it could be other categories rather than the ones here. Great, okay, so let's move on.

So today, we're going to cover health impact assessment basics and best practices from the literature review we presented on January 29th. The link is shared in the chat. And we'll share insights on Indigenous-led, community-based participatory research that we presented on February 17th. The link to the two articles we presented on is shared in the chat as well. Then we are going to present a case study, which involves a review of six national energy board reports and Canada Energy Regulator decisions on energy projects in Alberta. We will review the methods of the case study and share the results of the research. Finally, we will conclude with a summary of what we have presented.

[brief pause]

Dr. Diana Lewis: Okay, we're just taking a moment to put the chat function. Okay, perfect. Great. Next slide.

[brief pause]

Dr. Diana Lewis: Okay, perfect. Great. Next slide.

The Impact Assessment Act of 2019 defines a non-negligible adverse change occurring to the health, social, or economic conditions of the Indigenous Peoples in Canada, and the positive and negative consequences of these changes as within federal jurisdiction. Although the *Impact Assessment Act* mandates the consideration of potential impacts to health, health impact assessments continue to be voluntary.

Widely accepted as putting forth informed guidance for practitioners, the International Association for Impact Assessment recommends that impact assessments take a comprehensive and equitable approach to health that engages all potentially impacted groups. A recent review of health impact assessment frameworks, however, found that none provided adequate guidance to reflect five key principles to guide the development of health impact assessment as put forth by the International Association for Impact Assessment. The link to this article is shared in the chat.

As health impact assessment is becoming increasingly recommended in impact assessment processes, there is a need to develop meaningful guidance. For Indigenous Peoples, however, this will require a stand-alone and Indigenous-led process established by Indigenous Peoples themselves.



Based on our literature review, we suggest that for health impact assessment processes to be meaningful for Indigenous Peoples and be reflective of their knowledges and values, Indigenous-specific health impact assessment should follow eight best practices: be Indigenous-led, determine potential impacts based on community-specific models of health and well-being, assess impacts relative to community-specific baseline health data, draw on Indigenous value-based methodologies, prioritize cumulative effects, respect Indigenous jurisdiction over Indigenous knowledge systems, enhance relationships and communication between Indigenous Peoples, government, and industry, and integrate culturally relevant gender-based analysis and equity considerations.

In 2025, a group of researchers published a manuscript from community-based participatory research involving Indigenous Peoples to Indigenous-led CBPR, *It's more than just "drinking tea:" a reflection on a seven year research journey of Indigenous-led community-based participatory research*. We've already shared the link. What we learned was that doing research with Indigenous Peoples is more than just drinking tea together. This approach applies to the process of developing health impact assessments as well. Through our own Indigenous-led CBPR experiences, we share insights into the intersections of relational ethics and accountability: that collaboration is an ongoing process; that each group we work with has their own culturally relevant approach to gender-based analysis unique to their circumstances; that there is a need to decolonize place, that is, be in community and time, be flexible in research; that we must honour that community is self-determining and can say no; and above all, there is a need to respect data governance and autonomy. Over to you, Lara.

Lara Durksen: Thank you, Dee. So today, I will be sharing my Master's research with you all, which is focused on what information is being portrayed in impact assessments, and then if that information is reflective of Indigenous values. This research is based on a methodology of community-based participatory research. I've been working with Athabasca Chipewyan First Nation, or ACFN, since the first year of my Master's on this research.

ACFN is a Dene community and the majority of their members live in Fort Chipewyan, which you can see at the top of the map, around that purple area, around Lake Athabasca at the top. And then this map is also showing oil sands production, so all the red area is current operating or past operating oil sands projects. This is all located within Treaty 8 Territory in northern Alberta. So, you can see here that this blue line is the Athabasca River, which flows up towards Fort Chipewyan, and ACFN has been impacted by the oil and gas industry for decades. The continuous development is a major concern for members.

So, because of these concerns, my research looks at impact assessments in Alberta oil and gas projects, and what Indigenous values were included in them, and then compares those to the economic measures that were included. And so, to do that, I was identifying Indigenous Value Components, or IVCs, which are values, concerns, or impacts that the Indigenous participants of



impact assessments have specifically identified. The foundation for identifying these values were from broader concepts of value that are reflective of Indigenous Peoples' knowledges and ways of being. Then, economic measures are tools used to assess economic activity and the impacts of a project; so, for example: employment, purchase supplies, taxes paid, employment by association, or spending of associated firms. The themes identified in this category were Western indicators and impacts that are based on Western ideas of value.

