

A path to reconciliation between Indigenous and settler–colonial epistemologies

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There is a movement across settler–colonial institutions of education and research to engage with Indigenous Peoples and Knowledges. Many settler and Indigenous governments are pursuing pathways to move forward together to address global problems such as climate change. However, given the pervasive history of exploitation and displacement of Indigenous communities, this development has caused some concern among Indigenous leaders and scholars. At the 2022 Annual Meeting of the Ecological Society of America (ESA) in Montreal, Canada, the Traditional Ecological Knowledge Section of the ESA hosted a 2-day workshop. This gathering of 21 Indigenous environmental scientists included scholars from across the career and professional spectrum. By consensus, workshop participants identified three emergent themes—Engage, Heal, and Reconcile—that provide a pathway toward reconciliation between Indigenous and settler–colonial ways of knowing. This path allows for an ever-greater sharing of institutional resources and power toward a co-equal interfacing of Indigenous Knowledges and settler science.

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The Traditional Ecological Knowledge (TEK) section of the Ecological Society of America (ESA) convened a 2-day workshop before the 2022 ESA Annual Meeting in Montreal,

Canada (see Gazing Wolf *et al.* [2024] for workshop design, participant characteristics, and definitions of key terminology). Workshop participants included 21 Indigenous environmental scientists of diverse ages, genders, careers, and sectors, as well as diverse institutional, geographic, and community backgrounds (Table 1). Collectively, workshop participants had approximately 286 years of professional experience with Indigenous communities worldwide and 237 years of experience within settler–colonial institutions (SCI) of learning and research in the environmental sciences. At the workshop, our discussion focused on possible paths to reconciliation between Indigenous Peoples and their Knowledges (IK) and SCI. Three key themes emerged, outlining a progressive pathway that begins with fundamental engagement for mutual collaboration, advances toward a mutually healing relationship, and ultimately leads to fully realized reconciliation where power is equitably shared (Gazing Wolf *et al.* 2024). This paper summarizes the workshop discussions concerning the three reconciliatory themes (see Table 2 for a summary of recommendations by theme; see Figure 1 for approximated times that workshop participants spent discussing various broader topics within each theme).

In a nutshell:

- Although growing enthusiasm to engage with Indigenous Peoples is a welcome development, it requires relational reconciliation with Indigenous communities so as not to repeat histories of settler exploitation
- We consulted the collective experience of 21 Indigenous environmental scholars to explore a potential pathway toward reconciliation
- Three themes emerged as a pathway that moves progressively from basic engagement for mutually beneficial collaboration toward a mutually healing relationship and eventually to actualized reconciliation where power is shared
- This reconciliatory pathway will require major changes in institutional frameworks, competent leadership, and creative and flexible funding mechanisms

■ Important caveats

Indigenous communities may include Tribes, Nations, Pueblos, First Nations, and any other community on whose ancestral lands SCI exist. Importantly, any reference to such communities, schools, organizations, or individuals applies only to entities sanctioned by the community's governance, leadership, or other authoritative frameworks (such as Tribal councils, Elder councils, and so forth). Although the 21

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Table 1. Indigenous heritage of the 21 workshop contributors

Participant name	Indigenous heritage
Joseph Gazing Wolf	Amazigh, Nubian, Hunkpapa Lakota
Ellen Simmons	Swampy Cree
Paulette Blanchard	Absentee Shawnee, Kickapoo
Lydia L Jennings	Pascua Yaqui, Wixárika
Danielle D Ignace	Coeur d'Alene
Dominique M David-Chavez	Taíno
Deondre Smiles	Leech Lake Band of Ojibwe
Michelle Montgomery	Haliwa Saponi, descendent Eastern Band Cherokee
Ruth Plenty Sweetgrass-She Kills	Hidatsa, Mandan, Nakota, Dakota
Melissa K Nelson	Turtle Mountain Chippewa
Diana Doan-Crider	Tepehuán
Linda Black Elk	Korean, Mongolian
Luke Black Elk	Thítŕujwaj Lakota
Gwen Bridge	Saddle Lake Cree Nation
Ann Marie Chischilly	Diné
Kevin Deer	Kahnawake Mohawk
Kathy DeerinWater	Cherokee
Trudy Ecoffey	Oglala Lakota
Judith Vergun	Powhatan, Tuscarora, Mohawk, Shoshone
Daniel Wildcat	Muscogee
James Rattling Leaf	Sicangu Lakota

