# Position Paper

Addressing misconceptions about Indigenous Knowledges: Fallacies of limitations in scope and applicability

KAWERAK, INC.

*Tungwenuk Family Qupak Design, used with permission.*

*Our People &*
*Tribes are Thriving*

*This document may be cited as: Kawerak, Inc. (2024) Addressing misconceptions about Indigenous Knowledges: Fallacies of limitations in scope and applicability. Prepared by Brenden Raymond-Yakoubian (Sandhill. Culture.Craft), Julie Raymond-Yakoubian (Kawerak Social Science Program), and Lisa Ellanna (Kawerak Social Science Program). Nome, Alaska.*

# ADDRESSING MISCONCEPTIONS ABOUT INDIGENOUS KNOWLEDGES:

## FALLACIES OF LIMITATIONS IN SCOPE AND APPLICABILITY

Kawerak, Inc., 2024

Kawerak utilizes the term Indigenous Knowledge(s) (IK) to pertain to the broader knowledge(s) of Indigenous communities and individuals. We often use this term in the plural to acknowledge that there is multiplicity and difference in such knowledge between and within Indigenous communities, societies and cultures; there is no 'one' Indigenous Knowledge. This includes, among other things, different types of IK, including Traditional Knowledge (TK), which is a type of IK that has evolved over millennia and whose main culture-bearers are considered knowledge experts (such as Elders).

# KAWERAK DEFINES TK AS THE FOLLOWING:

Traditional Knowledge (TK) is a living body of knowledge which pertains to explaining and understanding the universe, and living and acting within it. It is acquired and utilized by indigenous communities and individuals in and through long-term sociocultural, spiritual and environmental engagement. TK is an integral part of the broader knowledge system of indigenous communities, is transmitted intergenerationally, is practically and widely applicable, and integrates personal experience with oral traditions. It provides perspectives applicable to an array of human and non-human phenomena. It is deeply rooted in history, time, and place, while also being rich, adaptable, and dynamic, all of which keep it relevant and useful in contemporary life. This knowledge is part of, and used in, everyday life, and is inextricably intertwined with peoples' identity, cosmology, values, and way of life. Tradition – and TK – does not preclude change, nor does it equal only 'the past'; in fact, it inherently entails change.[1]

[1] From J. Raymond-Yakoubian et al. 2017

Traditional Knowledge (TK) is something only Indigenous communities and individuals hold. It is a form of IK. We generally try to avoid denoting this in acronym form - such as ITK (Indigenous Traditional Knowledge) - in order to avoid the misconception that this kind of knowledge is something held by non-Indigenous peoples (i.e. "Indigenous Traditional Knowledge" can imply there is non-Indigenous Traditional Knowledge). Kawerak advocates for all the Tribal members from our region and with regard to all of their varied perspectives, experiences, and knowledge. This includes acknowledging the value of, for example, everything from the unique experiences and understandings associated with being Indigenous youth interacting with predominantly-western settings (as are found, e.g., in the educational system and urban settings), to those of Elders sharing understandings of human-animal relationships developed over millennia through subsistence practices, observations, and ceremony. We feel it is important to have clearly defined ways to ensure we can understand, characterize, and convey the richness and difference between such various kinds of knowledges and experiences.

In some cases, the distinctions between forms of IK are highly manifest in lived social and personal realities, while in others such distinctions are not as meaningful[2]. There can also be a strong heuristic value in drawing such distinctions; take, for example, the design of a research project. It can be very important that the 'study populations' (i.e. the people) involved in a research project be clearly conceptually understood, so as to be sure that the right questions are being asked of the right people, thus ensuring analytical validity and comparability across research and the potential for synthesis and integration. If one is using a blanket term like "Indigenous Knowledge" as a synonym for Traditional Knowledge (i.e. using "IK" as the term for the concepts typically embodied by TK), what separate terminological and conceptual apparatus does one have to acknowledge other forms of IK, such as those held by individuals who are not Elders or experts on particular topics like traditional practices related to subsistence? Without the conceptual and terminological tools which recognize the complexity of Indigenous Knowledges, one runs the risk of failing to acknowledge and account for the perspectives of all different Indigenous Peoples within and outside of Indigenous communities, and the risks in research of not engaging the right people, lacking methodological clarity, and gathering and creating muddled data and analyses which cannot be clearly used synthetically or comparably with other work (which, among other things, wastes research dollars as well as the valuable time of knowledge-holders and creates research fatigue). All of the above being said, it is also of crucial importance that the concepts and terminologies used by Indigenous people for their knowledges be respected - including Indigenous-language names for such concepts - and that particular concepts and terms are not forced on people.