To investigate the impact assessment process, I used the Canadian Impact Assessment Registry, which will be linked in the chat. This website allows you to search for any current or past assessments and view related documents. I was looking for federal impact assessment reports, which are summaries of the impact assessment process. They include information from the proponent, participants, and mitigation set out by the governing body. These reports give a recommendation to the responsible Minister on whether the project will cause significant impacts or not. For this project, I was searching for completed impact assessments in Alberta under the oil and gas sector, and to be the most current, they had to be under the *Canadian Environmental Impact Assessment Act* (CEIAA) of 2012. This search led to a total of six impact assessment reports, five under the NEB, and then one under the Canadian Energy Regulator, since that one had been started after that Energy Regular came into effect.

And then here's a list of the projects that I was using. I'm sure some of you are wondering why I was using reports from CEIAA 2012, when the current legislation is IAA 2019. On the screen now are the current proposed projects in Alberta. There are two projects that started under CEIAA and then have been transitioned to the new legislation, and then four projects that have started under the new legislation. While they're all under IAA 2019, none of these projects have made it to the published impact assessment stage yet.

So, with the chosen impact assessment reports, I used a thematic, inductive approach – thematic meaning I was reading the data, the reports, raw in a detailed manner to identify themes, meanings, and understandings. I was identifying themes under either IVCs or economic measures. Inductive means that I had no predetermined themes going into this, so as I was reading the reports, I was identifying themes as they appeared. This is based off previous knowledge from a literature review I completed on ecological economics and political economy within settler colonialism. To organize these themes, I used a qualitative research software called NVivo.

And then here's more a visual representation of my coding methods. So basically, I would read through the reports, highlight sections of text that represented values or measures, and then categorized them into their themes. So, for example, under IVCs, there were themes of community well-being, loss of land or hunting ability, and then, file data – which would be sentences – were highlighted and assigned into those themes. While reading the reports, I found that sections of text would fit the criteria of multiple themes, so I would code those sections of text into all appropriate



themes, which has shown how some of these boxes are connected to multiple theme boxes. As well, I wanted to mention that NVivo is able to perform auto coding, but all of this research was done manually.

So, with that analysis done, these are the themes that I had identified. Overall, I found 21 different themes for the IVCs, which cover a wide variety of values and concerns, and some of them are more specific than others. Most of these IVCs are intangible items, as you can see. You can't measure or quantify things like hunting ability, treaty rights, well-being, or spiritual importance in an easy, co-measurable way.

For the economic measures, there are 10 different themes. As you can see, almost all of these have specific, tangible measurements. So, for example, employment was measured in specific labor numbers, and then oil demand included items on projected demand in cubic meters per day, and then the estimated future cost of that oil. In total, there was 969 different references for the IVCs and 162 references for the economic measures.

Dr. Diana Lewis: So, at this point, you might be asking, “What does this have to do with health impact assessment?” When Indigenous Peoples are talking about health, they are talking about things that contribute to individual physical, mental, emotional, and spiritual health, and balance and well-being, but they are also talking about what brings health and well-being and balance to family, to community. They are talking about having strong connections to place, to environment, and having connections to things that sustain who they are as Indigenous Peoples. The work we do is framed by Indigenous geographies and Indigenous health geographies. We are sharing a few links in the chat.

Indigenous geographies allow us to consider the importance of place dynamics, community mobilization, and human-environment relations in our work. Indigenous health geography allows us to consider the impacts of land displacement and environmental dispossession, but also to consider the promise of environmental repossession. We're going to share a couple of links in the chat, a special edition of the *Canadian Geographer* that you should read, and a book written by one of the outstanding Indigenous health geographers in the field.

But no work in impact assessment can proceed without an accounting of the impacts that the structural determinants of colonialism and racism have had on the health of Indigenous Peoples in Canada. So, anyone working in Indigenous health impact assessment must also read the following, which we will share in the chat. Back to you, Lara.

Lara Durksen: Thank you. So next, remembering how I mentioned that data from reports could be coded into multiple different themes, I wanted to see how connected each of these themes were. So, with that, I put all the IVCs into a matrix query through NVivo to find those intersections of code. And I know this table probably looks pretty overwhelming at first, but it's basically



just showing how many coding connections each IVC theme has, with red showing a high number of connections and green showing a low number of connections.

