

Appendix E: Equity and Inclusion in the Next Five-Year Arctic Research Plan

This paper was prepared by Liz Weinberg with support from Nikoosh Carlo in August 2020 on behalf of the IARPC Plan Development Steering Group.

Discussions and planning around Arctic science¹ provide an opportunity to improve equity and inclusion. In particular, the 2022-2026 Arctic Research Plan may be a space in which to establish clear goals and metrics for supporting equity and inclusion in Arctic research. This paper seeks to provide definitions and examples of equity and inclusion in the context of the Arctic Research Plan. It synthesizes and strives to reflect a series of reports, articles, and other documents written by and in collaboration with Indigenous communities and Black, Indigenous, and people of color (BIPOC) scientists to analyze and explain a path toward increased equity and inclusion in Arctic science.

Drawing from these sources, this paper describes some of the historical and ongoing roadblocks to equity and inclusion. To build on existing efforts to improve equity and inclusion, it recommends actions in three key areas: centering Indigenous and BIPOC voices, knowledge, and research needs; establishing and deepening relationships; and increasing staffing and federal agency capacity.

What is the history of equity and inclusion in Arctic science?

Western science has historically been one aspect of colonization: Western science is driven by “discovery,” and information gathered by (typically white) academically-trained scientists has frequently been considered the most accurate, reliable, and important information. Science in the Arctic is no exception. However, Indigenous Peoples in the Arctic have occupied this region since time immemorial and are closely linked to Arctic lands, animals, and ecosystems; they continue to hold sovereignty over their well-being and that of the ecosystems they are a part of. For hundreds of generations they have closely observed their environment, conducted their own inquiries, and produced long-term understandings of patterns and processes in Arctic ecosystems.

Colonization disrupted the process and transmission of Indigenous Knowledge, and colonizing researchers conducted both ethical misconduct and extractive research.^{2,3,4} This history has resulted in trauma within Indigenous communities and mistrust of institutions such as the federal government, state government, and academia. BIPOC communities and individuals continue to be excluded from Arctic science communities due to the legacy of colonization, a lack of capacity building and compensation,

¹ Note: throughout this paper, the terms “science” and “research” are used interchangeably.

² Carlo, Nikoosh. 2020. Arctic Observing: Indigenous Peoples’ History, Perspectives, and Approaches for Partnership. Fairbanks: Center for Arctic Policy Studies.

³ Smith, Linda T. 1999. Decolonizing Methodologies: Research and Indigenous Peoples. London: Zed Books.

⁴ David-Chavez, Dominique M., and Michael C. Gavin. 2018. “A global assessment of Indigenous community engagement in climate research.” *Environmental Research Letters* 13, no. 12.

and the fact that these spaces typically prioritize white and Western paradigms over Indigenous and other nonwhite cultures and worldviews.^{5,6,7,8,9} In recent decades, many individuals and institutions—both Indigenous and non-Indigenous—within Arctic science have actively worked to engage Indigenous Peoples in Alaska through funding, conference invitations, and other efforts.^{10,11,12} Current Arctic science efforts present an opportunity to improve inclusion.

In the past several years, IARPC has implemented or initiated some steps to attempt to address these historical and ongoing issues, including through the formation of a Diversity & Inclusion Working Group and an Indigenous Engagement Working Group (in progress). However, IARPC and IARPC Collaborations still have far to go. There continues to be limited engagement by Indigenous people, Black people, and people of color within collaboration teams, owing to imbalances felt in those spaces, a centuries-long history of exclusion and overlooked input, and the fact that accessing collaboration teams requires internet bandwidth, which can be limited in Arctic Indigenous communities. To more effectively address some of these historical and ongoing issues and to support sustained engagement with Indigenous Peoples, Black people, and communities of color, the next Arctic Research Plan should consider *equity* and *inclusion* as foundational themes, with an emphasis on establishing clear goals and metrics.

What do equity and inclusion mean in the context of the Arctic?

Equity gives everyone the tools they need to succeed. It is often compared with *equality*, in which everyone is given the same resources or time, regardless of their starting point. In contrast, equity meets individuals and communities where they are, seeking to remove barriers and/or make up for past injustices. Equity in Arctic science means, for example, financially supporting efforts by Indigenous communities to improve internet access, working with communities to ensure that public comment periods and research projects do not overlap with important lifecycle events such as subsistence harvest times, providing mentorship and funding explicitly for scientists of color, collaborating with Indigenous communities to build capacity, training scientists and federal agency staff to effectively listen to and incorporate BIPOC comments and address their needs, and supporting community self-determination of where funding should go and how it should be used.

