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Wise practices: Indigenous-settler relations in Laurentian Great Lakes fishery governance and water protection [☆]

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ABSTRACT

Ongoing tensions between Indigenous and non-Indigenous communities working in support of the protection and management of fish and water in North America have necessitated a shift from current structures towards relationships built upon and driven by respect, relevance, reciprocity, and responsibility. Similarly, the cumulative and evolving effects of climate change, industrialization, resource extraction, and displacement of Indigenous Peoples from their traditional and contemporary lands and waters requires purposeful application of decolonizing methods in aquatic systems management and protection, which in turn aids in the re-establishment of agency to Indigenous Peoples. This article endeavors to outline critical differences in 'best practices' and 'wise practices' in Laurentian Great Lakes fisheries management, water protection, and Indigenous-settler working relations through dialogue on experiences of Indigenous working relationships with colonial governmental bodies. We discuss critical misunderstandings, and the need for creating room for and profoundly respecting Indigenous ways of knowing and being. This work brings together lessons, stories, and knowledge from a panel of Indigenous and allied scholars and community members from the International Association for Great Lakes Research annual conference in May 2021, and subsequently uses a conversation-based methodology to preserve the voices and teachings of panelists. The lessons shared in this work are vital to the future of Laurentian Great Lakes fish and water health.

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Background

In May of 2021, a panel of Indigenous scholars, allied scholars, and community members met virtually to discuss barriers, methods, and outcomes of bridging Western science and Indigenous knowledge systems in aquatic resource management, protection, and relationality. This dialogue was held within the International Association for Great Lakes Research (IAGLR) 64th annual confer-

ence which brought together researchers from a variety of disciplines under the theme of "Bridging: Knowledges – Seven Generations – Land to Lake." With sessions and workshops engaging participants in conversations around youth engagement, intentional and cooperative Great Lakes management, bridging ecology and human dimensions, and weaving together ways of knowing, the conference aimed to connect people to place, across disciplines and backgrounds. Following this panel discussion, the lead author, Kate Mussett, was invited to bring together the words of the panelists in a manner that preserves their voices, perspectives, and teachings. As a settler-descended academic with my own unique relationship and responsibility to fish and water, it is a privilege to play a role in honouring all that was shared within this discussion. As a story-listener and story-teller engaging in the process of

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'meaning-making' in Indigenous methodologies (Archibald et al., 2019). I have situated myself in a meaningful way as I attempt to cultivate respect, responsibility, relationality, and reciprocity in this work.

The panel discussion, convened by Dr. Andrea Reid, occurred within the "Bridging knowledge systems between Indigenous and non-Indigenous communities" session, which included Dr. Deborah McGregor (Whitefish River First Nation), then PhD candidate Susan Bell Chiblow (Garden River First Nation), Rod Whitlow (Kanien'kehá:ka, Six Nations of Grand River), and Ryan Lauzon, co-chaired by Dr. Andrea Reid (Nisga'a Nation) and Alexander Duncan (Chippewas of Nawash Unceded First Nation), and facilitated by Nicholas Boucher and Kaitlin Almack. The discussion engaged topics around 'wise practices' in facilitating learning, working, and relationship-building between Indigenous and non-Indigenous individuals and communities in the Laurentian Great Lakes. As a decades-old discussion, the critical importance of bridging knowledge systems in aquatic systems research, management, and relationality has made its way not only into environmental fields, but also political and social spheres (McGregor, 2008; Simpson, 2014). A movement towards bridging ways of knowing extends beyond the need for environmental protection and conservation, and into the broader and arguably more urgent goal of Indigenous-led stewardship and the dismantling of knowledge inequalities (Reid et al., 2021). Broadening participation and forms of knowledge included in environmental decision-making has had positive outcomes by amplifying and validating otherwise unknown perspectives, supporting Indigenous youth involvement, and bolstering self-determination, all of which aid in the achievement of healthy lands and waters (Whyte et al., 2015; Reo et al., 2017). However, missteps taken in processes of bridging and inclusion can cause considerable harms to Indigenous Peoples and communities involved, stressing a need for the identification of best or 'wise' practices arising from decades-worth of experiences working at this interface.

The IAGLR panel discussion brought to light ongoing issues in Indigenous and non-Indigenous relations. In particular, themes centered on the tokenization and assimilation of Indigenous Ecological Knowledge (IEK) and the failure of federal and provincial government agencies to recognize and respect diverse Indigenous knowledges, values, and perspectives in discussions of water, among other tensions. Inherent to being in good relationships within these contexts is the need for Indigenous languages, knowledges, and approaches to be on equal footing in current methodological frameworks in stewarding aquatic ecosystems. While panel participants come from diverse backgrounds, all have deep and personal relationships with the Laurentian Great Lakes, thus providing unique yet complementary perspectives on the need to shift away from 'management', and into the care of and relationality to water and its inhabitants. By recognizing the importance of languages, the necessity of mutual respect, and the role of human beings in complex aquatic systems, we can find true and effective collaboration. It is towards these ends that we present and discuss essential 'wise practices' for navigating Indigenous-settler relations in Laurentian Great Lakes fishery governance and water protection.