Indigenous workshop participants did not act as official representatives of any Indigenous communities during the workshop, these reconciliatory themes are meant to provide a pathway toward relational engagement with Indigenous communities through their official channels, whatever form those may take. The workshop participants also do not represent Indigenous Peoples, scholars, or perspectives on this or any other topic. The guidance herein is merely based on the collective experience of these particular environmental scholars, and it applies equally to Indigenous and non-Indigenous scholars alike and the institutions that fund them.

The recommendations we offer here are noncomprehensive guidelines that provide a starting point for SCI. Implementation of any of these recommendations should be conducted in direct consultation with Indigenous leadership from local communities and should be actionable and not performative. If any recommendations place added burdens on communities, they should be altered or disregarded. Moreover, if any actions are not possible given institutional or individual limitations, approximating them to whatever degree possible is encouraged. Moreover, the specific implementation of this path will depend on the current political climate in the settler state, the geographic location of the SCI in question, the degree of Indigenous presence at that institution, the relationship that institution has with Indigenous communities, and the type of institution involved (eg state university, private

research institution, field immersion school). Finally, rather than approaching this topic from a legalistic rights-based mentality, all are encouraged to understand reconciliation from a lens of relational responsibility toward one's partners.

■ Theme 1. ENGAGE: ethical protocols and guidelines for teaching and research involving IK

The relationship between IK and SCI ways of knowing is not one that is easily described with terms such as integrating or braiding. IK is an intergenerational, spatial (ancestral places of learning), temporal (accumulated over millennia), and existential (seasonal preparedness and community survival) epistemological foundation that is woven through the axiologies, ontologies, cosmologies, logic/reasoning, aesthetics, economies, languages, and daily lived experiences of Indigenous communities. IK is thus manifested in Indigenous bodies, hearts, and minds; it is not a “brand” that can be appropriated and utilized outside of a place-based communal context. IK and SCI ways of knowing are fundamentally different worldviews, positionalities, and value systems, and cannot be integrated. The two epistemologies can, however, work together in areas where they share common interests, a process that may be described as interfacing. Frequent interfacing of the two ways of knowing is, indeed, encouraged to help dominant power and knowledge structures be more open to cooperation, co-management, and coproduction with Indigenous communities.

Ideally, in all fields of study where it is relevant, IK would be an integral part of SCI curricula. As early in their education as possible, students would be introduced to IK in school curricula, and students who desire further learning would then be referred to community schools, organizations, and representatives. SCI staff, faculty, and administrators alike would be introduced to IK through various avenues of on- and off-campus professional development provided by community organizations. IK would be mentioned in SCI mottos, mission statements, syllabi, and hiring, promotion, and tenure processes. Importantly, this introductory education would, at the very least, elucidate the validity and reliability of IK as a way of knowing, and introduce not only Indigenous communities and histories but also Indigenous research ethics and methodologies.

One way to begin working toward this goal is for SCI to develop an introductory course as part of general education. Ideally, such a course would introduce students to IK, invite guest speakers from and offer field trips to local communities, and be taught by community members. Just as students would learn about the Belmont Report (<https://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/index.html>) when exploring research ethics, they would also learn about the UN Declaration on the Rights of Indigenous Peoples (<https://social.desa.un.org/issues/indigenous-peopl>

Table 2. Emergent themes and recommendations toward reconciliation as identified by the collective experience of the Indigenous workshop participants