Inclusion means that not only are people invited into a space, but that they are given respect and fully incorporated into the group. Their comments are carefully and thoughtfully considered, they are treated fairly and respectfully, and they are welcomed. Inclusion means not prioritizing one worldview or

⁵ Association of Village Council Presidents, Kawerak Inc., Bering Sea Elders Group, and Aleut Community of St. Paul. 2020. Navigating the New Arctic Program Comment Letter.

⁶ Carlo 2020.

⁷ Inuit Circumpolar Council-Alaska. 2015. Alaskan Inuit Food Security Conceptual Framework: How to Assess the Arctic from an Inuit Perspective: Summary Report and Recommendations Report. Anchorage, AK.

⁸ Howley, Korena Di Roma. 2020. Deep Biases Prevent Diverse Talent from Advancing. Eos, <https://doi.org/10.1029/2020EO145065>

⁹ Kawerak Inc, Association of Village Council Presidents, Aleut Community of St. Paul Island, Bering Sea Elders Group, and Alaska Native Tribal Health Consortium. 2020. Letter to NOAA Fisheries, North Pacific Research Board, Alaska Ocean Observing System, and the U.S. Arctic Research Commission regarding the need for co-productive approaches to research planning in the Bering Sea, August 2, 2020.

¹⁰ “Caleb Pungowiyi.” Caleb Scholars Program. <https://www.calebscholars.org/about-caleb/>. See also the efforts and work of Orville Huntington, Richard Glenn, Vera Metcalf, Patricia Cochran, and others

¹¹ IASC. 2019. Indigenous, Early Career, & Russian Science Travel Funding Available. International Arctic Science Committee.

¹² ARCUS. Conducting Research with Northern Communities: Documented Practices and Resources for Productive, Respectful Relationships Between Researchers and Community Members.

culture over another. In Arctic science, inclusion means, for example, ensuring that BIPOC individuals have opportunities and support to speak, present, ask questions, and lead; and restructuring introductions, presentations, and discussions to incorporate multiple cultural protocols. Inclusion in Arctic science could also look like institutions ensuring that non-BIPOC researchers are trained in cultural competency and have opportunities to reflect on their personal roles in making Arctic science more inclusive.

Why center equity and inclusion in the next Arctic Research Plan?

Equity and inclusion are keys to sustained engagement with Indigenous communities and BIPOC scientists. These concepts could be applied to many other groups, including but not limited to women scientists, LGBTQ+ scientists, and scientists with disabilities, all of whom are underrepresented in Arctic science. Indeed, IARPC has made strides toward greater inclusion of women in science in particular.

However, this paper focuses on Indigenous communities and BIPOC scientists in recognition that these groups are most heavily impacted by the legacy of colonization in science, and that research has happened historically to, without communication with, and on the bodies of Indigenous and Black people. While they face many different issues and challenges, the legacy of colonization means there are significant overlaps in how equity and inclusion can be implemented. Moreover, there are overlaps in these two groups, as the “I” in BIPOC represents Indigenous individuals, including those from the Arctic.

How can we approach equity and inclusion in the Arctic Research Plan?

Creating an environment that is equitable and inclusive of historically underrepresented groups begins with understanding barriers from their perspectives. Through a survey of [community-driven articles and reports](#) by Indigenous organizations and BIPOC scientists, we identified several barriers:

Including and building equity for Indigenous Peoples into the Arctic Research Plan would first and foremost require recognizing that knowledge transfer is a two-way street; the validity of Indigenous Knowledge is often ignored. Indigenous Knowledge is a form of systematic, interconnected observation and knowledge based on thousands of years of cultural tradition and relationships with the land and ecological systems.¹³ Indigenous Peoples are experts in their landscapes, ecosystems, and cultures.^{14,15,16,17,18} Moreover, Indigenous Peoples have sovereignty over their lands and data and often have well-established information and action priorities for their communities. The value of Indigenous communities’ participation in Arctic science for those communities needs to be clear. Often these

¹³Daniel, Raychelle. 2019. Understanding our environment requires an indigenous worldview, *Eos*, 100, <https://doi.org/10.1029/2019E0137482>.