A dialogue on 'wise practices'

The 'wise practice method' has been widely discussed across disciplines such as health, education, leadership, and law, but is underdeveloped within the realm of fisheries and aquatic science (Wesley-Esquimaux and Calliou, 2010). Despite their rootedness in Indigenous leadership and their creation of space for Indigenous knowledges, wise practices often refer to economic and business

leadership within First Nations communities as a form of reclamation, sovereignty, and agency (Wesley-Esquimaux and Calliou, 2010). At their core, wise practices represent resilience and adaptation; they are meant to exemplify not only a dynamic learning process, but also a congruence of lived experiences. Wise practices relate to Indigenous Knowledges in these ways, and are also central to themes of Indigenous ways of knowing (i.e., how Indigenous Knowledges are accrued and maintained). Contrastingly, Western scientific approaches are propagated by reductionism and reproducibility (Skinner, 1956). While early scientific philosophers argued for science as a creative process rather than a fixed set of steps, common themes arise across disciplines such as rootedness in scientific evidence and the use of hypotheses (Gauch, 2003; Skinner, 1956). Scientific methodologies, while meant to be tested and built upon, encourage structural sameness; it follows a strong, predetermined pattern built over time to produce results (Miheua and Wilson, 2004). While 'best practices' in Western science gives rise to some of our understandings of the natural world, they have infiltrated Western ways of thinking, leaving behind a fear to deviate from the predetermined norm, as seen through cross-disciplinary, decades-long use of best practices (Wesley-Esquimaux and Calliou, 2010). Given the definition of best practices as "documented case histories of innovation and performance success in a specific practice area" that "serve as models for others to learn from because of the detailed analysis of the practice under study" (Wesley Esquimaux and Calliou, 2010, p.6), 'wise practices' are distinct in their recognition of culture, nuance, and context. Additionally, 'wise' practices often value outcomes beyond traditional definitions of 'success' and 'performance' limited in applicability and productivity to the individual or research group, and instead deviate from this norm in recognizing holistic valuation and larger scale cause and effect. With that being said, what differentiates 'wise' practices from 'best' practices is the 'wise' commitment to situational context, shifting baselines, and changing relationships within practice, process, and collaboration.

In the space of fisheries and aquatic science, context matters. Wise practices were a chosen theme in the IAGLR panel discussion to highlight the complex, intergenerational, culturally situated, and constantly adapting place-based knowledges of Indigenous Peoples in the Laurentian Great Lakes. The 'wise practice' method facilitates coming together through a set of guiding principles for both Indigenous and non-Indigenous peoples to co-create ethical space (Ermine, 2007) in research and decision making. Current literature and discussion within bridging knowledge systems, such as the Mi'kmaw principle of *Etuptmumk* / Two-Eyed Seeing as defined by Elder Dr. Albert Marshall and Elder Murdena Marshall, alongside other Indigenous ways of knowing such as those represented in two First Nation led Great Lakes treaties; *Kaswentha* / Two Row Wampum (Haudenosaunee), and the Dish With One Spoon (Anishinaabe), mirror the fundamentals of wise practices (Bartlett et al., 2012; Jacobs and Lytwyn, 2020). These treaties, concepts, and principles are all built on a foundation of respect, balance, and relationality between groups of distinct knowledge holders or peoples who practice highly distinct lifeways (Bartlett et al., 2012; McGregor et al., in press; Reid et al., 2021). *Etuptmumk* has become a widely used framework given its inherent emphasis on understanding the strengths of distinct ways of knowing, e.g., Indigenous and Western sciences, while also being able to use both eyes, or perspectives, for the benefit of all (Reid et al., 2021). Its uptake in aquatic and fisheries science, specifically, is due in large part to the growing recognition by Western scientists of the strengths of multiple perspectives and Indigenous knowledges in environmental decision making (Abu et al., 2019; von der Porten et al., 2016). Additionally, fish and water are central to identities, economies, and well-being of Indigenous and non-Indigenous peoples alike. As identities have been shaped through

lived experiences in opposition to one another in this context, feelings of entitlement and disputes over rights and access arise, thus culminating in much of the conflict witnessed across what is now known as Canada and the United States.

Wise practices, as a core theme of *Etuaptomuk*, *Kaswentha*, or the treaty Dish With One Spoon, provide a pathway for a coming together of both stakeholders and rightsholders in the pursuit of healthy fish and water. Through use of these practices, co-creating space for multiple ways of knowing to bolster healthy aquatic systems sits at the fore of continued healing and relationship building between Indigenous and non-Indigenous peoples. Additionally, *Etuaptomuk* necessitates action from the individual or community who receives shared knowledge (Reid et al., 2021), a theme touched on at length in the following synthesized IAGLR panel discussion. It is with wise practices that we all must move through the space of bridging and celebrating multiple ways of knowing within the context of aquatic systems. In the Laurentian Great Lakes, which encompass overlapping First Nations' and Tribal territorial borders as well as nation state borders (Fig. 1 and Fig. 2), this papers' discussion on wise practices in bridging Indigenous and non-Indigenous knowledge systems and responsibility-sharing with respect to fish and water will likely have constructive outcomes for those who are most ready and willing to listen.

