

DRAFT FOR TASKFORCE REVIEW

Protocol for Identifying, Analyzing, and Incorporating Local Knowledge, Traditional Knowledge, and Subsistence Information in the Bering Sea

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Abstract:

This draft protocol provides guidance for identifying, analyzing, and incorporating Local Knowledge, Traditional Knowledge, and subsistence (LKTKS) information into the North Pacific Fishery Management Council's (Council) process.¹² The draft protocol is the result of a collaborative, multi-year effort from the Council's Local Knowledge, Traditional Knowledge, and Subsistence Taskforce, which is a nominated body formed under the Bering Sea Fishery Ecosystem Plan (BSFEP) Action Module 2. The draft protocol was developed for the Council to consider its work in the Bering Sea region though its usage could be much broader as the information within is relevant to the Council, Council and agency staff, and its advisory bodies. The draft protocol contains seven high-level guidelines that reflect best practices for working with LKTKS information. Each guideline is followed by some ideas for moving forward to help those using the protocol gain a sense of how they could engage this work (Section 4). The draft protocol is followed by potential onramps for LKTKS information the Council could consider for making changes to its decision-making process to incorporate LKTKS experts and information (Section 5). At this stage, the Taskforce envisions the Council would consider whether to adopt the protocol to inform its decision-making process and work conducted in the Bering Sea at a future meeting. Likewise, the Council would have an opportunity to consider each onramp recommendation and determine whether it would want to initiate any process changes at a future meeting.

¹ The Taskforce chose to work with the term 'Traditional Knowledge' because it resonates with existing work on Indigenous knowledge systems in the Bering Sea region

² The Council's January 2020 motion specifying the tasking for this Taskforce can be found here:

<https://meetings.npfmc.org/CommentReview/DownloadFile?p=ce213a15-6672-4d0b-9fad-6b0719388804.pdf&fileName=D3%20MOTION%20.pdf>

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List of Acronyms

Acronym	Meaning
AFSC	Alaska Fisheries Science Center
AKFIN	Alaska Fisheries Information Network
ANILCA	Alaska National Interest Lands Conservation Act
BSFEP	Bering Sea Fishery Ecosystem Plan
Council	North Pacific Fishery Management Council
EBFM	Ecosystem-based Fisheries Management
IRB	Institutional Review Board
FMP	Fishery Management Plan
FOIA	Freedom of Information Act
FPIC	Free, Prior, Informed Consent
LK	Local Knowledge
LKTKS	Local Knowledge, Traditional Knowledge, Subsistence
MSA	Magnuson-Stevens Fishery Conservation Management Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
SAFE	Stock Assessment and Fishery Evaluation Report
SOPP	Standard Operating Procedure
SSC	Science and Statistical Committee
SSPT	Social Science Plan Team
TK	Traditional Knowledge
TOR	Terms of Reference

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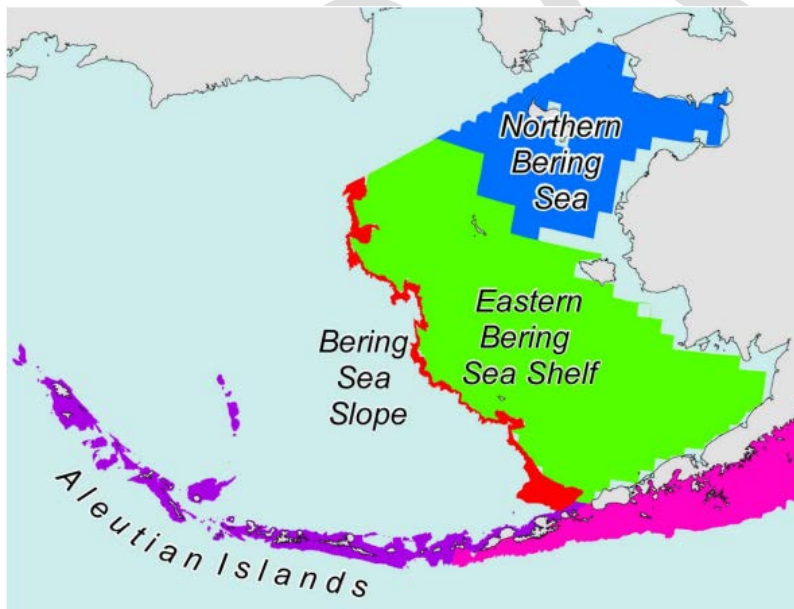
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1. Introduction