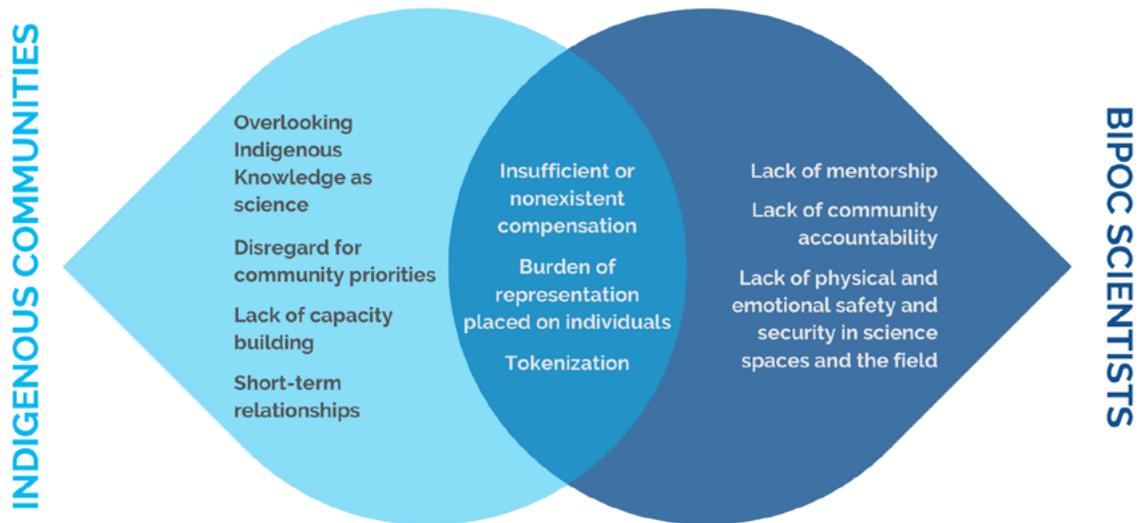
¹⁴Inuit Circumpolar Council-Alaska, 2015.

¹⁵Chang, Michael, Jasmine Ramgotra, Melissa Watkinson, Dana Wu, Ava Holliday, and Sara Breslow. 2020. 2019 Salish Sea Equity & Justice Symposium Report: Diversity, equity, inclusion, and justice in the marine and environmental fields in the Salish Sea region.

¹⁶Fienup-Riordan, Ann and Eddy Carmack. 2011. “The ocean is always changing”: Nearshore and farshore perspectives on Arctic coastal seas. *Oceanography* 24(3):266–279, <http://dx.doi.org/10.5670/oceanog.2011.78>.

¹⁷Barnhardt, Ray and Angayuqaq Oscar Kawagley. 2005. Indigenous Knowledge Systems and Alaska Native Ways of Knowing. *Anthropology and Education Quarterly*, 36(1), pp. 8-23.

¹⁸Kawerak et al. 2020.



Indigenous communities and BIPOC scientists face numerous barriers to equity and inclusion in Arctic science spaces. While each of these communities experiences its own unique barriers, some barriers, including lack of compensation and the prevalence of tokenization, are held in common. The Arctic Research Plan is an opportunity to address some of these barriers within the context of the IARPC scope of work.

communities are asked to share their data, priorities, and input without getting anything in return or seeing any significant change; in some cases their input is used to impinge upon their food sovereignty or other aspects of their communities.^{19,20,21,22}

The next Arctic Research Plan could develop teams or priorities that address inclusive and equitable research methods in which researchers gain permission from Tribal councils, build and maintain long-term relationships with communities, and support community efforts to build capacity, particularly

¹⁹Alaska Native Knowledge Network. 2000. Guidelines for Respecting Cultural Knowledge. Anchorage: AK.

²⁰University of Alaska. 2013. Improving Local Participation in Research in Northwest Alaska: Final Workshop Summary and Workgroup Recommendations.

²¹Johnson, Noor, Carolina Behe, Finn Danielsen, Eva-Maria Krümmel, Scot Nickels, and Peter L. Pulsifer. 2016. Community-Based Monitoring and Indigenous Knowledge in a Changing Arctic: A Review for the Sustaining Arctic Observing Networks. Final report to Sustaining Arctic Observing Networks. Ottawa, ON: Inuit Circumpolar Council.