The conversation method

As a panel of individuals working at the interface of Indigenous and non-Indigenous relations in aquatic systems, it was made clear within this discussion that the conversational or dialogue method (Kovach, 2010) would be best fitting for knowledge sharing and dissemination. The conversation method can be seen as harmonious with Indigenous paradigms given its roots in oral traditions and storytelling (Kovach, 2010). This methodology has been used increasingly within Indigenous literature, scientific and otherwise, to preserve Indigenous voices, stories, ways of knowing, and modes of knowledge sharing. This is critical in the recognition of inclusivity and engagement in academia, which have become growing themes in many research environments (Timler and Sandy, 2020). The contemporary academic institution often operates within colonial agendas and has historically seldom made space for the inclusion or legitimization of opposing or differing ontologies and ways of knowing. Academics have often been taught, and then believe, their methodology to be objective, all the while perpetuating racism (Mihesuah and Wilson, 2004) and other prejudices through the binaries of Western epistemologies. Systemic racism in higher education is sustained by common themes that run deep through the foundations of academia. For example, the continued treatment of Indigenous Peoples and cultures as subjects of research, exploitation of Indigenous scholars on boards, committees, and working groups to demonstrate consultation, and continued funneling of data and knowledge sharing into journals and other outlets with restricted access represent some, yet not all, examples of racism in academia. (Mihesuah and Wilson, 2004). It is only recently that academia has increased its involvement in and capacity for work which aims to reclaim and uplift Indigenous Peoples and their knowledges (Windchief and San Pedro, 2019). A critical example of this can be seen through the work of the Indigenous scholars and experts involved in this panel, within the IAGLR conference, as well as scholars, communities, and organizations internationally. The process of Indigenizing research is led by Indigenous scholars, where lived experience, cultural knowledge, and storied understandings play a central role (Archibald et al., 2019). Further, Indigenous methodologies "allow for connection to place, to people, to relationships, to land," and provide opportunities for lessons to be carried from listener to lis-

tener (Archibald et al., 2019; Windchief and San Pedro, 2019). In bringing this paper together, text from the IAGLR panel discussion remained relatively verbatim; that is to say, co-authors edited transcripts for readability, length, and intention. In this way, we were able to remain in keeping with the goals of conversation method by providing space to each speaker to hold agency over their own words including editing, omissions, additions, and structure. The lead author contributed only supporting sections and was not involved in the words described in the sections below.

The conversation or dialogue method applied here has been a tool for reclamation and decolonization of academic spaces, specifically literary spheres, and "aligns with an Indigenous worldview that honours orality as means of transmitting knowledge" (Kovach, 2010, p. 42). Its strengths lay in its style; the voice of each contributor is maintained throughout the written form, allowing each individual to speak with their own voice (McGregor et al., in press). Stories create relationships, find meaning, and allow lived experiences to become lessons for others. In this way, wise practices can be contextually situated within the context of fish and water relationality through the stories and experiences of those present within this discussion. As panelist Ryan Lauzon so keenly pointed out as this dialogue began, "...my world is kind of a fish world." Addressing issues of aquatic stewardship, fisheries management, and bridging ways of knowing in these realms requires a complex understanding of history and context, where the use of conversation and dialogue in written work can bolster reciprocity and respect (Timler and Sandy, 2010).

'Wise practices' and the facilitation of co-learning between Indigenous and non-Indigenous communities

Following introductions and opening remarks, the panelists were asked, "What does wise practice mean to you, and how can we use wise practices to facilitate co-learning between Indigenous and non-Indigenous communities?"

Dr. Deborah (Deb) McGregor: (*Anishinaabe, Whitefish River First Nation*) I would first like to acknowledge the knowledge Dr. Henry Lickers shared, because he really heavily influenced how I think about the TEK (Traditional Ecological Knowledge) field. I think that his 'zeal to deal framework' (Lemelin and Lickers, 2004) that he's been talking about for decades lays out some of the principles for what wise practices are. One is that he recognized knowledge as being part of systems, as opposed to what he called the 'nuts and berries' approach three decades ago. I still remember the lecture Dr. Lickers delivered at the University of Toronto, in which he said that the term 'Traditional Ecological Knowledge' (TEK) actually is not an Indigenous term, it's created by academics, so people associate it with Indigenous people, but it's actually not. Initially in my career, Indigenous Peoples in communities didn't know what I meant when I talked about [TEK]. They said "Well...what is that?" because that's not how people describe their own knowledge. The term is external to communities and I remember Dr. Lickers being one of the first people to point that out. Now Indigenous Peoples are increasingly talking about their knowledge on their own terms. I wanted to acknowledge the kinds of insights and ideas that Dr. Lickers shared in taking a principled approach have been hugely influential. I appreciate Dr. Henry Licker's leadership over those many decades when many people did not want to listen to Indigenous Peoples.

To me, when people have 'best practices' they start to approach it like a checklist; you start checking things off rather than actually using common sense and intelligence to figure out what's appropriate in that particular situation. In a best practice situation, people will say, "but I [followed the template], and it didn't work" and they get frustrated without realizing that situations are nuanced.

