

Indigenous participation in peer review publications and the editorial process: reflections from a workshop¹

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Abstract: This communication paper reflects on discussions from a workshop about Indigenous involvement in the peer review and editorial processes. Arctic-based research is undergoing a paradigm shift to include local Indigenous Peoples, their priorities, and knowledge throughout the research process. This special issue is an excellent example; it highlights research involving partnerships between Indigenous and non-Indigenous researchers to support knowledge co-production. Despite this shift, we find little space within the standard peer review and editorial processes for Indigenous Peoples, their perspectives, and knowledge. To discuss this issue, we organized a half-day workshop at the 2019 ArcticNet Annual Scientific Meeting with a diversity of Indigenous and non-Indigenous participants who are involved in Arctic research. The discussions revealed

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that answering questions about the involvement of Indigenous Peoples in the peer review and editorial processes largely begins by addressing the challenges of achieving equity in the research process generally. Our discussions demonstrated that further conversations are needed and that no single approach will work in all cases, but that there are several concrete actions that researchers, universities, funding organizations, and publishers can take to begin addressing this issue.

Taanna tusaumaqatigiguti paippaaq uqausiqarmat uqallaqatigigutaulauqtunik katimasinnaarutiqaktillugit Nunaqaqqaaksimanirmut qaujisattiarnirmik qimirrulutik ammalu aaqkisuqtautiutillugit pilirianguningit. Ukiuqtaqurmittuq qaujinasuarvik pilirivalliajuugaluq tukisinarutaugajuktumik piliringaaliqpallialutik piqasiujjauqullugit nunalinni Nunaqaqqaqsimajut inungit, ammalu qaujimaningit iluunnaalimaangani qaujinasuarniup pilirianguningata. Taanna ajjiungittuq akaunngiliuruti piujuaalungmat tukisinaqsittitjiutauninga; ujirnaqsittitmat qaujinasuarnirmik piliriqatautittininganit piliriqatigignningitigu kamakkua Nunaqaqqaaksimajut ammalu uqurmiut qaujinasuaqtit ikajuqsuiqullugit qaujimanirmik sanaqataujunik. Tamannaugaluatillugu piliriangungaaliqpallianinga, nanisigatta piviqarvigalaangannit iluani atuqtaulluatasuni qaujisattiarluni qimirrunirmi ammalu aaqkisuigiakkannirirmut pilirinirmik Nunaqaqqaaksimajut inungnut, kiggaqtuijinginnut ammalu qaujimaningnut. Uqaqatigigutiginiarlugit tamakkua akaunngiliuruti, aaqkisuilaauratta avvanganit ulluup katimasinnaarnirmik taikani 2019 Ukiuqtaqtumik Tukisinaqatigiit Arraagutamat Qaujinasuarnirmuugajunik Katimaqatigigniq ajjiingillutik Nunaqaqqaaksimajut ammalu Nunaqaqqaaksimajuungittut piliriqataujut taikkua piliriqataujut Ukiuqtaqurmi qaujinasuarnirmi. Uqaqatigignit saqititilaurmata tamanna kiuqattarniq apiqutunik turaangajunik piliriqatautitauninginnut Nunaqaqqaaksimajut inungit qaujisattiarluni qimirrunirmi ammalu aaqkisuigiakkannirirmik piliriniujunik angijumik pigiarutiqasungumat piliriangunasuaalirninginnut piliriangujarialit pijaunasuarutauluni taimaalluaqatigiingnirmik qaujinasuaqtut pilirininginni tamaitigut. Uqaqatigignivut tukisinaqsittitmat taavungakkanniq uqaqatigigutiqakkanniriaqaratta ammalu pitaqangimmat atausiarluni pilirijjutaugajaqtumik aaqkisujiutaugajaqtumik qanuittutuinnarni piliriangujuqarajaqpat, kisiani qatsikallangnik sanngijunik pilirigiarutaujuqarmat qaujinasuaqtikkunnit, silattuqsarvigjuanit, kiinaujaqaktittitit iqanaijarviqunginnit ammalu uqalimaagaliuqtit pilirigiarunnarmata tamanna pilianguqullugu akaunngiliuti.