Emergent themes	Recommendations (done in consultation with Indigenous communities as much as possible)
Theme 1. ENGAGE: ethical protocols and guidelines for teaching and research involving Indigenous Knowledge (IK)	<ol style="list-style-type: none"> (1) IK should never be appropriated or used outside of place-based community contexts. (2) IK should be included in all curricula, mission statements, syllabi, and so forth, where relevant. (3) Students, staff, faculty, and administrators alike should be exposed to IK as early in their academic experiences and careers as possible. (4) An introductory IK course would introduce students to local communities and their ecologies and histories, as well as protocols for ethical research with Indigenous communities. (5) Community-based research should prioritize safety, respect, rest, compensation, data sovereignty, and beneficial outcomes for communities; it may also support the political and environmental action of community leadership. (6) Funding proposals should be written in consultation with and based on the timelines of communities. (7) Campus climate and culture may be changed through consultation with Indigenous communities while highlighting ethical research conducted with them.
Theme 2. HEAL: addressing trauma inflicted upon Indigenous Peoples by settler-colonial institutions (SCI)	<ol style="list-style-type: none"> (1) SCI must detail harms committed against local communities and implement policy to work toward reparation. (2) An inter-Tribal advisory board may provide institutional accountability and research review. (3) Indigenous scholars should receive protections when they act as conscientious objectors to research or persons they consider unethical. (4) Diversity and inclusion should be understood as the act of inviting discomfort for dominant races, values, worldviews, and ways of knowing. (5) Indigenous students should have off-campus mentors and committee members as a method of holding on-campus faculty accountable by non-peers. (6) Financial, geographic, and cultural barriers should be reduced as much as possible to encourage Indigenous recruitment and retention. (7) SCI may support the repatriation of stolen lands in multiple ways, including sharing the profits made from these lands in the form of tuition-free education for community members.
Theme 3. RECONCILE: elevation of Indigenous scholars and Knowledge holders within SCI	<ol style="list-style-type: none"> (1) Communities would co-design, with equal authority, SCI mission statements, policy, codes of conduct, research ethics, tenure and promotion, undergraduate and graduate education, funding protocols, etc. (2) The recruitment, retention, and elevation to positions of power for Indigenous People is essential to reconciliation. (3) Cluster hires for faculty and cohort models for student recruitment are highly recommended for the purposes of retention. (4) Culturally relevant STEM curricula, community-designed campus spaces, a network of mentors from local communities, and regular cultural events would be the norm. (5) Indigenous scholars' community-embedded research and service activities would be supported by flexible funding mechanisms and promotion and tenure processes. (6) SCI would provide Indigenous Elders and practitioners credentials based on their experience, which they then can utilize to teach at these institutions. (7) Boards of regents, IRBs, funding offices, provost and deanships, and other positions of authority would each have Indigenous personnel and at least 50% of the personnel in those positions would be selected by an Indigenous board. (8) On-campus coursework and programming would tie into community programs and events to ensure a continuous exchange of knowledge and experience. (9) Indigenous communities would have access to SCI lands, libraries, labs, and other resources for education, research, agriculture, and economic development. (10) Indigenous leadership and SCI leadership would develop a comprehensive strategic plan to outline all relevant initiatives, as well as the funding mechanisms, implementation processes, and accountability measures.