The Bering Sea ecosystem is a rich area of marine productivity that supports an array of commercial, sport, and subsistence fisheries (Huntington et al., 2013; National Research Council 1996; Springer et al., 1996). Commercial and subsistence harvesters and processors hold deep connections to this marine environment as they rely on the ecosystem and its resources, such as fish, marine mammals, seabirds and more, to provide economic livelihoods, cultural wellbeing, and food security (Fall et al., 2013; Huntington et al., 2016; Vonoit Baron 2019). Indigenous Peoples across the Bering Sea region including, but not limited to, the Unangan, Alutiiq, Athabascan, Yup'ik, and Inupiaq have been connected to, and relied on, the Bering Sea since time immemorial (Carothers et al., 2021).

Amidst these long-term dependencies, the Bering Sea is undergoing major ecological and climatological shifts that are increasingly extreme and difficult to accurately predict (e.g., marine heat waves and changes in sea ice extent that impact seabird populations, marine mammals, forage fish populations, and more) (Cheung & Frölicher 2020; Oliver et al., 2019; Pilcher et al., 2019; Reum et al., 2020; Thoman et al., 2020). Communities have long observed significant climate variability, such as higher seasonal temperatures, changes in precipitation patterns, wind patterns, storms, and ocean currents (Cochran et al., 2013; Meier et al., 2014; Wrona et al., 2006). However, the current period of changes is greatly impacting subsistence harvests and traditions (Ahmasuk et al., 2008; Bering Sea Elders Group 2011; Christie et al., 2018).

Figure 1-1 Map of the Bering Sea



Source: Council BSAI Groundfish FMP. <https://www.npfmc.org/wp-content/PDFdocuments/fmp/BSAI/BSAIfmp.pdf>

The observable effects of climate change on the marine environment have resulted in a broader scope of scientific understanding of complex social-ecological systems like the Bering Sea and driven a shift towards ecosystem-based fisheries management (EBFM) approaches.³ National Standard 2 of the

³ Ecosystem-based management aims to maintain ecosystems in a healthy, productive, and resilient condition so they can provide the services humans want and need. Traditional fisheries management has focused on one species in isolation; however increased understanding of ecosystem processes and interactions has driven more effective management strategies including EBFM (NOAA 2022).

Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires the best scientific information available be used to inform the Council’s decision-making. As EBFM has gained traction, there has also been increased awareness that western science provides valuable data for fisheries management, but these approaches can be highly specified as well as ecologically and temporally narrow (Wheeler et al., 2020).

The best scientific information available to inform Council decision-making includes western science *and* the knowledge gained and shared by people with long-term experiences working, living, and harvesting in the Bering Sea (Huntington 2000; Johannes and Nies 2007; Mulalap et al., 2020; Stephenson et al., 2016; Thompson et al., 2020). As climate variability poses new and ongoing challenges (Dietz et al., 2020; Hauser et al., 2021; Huntington et al., 2020), the urgent need for multiple ways of knowing and understanding the marine environment is becoming more apparent (Hosen et al., 2020; Mustonen et al., 2021; Petzold et al., 2020) and is only expected to increase (Arsenault et al., 2019; Chapman & Schott 2020; Flynn et al., 2016; Latulippe & Klenk 2020; Zhongming et al., 2012).

Local Knowledge (LK) and Traditional Knowledge (TK) holders may be some of the earliest observers of environmental changes because of their long-term experience working, living, and harvesting in specific areas (Gadamus & Raymond-Yakoubian 2015) (see Section 2 for descriptive definitions of LK and TK). LK and TK can shine light on fluctuations in species abundance, location, spawning areas, migrations, ocean currents, sea ice, and much more (see Johannes & Nies 2007 for an extended review on this point). These knowledge systems are not ‘anecdotal’ information but are rather complex systems of dynamic and living knowledge with their own forms of adaptive integrity and legitimacy born from the direct experiences of those that hold it (Houde 2007). Often these knowledge systems undergo their own forms of peer review and accountability just like the various western scientific disciplines (Barnhardt & Kawagley 2005).