[2] For example, with regard to the latter, as with all people the knowledge of Indigenous people is heterogeneous and is also part of broader social and historical contexts and influences; as such, there can be an artificial nature to drawing such distinctions.

This discussion paper seeks to address a common misconception that is found amongst researchers, managers, policymakers, and the general public - the mistaken notion that Indigenous Knowledges (such as Traditional Knowledge) only pertain to small-scale, local, or otherwise limited scopes.

For example, versions of these arguments are not uncommon:

- That Indigenous hunters' knowledge of species harvested for subsistence only pertains to areas where those species are hunted, and that hunters are unaware of broader issues that affect such species (e.g. overall population trends)
- That the knowledge of Indigenous communities about the environment is limited in scope to areas where community members directly hunt and gather
- That forms of Indigenous Knowledge provide suggestions which need to be tested or validated by western science
- That forms of Indigenous Knowledge are limited in their epistemic utility to only supplementing, complementing, validating, or verifying western science
- That western science has inherently greater capacity and/or higher quality regarding the scope of its application (e.g. spatial, temporal, methodological, conceptual, etc.) compared to forms of Indigenous Knowledge
- That forms of Indigenous Knowledge pertain solely or mainly to environmental or ecological phenomena (as opposed to other phenomena, interconnected or not)
- That it is acceptable for researchers to extract portions of Indigenous Knowledges related to environmental or ecological knowledge (often called 'TEK' or 'Traditional Ecological/Environmental Knowledge') for use without its broader context
- That various sources of information from TK cannot be combined together in the same ways and to the same effects that various sources of information from western science are combined together
- That Indigenous Knowledges related to climate and the environment will soon become obsolete because of the pace of climate change
- That it is valid for researchers and institutions to assume what Indigenous experts have knowledge about or interest in

These views are not accurate. Indigenous Knowledges potentially apply to matters of all scopes and scales. Mistaken assumptions of Indigenous Knowledges (and about knowledge holders) as static, atomistic, limited in scope, divorced from external sources of information, and so on all must be recognized for their erroneous nature.

There are other misconceptions about Indigenous Knowledges that will not be discussed in this position paper - or at least not in as great detail as the issue of 'scope' - in some cases because they are, fortunately, becoming less prevalent over time. These include ideas such as the view that western science is fundamentally superior to Traditional Knowledge.

There are various mechanisms by which input is received into bodies and systems of Indigenous Knowledge such as Traditional Knowledge. This includes:

- The passing down of Traditional Knowledge between generations and across communities
- TK holders incorporating their own experiences and knowledge into their deeper, intergenerational body of knowledge
- TK holders integrating 'external' sources of information into their body of knowledge, such as through reading western science reports and incorporating that information into their ever-evolving knowledge
- Indigenous community members interacting with researchers, resource managers, and policymakers
- Indigenous community members consuming a variety of forms of news and other media
- Holders of Indigenous Knowledges communicating with other communities in person, by telephone or email, and in exchange networks
- TK interconnects observations, values, and views about various elements of reality, which are constantly tested, updated, and validated through meaningful processes
- Indigenous community members participate in a wide variety of networks which contribute to the constant development of knowledge bodies and systems, including networks of kinship, friendship, employment, sharing, and information exchange, among others
- Indigenous communities, Tribal organizations, and other related institutions have and cultivate experts who absorb and disseminate information within and outside communities

All of these activities contribute to the broad inputs, applicability, scope, and ever-evolving nature of forms of Indigenous Knowledge.

Forms of Indigenous Knowledge, such as Traditional Knowledge, potentially can and do speak to all scales and scopes, including local, state, national, international, and ecosystem levels (spatially-speaking); short and long-term time depths (temporally-speaking); to facts, analyses, values, spirituality, and ethics (categorically-speaking); and in other, including cross-cutting, ways (e.g. by interconnecting values to environmental observations). Currently, when these knowledges are included in work of various scales and scopes they are not always acknowledged or accorded the same weight or value as, for example, western science.