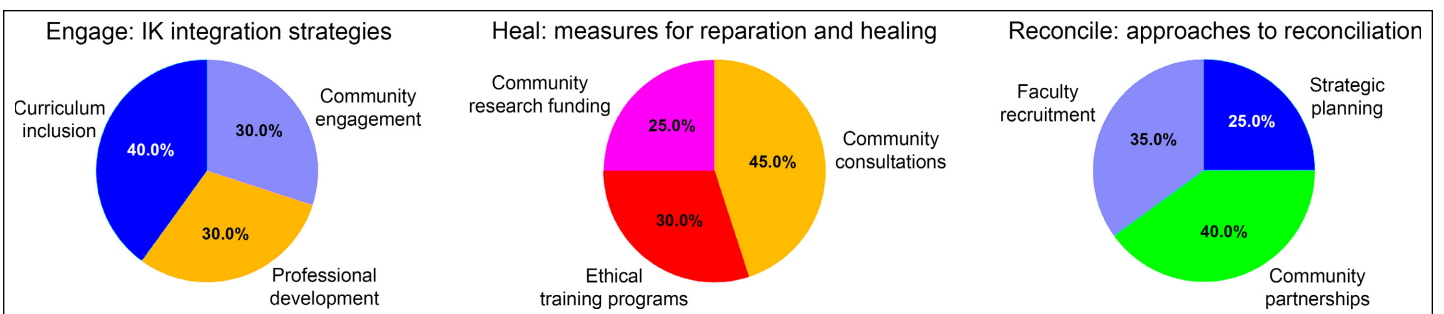


Figure 1. The approximate proportions of time spent by workshop participants discussing certain topics within each of the three themes—Engage, Heal, and Reconcile—during the two-day *Elevating Indigenous Knowledges in Ecology* workshop at the Ecological Society of America’s 2022 Annual Meeting. Image created by J Gazing Wolf in Microsoft Word.

es/united-nations-declaration-on-the-rights-of-indigenous-peoples). A TEK-focused course would present ecology of place (both human and more-than-human), Indigenous relationality to place, and community names, songs, ceremonies, stories, and sociopolitical history. It may be that in connecting the lifeforms of an ecoregion with the human history and culture of that region, students may gain an understanding of and respect for TEK, even if it is not directly taught. Extant courses like these may be emulated, and some organizations have developed micro-credential courses that focus on particular ecoregions and communities (eg Forest Twinning Initiative).

More widespread familiarity with IK may lead to greater engagement with communities. Many guiding documents exist for Indigenous engagement and research (Bartlett *et al.* 2012; Black Elk 2016; FWS 2018; David-Chavez *et al.* 2020; CSA 2021; Montgomery and Blanchard 2021; PMNM 2021; OSTP 2022; Tsosie *et al.* 2022; Bridge 2023). Ideally, any guiding principles for engagement would be context-dependent and produced by, or in collaboration with, the communities of interest. Before approaching any community, SCI researchers are encouraged to define their own values, how those values guide their ethics and research, and the power dynamics at work between them, their institution, and the community. This is especially applicable when working with Indigenous communities in the Global South who have been severely impacted by settler-colonial land theft and natural resource exploitation. These communities may also lack legal protections and be subject to economic dependency on a settler state. It is critical that the researcher creates an ethical space (Bridge 2023) for community members by being mindful of their notions of safety, respect, rest, and compensation. Research collaborations, in turn, would prioritize outcomes and benefits determined by the community. For example, grant funding typically used to hire non-Indigenous student assistants may instead be used to hire community members and students. As much as possible, the research itself would be carried out within the community, where members experience greater safety and where the research may be conducted under the watchful eye of community cultural experts. In working with any Indigenous community, the cardinal rule is to take the time to build relationships by educating yourself from the perspective of that community, and by giving your time, resources, and skill sets to serve community priorities (eg Heritage Lands Collective; <https://heritagelands.org>).

For some, approaching a community may initially cause consternation. However, researchers of every background are encouraged to engage with communities as early in the research process as possible. When doing so, it is important to consider that Indigenous leadership, while often underfunded and understaffed, have the governance responsibilities of any nation-state (ie providing healthcare, education, food, and so on). Researchers are therefore encouraged to remain persistent; if a response is not received right away, wait and ask

again! Indigenous Elders, Knowledge holders, and scholars often have many community-related service responsibilities, including leadership roles and relationship development, while pursuing their careers. Therefore, always keep communication short and directly on point. For similar reasons, short notice requests will almost always fail because of individual and community capacities, priorities, and governance processes. It also behooves researchers to know that SCI funding timelines and regulations make conducting any work with Indigenous communities extremely difficult (Gazing Wolf 2024). Funding proposals should be written in consultation with community leadership, and timelines should be determined by community capacity. Researchers are encouraged to compel funding agencies to understand that working with communities often requires flexible timelines, and unforeseen circumstances are almost certain. Moreover, many Indigenous communities have seasons throughout the year dedicated to communal ceremonies, agricultural planting or harvest, or rest and reflection, where they may be inaccessible. Lastly, several months should be budgeted for the community to review final research outcomes and reports before implementation/publication.