²²Alaska Eskimo Whaling Commission. Our History. <http://www.aewc-alaska.org/about-us.html>.

with youth.^{23,24,25,26,27,28,29,30} To build equity and inclusion, the plan and IARPC in general could consistently create spaces and opportunities throughout the research process for Indigenous communities to be actively involved in Arctic research, particularly recognizing that lack of compensation, internet connection, and other factors are barriers that need to be overcome, and that research priorities and timing need to be set with subsistence harvesting seasons in mind. The plan could also recognize and support the need for Indigenous communities to set their own priorities and make decisions about where funding is directed.

To include and build equity for BIPOC researchers, safety and security are paramount: it is not enough to invite BIPOC researchers into Arctic science spaces without ensuring that they will be emotionally and physically safe and able to thrive when they arrive.^{31,32} An opportunity exists for the next Arctic Research Plan to emphasize the importance of safety in fieldwork situations, particularly for BIPOC women and LGBTQ+ individuals. It could encourage support for BIPOC role models and mentorship—which means encouraging hiring BIPOC scientists and compensating them for the mentorship they give other scientists.^{33,34} It is important that the onus of identifying or fixing systemic racism is not placed on BIPOC scientists, and that individual BIPOC scientists are not expected to speak on behalf of their entire race or community.³⁵ Accountability is also key: space must be made for discussions of race, racism, and the ongoing impacts of colonization, and all scientists must be held accountable for racist comments and actions.^{36,37}

For both Arctic Indigenous communities and BIPOC scientists, certain themes arise consistently. First, addressing the lack of compensation given to Indigenous communities and BIPOC scientists could help the Arctic Research Plan support equity and inclusion. BIPOC individuals continue to earn less than their white counterparts and may bear the ongoing trauma of colonization, and Indigenous communities have survived a long and continued history of land dispossession and economic marginalization.³⁸

²³Johnson et al. 2016.

²⁴Inuit Circumpolar Council. 2016. Coastal Monitoring Indigenous Knowledge Holders Meeting Report. Ottawa, ON: Inuit Circumpolar Council.

²⁵Gwich'in Tribal Council. 2011. Conducting Traditional Knowledge Research in the Gwich'in Settlement Area: A Guide for Researchers.

²⁶Interagency Arctic Research Policy Committee. 2018. Principles for Conducting Research in the Arctic.

²⁷University of Alaska 2013.

²⁸IASC. 2020. Report from the IASC Action Group on Indigenous Involvement.

²⁹Inuit Regional Corporation. Guidelines for Research in the Inuvialuit Settlement Region.

³⁰Kawerak et al. 2020

³¹Black Ecologists. 2020. Black Ecologists Statement, Ecological Society of America.

³²Langin, Katie. 2020. "I Can't Even Enjoy This." #BlackBirdersWeek Organizer Shares Her Struggles as a Black Scientist. Science, doi:10.1126/science.caredit.abd1901.

³³Black Ecologists 2020.

³⁴Howley 2020.

³⁵Nature Editors. 2020. Systemic Racism: Science Must Listen, Learn and Change. Nature 582, 147, doi: 10.1038/d41586-020-01678-x.

³⁶Dutt, Kuheli. 2020. Race and Racism in the Geosciences. Nature Geoscience 13, 2–3, <https://doi.org/10.1038/s41561-019-0519-z>.

³⁷Langin 2020.

³⁸Patten, Eileen. 2016. Racial, gender wage gaps persist in U.S. despite some progress. Pew FactTank.

Moreover, while scientists are often salaried, Indigenous community members often are not and yet are frequently asked to provide input or information.³⁹ Second, it is important to recognize and seek to address that the burden of representation often falls on a few, typically overtaxed, individuals. Third, BIPOC individuals are often brought into science spaces as “tokens” to point to a general support of diversity and inclusion, without receiving significant community support.⁴⁰

What are the stages of creating an environment that is actively equitable and inclusive?

Individual and group support for equity and inclusion can be seen along a spectrum, from roadblock to passive ally to active ally to accomplice. Effectively fostering equity and inclusion requires active allyship and accompliceship.^{41,42}

Roadblock: A roadblock dismisses the importance of equity and inclusion. They may make assumptions about Indigenous communities, BIPOC scientists, and other minoritized groups, and shut down or avoid conversations about race and racism.

Passive ally: A passive, or performative, ally recognizes the importance of equity and inclusion but in a vague and oversimplified way. They may overlook their own personal responsibility and speak over or on behalf of minoritized individuals or communities. A passive ally often expects rewards or praise for their allyship.

