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Factors that support Indigenous involvement in multi-actor environmental stewardship

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Abstract

Regional, multi-actor environmental collaborations bring together diverse parties to achieve environmental protection and stewardship outcomes. Involving a range of participants helps involve alternative forms of knowledge, expertise, and perspectives; it may also present greater challenges in reaching agreements, particularly when both Indigenous and non-Indigenous parties are involved. The authors conduct a cross-case study of 39 regional partnerships involving Indigenous nations from the Great Lakes basin of North America with the aim of determining the factors that enable Indigenous partners to remain engaged in multi-actor collaborations. Six characteristics influenced Indigenous nations' willingness to remain engaged: respect for Indigenous knowledges, control of knowledge mobilization, intergenerational involvement, self-determination, continuous cross-cultural education, and early involvement. Being attentive of these factors can help partnerships achieve their environmental goals by keeping important partners at the table.

Keywords

Indigenous knowledge, environmental governance, co-management, environmental stewardship

Introduction

Collaborative approaches to environmental protection and problem solving are used across the globe because of their potential to address social-ecological issues that individual governments and organizations cannot address in isolation (Sayer et al., 2013). These multi-actor environmental collaborations connect diverse governmental and non-governmental partners, leveraging the strengths of each partner, including their different jurisdictional authorities and knowledge systems (Nagendra & Ostrom, 2012).

Sharing power and making decisions across jurisdictions and cultures is challenging, and a diverse academic literature articulates key lessons learned and effective approaches, including the importance of bridging organizations and social learning (Berkes, 2009), the appropriateness of consensus-based decision making in collaborative contexts (Wondolleck & Yaffee, 2000), the need for continual learning and adaptive management approaches (Sayer et al., 2013), and the importance of long-term relationships between partners, built on trust and frequent communication (Adams et al., 2014).

However, there remains a relative lack of information tailored to multi-actor environmental initiatives that involve Indigenous nations. The collaborative environmental governance literature generally fails to consider Indigenous nations, and authors who mention Indigenous actors most often refer to them as stakeholder groups rather than self-determining nations with inherent rights and governance systems that pre-date settler colonial structures. Indigenous nations in Canada and the USA regard multi-stakeholder processes as inappropriate mechanisms for settler colonial governments to engage Indigenous governments. Federal Indian law in the USA and Aboriginal rights jurisprudence in Canada dictate that engagement should be on a government-to-government basis (Smith, 1996). Conceptualizations of Indigenous peoples as stakeholders signal that the collaboration literature is out of step with the law and the literature on Indigenous governance. The disconnect reflects, and may reinforce, obstacles to Indigenous participation in multi-actor environmental initiatives (von der Porten & de Loë, 2013).

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This blind spot in the collaborative environmental governance literature is problematic given the large and growing number of multi-actor environmental initiatives that involve, or *attempt to involve*, Indigenous actors. Multi-actor initiatives increasingly seek to involve Indigenous partners because Indigenous nations are active environmental stewards and use unique knowledge systems relevant to understanding human–environment interactions (Bowie, 2013; Whyte, Brewer, & Johnson, 2015). Additionally, Indigenous nations have varying scales of jurisdictional authority, such as in the USA, where 567 Tribes operate as the third sovereign (Bruyneel, 2007) along with the US federal government and 50 states, and some parts of Canada, where First Nations have gained new powers under recent land claim settlements (e.g., Tsilhqot'in Nation v British Columbia 2014 SCC 44). Despite the increasing recognition of Indigenous nations as important partners in collaborative environmental projects, effective and lasting partnerships are relatively uncommon (Grossman, 2005; Whyte et al., 2015).

With this research gap and the importance of Indigenous participation in multi-actor environmental governance in mind, we focused on the following question in our work: *what factors motivate or enable Indigenous nations and their partners to engage and remain invested in multi-actor initiatives?*

Indigenous nations and collaborative environmental problem solving

We focused on a form of collaborative environmental problem solving that is becoming commonplace globally: voluntary, multi-actor, regional environmental governance initiatives. The limited literature on this form of collaboration along with our own professional experiences led us to believe that, while similar to other forms of collaborative environmental problem solving including co-management, protected areas management, and university–community research partnerships, a unique set of dynamics existed in these voluntary collaborations that warrants attention.

One key and arguably defining challenge for voluntary multi-actor initiatives is that non-Indigenous partners generally fail to view Indigenous partners as sovereign nations or understand their unique land rights and responsibilities (von der Porten & de Loë, 2013). This challenge is far less central within co-management arrangements, where Indigenous nations' political authority is formally recognized in the court of law (Pinkerton, 1989). Co-management, whether court-ordered settlements (e.g., *U.S. v. Washington*) or negotiated settlements (e.g., Holtgren & Auer, 2016), involves highly formalized, legally defined arrangements. These forms of collaborative environmental governance are "legally mandated coordination between sovereign entities" (Pinkerton, 1989). Thus, while the limits and nature of Indigenous sovereignty are often debated vis-a-vis co-management agreements, Indigenous partners are recognized as semi-sovereign governments.