Key words: research, Indigenous, Inuit, equality, inclusion, Arctic, Indigenous Knowledge, Qaujinasuarniq, Taimaalluaqatigiigniq, Piqasiujjiniq, Inuit, Nunaqaqqaaksimajut Qaujimaningit.

Résumé : Cette communication revient sur les discussions qui se sont tenues lors d'un atelier portant sur l'engagement des autochtones dans les processus d'examen par les pairs et de publication. La recherche dans l'Arctique connaît un changement de paradigme pour inclure les populations autochtones locales, leurs priorités et leurs savoirs tout au long du processus de recherche. Ce numéro spécial en est un excellent exemple ; il met en lumière la recherche comportant des partenariats entre des chercheurs autochtones et non autochtones pour soutenir la coproduction de savoirs. Malgré ce changement, les auteurs trouvent peu de place dans les processus standard d'évaluation par les pairs et de publication pour les peuples autochtones, leurs perspectives et leurs savoirs. Afin de discuter de cette question, ils ont organisé un atelier d'une demi-journée lors de la Réunion scientifique annuelle d'ArcticNet en 2019 réunissant une diversité de participants autochtones et non autochtones qui sont engagés dans la recherche arctique. Les discussions ont révélé que pour répondre aux questions à propos de l'engagement des peuples autochtones dans les processus d'examen par les pairs et de publication, l'on doit d'abord commencer par relever les défis de l'atteinte de l'équité dans le processus de recherche en général. Leurs discussions ont montré que d'autres conversations sont nécessaires et qu'aucune approche unique ne fonctionnera dans tous les cas, mais qu'il existe plusieurs actions concrètes que les chercheurs, les universités, les organismes de financement et les éditeurs peuvent poser pour commencer à aborder cette question. [Traduit par la Rédaction]

Mots-clés : recherche, autochtones, Inuits, égalité, Arctique, savoirs autochtones.

Introduction

A goal of this communication within this special issue on knowledge co-production and co-management is to discuss expanding the peer review and editorial processes to include and involve Indigenous Peoples and make standard scientific journal publications more relevant to them. In 2018, the national organization representing Inuit in Canada, Inuit Tapiriit Kanatami (ITK), released the National Inuit Strategy for Research that calls for a paradigm shift in the research process, policy and governance, and the development of equitable partnerships whereby Inuit are included from start to finish in research programs and projects (ITK 2018). Strong collaborative, participatory research between scientists, Indigenous organizations, communities, and peoples has demonstrated numerous benefits including new knowledge production, applied findings at local levels, and impacts on policy (Pearce et al. 2009; Danielsen et al. 2010; Etiendem et al. 2020; Fox et al. 2020; Henri et al. 2020; Pettitt-Wade et al. 2020). However, despite calls to action on participatory research in the Arctic, a multi-decadal analysis revealed only a slight increase in the involvement Indigenous Peoples in research from 1965 to 2010 (Brunet et al. 2014).

Publishing research findings in a peer-reviewed journal is often the last step of a research project. It communicates the major findings, making them available to a broader audience to be re-tested, built upon, and used as a citable source. The peer review process that precedes publication, involves recruiting the authors' peers (i.e., experts in the same field of study) to critically review the paper, scrutinize methods and analyses, question findings, suggest improvements, and flag overstated claims. Peer review and author revisions are meant to improve the paper and lend credibility to the findings, so that when published, the paper is seen as a valid contribution to scholarly knowledge. Despite flaws in the process (e.g., Crandall 1986; Smith 2006; Tennant 2018), peer-reviewed publications remain integral to the research community and are considered one of the most reliable and valid sources of information. Involvement in the peer review and editorial processes has largely been occupied by academics and professionals associated with research based institutions (Baldwin 2018). To increase validity, and have research be meaningful to those most impacted, it is essential and ethical to involve the people who are the subject of research, the subject matter experts, and the rights holders of the region where research occurs, in peer review and editorial processes that govern research publications.