Active ally: An active ally recognizes the importance of equity and inclusion and strives to center it in their work. They provide funding for Indigenous communities and BIPOC scientists, call out injustice, actively work to educate themselves, and/or seek to transfer the benefits of their privilege to those without it. An active ally recognizes that their actions may not be, and do not need to be, recognized or celebrated.

Accomplice: An accomplice includes the traits of an active ally, and consistently applies themselves to challenge institutionalized racism, colonization, and white supremacy. They create long-term, meaningful relationships with the communities they are attempting to support and stand with them in support of those communities’ goals.

What are the next steps for centering equity and inclusion in the Arctic Research Plan and in IARPC?

Centering equity and inclusion will require a long-term, multi-pronged approach. In addition to the recommendations above, the Arctic Research Plan and IARPC can begin to improve equity and inclusion by:

Centering Indigenous and BIPOC Voices, Knowledge, and Research Needs

- Ensure adequate time, opportunities, and mechanisms for the public to weigh in on the draft plan, including making sure that public comment periods do not fall within subsistence harvest periods, are of adequate length, and are communicated to Indigenous entities before and during the public comment period.

³⁹IASC 2020.

⁴⁰Gewin, Virginia. 2020. What Black scientists want from colleagues and their institutions. *Nature* 583. 319-322. doi: 10.1038/d41586-020-01883-8

⁴¹Swiftwolfe, Dakota. 2019. Indigenous Ally Toolkit. Montreal Urban Aboriginal Community Strategy Network.

⁴²Phillips, Holiday. 2020. Performative Allyship Is Deadly (Here’s What to Do Instead). Forge.

- Include agreed-upon methods for Indigenous engagement and inclusion of Indigenous Knowledge throughout the plan and its implementation; emphasize the role of Co-Production of Knowledge and Tribal sovereignty.
- Collaborate with Indigenous communities to link basic research objectives to information needs identified by Indigenous Peoples and entities.
- Create a plan structure that allows participants with limited or variable availability to be involved throughout implementation.
- Support Indigenous Peoples and BIPOC peoples in leading collaboration teams and in attending presentations and meetings. This includes offering administrative support and financial compensation for their time.

Establishing and Deepening Relationships

- Encourage IARPC leadership, collaboration team leads, and others to visit communities (at times that are convenient for community members) outside of the five-year planning process to share information, receive feedback, and adjust implementation and focused efforts as requested and necessary.
- Work with local and regional entities on outreach to communities and compensate those entities for their time.
- Co-create meaningful opportunities for Indigenous leadership within the new plan structure and consider means for adequate compensation.
- Establish meaningful relationships with organizations that represent BIPOC scientists and ensure they have the means to comment on the plan draft.
- Create agreed-upon mechanisms for making knowledge generated through plan implementation useful, usable, and consistently shared.
- Use collaboration teams and self-forming teams to support a workshop to foster dialogue on historical and ongoing barriers toward equity and inclusion and paths forward.

Increasing Staffing and Federal Agency Capacity

- Hire an Indigenous engagement coordinator hosted by the IARPC Secretariat who works with and across the other federal agencies and with existing Tribal liaison networks.
- Collect best practices from federal agencies who work well with Indigenous communities.
- Offer training and programming about the history of Arctic Indigenous Peoples, colonialism in research and the Arctic, and decolonization; foster spaces for self-reflection.

This list was generated from a variety of sources over the span of plan development to date, including those cited, the March 2019 comment letter on the National Science Foundation's Navigating the New Arctic Program submitted by the Association of Village Council Presidents, Kawerak Inc., Bering Sea Elders Group, and Aleut Community of St. Paul,⁴³ and the August 2020 letter on co-productive approaches

⁴³Association of Village Council Presidents et al., 2020.

to research planning in the Bering Sea sent by Kawerak Inc., the Association of Village Council Presidents, the Aleut Community of St. Paul Island, the Bering Sea Elders Group, and the Alaska Native Tribal Health Consortium.⁴⁴ It is not intended to be prescriptive or exhaustive, and aims to give workshop participants and plan developers ideas to consider as they determine the content and structure of the next plan.

Through efforts like the Principles for Conducting Research in the Arctic, IARPC member agencies and IARPC Collaborations members have taken a step toward making Arctic research more equitable and inclusive. The drafting of the next Arctic Research Plan is an opportunity to deepen and strengthen these efforts, and to weave equity and inclusion throughout all our Arctic research endeavors.

⁴⁴Kawerak et al., 2020.