The co-management literature identifies several crucial considerations and obstacles such as building trust among partners (Berkes, 2009) and accommodating incompatible sets of values and dissimilar worldviews within a single management framework (Houde, 2007). Co-management has been criticized for being overly bureaucratic, and for the structures and underlying assumptions of management not reflecting Indigenous ways of knowing (Nadasdy, 2005). In our experience, these same considerations are important in voluntary collaborative governance arrangements involving Indigenous nations, but this comparison has not been made clearly in the literature to our knowledge.

Another unique attribute of voluntary multi-party initiatives is that they tend to focus on broad environmental issues not easily bounded geographically. Co-management agreements, on the other hand, tend to focus on specific fish or wildlife populations and geographic areas, as do conservation initiatives within protected areas.

The literature on Indigenous peoples and protected areas provides a variety of lessons relevant to voluntary, collaborative environmental governance, despite its focus on geographically bounded conservation issues. Key suggestions for shared governance of protected areas with Indigenous partners include recognizing Indigenous people's political authority and rights; the importance of formal, legal binding agreements; respecting Indigenous peoples' values and knowledge systems; and balancing decision-making powers and structures (i.e., norms) equally between Indigenous and non-Indigenous groups (Stevens, 2014).

A third relevant but arguably distinct area of scholarship focuses on research collaborations between scientists and Indigenous communities (e.g., Adams et al., 2014; Huntington, Gearheard, Mahoney, & Salomon, 2011). These collaborations are typically framed as community–university partnerships, and are not explicitly government-to-government arrangements. Key insights from this literature include the importance of long-term personal relationships and trust among collaborators (Huntington et al., 2011) and awareness of cultural differences and respectful interpersonal relationships (Adams et al., 2014). Community-research initiatives tend not to focus explicitly on issues of political and governmental authority that are present in multi-party environmental governance relationships (McGregor, 2014).

Methods and study region

We conducted our study in the Great Lakes region of North America because of the large number of multi-actor environmental governance initiatives involving Indigenous nations that have emerged there in recent decades, and because the Great Lakes region of North America has a long history of Indigenous peoples using collaborative approaches in their land tenure systems (White, 1991). Initiatives between multiple Indigenous and non-Indigenous groups have marked the history of the region for over 350 years, and this context informs the more recent cases studied in this project. The Dish with One Spoon Treaty, also known as Gdoo-naaganinaa, meaning "Our Dish," for example, represents a treaty between the Haudenosaunee and Anishnaabek to cooperate and share resources in the spirit of coexistence (Simpson, 2008), an understanding

that remains very relevant to this day (Lytwyn, 1997). When Indigenous nations engage in multi-party agreements, they are often seeking recognition of treaties that originally laid the groundwork for coexistence between their peoples and settler Americans. Several of the examples in this study involve treaty organizations that aim to hold Indigenous nations and settler governments accountable to the legal provisions and spirit of relevant treaties.

Our study investigates collaborations involving Indigenous nations from Anishnaabek, Menominee, Cree, and Haudenosaunee cultural groups, peoples who have lived in the Great Lakes region for countless generations. Among those who consented to participate in this study are representatives from modern Indigenous nations as well as their partners from non-Indigenous governments and organizations. Our interview consent process was part of a broader research protocol approved by the Human Research Protection Program at the University of Michigan.

Within this region, we sought examples of multi-actor initiatives where Indigenous peoples were involved from the initial planning stages. This criterion was based on feedback from Indigenous representatives indicating that adding initiatives after the initial goals and decision-making structures have been established made it harder for them to pursue their goals (Stevens, 2014). A drawback of only studying examples where Indigenous partners were involved from inception is that we are unable to speak with authority about the outcomes of partnerships where Indigenous nations become involved later in the process.

We identified an initial set of relevant cases from our professional networks and were informed about additional examples from interviewees (i.e., chain referrals; Huntington, 2000). We continued to add cases until we exhausted all examples known by the author team and our interviewees. We conducted 48 interviews in the assessment of 39 case examples. Interviews ranged in duration from 40 min to 2.5 hr. Our use of one interview on average per case is a significant limitation of our study. We sacrificed depth to focus on breadth. However, interviewees were carefully chosen to maximize the knowledge gained from each interview and we triangulated this information with the literature, document analysis, and focus groups.

We interviewed a total of 34 individuals. Some individuals were interviewed more than once because they could share information about more than one case. We selected individuals who held central roles in their respective cases. Of the interviewees, 10 were women and 24 were men, reflecting the underrepresented status of women in environmental management professions. Of the participants, 19 were Indigenous people (tribal or First Nation citizens) and 15 were non-Indigenous representatives working for Indigenous governments, treaty organizations, or federal agencies. Our semi-structured interviews were guided by questions concerning the history, structural and procedural elements, and outcomes of the multi-actor initiatives. The interview questions were intentionally broad and open-ended, avoiding leading questions and other forms of researcher or respondent bias.

Our process began with our research question rather than a theoretical framework. We then took a grounded theory approach (Glaser & Strauss, 1967) to data collection and analysis. Our data collection began with analysis of available peer-reviewed sources and gray literature about each case example. This documentary research was intended to provide background information so that interviews would not replicate existing results. We then conducted at least one semi-structured interview per case.