Decision-making and management bodies like the Council have increasingly recognized the value of multiple knowledge systems for sustainably managing fisheries (Alessa et al., 2016; Ban et al., 2017; Fischer et al., 2015; Reid et al., 2021). In response to increasing awareness of the value and importance of LK and TK, and the input gained from advisory bodies, Alaska Native Tribes and Organizations, and fishery stakeholders throughout the multi-year process of developing the BSFEP, the Council initiated Action Module 2 of the BSFEP and appointed the LKTKS Taskforce at its October 2019 meeting. At its January 2020 meeting, the Council adopted two goals for this taskforce:

1. To create processes and protocols through which the Council can identify, analyze, and incorporate LK and TK, and the social science of LK and TK, into the Council’s decision-making process to support the use of best scientific information available in EBFM.⁴
2. To create a protocol and develop recommendations through which the Council can define and incorporate subsistence information into analyses and decision-making.

Through the Council’s public decision-making process, the Taskforce has received input from the Council and multiple advisory bodies (i.e., BSFEP Plan Team, Ecosystem Committee, Social Science Planning Team, Science and Statistical Committee (SSC), and Advisory Panel (AP)) to develop a protocol that achieves the Council’s goals in an approachable and useful way.

As such, the draft protocol is structured to streamline the background and contextual information for the reader to understand the Taskforce’s approach to putting forward the draft guidelines and onramp recommendations. Following this introduction, **Section 2** of the draft protocol expands the discussion on

⁴ The Taskforce made a distinction between LK and TK, and the social science of LK and TK because LK and TK exist regardless of whether social science has been conducted to understand, analyze, or synthesize them.

LK, TK, and subsistence by providing extended descriptive definitions of these key terms for the reader. **Section 3** outlines some of the potential challenges for the Council to consider with respect to achieving its goals related to LK, TK, and subsistence. The discussion on challenges precedes the draft guidelines because the substance of these challenges provides important context for understanding them. **Section 4** contains the draft guidelines that reflect best practices for working with LK, TK, the social science of LK and TK, and subsistence information. Each guideline is followed by some ideas illustrating options for moving forward to help the Council consider what it might look like to put the guidelines into practice. **Section 5** contains draft onramp recommendations the Council could consider for making changes to its decision-making process to incorporate LKTKS information in the future.

At this stage, the Taskforce envisions the Council would consider whether to adopt the protocol to inform its decision-making process and work conducted in the Bering Sea at a future meeting. Likewise, the Council would have an opportunity to consider each onramp recommendation and determine whether it would want to initiate any process changes at a future meeting.

Figure 1-2 Setting the stage

- *This protocol was written in a holistic way. No one component should be extracted from the whole.*
- *Respect for these knowledge systems, and the experts that hold it, is the foundation for this protocol.*
- *The protocol has an intentionally broad scope to have the best chance at being useful to the Council as well as the key entities working to inform its decision-making (i.e., Council staff, agency staff, advisory body members, and more).*
- *The protocol is specific to Federal fisheries management in the Bering Sea. Certain elements may be useful in other management contexts or regions, but caution should be used when doing so.*
- *The protocol is action-informing and as such it does not force particular actions or changes from the Council.*

2. Background

LK and TK holders who are intimately familiar with a particular place and hold knowledge of its past and present conditions could be the first to notice changes in the Bering Sea ecosystem, such as shifts in resource abundance, shifts in species location, or habitat changes (Berkes 1993; Clark 2016; Close & Hall 2006; Neis & Felt 2000). LK and TK are best understood as knowledge *systems* rather than are linked to skills, observations, and cultural meanings and values often gained through direct experience, story, and oral histories (Aporta 2002; Aporta & Higgs 2005; Folke 1999; John 2015). The holistic nature of these knowledge systems could help the Council have a better understanding of environmental and climate changes in the Bering Sea as well as the different potential impact of management actions, as it is knowledge based on entire careers, generations of knowledge, and in the case of TK, millennia (Ban et al. 2017; Thornton et al. 2010). Such was the case in the Northeast when North Atlantic cod fishermen communicated their observations of a decrease in the cod spawning stock on their fishing grounds to the Northeast Council long before the biological collapse of their cod fishery (Johannes et al., 2000).⁵

Because of its specificity and connectivity to place, there is no universally agreed upon definition of LK or TK in international law or common discourse (Mulalap 2020), although there are several legal frameworks that describe and protect Indigenous Knowledge/TK in particular (for examples see CBD 1992; ILO 169 1989; UNDRIP 2007). The absence of universally agreed upon definitions of LK, TK, and subsistence led the Taskforce to discuss the key elements of these concepts early in our work to have a common understanding while working together. We have included the descriptive definitions of LK, TK, and subsistence (which is more appropriately read and understood as the subsistence way of life) developed by the Taskforce that are relevant to the Bering Sea region below.