In this communication, we reflect on discussions from a workshop about Indigenous involvement in the peer review and editorial processes held before the 2019 ArcticNet Annual Scientific Meeting (ASM), held in Halifax, Canada, 2–6 December. As part of the reflection process, we circulated minutes from the meeting to workshop participants for comment along with a summary of the key themes and recommendations. A draft paper inclusive of these comments was twice circulated among co-authors for feedback.

Workshop Description

The workshop brought together a diversity of peers and practitioners in Arctic research including academics, Indigenous Peoples and those working for Indigenous organizations and co-management boards in the Arctic, and governments from regional and national levels who were attending the 2019 ArcticNet ASM, held in Halifax, Canada, 2–6 December. We use the term “Indigenous Peoples” to recognize that the Arctic is home to many Indigenous groups that hold diversities among and within; additionally, the use of “Indigenous Peoples” here is not meant to represent all Indigenous groups. ArcticNet is a Network of Centre of Excellence in Canada that brings together scientists in the natural, human health, engineering, and social sciences with their partners from Inuit organizations, northern communities, federal, territorial, and provincial agencies, and the private

sector to study important issues in the Canadian North using holistic, multi-disciplinary approaches (<https://arcticnet.ulaval.ca/>). There were 27 participants in the workshop, including two chairs from the special issue editorial team (Loseto and Breton-Honeyman) and two staff members from the special issue publisher, Canadian Science Publishing (CSP). Nearly 60% of participants were female; 52% were representatives of Indigenous organizations; 30% were Indigenous; 30% were from universities of which half were graduate students; 11% were from the federal government with the remainder being CSP staff (7%).

The goal of the workshop was to discuss the involvement of Indigenous People in the peer review and editorial processes. The workshop was held over a 4 h period and used a round table format that started with presentations by the chairs, guest speakers, and the publisher of the special issue, and followed by an open discussion. It was intended that there would be an applied component of the workshop to go through the peer review and editorial processes for an article step by step, but time did not allow for this.

The discussion was captured by having a minute taker write down what was said, by whom, with focus on concluding comments, ideas, and concerns raised and proposed direction under key topics. At the end of the workshop, we agreed to circulate minutes, examine consensus on recommendations discussed, and chairs would invite participants for continued engagement on this discussion. The minutes were shared with participants for confirmation, and participants were asked if they were in support of publishing a manuscript about the workshop and if they would like to participate in co-authoring this manuscript. Those who did not participate as co-authors were supportive of the publication of the workshop.

After removing introductory and presentation material, a word frequency analysis was conducted on the discussion component of the minutes using the qualitative analysis software, NVivo 12. Words with a minimum length of three letters were included in the analysis and stemmed words were included together (e.g., the words “community” and “communities” were counted together). The 80 most frequent words in the minutes were generated into a word cloud (Fig. 1). Note all words are spelled using lowercase letters, the software package did not allow capitalization of words (e.g., such as “Indigenous”).

Workshop Discussion

The topics of discussion ranged widely and touched on many aspects of Indigenous participation in and experiences with research generally, with some mention of the publishing processes. The range of topics discussed is reflected in the word cloud, which also shows the most common words used, with the size of the word indicating the frequency of occurrence (Fig. 1). They included “community” (including “communities” — 108 occurrences), “research” (including “researcher” — 71 occurrences), and “publish” (including “publisher”, “publishing”, and “publication” — 53 occurrences), and “need” (38 occurrences). Other frequently used words included “Indigenous” (32 occurrences), “review” (24 occurrences), and “reports” (24 occurrences).

Apart from those words specifically referring to publishing and publication, many of the frequently used words reflect broader discussions and concerns about the involvement of Indigenous Peoples and communities¹ in the research process more generally (Fig. 1). Much discussion at the workshop focused on the research process and the challenges and barriers of community engagement as a whole. A published article is an integral part of the research process as far as southern researchers are concerned, but for some

¹The use of the term “communities” also implicates the associated Indigenous organization, which is an important level of engagement for both validation of results but also research coordination in the regions.