Consistent with grounded theory, we reviewed the data and then developed a preliminary codebook of key themes concerning attributes that our respondents associated with the success and failure of multi-party initiatives. We coded interview data using NVivo 10 (QSR International Pty Ltd., 2012), following the open-coding scheme suggested by Corbin and Strauss (2014).

After coding interviews covering 12 different cases, we presented preliminary themes to a focus group of 11 natural resource and environmental professionals who work for or with Indigenous peoples as a form of member checking (Lincoln & Guba, 1985). Participants included a subset of our interviewees plus additional people who held similar professional roles as the interviewees, but within neighboring Indigenous nations or organizations. The focus group served to confirm, correct, and refine our understanding of preliminary results (Bernard, 2011). Subsequently, we switched iteratively between conducting clusters of interviews and focus groups. In total, we held four focus groups in distinct locations selected geographically to better enable diverse participation. Focus group participants were a mix of Indigenous and non-Indigenous representatives of Indigenous nations and representatives from non-Indigenous governments and organizations who work closely with Indigenous nations. Our data collection and analytical procedures progressively triangulated and refined our understanding of key concepts to improve the reliability of our results (Miles & Huberman, 1994).

Results

Figure 1 describes general characteristics of the cases, including geographic information, Indigenous cultural groups involved, and the goals and reported outcomes. We were unable to report direct measures of environmental or conservation outcomes because monitoring efforts are generally lacking in the initiatives we studied. Each case involves one of the following types of initiatives: (a) environmental governance organizations connecting multiple Indigenous and non-Indigenous governments, based on either a treaty or other political agreement; (b) cooperative enterprises that connect Indigenous and non-Indigenous governments, non-governmental organizations, and community groups toward shared stewardship or environmental protection interests; (c) advocacy networks or coalitions that include a range of non-Indigenous individuals and organizational partners that seek conservation outcomes. All examples had a primary purpose related to environmental protection (Figure 1).

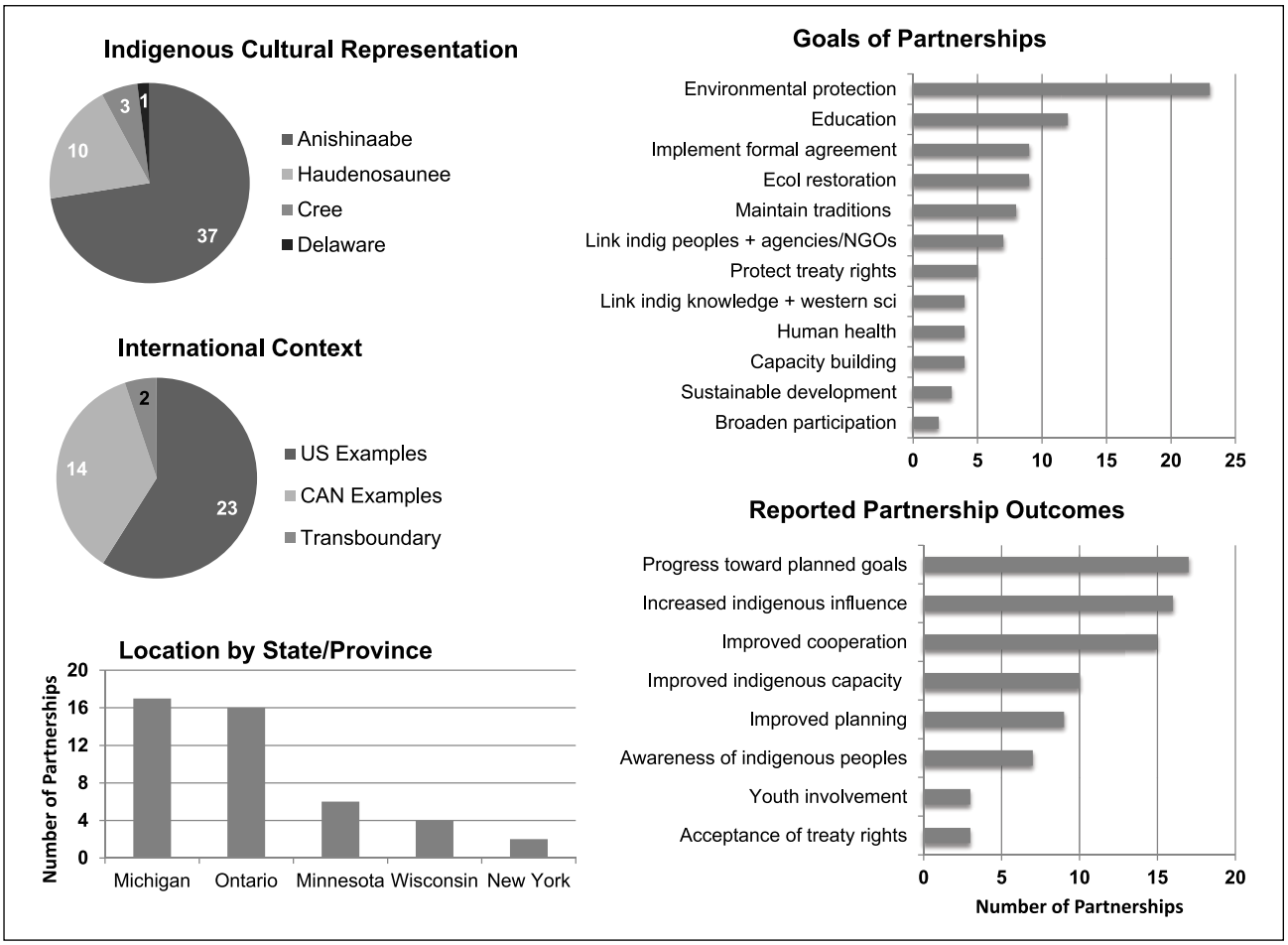

Figure 1. The number of examples analyzed in this study organized by broad cultural group, location, partnership goals and reported partnership outcomes.