Ideally, the community has its own research review process; if not, an Institutional Review Board (IRB) process may be followed in the US or the Ownership, Control, Access, and Possession (OCAP) process may be followed in Canada (Schnarch 2004; Mcreedy *et al.* 2018). Whichever process is utilized, community participants must at a minimum be informed of (1) how the researchers have thought about and defined their own responsibility for the knowledge they will gain, (2) how the researchers understand community members as co-creators and what that means in terms of outcomes and products, (3) what processes researchers will use to safeguard Tribal data sovereignty and protection of data from misuse or appropriation, and (4) how the knowledge gained will be repatriated to the community via outcomes and products. The means of properly compensating community members for their time and shared knowledge should also be made in consultation with them, as financial compensation is not always culturally meaningful or appropriate. This question of reciprocity must be addressed explicitly and in writing.

By respecting Indigenous sovereignty and autonomy, SCI may help further community environmental action and policymaking. SCI researchers would learn the histories, current policies, and ongoing decolonial efforts of the Indigenous communities that they seek to support prior to elevating the IK of those communities through research or educational efforts. No research or action would be taken unless it originated with the community, following the adage “nothing about us, without us” (Funnell *et al.* 2020). Through frequent dialogue with community leaders, SCI researchers may design studies to support any ongoing environmental action of the community (eg cultural anthropologists working with the Bears Ears Inter-Tribal Coalition). Notably, efforts to support Indigenous environmental action, such as land protection, may ultimately lead to the exclusion of supportive allies from those lands (eg the

limiting of recreational or hunting access to those lands). Indigenous sovereignty is indeed not a metaphor (Tuck and Yang 2012)!

In their own contexts, SCI officials who are working to change their institution's campus climate and cultural values are encouraged to seek guidance from Indigenous communities. This may be done in a continuous consultative capacity with local community representatives if funding mechanisms are in place. Another approach would be to create a means of anonymous feedback from local community members and Indigenous students, staff, and faculty at the institution. SCI officials may also consult with non-Indigenous colleagues who have successfully worked with Indigenous communities or are successfully recruiting and retaining Indigenous and other underrepresented students. SCI news media, academic journals, and professional societies may also highlight successful and ethical work being done with Indigenous communities. When doing so, they should especially highlight the research outcomes that benefited the community and the approach that the researcher used to build a relationship with the community. Finally, it is important for SCI leadership to understand that a campus that overwhelmingly embodies one race, culture, and value system delivers a clear message of exclusion to all others, even if that is not the intention.

■ Theme 2. HEAL: addressing trauma inflicted upon Indigenous Peoples by SCI

Healing must be understood as a constant work in progress and must be culturally relevant. It begins with education and candid reflection on the cause-and-effect mechanisms that have led to current circumstances. Trauma caused to Indigenous communities must be publicly acknowledged without justification, guilt, or whitewashing. The specifics of the political, economic, and environmental harms committed against Indigenous communities by the SCI in question must be outlined (Budowle *et al.* 2019). Once these are known, specific policy, programming, and funding mechanisms can be designed to begin the process of reparation and relational restoration. This process of institutional interrogation should include an assessment of ongoing institutional practices that continue to cause harm to communities. Concurrently, every effort should be made to place IK on equal footing with SCI, thus combating the colonial supremacy at the heart of the trauma.

To prevent further harm, SCI may organize and fund an Indigenous advisory board that provides direct institutional accountability. This board may build capacity for interested scholars in SCI by providing training in ethical engagement with communities. Subject to available funding and capacity, the board may also serve as a review board for community research. Short of this, current IRBs may be trained in

Indigenous research protocols. Moreover, for funding and IRB purposes, a letter of support from the community should be necessary for project approval (eg the University of Arizona requires Tribal consultation for community-based research). Furthermore, scholars must be made aware, via IRB or other training/policy, that the use or publication of IK in their research is strictly prohibited unless (1) such use has been approved by community representatives involved in the research; (2) all such use is properly written, attributed, and cited in publications as an authoritative source (Peters 2020; MacLeod 2021); and (3) the researcher can demonstrate that such use is for the benefit of the community. Concurrently, SCI leadership must continue to take responsibility for any ethical missteps their personnel commit and make every effort to remedy the damage caused. Ultimately, there should be a written policy in place to navigate through conflicts between SCI, Indigenous communities, Indigenous scholars, and SCI scholars.