So here, for water quality and aquatic health, and then community well-being, those two themes share nine pieces of coded data. Some of these shared codes could come from communities mentioning their fear of contaminated drinking water, which then leads to anxiety and impacts on mental health for their members. It's also interesting if we focus in on this part of the table, on the more Western values of employment, funding and compensation, and economic opportunity. So, to make that a little bit easier, this is the same table, just with those Western themes in them. So, as you can see, they're not as connected to the other IVCs, and this green section up at the top there is just showing their connection to the other Western themes within the IVCs.

Dr. Diana Lewis: So, we have the next question we'd like to ask you: do you understand the concept of talking past each other? So, we'll wait a few minutes so we can see the results.

[brief pause]

Dr. Diana Lewis: We should have some music playing while we're waiting.

[brief pause]

Dr. Diana Lewis: So, it just takes us a bit of time to start seeing the responses come up.

[brief pause]

Dr. Diana Lewis: So, it looks like the majority of respondents don't understand that concept, so we hope that this presentation makes this a little more clear for everyone because this is what seemingly is happening. Over to you, Lara.

Lara Durksen: Okay, so now this is that same table again. I've just taken out those Western, or more Western-leaning, IVCs and it shows that the IVCs have a really big amount of interconnections. Overall, one of the most important takeaways from this slide is that all of these IVCs are sharing relationships, they're sharing different intersections of code from at least one other IVC. So then, if we go back to the full table of all the IVCs together, we can see all those connections, and then going back to the economic IVCs, that lack of connections, and it's just showing a very different story within what's happening in these impact assessment reports.

So, for that, I made a more visual representation of the relationships. So, this is the IVC. This isn't including all of the themes because it just has anything with more than eight shared references. Including all of them would be impossible to read, probably more confusing than that first



table. But I did want to show you how these IVCs, they're creating a web of connections between each other.

And then I ran that same matrix query for the economic measures, which shows a very different narrative. There are almost no connections between themes. The themes in economic measures are very, more distinct and easily categorized. They all have their own predetermined formulas or dollar values. These are the types of values and measures that would appear very straightforward to decision makers. And then, I made that same visualization for the economic measures, but this one includes all of the connections, so you can see that they are very much less connected.

And then putting these figures side to side, showing the relationships between the IVCs and the economic measures, really shows the difference between the themes. I want to point out that the lines connecting them – between themes – are at different scales, so for the IVCs, it starts at a minimum of eight and has a maximum of 15, or 17, sorry. And then the economic measures start at a minimum of one and a maximum of three. So, there's a clear disconnect between how these two value systems operate, which is leading to misunderstandings in decision making.

Dr. Diana Lewis: So, let's go back to that question we asked a few slides back: do you know what talking past each other is? While the Indigenous people in this case study shared all 969 of the things that were important to them from a traditional economy perspective, what would be important for individual, family, community health and well-being, for balance, for their lands and territories to be in balance, the decision maker seemingly heard none of those things, or very little of which reflected what was shared with them during the impact assessment process. In fact, their economic measures only totaled 162 measures. Reflect on that: 969 values, concerns and impacts versus 162 economic measures.

In 2025, a few of us wrote the following article, which is shared in the chat, *Confronting epistemic blinders in impact assessment and environmental health risk assessment processes*. I will read a few sections of the abstract:

The driving epistemology of settler colonial society in Canada is socially structured around the elimination of Indigenous Peoples' access to territory to expropriate its resources for their own purposes. To reduce Indigenous Peoples' complex lives and land-based relations into reductive environmental exposures that serve to sanitize, homogenize, and normalize continued colonial violence on their bodies to talk away how Indigenous Peoples are impacted. This perspective offers insight into how Indigenous Peoples' epistemological frameworks for health and well-being are neglected in impact assessment processes.



I think the work that Lara has done should leave us all reflecting on what is happening. When you don't consider what Indigenous people are sharing with you in these processes, you perpetuate harms.

So, we ask one final time: do you understand now what talking past each other is? And we'll wait while people respond. And it takes about 30 seconds to let everybody respond.

[brief pause]

Dr. Diana Lewis: It's just a few more seconds.