As such, researchers, managers, and policymakers should not assume the potential application of forms of Indigenous Knowledge to a particular issue. TK holders may have significant knowledge about many issues that might not otherwise be assumed to be the case, either through direct experience, interaction with others, and by consuming other forms of information and incorporating that into the knowledge system, for example. Additionally, TK can often provide indirect or proxy information about many phenomena, something which may not be realized by others. A strong understanding of forms of Indigenous Knowledge, such as TK, also opens up avenues for critical reflexivity, which should be incorporated into all scientific practice, allowing people to question unexamined biases and assumptions in their work which may be tied to their particular disciplinary training, cultural background, and place in history and power structures. Likewise, people should not simply assume what issues the holders of Indigenous Knowledges are interested in. Co-productive and collaborative principles (e.g. equity, trust, and respect) and relationships should lie at the root of engagements with holders of forms of Indigenous Knowledge.

The above-noted mistaken assumptions about Indigenous Knowledges are often accompanied by naive views about western science. In contrast to Traditional Knowledge, however, western science often draws conclusions from an extremely limited time depth and using few data points. In many cases, western science also utilizes naive conceptualizations of the concept of 'objectivity', expands to conclusions from models of debatable utility, and is often based on numerous unexamined cultural assumptions about the nature of knowledge and the relationships between objects in reality, as well as other important yet often unexamined issues like the relationship of knowledge to power. Many of these issues have been extensively attended to in the various literatures on the philosophy, social studies, anthropology, and history of science and knowledge, as well as in the history of ethnology, but they often still remain uncritically examined in normative scientific fields; appreciation and collaborative engagement with holders of Indigenous Knowledges can also help in critically examining these contexts, limitations, assumptions, and biases.

It is absolutely imperative from ethical, epistemic, and practical perspectives that forms of Indigenous Knowledge be appropriately considered, valued, and respected. These knowledges are crucial to the lives of Indigenous people, they speak to unique perspectives on the world, and they have helped steward relationships amongst people and between people and the environment since time immemorial. For example, it is crucial that TK is equitably considered and meaningfully incorporated into scientific research (e.g. through co-production of knowledge work) on par with western science. Research across scientific disciplines are frequently re-'discovering' truths already known within the knowledge systems of Indigenous Peoples, such as in expanded conceptualizations of sentience in the natural world. It may indeed be the teleology of western science to show that hunter-gatherers were right about everything that mattered all along; it is a moral imperative to value Indigenous Knowledges such that this teleology does not also become an ironic tragedy, wherein western science is complicit in the extinguishment of the societies and cultures who were generative of and have been sustained by those knowledges.

"[I]f we're not going to be fishermen, they're killing that particular source of life, then we'll be scientists. Local knowledge, like I told my Dad I have a degree from Stanford University, anybody can get that with 16 years of concentrated education. [...] I told him the knowledge that you have is far more valuable than anything that I have gained in 16 years of education, as his knowledge is not written in any books. He possessed the oral tradition, knowledge passed down through generations, in our own language. I cannot speak my own language, so the oral tradition may be severed."[3]

**-Jerry Ivanoff**

---

"Chums, pinks and king salmon spawn in clean riffle gravel waters where there's clean water, clean rocks, and gravel as far as I know. That's as far as I know from what I've read on Fish and Game reports."[4]

**-Thomas Punguk**

[3]J. Ivanoff in Raymond-Yakoubian, B. and J. Raymond-Yakoubian 2015

[4]T. Punguk in Raymond-Yakoubian, B. and J. Raymond-Yakoubian 2015

# ACKNOWLEDGMENTS

Kawerak and this paper's preparers gratefully acknowledge the following people for their review and feedback on this paper: Brandon Ahmasuk, Melanie Bahnke, John Bioff, Lauren Divine, Rachel Donkersloot, Stacey Lucason, Maya Reda-Williams, Danielle Slingsby, Siġvanna (Meghan) Tapqaq, and Jaylene Wheeler. Many additional people from the Kawerak region and other places also contributed through informal discussions on these issues over the course of many years.

# OTHER RESOURCES

Aleut Community of St. Paul Island, Association of Village Council Presidents, Bering Sea Elders Group, City of St. George, Pribilof Islands, Kawerak, Inc., and Tanana Chiefs Conference (2018) Stage 1 FEP inputs from Indigenous organizations and communities (Regarding pages 66-77 of current BS FEP draft; For the Bering Sea FEP team), sent to Diana Evans, Bering Sea FEP Co-Chair and Deputy Director, North Pacific Fishery Management Council. May 1, 2018.

Aleut Community of St. Paul Island, Association of Village Council Presidents, Bering Sea Elders Group, City of St. George, Pribilof Islands, Kawerak, Inc., and Tanana Chiefs Conference (2018) Stage 2 FEP inputs from Indigenous organizations and communities (Regarding all pages in current BS FEP draft except chapters 4, 5, 6, and Appendix A; For the Bering Sea FEP Team), sent to Diana Evans, Bering Sea FEP Co-Chair and Deputy Director, North Pacific Fishery Management Council. June 12, 2018.