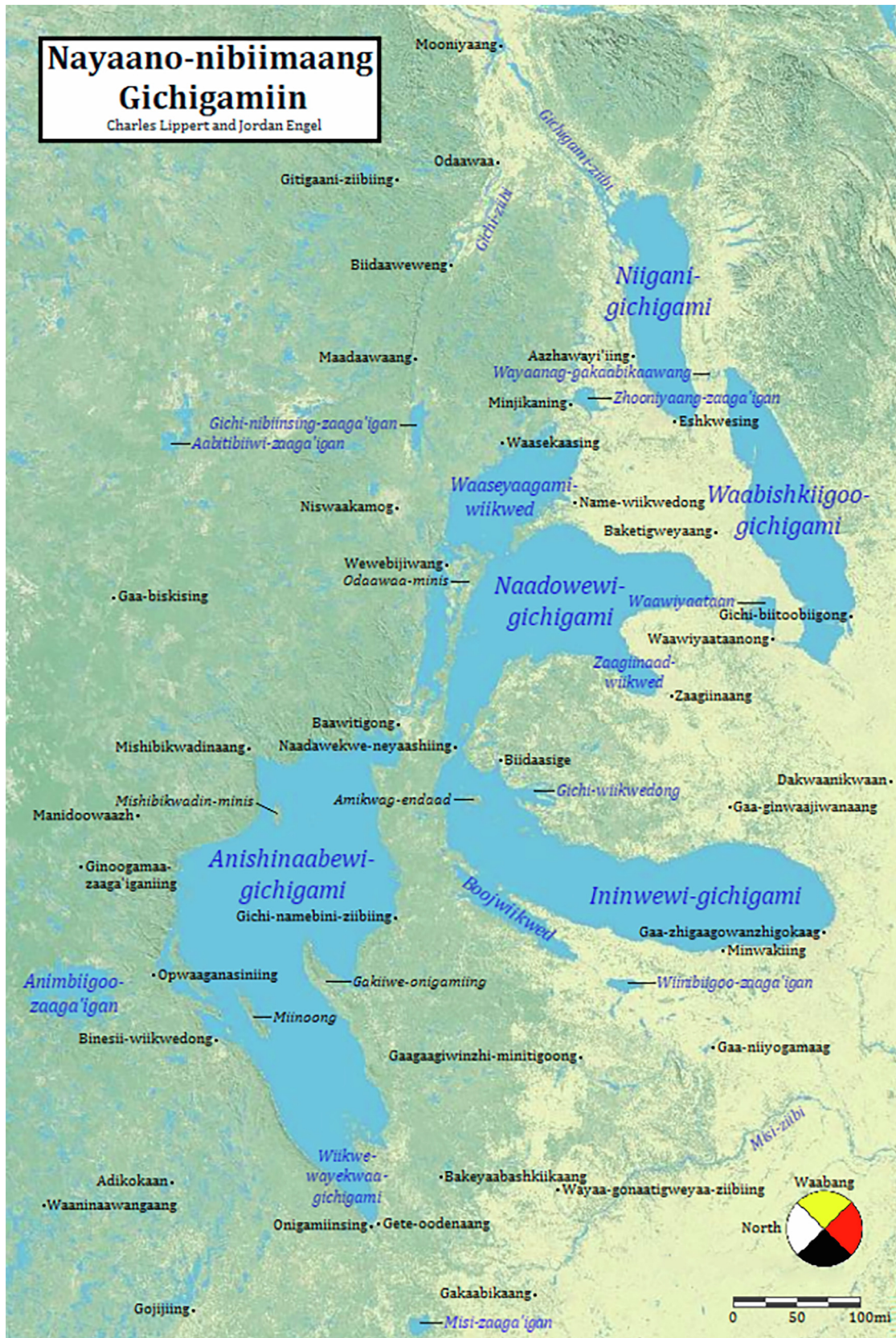


Fig. 1. “Nayaano-nibiimaang Gichigamiin (The Great Lakes) in Anishinaabemowin (Ojibwe)”, by Charles Lippert and Jordan Engel (2015) licensed under CC BY-SA 4.0. Traditionally, the Anishinaabe orient themselves to the East, whereas standard European orientation is to the North. This is reflected in the altered orientation of the Great Lakes in this map, as well as through the compass in the form of a medicine wheel, which includes the English word “North” as well as the Anishinaabemowin word “Waabang”, meaning “East”.



Fig. 2. "Map of the Great Lakes with latitude, longitude and basin outline" by "NOAA Great Lakes Environmental Research Laboratory (2005)" is marked with CC BY-SA 2.0.

Situations are different, people are different, the context may have changed. Maybe this approach worked last week, but it's not going to work this week. To me wise practices conveys wisdom, and wisdom is when you're able to apply knowledge appropriately. Learning is one thing and then applying knowledge appropriately and wisely is another. Wise practices occur when you're able to bring in other values, principles, and ideas into the conversation.

A wise practice is not just application of knowledge; it's actually being specific to the situation and using your discretion and all your senses. Wisdom isn't just using our intellect; sometimes you have to say "whatever it was we did before isn't going to work now". Your instincts tell you that you need to take a different approach so it's also understanding the other parts of yourself and honoring them- my hunches are actually telling me something and I should act on this knowledge. Wisdom embodies all of that, in a particular situation. This requires interpersonal skills and the ability to listen and read a room. I'm not saying I'm perfect- sometimes when you're not paying attention, that's when things can blow up in your face. Anybody entering into such a space has to be engaged holistically in order for it to be a space of wisdom and wise practices, as opposed to just checking those boxes. That is how I've approached wise practices, and thought about the times when I just applied knowledge and not wisdom and how they had very different outcomes.

Susan (Sue) Chiblow (Anishinabe, Garden River First Nation): I worked for Chiefs of Ontario, and I was their Environmental Coordinator/director for 12 or 13 years, and during that time, one of the issues that we were dealing with was water because Chiefs [of Ontario] are mandated by resolution from the Chiefs and Assembly. So, we accessed some funds from government and went around Ontario to talk to the different Nations and to the different communities about water. The [provincial] government almost all

came along with us too because they were funding it and they wanted to be part of it, which is not a problem, but we were supposed to be co-developing the agendas. We had nine o'clock scheduled for ceremony opening, but [the government representatives] just called an opening at 9 and then 9:15 is introductions and then at 9:20 we get right into the agenda. But it doesn't work that way in the communities.