Participants discussed multiple barriers that exclude active involvement of Indigenous Peoples in the peer review and editorial processes. A recurring question was how could barriers like language and Internet access (peer review is typically conducted online) be surmounted so that Elders and other Indigenous Peoples can participate meaningfully in research reviews that are relevant to them? It was recognized that the process of peer review is particular to “western science”, and that the scientific peer review process may not be well suited to enabling an equal contribution from Indigenous Peoples given IK has its own processes of evaluation (e.g., [Smith 2013](#); [Aikenhead and Ogawa 2007](#); [Whyte et al. 2016](#)). In fact, the use of peer review may reinforce power imbalances between science and IK because it situates the procedures to determine the rigour of research in academic journals using western based approaches ([Nadasdy 1999](#); [Simpson 2004](#)). Although IK experts can participate deeply in the preparation of peer reviewed publications (e.g., [Sanderson et al. 2015](#)), IK can also be published with little apparent participation of IK holders in the process ([David-Chavez and Gavin 2018](#)). For this reason, it is important to also consider how the development, communication, and application of IK can be supported locally, regardless of whether this knowledge is published in peer reviewed journals ([Agrawal 1995](#); [Roburn and Tr’ondëk Hwëch’in Heritage Department 2012](#)). This may include exploring new ways for research to be published in the communities and ways in which this can be incentivized for researchers, so these types of publications are as important as peer-reviewed publications.

Key themes, outcomes, and recommendations

From the discussion, we identified re-occurring themes that require further consideration. The themes relate to the broader ethics of Arctic research and the involvement of Indigenous Peoples. Perhaps the most telling theme is the need and interest of participants to continue this discussion.

- *Community involvement throughout the entire research process.* The communities must have access to the results, and a chance to interpret, understand, and utilize them. Research projects need to factor in the costs of translations, interpretation, dissemination, and consideration for accessibility.
- *Report research findings back to the community in an appropriate manner before the paper is submitted to a journal.* This also affords the community the opportunity to provide input and validate results (a form of locally based peer review that should be clearly documented) that can include iterative approaches to support knowledge co-production. Funding for communicating results must be secured as a standard budget item as this is a critical activity in Arctic research.
- *Communities/organizations/regions determine their involvement in the publication process.* Regarding co-authorship by Indigenous Peoples, care must be taken to not lend to tokenism or false representation of Indigenous engagement.
- *A community involvement statement could be included in a publication.* The process of community involvement could be reported in the body of the article, and (or) the community could provide validation of appropriate engagement (i.e., receive a badge of community approval).
- *Consider community capacity for involvement in peer review and editorial processes.* Although inviting communities to play a more active role in peer review may be a laudable/desirable goal, it is important not to overburden communities or community representatives, who are often overwhelmed by requests for their time. This highlights the need for capacity to be built to enable equitable participation, including fair compensation, and the role of the research community to support this.

The topic of involvement of Indigenous Peoples in publishing, authoring/co-authoring, and involvement in the editorial process of scientific papers is complex and connects back to the original research process, ethics, and challenges within. There was less discussion or focus on the direct participation of Indigenous Peoples in the editorial process as editors or reviewers. Barriers were identified, though the discussion focused on the entirety of Indigenous engagement in the research process, rather than focusing solely on publishing. This was likely due to the discussion topics introduced and also that it is impossible to discuss Indigenous participation in the editorial process without connecting to larger systemic issues that underpin the overall publication process. Second, the chairs reflected on the reality of the unfamiliarity of the peer review publication process to many, making it difficult to discuss opportunities for involvement. It was also noted that the burden of participating in a peer review is significant, both in time and expertise, and Indigenous organizations are often not equipped to support the peer review or editorial processes. Participants asked how the research community and funders could bolster the capacity of Indigenous organizations to participate if desired? The discussions revealed that questions about the involvement of Indigenous Peoples in the peer review and editorial processes begins by addressing the challenges of achieving equity in the research process generally.