Aleut Community of St. Paul Island, Association of Village Council Presidents, Bering Sea Elders Group, Bristol Bay Native Association, City of St. George, Pribilof Islands, Kawerak, Inc., and Tanana Chiefs Conference (2018) Third letter with FEP inputs from Bering Sea partnership of Indigenous organizations and communities (regarding entire currently-available FEP draft document), sent to Diana Evans, Bering Sea FEP Co-Chair and Deputy Director, North Pacific Fishery Management Council. August 28, 2018.

Ellam Yua, J. Raymond-Yakoubian, R. Aluaq Daniel, and C. Behe (2022) A framework for co-production of knowledge in the context of Arctic research. In Ecology and Society 27(1):34. https://doi.org/10.5751/ES-12960-270134

Kawerak Knowledge Sovereignty and Indigenization website. https://kawerak.org/knowledge

Kawerak, Inc. (2017) Knowledge and Subsistence-Related Terms. Internal White Paper, May 2017. https://kawerak.org/download/kawerak-knowledge-and-subsistence-related-terms-3/

Kawerak, Inc. (2018) Comments on Principles for the Conduct of Research in the Arctic. Letter to the National Science Foundation, Interagency Arctic Research Policy Committee. January 15, 2018. https://kawerak.org/download/jan2018-kawerak-iarpc-comments-2/

Kawerak, Inc. (2018) Comments on Principles for the Conduct of Research in the Arctic. Letter to the National Science Foundation, Interagency Arctic Research Policy Committee. August 28, 2018. https://kawerak.org/download/aug2018-kawerak-comments-on-iarpc-draft-principles-2/

Kawerak, Inc. (2020) Statement regarding research and related activities in the Bering Strait region under COVID-19 conditions. Dear Colleagues letter from the Kawerak Board of Directors to the research community. May 18, 2020. https://kawerak.org/download/research-through-covid-19-in-the-bering-strait/

Kawerak, Inc. (2020) Response to IARPC request for comments on the development of the next Arctic Research Plan, 2022-2026. Letter to the National Science Foundation, Office of Polar Programs. July 24, 2020. https://kawerak.org/download/iarpc-plan-comment-letter-2020/?tmstv=1710809014

Kawerak, Inc. (2020) Follow up regarding research and related activities in the Bering Strait region under COVID-19 conditions. Dear Colleagues letter from the Kawerak Board of Directors to the research community. December 16, 2020. https://kawerak.org/download/dec-2020-letter-to-researchers-regarding-research-and-covid-19/

Kawerak, Inc. (2021) Knowledge & Research Sovereignty Workshop May 18-21, 2021 Workshop Report. Prepared by Sandhill.Culture.Craft and Kawerak Inc. Social Science Program. Nome, Alaska. https://kawerak.org/download/kawerak-knowledge-and-research-sovereignty-ksi-workshop-report/

Kawerak, Inc. (2021) Four-Language Glossary: Inupiaq, St. Lawrence Island Yupik, Yup'ik, and English Terms for Research, Science, and Policy. Nome, Alaska. https://kawerak.org/download/4-language-glossary-terms-for-research-science-and-policy/

Kawerak, Inc., Association of Village Council Presidents, Aleut Community of St. Paul Island, and Bering Sea Elders Group (2020) Letter to the National Science Foundation regarding the Navigating the New Arctic Program. March 19, 2020. https://kawerak.org/download/navigating-the-new-arctic-program-comment-letter/

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, NPRB, AOOS, and USARC regarding the need for co-productive approaches to research planning in the Bering Sea. August 2, 2020. https://kawerak.org/download/august-2020-bering-sea-research-letter/

Kawerak, Inc., Association of Village Council Presidents, Aleut Community of St. Paul Island, and Bering Sea Elders Group (2021) Letter to the National Science Foundation regarding Executive Order 13985 and the Navigating the New Arctic Program. December 17, 2021. https://kawerak.org/download/dec-2021-nna-follow-up-letter/

Kawerak, Inc., Association of Village Council Presidents, Tanana Chiefs Conference, Aleut Community of St. Paul Island, Kuskokwim River Inter-Tribal Fish Commission, and Bering Sea Elders Group (2022) Letter to the Council on Environmental Quality and the Office of Science and Technology Policy regarding Indigenous Traditional Ecological Knowledge and Federal Decision Making memorandum and Tribal Consultation and Public Input Opportunities on ITEK in Federal Policy. May 5, 2022. https://kawerak.org/download/tribal-coalition-tk-itek-letter/?tmstv=1686181354

Kawerak, Inc., Association of Village Council Presidents, Aleut Community of St. Paul Island, and Bering Sea Elders Group (2023) Letter to the National Science Foundation regarding NSF PAPPG proposed changes comment request (88 FR 2248; document number 2023-07780). June 19, 2023.