[brief pause]

Dr. Diana Lewis: Oh, this is awesome! This is better than I could have imagined. So now we have 95% of people saying yes, now they understand what that term is. So, we've increased a positive response rate to that question by 40%. Thank you very, very much. So, Lara, what's next?

Lara Durksen: So, I think that what this research has set up is that now is the time to explore opportunities for new evaluation systems to be used in impact assessment. It's clear that what's being used right now is causing Indigenous values and concerns to be misrepresented. I think that future research has to focus on community-specific frameworks for looking at value and determining what an impact on those values is. Dee?

Dr. Diana Lewis: So, at the IndigenERA Lab, we hope to continue to build on the research that we do and we continue to develop resources for Indigenous-led health impact assessment. Next slide.

So, we hope you join us for our next webinar, which is on March 31st and that one will go into what distinction-based health impact assessment looks like. We hope that you take what you have learned today to inform how you move ahead in your respective roles. Welalioq, tan teli pejitayoq. Thank you for coming.

Denica Bleau: Thank you. Participants, this is your opportunity to ask the presenters some questions, so please submit your questions in the Q&A section.

So, our first question – thank you, Dr. Diana and Lara – so this one's for Dee, Dr. Diana: can you speak to if/how Indigenous-led health impact assessments following the best practices from the literature review can be a form of environment repossession? It's a long one.

Dr. Diana Lewis: I think that if you, as a practitioner, were to follow the best practices, everything that we've talked about would lead to better outcomes in the process. So, if you allow the Indigenous



communities to lead or at least to co-lead the process; if you look at how impacts are impacting the community distinctly through cultural impacts, how they are experiencing health and well-being impacts in their community; if you allow the communities to have the baseline health data to be able to measure going forward any changes in health and well-being based on their understandings of health and well-being; if you use Indigenous valued methodologies, prioritize cumulative effects; if you respect that Indigenous Peoples have jurisdiction over their own knowledge systems, you look at culturally relevant gender-based impacts, and understand also, we didn't have that in the eight best practices, but that Indigenous people control their data and have autonomy over their own data collection processes; it only can result in better outcomes than what we're currently seeing now.

Denica Bleau: Thanks for that, Dee. The next question's for both of you: you discuss the intangible aspects of the Indigenous value components as being difficult to co-measure. Have you considered or do you have experiences with how these might be measured?

Lara Durksen: While I was doing my literature review, I came across a few really good examples of other case studies and other researchers that are doing this kind of research. And I think that the most important part of all of these different ways that are opportunities to look at these immeasurable or intangible items, is that they have to be community-based and Indigenous-led.

So, in my thesis I talk about how – sorry – so these examples, there's one from Australia where they do a culturally relevant, replacement cost. So, replacement cost is a usual type of measurement that is being used, but usually they're taking the wrong sorts of items that they're creating their formulas around. And so, this study worked with an Indigenous community in Northern Australia to see what fish were being impacted by development upriver and then working with them through interviews and on the land to see what that actual replacement would be, instead of the predetermined ones from proponents or the government. And I just thought that was a really interesting case of how you can take something and readapt it and figure out how to make it actually meaningful.

Dr. Diana Lewis: I think if I were to use an example of how I've used evaluating intangibles, in the work that we did with the Pictou Landing First Nation women. We asked the question, “Are you fearful of the air, land, and water around you?” And simple answer, yes or no, and then we crosstabbed that with an appropriate definition of health. So we asked questions specifically about physical health, mental health, emotional health, spiritual health, and when we did a crosstab of the answers to that questions, when people were fearful – which, think about it: as Indigenous people, we're not meant to be fearful of the air, land, and water around us. That's how we derive our identity, and our languages, and our cultures, and so on. When people were fearful, it had different impacts on how physical health was impacted compared to mental health, compared to spiritual health.



And so, there are ways of getting around this, and we found a really good example from the Mackenzie Valley Environmental Impact Review Board that does an assessment of sacred sites, and they have a way to assess how sacred – how in this case, it was uranium exploration by an energy company in the Northwest Territories – how that would cause stress to people that were living around the uranium site. And as a result of the stress that was caused to the community members, they didn't approve the project. And so, there's ways that can be measured, and this is the work that we hope to do as well in the research with the IndigenERA Lab.

Denica Bleau: Thank you for both sharing about that. For Lara, this is a question for you: what led you to do a matrix query using NVivo?