So, when the opening was done, the women, the elderly women that were there, were saying that we first have to do a water ceremony, we need to bring the water into the meeting, because this is what we're talking about. The water has its own spirit, the water can hear and the water can listen, so we need to do this. Depending on how many people were there, that can take up to two or three hours and then after that we do introductions of everybody that's at the meeting. And of course, you have people who registered for the meeting, but then you have people who just find out something's going on in their community and they want to share their knowledge, and they show up at the meeting. Then a lot of times elders wanted to talk about the treaties, because that was/is the basis of our relationship, this is what our understanding was/is, how we are going to live in peaceful existence with one another, and so on. So that can take up to an hour or a couple hours. At the end of the day we have maybe an hour left and that's when we're going to talk specifically about the water. But again, the way elders talk is that they don't talk specifically about the water, because everything is connected, so they would talk about the life. And then you have to extract; you don't take exactly what they're saying about the water. I think you know, in terms of building on what Deb was talking about, wise practices mean being able to accommodate and adjust to what's going on.

And, in many instances, [the organizers] would say "Okay, we have 25 participants registered, so we need 25 plates". No, no,

you always order extra food because people show up. And we don't know what their situation is, maybe this is going to be their only meal today, you can't turn anyone away. One of the things that I would do as a wise practice is, I always wait and let everybody eat first to make sure that if anybody walked in that there was some food left for those people, because I could go and buy something. In terms of practicality, like Deb said, using your intuition, your gut, and adapting to what's happening are key because a lot of the old people often don't want to follow an agenda when it's not theirs. So being able to adapt really quickly and say "Okay, then we're not going to have an agenda, but we should start at around this time, and we should probably eat around this time because you know some of you may be diabetic and we may have to feed you". Just being able to adapt and using your intuition in those types of situations, I think is a really helpful wise practice.

Rod Whitlow (Kanien'kehá:ka; Six Nations of the Grand River): All three of us have worked with Chiefs of Ontario and so we're all very familiar with a lot of the communities around the Great Lakes and some of the environmental issues that they're facing.

There was one project in particular that I just wanted to share a reflection on, it's called the First Nations Water Management Strategy. Deb and I at the time were working for Environment Canada, and we were looking to have traditional knowledge discussions and dialogues throughout the Great Lakes or throughout the province of Ontario. Typically, the way governments would approach these was that they'll say "Okay, we have enough resources and enough budget to have maybe one meeting in the North, and one meeting in the South". It's kind of similar to that pan-Aboriginal approach- they didn't realize that there's even diversity within respective First Nations. So, the way we approached in trying to listen to the elders and some of their teachings is that we divided the workshops into four, not just a North and the South, so we had a Haudenosaunee in Southern Ontario workshop, and then we had Mushkegowuk Cree and then we had an Ojibway Anishinaabek and then Oji-Cree in Northwestern Ontario.

The best practice that the government thought was good was one workshop in the North, one in the South- checkmark, that's going to be good enough. They were just too quick to use that pan-Aboriginal approach. Mind you, they were considering that there were differences and realities between Northern or remote communities and Southern Ontario First Nations communities, but at the same time, they missed out on the whole concept of distinction based on whether it's a creation story, a worldview, a language, a story. That's just one example of where it was actually better to take a wise approach, as opposed to a best practice approach.

Ryan Lauzon (Fisheries Assessment Biologist with the Chippewas of Nawash Unceded First Nation): I was laughing inside when I heard Sue talk about food because I think that's probably the most wise practice of all; make sure you have lots of food for every-one. I know that whenever we have any community meeting or gathering, feasts tend to play quite a large role. Food aside, I'm just thinking about some of the ideas behind wise practices, and I think one is the focus on your strengths. By that I mean, relating back to my work with Saugeen Ojibway Nation, that the strength is the knowledge that communities collectively and individually hold. Knowledge is being gathered and passed down for many generations, and that's where I see the real strength in the community. When we engage in negotiations or research or things of that nature with the Crown or whether we're involved in consultations on some kind of development, that's really where my mind goes; to focus on your strengths. What is it that the communities know about the subjects? That knowledge is only held within the community, so when you have the government coming to the table, or you have some proponent with some kind of project, they don't hold that knowledge. That knowledge is inherent to the community. That

is really where the strength is, and so an important wise practice is to focus on your strengths.

One of the things we try to do is incorporate ceremony into everything that we're doing, so we typically have elders involved. Whether it be some kind of working group, they usually have some kind of teachings that they would like to share to help guide our work. Usually there are some stories involved that have some kind of relationship to what we're talking about. Another point that I've learned through the school of hard knocks, so to speak, is making sure that every-one is involved. And by every-one, I mean from community members to the leadership. If somebody gets left behind and you start getting too far ahead on a particular issue then you'll quickly be brought back down to Earth. It's important that everybody is in the loop and being brought along at the same time; otherwise you're really going to struggle. Finally, I think it's really important to create relationships, and in creating those relationships, whether it be with the Crown or with academics, is creating some kind of ground rules to follow around what you are willing and not willing to do. Just something to think about before you engage in any discussions.

'Wise strategies' in listening, adaptation, and relationship building

The panelists were then asked about wise practices or strategies to help get those that we are working with to be good listeners, and for us to be good listeners to their needs and interests in turn.

Dr. Deborah McGregor: I look at it as trying to prepare people to be able to listen. People can hear things but it doesn't necessarily mean that you're listening and actually absorbing. In an Anishinaabe context, to learn something or come to know something is actually a verbal process. You're expected to act on knowledge in appropriate ways, and there are guidelines or protocols around how you would do that and how your decisions are going to support life. You're not going to abuse knowledge. Oftentimes people think they're just listening to a story, but you're actually receiving guidance for how you're supposed to conduct yourself.