Our analysis revealed six broad themes relating to the success and failure of multi-actor initiatives (Table 1). We report the general insights from our data for each theme below.

Respect for IKs and practices

Interviewees shared the idea that respect for IK and practices is critical to the success of multi-actor initiatives involving Indigenous nations. Respect has culturally specific meanings and somewhat different conceptualizations across the Indigenous nations in our study region. For Anishnaabek, respect is a core value that helps to define Minobimaadiziwin, or how one goes about living well. This includes putting the needs of others before your own, not looking down on anyone, and acknowledging the importance of all of creation (Benton-Banai, 1979).

We interpreted the insights shared about respect for IK based upon this Anishnaabek conceptualization of respect. Interviewees described various forms of IK (Table 2), and to reflect this diversity, we use the term IK in the remainder of this article. The Indigenous representatives we interviewed conceptualize IK as being based in relationships between people and all of Creation, and centrally about the act of *tending* to relationships rather than *understanding* the relationships (McGregor, 2008).

Interview participants explained different forms of IK by demonstrating how they have been used to inform Indigenous nations' priorities and decision making and how they have influenced conservation practices within multi-actor initiatives. For example, federal agency representatives modified their long-term forest monitoring protocols (as reported in Emery et al., 2014) based upon IK regarding birch tree characteristics shared by their tribal partners. As one Indigenous person in this project shared who was interviewed in this project,

> We try to engage community members with "traditional knowledge" in projects. When the MOU [Memorandum of Understanding] was signed, there were prayers and singing . . . . Having traditional knowledge and Western science work together is laid out specifically in the MOU. We're not talking about "ants crawl up tree during hurricane" and test that observation with Western science; it's more like "how can traditional knowledge design research and interpret research." For example, the [United States Forest Service] was working with [the Great Lakes Indian Fish and Wildlife Commission] and with birch bark gatherers and assessed what information could the Forest Service, as scientists, collect to quantify changes [in the paper birch population that Indigenous knowledge holders] were seeing. (Federal agency employee)

This example illustrates three different forms of IK: (a) *intergenerational knowledge regarding subsistence skills or expertise*—in this case about the suitability of different paper birch (*Betula papyrifera*) morphological characteristics to

Table 1. Themes and key factors that enable and motivate Indigenous partners to remain engaged in cooperative environmental protection and stewardship initiatives.

Theme	Key factors that sustain Indigenous engagement in partnerships
Respect for Indigenous knowledges (IK)	Acknowledging that IK comes in many different forms and is dispersed widely within a community Acknowledging the importance of all knowledges and not looking down on a collaborators way of seeing the world Viewing cultural protocols as an expression of IK
Control of knowledge mobilization	Reflexivity about how science, IK and technical work are used for purposes of planning, policy formation, and decision making Using science and technical work to support Indigenous priorities and self-determination, alongside other goals of partnership Recognizing that Indigenous partners may want to take charge of data collection and analyses
Intergenerational involvement	Holding broad views about what constitutes youth and elders Involving youth in partnerships in multiple ways, from internships to participation in cultural protocols to engaging their vision for the future in your project
Self-determination	Recognizing cultural, jurisdictional and economic dimensions of self-determination Co-authoring language in formal agreements, such as memoranda of understanding, that articulates respect for Indigenous autonomy and authority Involving Indigenous members in leadership and advisory roles
Continuous cross-cultural education	Developing an understanding of one another's cultural traditions, histories, values, priorities, and aspirations Including cultural practices in partner activities opens door to learning Open-mindedness Seeing cross-cultural education as an ongoing process
Early involvement	Involving Indigenous partners in framing the vision and structure of institution, that is, at inception Involving Indigenous partners in advisory boards Drafting memoranda of understanding to articulate roles and expectations of each partner

Table 2. Forms of Indigenous knowledge (IK) and how they are enacted in cooperative environmental protection and stewardship initiatives.