SCI may also become agents of healing for Indigenous scholars within SCI. For SCI that have advanced their relationships with local communities, it is important to connect incoming Indigenous students, staff, and faculty with those communities. In addition, Indigenous scholars tend to experience retaliation, discrimination, and marginalization when, as conscientious objectors, they refuse to work with certain people or be involved in certain projects. SCI must protect all scholars' rights to refuse to work with certain people, labs, projects, and funding mechanisms for ethical reasons. Moreover, SCI leadership is encouraged to consider that the traditional SCI values of meritocracy and competition are not only culturally irrelevant but antithetical to most Indigenous community values. Ultimately, any sense of "diversity and inclusion" must be considered disingenuous if Indigenous or other underrepresented people are invited into SCI contexts and required to assimilate their identities, perspectives, and values under dominant settler cultural values and norms.

The prevention of harm to Indigenous students may be approached in multiple ways. Students should be encouraged to have outside committee members or adjunct professors as a form of alternative advisement and as a method of holding on-campus faculty accountable by non-peers. Students should also be encouraged to pursue a network of Indigenous and non-Indigenous mentors on- and off-campus, who could buffer any potential conflict they may experience with their advisors. Every effort would be made to reduce financial barriers for those seeking an education and provide continuous academic guidance to first-generation students. Moreover, academic hazing, whereby faculty believe that subjecting students to excessively stressful experiences is good for them, is in stark contradiction to the nurturing education many Indigenous youth receive from Elders and should be considered a violation of institutional policy. Lastly, Indigenous students must also do the important work of identifying how they themselves are contributing to their own and others'

traumatization and what options they have for alleviating self-imposed suffering.

Finally, any genuine effort at healing must address the issue of stolen lands and the immense economic benefit that SCI have enjoyed on account of this. Language such as “land-grant” and “new world” would disappear from SCI vernacular. SCI may use their political and economic leverage to support the Land Back movement by pushing to return national parks and other public lands to Indigenous communities (Treuer 2021). They may also work to expose billion-dollar land-grab “conservation” organizations that “protect” ecosystems by stealing Indigenous lands and excluding Indigenous communities from them (Colchester 2004; Dawson 2022). Land-grab SCI may also address their own land-profiting history (Harvey 2021) by providing free educational opportunities for community members (Nelson *et al.* [2021]; see the University of California’s Native American Opportunity Plan; <https://admission.universityofcalifornia.edu/tuition-financial-aid/types-of-aid/native-american-opportunity-plan.html>) and by aligning their land acknowledgments with institutional responsibility (Ambo and Rocha Beardall 2023).

■ Theme 3. RECONCILE: elevation of Indigenous scholars and Knowledge holders within SCI

Reconciliation, which should not be confused with decolonization, is achieved when the Knowledges and value systems that guide IK and SCI exist as co-equal partners economically, politically, educationally, and so forth. Pragmatically, a sign of reconciliation would be when local Indigenous communities have become co-equal decision-making entities of education and research with SCI. Communities would co-design, with equal authority, SCI mission statements, policy, codes of conduct, research ethics, tenure and promotion, undergraduate and graduate education, funding protocols, and other factors. Alternatively, SCI would provide the funding and space for communities to implement a parallel, self-standing path for students and scholars to choose their educational and research pursuits within the institution. If this is not possible within SCI structures, then funding must be diverted to Tribal colleges and universities (TCUs) or other community-run schools for these institutions to become viable places of employment and community-led education and research.

An effective way to pursue reconciliation is through the recruitment and retention of, as well as elevation to positions of power for, Indigenous community members. Cohort models for student recruitment and cluster hires for faculty are highly recommended. Peer support programming helps avoid burn-out, provides emotional and cultural support, echoes institutional change, and distributes power. To avoid “translational exhaustion” for community experts and scholars (ie having to

answer the same questions repeatedly, sit on department panels, engage in listening sessions, and so forth), SCI would fund the development of training modules that included frequently asked questions about IK, Indigenous science, and ethical engagement with Indigenous communities. Lastly, a greater sense of belonging may be encouraged through a culturally relevant science, technology, engineering, and mathematics (STEM) curriculum, community-designed spaces on campus, a network of mentors from local communities, and regular cultural events.