There's also a lot of space for your own agency, for using your own intelligence to decide what the right, appropriate, or ethical way to act on that knowledge. **That's a big part of listening; preparing people to be able to hear the lessons.** Even if you hear the same story a number of times, you should be getting something different, because you should have grown from the last time you heard it. If you haven't, then the problem isn't the person sharing the story, the problem is you and your lack of readiness to really listen. We need to teach and prepare people to be able to listen. The hardest thing for people to listen to is truth. I think about the findings of the Truth and Reconciliation Commission (TRC), the Missing and Murdered Indigenous Women and Girls (MMIWG); these have pointed to the fact that Canada is still very colonial and still very racist. There's still a lot of truth that has yet to be revealed and it's not that much fun, but it still needs to happen. I would say you have to prepare people and train them to be able to understand how knowledge, knowing, and listening is understood in an Indigenous context.

Sue Chiblow: In the research that I'm doing for my PhD I'm working with a lot of elders, and one of the things Ray Owl and Willie Pine talk about is the word "*bizindam*" which is listening to learn, not listening to react and Jim Dumont talks about this, he calls it Indigenous Intelligence. In Richard Wagamese's book '*Embers*' (Wagamese, 2016), he relays a conversation about the importance of listening three times that says, 'When you listen you become aware, that's for your head. When you hear you will awaken, and that's for your heart. When you feel it becomes a part of you and that's for your spirit.' It's so you learn to listen with your

whole entire being and that's where you actually learn. The whole way we're taught throughout the educational institutions is totally counterproductive. When you're working with elders, we need to understand that knowledge is a gift and with that gift comes responsibility. And we all have our own gifts, but when somebody is sharing something with you, you're supposed to take something away from it.

But it depends on where you are at in your life and the next time you hear it you're supposed to take something else away and it continuously builds on your knowledge system, depending on where you are. **We should replace the whole university setting with learning to listen, and try to keep our minds cleared, our hearts open and our spirits feeling good and not actually listen to react but just listen to absorb.** I was raised in a single parent family, by my dad, and I had four sisters and brothers and we didn't have running water, when we were kids we still had to haul water. He would give us instructions and if you didn't listen to those instructions, then it had consequences. Once I fell down the well hole, and here I am down that hole, and all I can hear is snakes everywhere. And, of course, if I had panicked I probably would have got bitten, but I ended up crawling out nice and slow. When I ran back to the house the first thing he said after seeing I was alright was, "Well, did you listen?" I'm sure most of you know that when you're in the bush and you're not following the instructions you can run into all kinds of trouble. I think teaching people to listen and to not react is really important.

Rod Whitlow: When I was working as a public servant for the Province of Ontario, we had these weekly or monthly sessions in Downtown Toronto where we'd have elders come to try and build awareness of how to work more effectively with First Nations, Métis and Inuit. When the Provincial Ministries had meetings with Indigenous organizations and communities, they often went off the rails. We would start with an agenda and the room was usually filled with all these 'government' talking heads and when we would open the meeting up for discussions, some Indigenous delegates would often be hesitant to contribute to the discussion. And it was because it was coming too fast, the government was taking on a one-way flow of information approach. There was no respect for the respective historical relationships with the Crown. It wasn't until a meeting in Thunder Bay where one of the elders just said "Okay, we need to stop this meeting, it's not productive, it's a waste of people's time". So, we brought out the Wampum Belt and had one of the elders do a traditional teaching about how we have a Council Fire and there's a protocol for having a discussion. **There's no hierarchy, you're sitting in a circle, every-one has an opportunity to share a voice and they can pass if they so desire.** You never know if someone might be feeling intimidated by the person in the suit and tie, so we went through a more grassroots level, Council Fire type of sitting in a circle where every-one has an equal opportunity to share their insight and to ask questions without ridicule. I think that meeting was probably one of the better meetings that we had because people opened up. It's just more at a fundamental level of respect that you have for every-one in that circle regardless of their background. We're all there to listen, to learn, to share information.

Ryan Lauzon: This discussion brings me back to a lot of the community meetings that I've been involved in and certainly, when it comes to fish, those meetings, they can get extremely lively. One of the things that I do hear quite often is community members will say that you know they want to see some kind of action. **It's not enough just to listen, but you actually have to take the steps to put something into place and show that you listen by taking action from whatever it is that they're sharing with you at that particular time.** So that's something I'm trying to really focus on is trying to take action on the things that are getting brought up by community members and that's really what's guiding our

approach, whether it be to research or negotiations with the Crown and so on.

'Wise practices' for writing and publishing research involving Indigenous Peoples and communities

The panelists were then invited to comment on wise practices and their own experiences using them for writing and publishing research involving Indigenous Peoples and communities.

Deb McGregor: It can be a challenge. In more recent years, I am trying to preserve the voice of people by presenting the work as conversation. Oftentimes in academia, people make things way more complicated than they actually are. Academics will go in and study, and theorize around other people's ideas that don't come from the community. By the time you publish it, it may actually be dated or no longer relevant. So, unless you've got ongoing engagement, like with water issues which are not going to get resolved any time soon, the work needs to be shared in order to stay relevant and within community. Increasingly what you're seeing is scholars recognizing the communities and organizations as co-authors that they've worked with.

Another trend that I see is having the land itself as a co-author-a contributor of knowledge (*M'sit' No'kmaq et al., 2021*). A lot of our knowledge comes from the land and waters themselves, and so are you then appropriating that knowledge without permission from the waters, and acknowledging that they're generating knowledge as well. This was something that scholars in Australia had been doing for quite some time. As Indigenous scholarship starts to become more advanced, that's what people are going to do, they're going to try to acknowledge more of a collective way of authorship. Where the organization that you work for is what you put in the footnote, and instead include the individual you primarily worked with, as well as acknowledging the land itself. I read a paper where one of the co-authors was the land itself. Indigenous Peoples are going to define scholarship in ways that acknowledge their knowledge and contributions to research. We need to make sure that people's voice stays the way that they want it to be, as opposed to fancied up to fit into someone's paradigm or theory that they don't even care about or engage with in the first place.