Next steps

Many perspectives were shared during the workshop, highlighting the complexity and range of perspectives on the inclusion of Indigenous Peoples in the peer review and editorial processes. Although the main workshop outcome identified the need for further discussion, there was discussion on possible themes that could be actioned now. The journal or publisher could request that authors include a section in manuscripts or in the submission template that describes the community partnership or communication and (or) validation process that occurred (e.g., within the methods or detailed in supplementary material) that is not common to the natural sciences. Similar to reporting research licenses or ethics approvals, this information could be included, recognizing the limitation that the journal/publisher would not have the capacity or means to validate the information provided. Another idea was to have a representative Indigenous organization provide a confirmation of communication or validation that occurred at the appropriate community and regional level regarding the publication of findings, though this too would pose capacity challenges. Despite challenges, we encourage the Arctic research community to consider and test these proposed approaches and to share their experiences. We recognize that no single approach will work for all, but it is through conversations like the ones held during the workshop that we are able to think beyond the status quo and evolve the peer review and editorial processes in step with other advancements that have been made to involve Indigenous Peoples in Arctic research.

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Qujagijavut M. Slavitch ammalu R. Pietersma Kanatami Qaujinasuarnirmut Uqalimaagaliaqtit (CSP) ikajuqsuininganut katimasinnaarnirmik, R. Pietersma katimaj-juutilirininganut ammalu nuattininganut iqaumajjutiksanic, ammalu Kanatami Qaujinasuarnirmut Uqalimaagaliaqtit (CSP) piliriqatiginit kajusitittininganut uqaqatiginnirmut ilagijautittinirmuungajuni Nunaqaqqaaksimajut inunginnit qaujisattiarnirmik qimirrulutik uqalimaagaliurlutik pilirianguninginnit iluunnanginut Kanatami Qaujinasuarnirmut Uqalimaagaliaqtit (CSP) qautamaaqsiutilianginni, ammalu kiinaujatigit ikajurninginut katimasinnaarnirmi. Qujagijavut Ukiuqtaqtumik Tukisiniatigitiit katimatittininginnut 2019–mi Arraagutamat Qaujinasuarnirmuungajunik Katimaqatigigni (ASM) ammalu ikajuqsuininginut titiraktuup uqalimaagalianginnut akinginnit taatumunga titirautiqarvigijanganut.