Lara Durksen: Yeah, so like I said, while I was coding, I was seeing that these multiple sentences or the comments from these Indigenous participants in the reports were fitting into many of the themes, so I didn't want to water down and make a hundred different types of themes, but it made more sense for the themes to then fit into multiple criteria instead.

And then I had an idea in my head that this would mean something to look at, to see how they're all connected, because I know that value components are generally divided into very separate categories of health, environment, economy when these impact assessments are being done by the proponent. But that separation wasn't what I was seeing in the reports themselves.

And also, I think it would have been really, really interesting, the groups of sentences, they're – what I showed was the intersections between two themes, but a lot of the time they were being coded into three, or four, or five different themes for the same group of sentences. And the matrix query was just the most easily readable version of that that I could find. And I just really wanted to be able to show that these connections – you can't separate them and decontextualize them because then these value components, they start to lose their meaning.

Denica Bleau: I relate to that as a student, so thank you for sharing that. We have another question for you. So, for Lara: you mentioned, Lara, [that] this research started with community partner Athabasca Chipewyan First Nation. Can you share more about your research relationship with them throughout your Master's?

Lara Durksen: Yeah, so when I started this – when did I join the lab, 2022?

Dr. Diana Lewis: 2022.

Lara Durksen: And Dee had already been working with ACFN on a larger project, and I met with them in February of 2022 with another researcher, Elana – from the first webinar, and we had presented the idea around resource economics and what sort of research ideas we could start looking



at. And quite a few members from ACFN that were present were interested in the research, which was exciting. And then from that, I continued to meet with them and discuss which ways the research could go.

This research project did look a lot different at the beginning. So, originally we were going to look at getting deeper into how people value things and what sort of systems are behind that, and there was going to be interviews in a much more extensive methodology for this project. But because of the timeline of a Master's and then the timing of the community themselves, we switched that, so that I wouldn't be putting way too much pressure on the community to get this work done within the timeline that I had to do. It's only two years, which is not enough time to be building that connection that you need and that relationship.

So, with that, while they were doing this health survey, this project was something that I could come back to Guelph and do independently, so I wouldn't be taking up too much of their time, and then come back to them with these results. So, I presented these results at the end of August before I defended, and they were quite excited about it, and we're looking to continue working together on this project, which is really exciting.

Denica Bleau: I love that you recognized and prioritized understanding your capacity within the Master's, because it is so fast.

Okay, we have another question for you, Lara: in your tables, does a higher frequency mean an IVC or economic measure is more important?

Lara Durksen: No. So, with talking about within the IVCs, there's this many mentions of them in this project or this many mentions of them in a different project; all of these reports had over 20 different First Nations included in them, and they all had different priorities that they were coming forward with. So, just because an IVC or an economic measure has a higher frequency than another IVC or another economic measure, didn't mean that they were more important. It just means that they were showing up more, but that doesn't say for one community – like trap lines could be really important to them – [it] doesn't mean that because community well-being was showing up more makes it over that.

Denica Bleau: Okay, so this question, I hope I'm asking this correctly: can you speak to the impact of not having Indigenous people in the systemic and decision-making governance positions alongside co-collaborating health initiative?

Dr. Diana Lewis: Okay, I'm going to interpret that to mean having non-Indigenous people who understand the economic measures that Lara's talking about making the final decision on the impact assessment, because I'm not quite sure what the co-collaborating health initiative is.



So, if I were speaking to the decision makers for the impact assessment process, I think it clearly demonstrates that they're defaulting to the measures that are more familiar to them – the measures that are generic formulas ready to use and what's stressed in the training of practitioners who are making final decisions. If I look at that question to think about the impact of not having Indigenous people in decision-making of the co-collaborating health initiative? If you're asking the question about the research program, and I'm not sure you are, but our overall research program is looking at environmental health and how the impact assessment process is impacting the health of our communities. Everything I do, and everything that we're training the students to do, is how to work in collaboration with Indigenous communities. And so, it may be even more of an extent than co-collaboration because we take our direction from community and we sign research agreements that they own the data, the data belongs to them. You heard Lara say, before she defended her Master's, she presented to the community. So, we always present back to the community, and then they direct us what the next steps are.

So, I hope I've answered that question. I wasn't quite clear, maybe, what was being asked.

Denica Bleau: Yeah, we don't have any follow-up, but I think even within the past presentations you guys have contextualized that as well, is how closely you're taking direction from communities. It's very much so, communities are directing almost, right?