Form of IK	Examples of how IK is enacted in partnership settings
Intergenerational knowledge concerning subsistence skills or expertise	Involving IK practitioners (youth and elders) in partnerships, including having them serve on advisory or governing committees
Communal or collective knowledge regarding the dynamics of resources or environmental variables over time	Involving IK practitioners in the development of monitoring protocols, involving community elders who have longer perspectives for observing change, consulting oral histories, and elders' knowledges to make sense of perceived socio-environmental change or dynamics
Knowledge of ceremony and cultural protocol	Beginning and ending aspects of the partnership (including workshops, meetings, milestones) with ceremonies that situate the work in a specific place and that involve spiritual forms of knowledge in the partnership
Indigenous languages	Recognizing that Indigenous languages are integral parts of IK systems. Incorporating Indigenous languages in collaborative work, for example, in meeting proceedings, in ceremony or cultural protocols, in fieldwork, or when communicating with elders
Ancient teachings or prophesies	Using traditional stories about roles, responsibilities and human–animal relationships as a basis for setting priorities within the collaboration
Knowledge concerning stewardship responsibilities	Consulting specific families or community members who have responsibility for different forms of stewardship; recognizing behavioral standards of respect for plants and animals that are being monitored, studied, or affected through the partnership
Human–nonhuman relationships	Using Indigenous understandings of ecological relationships to frame priorities, decisions, hypotheses, and data interpretation
Communally held values	Encompassing familial notions of stewardship (i.e., caring for the land and water is caring for one's relations), hospitality, sharing, and clan relationships and responsibilities

specific non-timber forest product uses; (b) *communal knowledge regarding dynamics of resources or environmental variables over time*—in this case about paper birch population trends; and (c) *ceremonial knowledge* of specific prayers and songs appropriate for initiating formal agreements between Indigenous nations and their partners. Per our

interviewees, this third form of knowledge is the least familiar to non-Indigenous conservation partners, and thus, we will focus on this aspect of IK in this article.

Our interviews and focus groups regularly pointed out that the integration of prayer, songs, and other cultural protocols into initiative-building activities was an enactment of IK. Ceremonies and related cultural protocols (e.g., songs and prayers) are used to open and close meetings and events. When these protocols are included at the beginning of a meeting or new initiative, the purpose is often to invite spirits, including one's ancestors, to participate and to guide the proceedings. Upon an event or initiative's closing, Indigenous communities will often hold a feast to feed and honor the spiritual as well as the physical participants and "close the door" or wrap up an interaction with spirits. These practices are ways of involving spirit, including the spirits of human and other-than-human persons as well as place, in the work of multi-party initiatives.

Indigenous representatives reported they also involve spiritual beings in their work by consulting with them directly in ceremonies, as was done with the 2008 Chiefs of Ontario Anishnaabek, Muskegowuk, and Onkwehonwe Water Declaration:

> So after [drafting a preliminary version of the Declaration], everybody says "yeah it looks good. Now you need to take it to ceremony." So we took it to ceremony so we could technically say that our ancestors had a say in it. That's when the declaration was drafted. It went to ceremony and came back and we brought it to the chief assembly and they adopted a resolution supporting the declaration. (Treaty organization employee)

Participants might enter such a ceremony with a question in their hearts and minds in hopes that their ancestors will help with a specific decision or add a missing element to the initiative. With the Chiefs of Ontario Water Declaration, one of the things the partners learned from bringing the draft statement into ceremony was to understand the agreement itself as functioning much like water in a river:

> . . . the declaration is like the water: it'll move and it might hit a barrier like a rock and it might become stagnant for whatever length of time but then it'll eventually move again because the water doesn't stay stagnant forever. So that kind of comparative analysis was part of what the ceremony had explained to us on what was going to happen. (Treaty organization employee)

Another form of IK is conveyed through storytelling, which can include very specific or more general lessons, teachings, or prophesies relevant to conservation. An example of a more general teaching among Anishnaabek peoples is articulated in the following quote:

> Many times in a lot of the conversations we made sure we had elders present at the community meetings and it was repetitive to hear them say that "whatever happens to the land happens to us." This is not a new concept; we as First Nations people know this [concept] and this is a very old concept that goes back to the beginning of time. It was part of our original instructions about how we are to conduct ourselves and all of our relations on the land. If we make the deer sick, we have to eat that, we're going to get sick. This is an old teaching . . . (Treaty organization employee)

These examples demonstrate the breadth of what constitutes IK from the perspective of Indigenous nations in our study.

We also heard how IK can be viewed narrowly or ignored altogether by representatives from partner organizations, due to inequitable political relationships (Nadasdy, 2005) or, as Latulippe (2015) observes, "uneven, colonial relations of power" (p. 121). The inclusion of IK in Western frameworks does not always result in respect of IK if colonial relationships are simply replicated (Bowie, 2013). Our interviewees and focus group participants explained that their non-Indigenous conservation partners maintain narrow views of IK, only recognizing forms that mirror knowledge produced by Western science (e.g., knowledge based upon repeated observations) and that more diverse forms of IK, such as ancestral teachings or values-based knowledge, are often dismissed. Per our interviewees, partners' narrow views of IK interfere with the formation and function of cross-cultural (i.e., linking Indigenous nations and non-Indigenous groups) multi-actor initiatives.