Rod Whitlow: In the EAGLE (Effects on Aboriginals from the Great Lakes Environment) Project we had a principals document as well, and we had some academic researchers that wanted to publish in a scientific journal or get some credit for coursework and we made sure from the beginning that there would be adequate or appropriate authorship provided to those elders and those knowledge holders that shared information. So that was always very important to the research that we did, even with the technical reports that we produced out of that project we made sure that we gave due credit to the steering committee members, which were representatives from the First Nations across the Great Lakes Basin. I also wanted to mention this bibliography put together by the International Joint Commission alongside so many other publications, which benefited from the participation from a lot of First Nations in Great Lakes Executive Committee meetings, and fisheries work done by Saugeen Ojibway Nation, and the Anishinabek Fisheries [Resource] Center up North. [These organizations] have always been advocating for us to start compiling a compendium of papers and research where the principal investigators were First Nations and Indigenous Peoples, because there's a wealth of information there- I know there's a lot to the oral history and transmitting that information. You have to follow a certain framework when you're submitting something for a journal, so maybe it should be a matter of routinely and on a regular basis compiling an annual report of studies that have been done, even if it's just

focusing on environmental issues across the Great Lakes [and bringing those back to community].

Sue Chiblow: That's a great idea, Rod. It would be so helpful for us upcoming scholars because we could just go to one place, instead of spending hours and hours and hours researching [to even find these works in the first place].

As Anishinabek women, we carry a responsibility to protect the water, we carry that voice. And it's all related to the water that we carry, how we mirror spring, when the spring waters rush in and the water comes forward the Creator gave us women that responsibility. When Kim Tallbear talks about this, she talks about 'standing with' instead of ['giving back']. Instead of just capacity building, are you willing, ready, and able to stand with the Indigenous Peoples, and also to stand with that knowledge? Grandmother Josephine Mandamin Ba who talked about how water can hear, water can smell, water can see all these things, and eventually the science caught up to what she was saying, and she gained this knowledge from actually doing something. Ryan was talking about the action that comes with when you learn something; Grandmother Josephine walked around all the Great Lakes and she talked about the different personalities [they have]. And Deb was talking about how conversations are actually being documented now in literature, and when you talk to elders you always hear them say 'my elders said' so they're always acknowledging where that knowledge comes from. I can only speak from an Anishinabek perspective because that's who I am- but there's a whole component of offering and asking for knowledge. For example, when I'm walking the dog really early in the morning, and I put my *asema* down- *asema* is tobacco for those who don't know. And I'm asking, I'm grateful for the day and grateful for all the beauty, grateful for life, for giving us responsibilities. And I'm asking assistance for me to live my responsibilities and it shows me how we are all connected through water. So, then I ask my supervisor, 'Do I quote the trees?' How do I quote that in a scholarly article? A lot of it has to do with acknowledging where that knowledge comes from and being respectful. Like Deb said, if an elder tells me something, I can't change those words, that's what they told me, who am I to go and change what they've actually told me?

Ryan Lauzon: As far as the research that we do within the community, any research that we do isn't thought up by an academic in a university. The research comes from the community members asking questions and telling us that we need to go figure something out or investigate something. We're very cautious about relationships with settler governments or institutions. The Joint Councils are quite strict about the way in which we engage in those kinds of partnerships. We have community members that are part of the research and guide us along the whole way, so that there's constant feedback coming in and making sure that we're following what it is that the community is actually asking us to do, and doing it in a good way. We try to employ community members in our research as well, which usually provides some kind of benefit. For example, last fall we hired a fisherman to go out and he took his kids along and they all went out and caught fish, and when we brought them back to shore we put radio transmitters in them, so we could follow those fish. Even the areas that we were fishing were identified by community members that said 'Well, this is where you should go out and, and this is what time, you should go out and catch these fish' and so on and so forth. I would just say that really, the community as a whole has to be a partner, the whole way, right from the conception of the research questions to publishing, and making sure that that information goes back to the community. Not just in the form of a report that nobody's going to read. You might have some kind of a community feast and have a discussion.

Learning to listen

Bridging ways of knowing in fisheries and aquatic science is highly nuanced, and distinctly contextual. This discussion brought to light the ways in which colonial underpinnings remain foundational to and are still found within interactions between Indigenous and non-Indigenous Peoples and communities. Additionally, as Indigenous methodologies and research frameworks, such as *Etuaptmumk*, garner more interest from the wider research community, so too have the co-creation of ethical research protocols (Chiblow, 2020). Wise practices, or those which allow for place- and context-based relationship building and collaboration, have been exemplified here in several ways: knowledge sharing, relationship building, and environmental decision making within fisheries and aquatic science. While early stages of collaborative aquatic resource governance often assume how, when, and where Indigenous Knowledges will be used, few opportunities are provided for truly reflexive, reciprocal, and respectful collaboration (von der Porten et al., 2016).