So, I have a kind of gender-based question. It's come up a couple times, so I tried to summarize it, but was there a gender-based analysis applied within the research or how did you examine gendered impacts in your work, or how might this have come up?

Lara Durksen: Well, for mine it would be somewhat difficult to apply a gender-based application, just because these comments are coming from – it'll say, like from the First Nation as a whole, and then within these reports as well, there's, like I said, 15 or 20 of these participants, so it'd be kind of outside the realm of a Master's to look at each of these different communities, like gender-based considerations.

Dr. Diana Lewis: I think in one of the last slides that we mentioned, like the next steps. So, Lara is going to look at using this same methodology but looking at impact assessment reports from a health perspective, that when Indigenous people share their health concerns, how well that's reflected back on community.

Maybe another opportunity is to do the same methodology from a culturally relevant gender-based analysis to see how gendered aspects are reflected back. Like, there's so much potential in this research to explore what actually is happening in those processes.



Denica Bleau: Yeah, and it sounds like, if I'm understanding correctly, the work is intended to be continued and built on, and how gender might be included in that, too. There is quite a few gender-focused ones [questions], so we'll see if we jump around to them or those might be things that are in further discussion or might be continued work.

So, I'm going to jump to another question. This is interesting: how would you deal with myths or disinformation about a potential project?

Dr. Diana Lewis: Maybe I could start the answer to that and then see if there's more to add. So, we try to support community in understanding impact. So, we have a lot of people on our research team; we have children's health experts, we have ecotoxicologists, we have biologists, we have people who are looking from an epidemiological perspective. So, we have policy experts and so on on the team. And what we tried to do – so I'm leading two projects, and we're kind of starting to wind down the first one. And in the first project – it's a five-year project that we're now in the fifth year – we have met regularly as a project team, once a month, for probably the first four years of that project. So, we have really open communication with our community partners.

In addition to that, we are often in the community, and we are often having community meetings, doing presentations, meetings with advisories, and so we might hear of concerns that maybe aren't substantiated or maybe they just need a bit more support in understanding the issue. And we feel if we don't have the expertise within our team, being in an academic environment in a university, you have access to a lot of experts, and so we can access expertise to try and address any misinformation or disinformation.

In the second research project that we're just starting, we are specifically holding knowledge symposiums on topics that are really important to these communities. And in the process, we'll be developing knowledge translation pieces that we will post on our website and share more broadly with other communities who might be in the middle of this disinformation, misinformation, which, interestingly, is the topic of the International Association for Impact Assessment Conference coming up in May, where we're all presenting. And the first Knowledge Symposium is focused on contaminant transport and children's environmental health. So, how do we understand contaminants from various sources and how do they make their way into humans and children which have specific exposures that we should be aware of? We have another knowledge symposium that's going to focus on microplastics, and we've had a student actually sample for microplastics in one of the communities so we can see the distribution of microplastics. And we have another Knowledge Symposium on the impacts of wildfires on our communities.

So, what are we talking about? You know, in Nova Scotia they're experiencing wildfires we never had before. How is that impacting my community? Toronto has had the worst air quality in the world from forest fire smoke, so you can imagine what the communities who are living near those



wildfires are experiencing. Like when we're given warnings in Toronto, “Just be careful about going outside,” what are the communities experiencing? And so, we're going to have a Knowledge Symposium to support the communities in understanding those impacts. As Lara mentioned, the first presentation they did to the communities, Elana and Lara, was on health economics and resource economics. How do we adequately understand economic impacts of all these things, right?

So, we're hoping to support the communities in that effort. Understanding how to do risk communication so that we're not adding to disinformation, or misinformation, and needlessly creating fear. So, we're trying to come at it from different angles. And what's so amazing about having the resources of students like Lara is they're looking for projects, and these are projects that communities need.

So, being a member of a community and having worked with communities for so long in my career, I can have, maybe, a closer understanding of what some of those pieces of disinformation and misinformation might be. Do you want to add to that?

Lara Durksen: No, I think you covered it pretty well.

Denica Bleau: Yeah, thank you for that, Dee.

I'm going to jump back to one of the other questions and frame it a little bit different, too. So, question number eight that we had, it says, “Did you find connections between the health of Indigenous women?” but I think even talking about Indigenous women or men, if there was differences, and the health of the environment? And I know, Dee, we talked about certain things we can't talk about within this scope, but if there are areas that you guys might be able to speak to for that?