References

- Agrawal, A. 1995. Dismantling the divide between Indigenous and scientific knowledge. *Dev. Change*, **26**: 413–439. doi: [10.1111/j.1467-7660.1995.tb00560.x](https://doi.org/10.1111/j.1467-7660.1995.tb00560.x).
- Aikenhead, G.S., and Ogawa, M. 2007. Indigenous knowledge and science revisited. *Cult. Stud. Sci. Educ.* **2**: 539–620. doi: [10.1007/s11422-007-9067-8](https://doi.org/10.1007/s11422-007-9067-8).
- Alexander, C., Bynum, N., Johnson, E., King, U., Mustonen, T., Neofotis, P., and Oettlé, N. 2011. Linking Indigenous and scientific knowledge of climate change. *BioScience*, **61**(6), 477–484. doi:[10.1525/bio.2011.61.6.10](https://doi.org/10.1525/bio.2011.61.6.10).
- Baldwin, M. 2018. Scientific autonomy, public accountability, and the rise of “peer review” in the Cold War United States. *Isis*, **109**: 538–558. doi: [10.1086/700070](https://doi.org/10.1086/700070).
- Brunet, N.D., Hickey, G.M., and Humphries, M.M. 2014. The evolution of local participation and the mode of knowledge production in Arctic research. *Ecol. Soc.* **19**: 15. doi: [10.5751/ES-06641-190269](https://doi.org/10.5751/ES-06641-190269).
- Crandall, R. 1986. Peer review: improving editorial procedures. *BioScience*, **36**: 607–609. doi: [10.2307/1310195](https://doi.org/10.2307/1310195).
- Danielsen, F., Burgess, N.D., Jensen, P.M., and Pirhofer-Walzl, K. 2010. Environmental monitoring: the scale and speed of implementation varies according to the degree of peoples involvement. *J. Appl. Ecol.* **47**: 1166–1168. doi: [10.1111/j.1365-2664.2010.01874.x](https://doi.org/10.1111/j.1365-2664.2010.01874.x).
- David-Chavez, D.M., and Gavin, M.C. 2018. A global assessment of Indigenous community engagement in climate research. *Environ. Res. Lett.* **13**: 123005. doi: [10.1088/1748-9326/aaf300](https://doi.org/10.1088/1748-9326/aaf300).
- Etiendem, D.N., Jeppesen, R., Hoffman, J., Ritchie, K., Keats, B., Evans, P., and Quinn, D. 2020. The Nunavut Wildlife Management Board’s community-based monitoring network: documenting Inuit harvesting experience using modern technology. *Arct. Sci.* (this issue). doi: [10.1139/as-2020-0008](https://doi.org/10.1139/as-2020-0008).
- Fox, S., Qillaq, E., Ilkoo, A., Tigullarq, D.J., Kautuk, R., Huntington, H., et al. 2020. Connecting understandings of weather and climate: steps towards co-production of knowledge and collaborative environmental management in Inuit Nunangat. *Arct. Sci.* (this issue). doi: [10.1139/as-2019-0010](https://doi.org/10.1139/as-2019-0010).
- Gearheard, S., and Shirley, J. 2007. Challenges in community-research relationships: learning from natural science in Nunavut. *Arctic*, **60**: 62–74.
- Gérin-Lajoie, J., Herrmann, T.M., MacMillan, G.A., Hébert-Houle, É., Monfette, M., Rowell, J.A., et al. 2018. IMALIRJIIT: a community-based environmental monitoring program in the George River watershed, Nunavik, Canada. *Écoscience*, **25**: 381–399. doi: [10.1080/11956860.2018.1498226](https://doi.org/10.1080/11956860.2018.1498226).
- Gratani, M., Butler, J.R.A., Royce, F., Valentine, P., Burrows, D., Canendo, W.L., and Anderson, A.S. 2011. Is validation of Indigenous ecological knowledge a disrespectful process? A case study of traditional fishing poisons and invasive fish management from the wet tropics, Australia. *Ecol. Soc.* **16**: 25. doi:[10.5751/ES-04249-160325](https://doi.org/10.5751/ES-04249-160325).
- Grimwood, B.S.R., Doubleday, N.C., Ljubcic, G.J., Donaldson, S.G., and Blangy, S. 2012. Engaged acclimatization: towards responsible community-based participatory research in Nunavut. *Can. Geogr.* **56**: 211–230. doi: [10.1111/j.1541-0064.2012.00416.x](https://doi.org/10.1111/j.1541-0064.2012.00416.x).
- Gwich’in Social and Cultural Institute (GSCI). 2004. Gwich’in Tribal Council: traditional knowledge policy. Available from https://gwichin.ca/sites/default/files/gtc_final_tk_policy_2004.pdf [accessed 6 October 2020].
- Henri, D.A., Carter, N.A., Irkok, A., Nipisar, S., Emiktaut, L., Saviakjuk, B., et al. 2020. *Qanuq ukua kanguit sunialiqpiti-tigu?* (What should we do with all of these geese?) Collaborative research to support wildlife co-management and Inuit self-determination. *Arct. Sci.* (this issue). doi: [10.1139/as-2019-0015](https://doi.org/10.1139/as-2019-0015).
- Inuit Tapiriit Kanatami (ITK) 2018. National Inuit strategy on research. Inuit Tapiriit Kanatami (ITK), Ottawa, Ont., Canada. Available from <https://www.itk.ca/wp-content/uploads/2018/03/National-Inuit-Strategy-on-Research.pdf>.
- Nadasdy, P. 1999. The politics of TEK: power and the “integration” of knowledge. *Arct. Anthropol.* **36**: 1–18.
- Pearce, T.D., Ford, J.D., Laidler, G.J., Smit, B., Duerden, F., Allarut, M., et al. 2009. Community collaboration and climate change research in the Canadian Arctic. *Pol. Res.* **28**: 10–27. doi: [10.1111/j.1751-8369.2008.00094.x](https://doi.org/10.1111/j.1751-8369.2008.00094.x).
- Pedersen, C., Otokiak, M., Koonoo, I., Milton, J., Maktar, E., and Anaviapik, A. 2020. SciQ: an invitation and recommendations to combine science and Inuit Qaujijatuqangit for meaningful engagement of Inuit communities in research. *Arctic Sci.* (this issue). doi: [10.1139/as-2020-0015](https://doi.org/10.1139/as-2020-0015).
- Pettitt-Wade, H., Pearce, T., Kuptana, D., Gallagher, C., Scharffenberg, K., Lea, E., et al. 2020. Inuit observations of a Tunicata bloom unusual for the Amundsen Gulf, western Canadian Arctic. *Arct. Sci.* (this issue). doi: [10.1139/as-2020-0018](https://doi.org/10.1139/as-2020-0018).