In one example, we learned how a non-Indigenous partner reacted to a suggestion by a US tribe to use culturally significant species in riparian conservation plantings:

> There was a member of one of the partner organizations that felt that the incorporation of TEK into the project was a waste of time. Their attitude and statements were essentially "We aren't going to plant sweetgrass or whatever just so the Tribe can come and harvest it!" (Indigenous nation employee)

Another example of dismissing IK relates to the Anishnaabek belief that rocks and stones are ancient, living beings that should be treated with respect:

> For the western world to think rocks are nothing, was a huge insult to a lot of First Nations people because the rocks are so important to us in ceremony. For them to say that they're just rocks was . . . . The whole lack of NWO [referencing an agency in northwest Ontario, Canada] not even doing homework on how they approach subjects from that type of Indigenous perspective, that's where the anger came out . . . . As opposed to saying well maybe we should ask the rock if they can help us take care of this problem as opposed to saying "they're just rocks, they serve no purpose." That was a big issue. (Treaty organization employee)

Given how IK serves as a vector for multiple forms of participation, the dismissal of IK has significant implications for who gets to participate in the initiative.

Control of knowledge mobilization

This category of insights concerns the issue of how to document and use IK, scientific knowledge, and hybrid knowledge co-produced in initiatives involving Indigenous nations. Participants explained some of the situations when Indigenous nations benefit from taking ownership of data

collection as well as other situations where it is not a priority or realistic for them to take a lead role in data collection or monitoring.

We were told that, in some instances, it is strategically important that Indigenous nations be put in charge of data collection and analysis. Their control legitimizes both the data and the research process in the eyes of Indigenous community members. In resource conflicts, Indigenous harvesters often do not trust the data generated by non-Indigenous governments. In such instances, an Indigenous organization may collect data using both Indigenous and scientific methods. In other instances, Indigenous partners may prefer non-Indigenous groups to take charge of data collection, as expressed by one of our focus group participants:

> There are some cooperatives, as you call them, that we get involved in with the idea that, "You know, those guys are probably going to be doing a good thing." We still want to be there and keep an eye on [the process], but let them do their thing because they're really going to benefit us and we won't need to spend much staff time or build any infrastructure. (Inter-tribal organization employee)

We were told that conflicts result from differing expectations of who should generate the data and whether all information resulting from the project should be made publicly available. Multi-party initiatives run more smoothly if these expectations are discussed early on and if responsibilities for data collection and sharing are articulated through formal agreements prior to gathering data. Some multi-actor initiatives develop formal research protocols or memoranda of understanding to ensure that each partner has a voice in how data collection and storage should occur.

Intergenerational involvement

Our interviewees articulated the importance of involving participants from multiple generations (i.e., youth, middle-aged, and elder community members). Prioritizing the involvement of youth and elders respects the importance of intergenerational relationships.

A main point made in the interviews was that it is important to think broadly about the definition of youth and elders and that the meaning of the terms is contextual. A person in his or her 30s who is serving on a tribal council might be considered a young person by fellow council members, but may be considered an elder when they visit the local primary school. When Indigenous nations host college interns, hosting these young adults is part of their youth engagement strategy.

Involving youth in these initiatives can empower youth in learning or reinforcing cultural practices and traditional values, develop their appreciation for science, and assure them that outsiders respect their cultures. It also serves to motivate, educate, and train young people as stewards of their environments. These initiatives will benefit from their insights, enthusiasm, optimism, and technical skills. Our interviewees also shared that multi-party initiatives benefit from the participation of elders in enumerable ways. Elders were involved in the decision making, guidance, and visioning processes of various initiatives, whether through direct involvement or through an advisory committee. For example, many initiatives in our study linked elders with the scientists performing scientific and technical work, thereby involving them in research design to data interpretation.

Some Indigenous communities have populations with the majority under the age of 18. In these cases, involving youth is critical to ensuring the long-term viability of the project efforts.

Self-determination

Respondents raised the issue that one of the biggest problems is the lack of respect for Indigenous peoples' political and governmental authority, that is, Indigenous self-determination. The respondents characterized authority in different ways. In some cases, it refers to political or economic autonomy. However, authority or self-determination can also have a cultural connotation: it can refer to honoring Indigenous customary laws and can apply to culturally specific forms of governance, economic systems, or ways of life. These different forms of political and governmental authority were often conceptually interwoven for Indigenous nations in our study. For example, Indigenous "responsibilities for the water" could refer to cultural imperatives to be good stewards of water bodies and water "beings," and simultaneously could refer to Indigenous political authority concerning governance of water "resources." Formal memoranda of understanding can help articulate the multiple layers of meaning and create a shared understanding of self-determination.

In some cases, multi-actor initiatives made additional efforts to involve Indigenous members in the leadership and advisory roles as a way of taking the concept of self-determination seriously. Initiatives that remained together long enough to accomplish their agreed upon goals tended to acknowledge Indigenous nations as legitimate governments rather than as stakeholders or special interest groups.

Continuous cross-cultural education

Our interviewees shared that multi-party initiatives run better if all participants have a basic level of education and sensitivity about one another's cultural traditions, histories, values, priorities, and aspirations. Yet at the outset of initiatives, what the most appropriate mechanisms for cross-cultural learning or adequate competencies for engagement with Indigenous peoples may be unclear. Non-Indigenous partners—including those who work for Indigenous governments—are often unfamiliar with the values or perspectives of Indigenous peoples. For example, many Indigenous people in the region where our study was conducted are motivated by culturally specific and long-standing responsibilities to care for the land, water, plant and animal populations, and human community. Cultural differences in understanding human–nonhuman relations and perceptions about stewardship responsibilities can become a source of disagreement in landscape scale multi-party initiatives.