Dr. Diana Lewis: Yeah, so two of the communities that we work with were with the women in the community, so Pictou Landing First Nation Native Women's Group and the Yukwanulha Yukwanikuhliyo are the Oneida Nation of the Thames women. And just the underlying responsibility of the women leading those processes speaks to the gender aspect of getting back to their traditional roles, of being responsible for the health and well-being of their community members. And that we respect that, we honour that they have the role to do that. And in our research, we have no reason not to work with the women in the community.

In Pictou Landing First Nation, for example, they were dealing with effluent from a pulp and paper mill that was dumped into a body of water that bordered the community. So the 85 million litres of effluent being dumped into this body of water that washed ashore to the First Nation made people really afraid because they saw, within days, this massive kill-off of all the fish in that body of water,



which has gendered impacts; people not being able to fulfill their obligations or responsibilities to the fish. But the women have the responsibility for water and, being afraid of the water, felt that they couldn't conduct their ceremonies. And so, the effluent treatment facility closed in 2020. And just this past summer, we all went down to Pictou Landing First Nation and gathered the women, some of the research team, and we had a ceremony on the beach because Pictou Landing First Nation's on the Northumberland Shore, on the northern part of Nova Scotia. And so, we had a ceremony on the beach because the water's starting to clean up now, and the women led the ceremony.

So, we do try to take into consideration women's roles and respect women as caretakers of the health of their communities and environment. It's all interconnected.

Denica Bleau: Lara, do you want to – I keep pronouncing your name in an Irish way – do you want to talk about any, or speak to any of that or should I jump onto the next question?

Lara Durksen: Head on to the next one.

Denica Bleau: So, based on your findings, do you see opportunities for acquiring Indigenous health IAs as an integral part of IAs or other policy opportunities?

Lara Durksen: Yeah, I would say, definitely, these findings really show that what's going on in impact assessments right now, it's not working, and it's not showing what it needs to show. So, I think by having HIAs as a required part of the impact assessment process, it would mean that these values and how they're related to health would be able to be more explored and then better translated to these decision makers. And I hope with continuing this research that it strengthens that argument that Indigenous-led HIAs are required.

Denica Bleau: Dee, do you want to add anything to that?

Dr. Diana Lewis: Yep, no, I think that was really good.

Denica Bleau: This is a great follow-up question. So, you mentioned decision makers. This question is: how have various decision makers interacted with your findings? What was the feedback or recommendations for future assessments, if that came up?

Dr. Diana Lewis: Yeah, so we actually are hosting a Policy Institute here at the University of Guelph, May 25th for senior decision makers in government, federal and provincial, and then we're inviting maybe the practitioners, technicians – I'm not sure how you refer to government employees that are maybe a level below the decision makers – to stay with us for a few extra days to just think about these results that we're finding, because this is just one project in the whole larger research



project. And so, we'll be presenting a number of projects to them. And then, how do we see opportunities to influence policy and move this forward? So, it's a really great question and something that we are looking forward to at the end of May.

Denica Bleau: What a cool opportunity for your Master's [students] to have such an impact within those decision-making, and upcoming policy, too. That's really exciting.

Okay, this is a kind of a longer question, so it's not in the chat yet. I'm going to try to summarize it. So, within possibly governmental structures, there might be an emphasis on building faster and foregoing environmental assessments or, for example, taking advantage of Canada's rich natural resources. So how has this, or has it, impacted the work that you do in communities and the work that you work with? So, kind of possibly foregoing Indigenous consent. Has that come up? How has that come up? Etc.

Lara Durksen: Yeah, that's a really good question. I'm writing an article right now based on these findings, and it's been quite prevalent in my mind that I want to be able to publish this very soon because I know that policy is changing and they're trying to speed up these processes, even though everything that we're finding is showing that that isn't what should be happening. And that, in order for these projects to be able to make the best decisions, they need to be putting in that time to make those decisions. Dee?

Dr. Diana Lewis: Yeah, if I could add to that? I'm not sure that I heard it correctly, but these processes going faster and possibly foregoing Indigenous consent?

Denica Bleau: Yeah, and environmental assessments, etc.