- Reed, M.S. 2008. Stakeholder participation for environmental management: a literature review. *Biol. Conserv.* **141**: 2417–2431. doi: [10.1016/j.biocon.2008.07.014](https://doi.org/10.1016/j.biocon.2008.07.014).
- Roburn, S. Tr'ondëk Hwëch'in Heritage Department. 2012. Weathering changes: cultivating local and traditional knowledge of environmental change in Tr'ondëk Hwëch'in traditional territory. *Arctic*, **65**: 439–455. doi: [10.14430/arctic4242](https://doi.org/10.14430/arctic4242).
- Sanderson, D., Picketts, I.M., Déry, S.J., Fell, B., Baker, S., Lee-Johnson, E., and Auger, M. 2015. Climate change and water at Stelat'en First Nation, British Columbia, Canada: insights from western science and traditional knowledge. *Can. Geogr.* **59**: 136–150. doi: [10.1111/cag.12142](https://doi.org/10.1111/cag.12142).
- Simpson, L.R. 2004. Anticolonial strategies for the recovery and maintenance of Indigenous knowledge. *Am. Ind. Quart.* **28**: 373–384. doi: [10.1353/aiq.2004.0107](https://doi.org/10.1353/aiq.2004.0107).
- Smith, L.T. 2013. *Decolonizing methodologies: research and Indigenous peoples*. St Martin's Press, New York, N.Y., USA.
- Smith, R. 2006. Peer review: a flawed process at the heart of science and journals. *J. R. Soc. Med.* **99**: 178–182. doi: [10.1177/014107680609900414](https://doi.org/10.1177/014107680609900414). PMID: [16574968](https://pubmed.ncbi.nlm.nih.gov/16574968/).
- Tengö, M., Brondizio, E.S., Elmqvist, T., Malmer, P., and Spierenburg, M. 2014. Connecting diverse knowledge systems for enhanced ecosystem governance: the multiple evidence base approach. *AMBIO*, **43**: 579–591. doi: [10.1007/s13280-014-0501-3](https://doi.org/10.1007/s13280-014-0501-3). PMID: [24659474](https://pubmed.ncbi.nlm.nih.gov/24659474/).
- Tennant, J.P. 2018. The state of the art in peer review 2018. *FEMS Microbiol. Let.* **365**: doi: [10.1093/femsle/fyn204](https://doi.org/10.1093/femsle/fyn204).
- Wilson, K.J., Bell, T., Arreak, A., Koonoo, B., Angnatsiak, D., and Ljubici, G.J. 2020. Changing the role of non-Indigenous research partners in practice to support Inuit self-determination in research. *Arct. Sci.* (this issue). doi: [10.1139/as-2019-0021](https://doi.org/10.1139/as-2019-0021).
- Worden, E., Pearce, T., Gruben, M., Ross, D., Kowana, C., and Loseto, L.L. 2020. Social-ecological changes and implications for understanding the declining beluga whale (*Delphinapterus leucas*) harvest in Aklavik, Northwest Territories. *Arct. Sci.* (this issue). doi: [10.1139/as-2019-0027](https://doi.org/10.1139/as-2019-0027).
- Whyte, K.P., Brewer, J.P., and Johnson, J.T. 2016. Weaving Indigenous science, protocols and sustainability science. *Sustain. Sci.* **11**: 25–32. doi: [10.1007/s11625-015-0296-6](https://doi.org/10.1007/s11625-015-0296-6).