Kawerak, Inc., Chinik Eskimo Community, King Island Native Community, Native Village of Brevig Mission, Native Village of Council, Native Village of Diomede, Native Village of Elim, Native Village of Gambell, Native Village of Koyuk, Native Village of Mary's Igloo, Native Village of Saint Michael, Native Village of Savoonga, Native Village of Shishmaref, Native Village of Teller, Native Village of Unalakleet, Native Village of Wales, Native Village of White Mountain, Native Village of Shaktoolik, Nome Eskimo Community, Stebbins Community Association, and Village of Solomon (2024) Kawerak-region Tribal Protocols, Guidelines, Expectations & Best Practices Related to Research. Prepared by the Kawerak Social Science Program and Sandhill.Culture.Craft. Nome, Alaska. Available at: https://www.kawerak.org/knowledge

Kawerak, Inc., Orutsararmiut Native Council, Association of Village Council Presidents, Aleut Community of St. Paul Island, Bering Sea Elders Group, Tanana Chiefs Conference, and Kuskokwim River Inter-Tribal Fish Commission (2022) Letter to NOAA Fisheries Alaska Region and the Alaska Fisheries Science Center. August 19, 2022.

Raymond-Yakoubian, B. (2017) Sounds and Discourses of Knowing: The Extents of Indigenous Knowledge and the Cross-Cultural Epistemic Assumptions of Alaskan Natural Resource Management. Paper presented at the University of Tartu Arctic Workshop, Tartu, Estonia, May 27, 2017.

Raymond-Yakoubian, B. and J. Raymond-Yakoubian (2015) "Always taught not to waste": Traditional Knowledge and Norton Sound/Bering Strait Salmon Populations. 2015 Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative Project 1333 Final Product. Prepared by Kawerak, Incorporated. Nome, Alaska. https://kawerak.org/wp-content/uploads/2018/04/TK-of-Salmon-Final-Report.pdf

Raymond-Yakoubian, B. and J. Raymond-Yakoubian (2015) At the Intersection of Bering Strait Inuit Subsistence Lifeways, Western Science and Management, and Environmental Change: Scientific and Regulatory Ideology, Human-Environmental Justice, and the Indigenization of Climate Change. Paper presented at the Climate Change in Culture Conference. Charlottetown, Prince Edward Island.

Raymond-Yakoubian, B. and J. Raymond-Yakoubian (2017) Research Processes and Indigenous Communities in Western Alaska: Workshop Report. Prepared by Sandhill. Culture.Craft and Kawerak Social Science Program. Kawerak, Inc. Nome, AK. https://kawerak.org/wp-content/uploads/2018/04/Research-Processes-and-Indigenous-Communities-in-Western-Alaska-Workshop-Report.pdf

Raymond-Yakoubian, B., L. Kaplan, M. Topkok, and J. Raymond-Yakoubian (2014; revised 2015) "The World has Changed": Iŋalit Traditional Knowledge of Walrus in the Bering Strait. Kawerak Inc. North Pacific Research Board Project 1013 Final Report. https://kawerak.org/wp-content/uploads/2018/04/The-world-has-changed_web.pdf

Raymond-Yakoubian, J. and B. Raymond-Yakoubian (2018) Knowledge, Sustainability, and the Indigenization of Research. Paper presented at the Arctic Council Social, Economic, and Cultural Expert Group Workshop, Inari, Finland, September 23, 2018.

Raymond-Yakoubian, J., B. Raymond-Yakoubian, and C. Moncrieff (2017) The incorporation of traditional knowledge into Alaska federal fisheries management. In Marine Policy 78:132-142. http://dx.doi.org/10.1016/j.marpol.2016.12.024

Sahlins, M. (1996) The Sadness of Sweetness: The Native Anthropology of Western Cosmology. In Current Anthropology, 37(3):395-428.

Sahlins, M. (2002) Waiting for Foucault, Still. Chicago: Prickly Paradigm Press.

KAWERAK, INC.

KAWERAK.ORG/KNOWLEDGE