One of our focus group participants articulated that collaborators need to be open minded if they hope to achieve common goals across cultural differences. "You've got to be open to other ways of thinking. It's more like there's an attitude . . . you've got to be open to other values and other priorities."

A key insight shared by representatives of multiple cases in this study was that cross-cultural education is an ongoing process worthy of significant time and human resources. Participants never graduate from such an educational process; one-off sensitivity training is insufficient. "It's not like there's an end point. You're never going to be [done being] educated; you're never going to be done [educating one another]" (inter-tribal organization employee).

Another strategy described in our interviews involves ongoing cultural liaisons or translators who assist with bridging understanding across cultural differences. For instance, Indigenous community members with academic training in Western science or staff with experience bridging Indigenous and non-Indigenous institutions can help avert or resolve misunderstanding among partners or between a multi-actor initiative and outside constituents. Indigenous peoples' traditions, including ceremonies, can play important roles in the meetings and fieldwork of these initiatives and should not be hidden or left out. The presence of cultural traditions may play an integral role in cooperative group interactions and in many instances leads to cross-cultural conversations. Non-Indigenous partners learn about Indigenous partners' values and cultural understandings via active participation. Including cultural practices also demonstrates respect for Indigenous peoples as central partners.

Early involvement

Many policies, such as federal consultation policies in Canada and the USA, suggest that Indigenous peoples should have opportunities to consent or be consulted "early on" in processes that affect their interests. Yet "early" can be interpreted in many ways. Indigenous representatives regard "early" as being invited to participate when a multi-actor initiative is established, when they can still help determine the form and operations of the institution. This differs from interpretations of early involvement, suggesting that it is acceptable to reach out to Indigenous partners after an institution or program's specific vision or structure has already been outlined. An underlying idea was that consent or consultation must occur at the conceptual stage of the planning of any initiative if Indigenous peoples' governmental and political authority is to be respected.

Our interview participants also shared that early involvement can and should mean a variety of things, depending on the circumstances, but it is *not* a simple box checking procedure to fulfill a business or policy mandate. For instance, early involvement can mean involvement in the determination of collaborative structures such as advisory boards and rules such as how group decisions are made. It can also involve opportunity for free, prior informed consent, being considered an equal partner, and formal consultation as prescribed in federal legislation. In this sense, for multi-party initiatives, early involvement can be assumed to mean several things associated with the determination of how collaboration will unfold. One early involvement strategy that is commonly used is the drafting and signing of formal memoranda of understanding concerning the partnership. Per our interview and focus group participants, memoranda are effective ways of ensuring that Indigenous nations' expectations for fledgling partnerships are fully understood.

Discussion

Our findings reveal that successful multi-actor environmental governance initiatives are constituted in ways that respect Indigenous nations' political and governmental authority (i.e., self-determination) and cultural distinctiveness. One unifying theme among the successful examples we studied was that they created structures that enable Indigenous participation on terms that respect their own conceptions of political authority, inclusion, and culture.

One important way to ensure these structures are in place is to involve Indigenous partners from the very beginning. When Indigenous partners are involved in forming the multi-party initiatives from their inception, they can influence the vision and objectives as well as decision making and other procedural norms in ways that reflect Indigenous practices. This finding aligns with lessons and principles surrounding place-based learning communities (Davidson-Hunt & O'Flaherty, 2007), co-management (Berkes, 2009), and protected areas management (Stevens, 2014). Early involvement thus becomes a mechanism for enabling Indigenous participation on Indigenous communities' own terms.

Successful initiatives also embraced Indigenous procedural norms and cultural protocols. Indigenous protocols and practices have been an important part of Indigenous–non-Indigenous relations since treaty making days (Borrows, 2005; Simpson, 2008), but their importance is not always recognized by contemporary settler communities. For Indigenous participants, their cultural protocols are designed to acknowledge genealogies, inclusive of place as an autonomous spiritual entity and "apical ancestor" (Larsen & Johnson, 2016) as well as human and other-than-human members of their communities. An individual community's protocols also acknowledge the reciprocal responsibilities imbued in their place-based community of relations. These practices are enactments of IK and, from the perspective of Indigenous participants in our study, are intrinsically important steps in environmental protection and stewardship.

Including these cultural practices can be important to multi-actor collaborations in multiple ways. For instance, these practices create an opening for cross-cultural dialogue and learning. For instance, a pipe ceremony may facilitate dialogue regarding the meaning and purpose of ceremonial practices in formal partnership proceedings. Cross-cultural education is not a simple, one-direction process of learning about other cultures. It is particularly

important for non-Indigenous partners to examine their own institutional cultures (e.g., norms, priorities, values, biases) and make those explicit to both themselves and their indigenous partners. This process can be challenging and uncomfortable, and may require help from an outside facilitator, but can significantly enhance an organization's ability to partner with Indigenous groups.