Throughout the course of this dialogue, three main points became clear (Fig. 3). First, the future of Indigenous and non-Indigenous working relationships depends on readiness and willingness to take guidance from First Nations, including their desire to ground interactions in ceremonial practices and other cultural protocols as appropriate. That is to say, non-Indigenous individuals, organizations, and governmental bodies need to take it upon themselves to understand what it means to work with Indigenous Peoples and Indigenous Knowledges. Knowledge sharing necessitates action and responsibility. Research and decision-making partnerships are not often ethical or beneficial to the community or people in question, and require engaging in meaningful partnerships that centralize Indigenous worldviews and pedagogical principles (Chiblow, 2020; Archibald et al., 2019). This readiness requires unlearning processes and structures within research, education, and collaborative work which are rooted in colonial ideologies and agendas, and re-learning by way of wise practices founded in respect, reciprocity, relationality, and relevance. Second, successful future partnerships must be equitable and collaborative at their core. In this way, Indigenous and non-Indigenous governments, scholars, scientists, and communities alike must commit to the co-creation of space, co-learning, and other associated shared responsibilities. For settler academics, collaborative intentionality means enabling collective co-authorship approaches, the use of methodologies such as those employed in this paper (i.e., the conversation method), and the sharing of knowledge, outcomes, and information with communities outside the sphere of academic publishing. Additionally, commitment to co-learning and co-creation of space requires an understanding that academic publications and gray literature often do not serve as effective communication tools for communities. While the conversation method may be a deviation from the traditional norm in academia, it is still employed within the context of an academic publication. Going forward, effective and respectful forms of communication must be central to the co-creation of research and working outcomes in contexts such as those discussed in this panel and paper. Finally, integral to the success of future collaborative and equitable work is the ongoing understanding that relationship building is a process; check expectations, pan-Indigenous ideologies, and self-serving goals at the door- as each project, conversation, and partnership requires unique and thoughtful attention. It is with wise and careful practices within fisheries and aquatic sciences that Indigenous and non-Indigenous people and communities can begin to share truths about our pasts, and set the stage for collaborative work in pursuit of healthy fish and water.

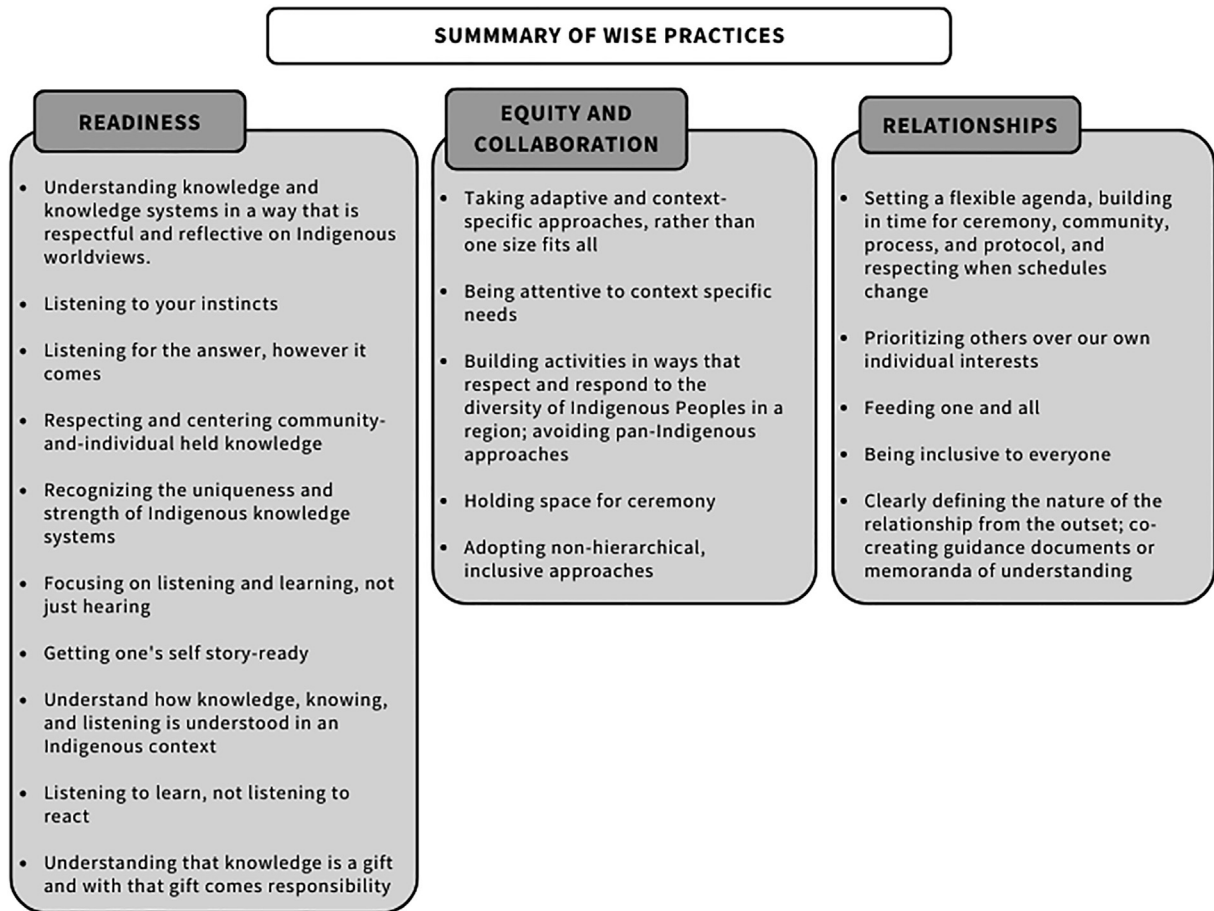


Fig. 3. Summary of Wise Practices along main themes compiled from IAGLR panel discussion.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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