Clearly negotiated contracts of teaching, research, and service responsibilities would improve retention of graduate students and faculty. When these contracts are negotiated, the individual’s community/familial responsibilities and service obligations would be considered. Remote options for paid student internships and research experiences for undergraduates (REUs) are necessary for those with care-taking responsibilities. Remote teaching assignments and teaching releases are necessary to continue developing place-based, community-embedded relationships and research for Indigenous faculty. Flexible funding mechanisms and promotion and tenure processes would support Indigenous scholars’ community-embedded research and service activities. Prior knowledge and experience, community service and outreach, community-oriented publications, and network wealth (ie a scholar’s ability to bring the relational knowledge of diverse communities to their teaching, research, and service) should weigh as heavily on tenure and promotion as academic publications and grants. SCI would also provide means for people to be acknowledged as scholars outside of settler frameworks (eg academic institutions in Australia and New Zealand provide Indigenous Elders and cultural practitioners credentials based on their experience, which they then utilize to teach at these institutions).

To increase direct engagement with and benefit to communities, SCI would develop satellite campuses that serve the educational and research needs of rural Indigenous communities. On-campus programming would tie into community programs and events to ensure a continuous exchange of knowledge and experience. Community-rooted research (David-Chavez *et al.* 2020) would be the expected norm (eg the Traditional Foods Project conducted by the US Centers for Disease Control and Prevention; DeBruyn *et al.* 2020). Academic departments would coordinate coursework with community educational programming and business entities (eg Indigenous language exchange for language departments). Student and faculty exchanges and field trips to TCUs and other community organizations would be encouraged. Through memoranda of understanding (MOUs), communities would have access to SCI lands, libraries, labs, and other resources for education, research, agriculture, and economic development. Lastly, publications and other research outcomes would be “translated” into culturally relevant products that inform and empower Indigenous communities (eg Willow AGEP Alliance).

Finally, SCI may also work to reorient institutional power dynamics and networks to privilege IK. University presidents and regents would visit Indigenous communities annually and be recognized by community leadership. SCI boards of regents, IRBs, funding offices, provosts and deanships, academic departments, and other entities of authority would be required to have a minimum number of Indigenous personnel, and an Indigenous board would select at least 50% of the personnel in those positions. If community capacity allows, a permanent Elder council would hold equal decision-making power with the SCI board of regents in all matters (see Northern Arizona University's Elders Program; <https://in.nau.edu/native-american-cultural-center/elders>). Indigenous leadership and SCI IRBs would co-develop training for Indigenous and non-Indigenous researchers while building greater capacity toward independent Indigenous IRBs. SCI would create partnerships at a state or regional scale between themselves, other SCI, and Indigenous communities for political, economic, and resource leverage. SCI would also use their political and economic leverage to place Indigenous leadership on governing bodies at state and local levels. Lastly, SCI would develop comprehensive strategic plans to outline these initiatives, the funding mechanisms, the implementation processes, and the accountability measures (see The University of British Columbia's Indigenous Strategic Plan; <https://isp.ubc.ca>). An iterative review process would be applied to record and assess the tangible outcomes of implementing the strategic plan. Though funding is a major hurdle, SCI may leverage capital and donor campaigns to develop endowments while redirecting extravagant administrative salaries or restructuring leadership altogether.

Conclusion

This path to reconciliation requires culturally competent leadership across SCI, Indigenous communities, and student/staff/faculty populations. Without SCI leadership willing to share power and resources, without Indigenous leadership who listen to their communities, and without students/faculty organizing and demanding change, the path ahead will likely be stagnation or regression. Finally, it must be emphasized that the recommended changes put forward in this paper are by no means a denigration of the scientific method used in SCI research or the many benefits that research has provided human societies. Reconciliation only addresses the foundational and structural inequalities upheld by SCI.

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Data Availability Statement

No data were collected for this study.

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