Dr. Diana Lewis: I don't see how that could happen. The Policy Institute that we are hosting – and it's by invitation only – we've titled it “Fast Tracked, but Data-Driven.” So, with the methodologies that we have already developed, we've already done a few different kinds of approaches, we can demonstrate how the data can be collected to support communities to be able to participate in those processes. And I'm hoping – I mean, there's no guarantees, but I'm hoping that we have some influence on that process, that Indigenous communities can be supported to have the data to make informed decisions.

Denica Bleau: Yeah. That's so important with UNDRIP and everything else that continues to be very important to follow within Indigenous communities.

Okay, could you elaborate on giving priority to cumulative effects? So, someone has kind of a question of having a deeper understanding of that.



Dr. Diana Lewis: So, I don't think this is something new. So, Indigenous communities will ask for cumulative effects to be considered. Cumulative effects is one of the best practices suggested by the International Association for Impact Assessment. And when we talk of cumulative impacts, a project environmental assessment can't only look in isolation at the impacts of one specific project. They do but they shouldn't because traditional territories aren't impacted just by one project. They've been impacted by colonialism in so many different ways. They've been impacted by project after project after project that chips away a little bit each time of how Indigenous people get to live on the land, to have their traditions, to speak their languages.

And those little chips add up over time, so that when you're dealing with Project X, all of these other impacts have happened. And so, I think it's so important to understand – and we've said this in the previous webinars – when technicians, practitioners come into community, they need to understand that colonial history and all of those cumulative impacts that the community is aware of, because those have impacts on community.

Denica Bleau: This is an interesting question, unless, Lara, did you want to add to anything to that before I jump on? Okay. Who is responsible for determining what gets measured?

Lara Durksen: From what I've understood from my thesis is that it's kind of a shared responsibility between the proponent, who's going in and completing these impact assessment reports, and then the governing body, so that would be the NEB or the CER. Before the impact assessment process starts, they set out requirements for the proponent. And then while all of this is being put into the one impact assessment reports, Indigenous communities are sharing their values during hearings.

Denica Bleau: Did you want to add anything, Dee?

Dr. Diana Lewis: Yeah, I think, as we've said [...] in the best practices, Indigenous communities need to participate in those processes. And I think what Lara's research clearly evidenced was when it's left to one party, they look completely different, so there has to be collaboration.

Denica Bleau: I'm just sifting through some of these questions. So, there's lots of “thank you's,” I want to say that, and lots of, “Wow, this work has been really amazing to listen to.”

Lara, there's some questions about if you want to pursue a PhD or how this work might be further – I don't know if people are trying to grab you. So exciting thing, I think, people see how important this work is, so some questions of that. I'm just sifting through, there's lots of great questions, so that's kind of a question that got brought up. It looks like we've answered most of them.

Lara, so are you planning on doing a PhD or do you need a break?



Lara Durksen: I definitely think I need a little break. I've been lucky enough that I've been able to stay on as a Research Assistant after I've graduated. It's just really nice being able to continue this project and stay with this team. But I've definitely thought about it, it just needs a lot more thought put into it.

Dr. Diana Lewis: Yeah, we have a lot of students that are working with us. I think there's about 12, or – I lose track, because we have students who are Research Assistants, we also have volunteers. We have some really great Indigenous students in biology, environmental governance, statistics, environmental engineering that are part of the team, so we're building capacity for our communities. There are awesome students that are out there that can help support these kinds of processes.

Denica Bleau: That's so great. And just Dee has, as you've said, this work is continuing, and it's so great that students are so passionate about working with community and following their lead.

We have gone through all of the questions. Those are really good questions, and some of them were tough. So, thank you for our tech team. They've been in the background helping us sort through and keep us organized, so thank you so much, tech team. And thank you again, Dr. Diana, a.k.a. Dee, and Lara for joining us today. This has been so great.

We are wrapping up a little bit early today, but we want to encourage everyone to complete the webinar survey, and the link is going to be posted in the chat, before we close the chat. And you'll also receive an email with the link tomorrow, in case you miss it.

So, thank you for everyone that attended. If either of you want any last thoughts?

Dr. Diana Lewis: I just want to say thank you for everybody who's registered and shown up for the webinar. It's really important for the work that we do that we spread the message of the kind of work that's happening with communities. So, thank you, Walaliak.

Lara Durksen: Thank you.

Denica Bleau: Thank you, everyone, for attending.



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