Furthermore, involving certain Indigenous cultural practices, especially ceremonies, challenges the assumption that Euro-American norms should be the default standards. Indigenous cultural protocols are normal in Indigenous territories, have a long-standing history in Indigenous–non-Indigenous relationships and treaty making (Borrows, 2005; Simpson, 2008), and Indigenous nations continue to enact them. Incorporating these practices provides an opportunity for settler communities to reflect on why they privilege their own cultures and protocols when they approach Indigenous partners. The practices are more than polite gestures; instead, they seek to set up the interactions as diplomatic spaces where people can work across cultural differences and co-determine appropriate initiative norms and structures. As Dale Turner writes, "It must be remembered that the need to explain ourselves to the dominant culture arises primarily for political reasons and only secondarily from a desire to attain some kind of rich cross-cultural understanding of indigenous philosophies" (Turner, 2006, p. 73).

Finally, given our finding that Indigenous nations prioritize involving youth in multi-actor environmental collaborations, following Indigenous procedural norms and including their cultural practices help teach Indigenous youth about their own culturally specific forms of deliberation and decision making while legitimizing these norms.

Our results also indicate the importance of respecting the ways partners perceive and understand the world. This point speaks to the importance of how IK is defined or understood among cooperators. There is a growing body of scholarship that aims to explain IK for the sake of helping scientists, and non-Indigenous resource managers prepare for collaborative work with Indigenous nations (e.g., Latulippe, 2015). However, we found that when non-Indigenous partners come to the table with their own preconceived notions about what constitutes IK and how it should be incorporated into the project, it slows the development of initiatives while participants sort out differing expectations. An alternative strategy is to keep an open mind about how the different dimensions of IK, such as ceremonial or ecological dimensions, might inform the partnership. Remaining flexible and adopting the role of a learner vis-a-vis a partner community's IK can create an environment where Indigenous partners can safely use or enact some of the relevant aspects of their IK that are often ignored in multi-actor initiatives.

Recognizing the legitimacy of ceremonial practices associated with IK is more vital than understanding IK as "substantive" knowledge in the sense of data or information (Whyte et al., 2015). Recognizing the legitimacy of these practices can be an important part of respecting IK. Respect is seen by Anishnaabek as a core value that involves putting the needs of others before your own, not looking down on anyone, and acknowledging the importance of all of creation (Benton-Banai, 1979). This form of respect can be applied to how we think about different knowledge systems within a multi-party initiative by acknowledging the importance of all knowledges and not looking down on a collaborator's way of seeing the world.

Our study reveals specific examples of the ways various forms of IK are enacted in multi-actor initiatives (Table 2). IK is highly dispersed within Indigenous communities, where different individuals and families are considered keepers or knowledge holders of different knowledge dimensions (Reo, 2011). Therefore, involving and enacting IK in partnership settings requires participation by a diverse set of Indigenous community members, including men and women, youth and elders, IK practitioners, and Indigenous agency staff, who all have distinct responsibilities as knowledge holders in communities. Successful multi-actor collaborations involving Indigenous partners respect different ways of knowing and being and establish structures that enable full participation and dialogue.

Conclusion

Our research began with a single question about cooperative environmental stewardship involving Indigenous nations in the Great Lakes region; we asked, "What factors motivate or enable Indigenous nations and their partners to engage and remain invested in multi-actor initiatives?" Our aim was to provide information to environmental practitioners. We did not design our project to help build new theory or inform existing theories about cooperation, cross-cultural relationships, or related concepts per se.

Important follow-up work that includes a range of cases involving Indigenous peoples from a broader, perhaps, global, geographic area could lead to new theoretical contributions about multi-actor environmental governance involving Indigenous nations. Follow-up projects should consider looking at failed attempts at cooperation as well as those that endure. Such works could focus, as we did, on the IK dimensions of multi-actor initiatives. However, a more detailed investigation of the other themes that emerged in our project is also warranted. Several questions emerged and remain unanswered in our project. For instance, what principles and concepts guide the development of Memoranda of Understanding used in multi-actor environmental initiatives with Indigenous nations? How could cross-generational mentorship models be utilized within multi-actor environmental initiatives? How might Indigenous languages be important to Indigenous practices, thought, or deliberation within multi-actor initiatives?

A key challenge for collaborative environmental protection involving Indigenous and non-Indigenous actors has been that the structures and underlying assumptions of partnerships do not reflect Indigenous ways of knowing (Nadasdy, 2005). Recognizing this central tendency, we close by reflecting on Indigenous ways of knowing, to explore further the implications of our results.

For Anishnaabek, the world (i.e., place and space) was created, then all the non-human persons were created, and finally humans (Anishnaabe) were created. *People are therefore considered younger siblings to the rest of creation*, and are expected to respect and care for all of creation, much like youth are expected to respect their elders. This basic cosmological understanding is true in other Indigenous societies as well (see Larsen & Johnson, 2016). In voluntary partnerships focused on environmental protection and stewardship, everyone involved is trying to care for the environment, and so there is common ground to build upon. But deeper cross-cultural understanding, such as the culturally specific motivations of stewardship, is required to sustain partnerships. Reflecting on what has been shared with us writ large by the Indigenous and non-Indigenous people we interviewed, it becomes clear that the Indigenous partners, who have been stewarding their lands and waters for thousands of years, are the older siblings in any partnership with settler communities. We are left wondering what cooperative environmental stewardship could look like if non-Indigenous agencies and organizations looked up to and respected their Indigenous partners (existing or potential) as elder siblings, each sibling having equal importance but different roles and responsibilities that help maintain healthy relationships.

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