2.1 Local Knowledge

LK broadly includes the long-term observations and experiences of people living, working, harvesting, and processing in specific places (Close & Hall 2006; Neis & Felt 2000). LK holders are often relatively small groups of people living, working, or connected to, a common geographic location (Martin et al., 2007), and they may or may not be Indigenous Peoples (PFRCC 2011). For example, within the Bering Sea region, LK holders might include commercial Bering Sea fishermen who spend considerable time in the region and are possibly intergenerational participants in the fishery but reside (at least part of the year) outside the region (i.e., in Lower 48 ports such as Seattle, WA or Astoria, OR). This knowledge system and the observations or values it encompasses can evolve over time and be acquired over the course of a few generations or less, but it is inherently the product of knowledge formation and dissemination based on personal and shared experience (Martin et al., 2007).

2.2 Traditional Knowledge

For the purpose of the draft protocol and to reach shared understandings of TK, the Taskforce spent significant time early in its work to clearly define some of the main characteristics of TK within the Bering Sea region and clarify them based on existing scholarship and our collective expertise. In global governance and research settings, ‘Indigenous Knowledge’ is the most common terminology used. However, knowledge holders from across the Bering Sea have stated ‘Traditional Knowledge’ is the preferred term for their knowledge systems. This is to emphasize the important distinction that, while TK is held and transferred across generations by Indigenous Peoples, not all people who are Indigenous hold TK (Mauro & Hardison 2000; IPCC 2022; UNESCO 2022; PFRCC 2011).

⁵ The term fisherman is used throughout this document because it is the preferred term of both male and female fishers to identify themselves in Alaska.

Thus, the Taskforce agreed to use the definition for TK put forward in Raymond-Yakoubian et al. (2017) because it is the product of extensive work and dialogue with Alaska Native Elders and TK holders from the Bering Sea region and is thus appropriate for the scope of this Taskforce’s work. As the definition below implies, TK is a dynamic knowledge system can change, grow, or be lost over time as it is discussed, shared, and practiced throughout communities across generations (Noongwook et al., 2007; Raymond-Yakoubian & Raymond-Yakoubian 2015).

“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. [Traditional knowledge] 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 nonhuman 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 [Traditional Knowledge] – does not preclude change, nor does it equal only ‘the past’; in fact, it inherently entails change.” (Raymond-Yakoubian et al., 2017).

“TK been handed down, undergone its own form of testing generation after generation, and is the culmination of finding the best practical skills to support Alaska Natives’ ways of life.” – Alaska Native Elder, personal communication

TK is an evolving knowledge system built over generations as people learn from the places where they live, work, and interact with marine resources. Berkes (2009, 151) notes TK should be viewed and engaged with “as process, rather than as content), emphasizing the significance of knowledge production as a social process (whether western science, LK, or TK). As such, different knowledge systems are developed through a range of diverse processes that reflect situated experience, cultural, meaning, empirical observation, and methods of validation. This knowledge is accumulated across generations and shared—often orally—through situated learning and stories, typically under the guidance of Elders (FAI 2008). Alaska Native Elders are held in high regard in their communities and Tribes. The term ‘Elder’ carries responsibilities for those who bear the title as they provide critical connections to families, communities, and regions. Elders are knowledge bearers, language bearers, and culture bearers (FAI, 2021, *Alaska Native Governance and Protocols Dialogue*).

2.3 Subsistence

At its November 2020 meeting, the Taskforce discussed how understandings of subsistence vary across cultures and some of the limitations in the State and Federal definitions for subsistence. These definitions for subsistence may not adequately capture what subsistence means to Alaska Natives but continue to impact Alaska Natives’ ways of living in significant ways. Because one of the Council’s goals for this Taskforce is to create a protocol and develop recommendations through which the Council can define subsistence information, it is important to note that neither the State of Alaska nor the Federal government define subsistence or subsistence users. Instead, State and Federal governments define and regulate ‘subsistence uses.’ The State of Alaska defines subsistence uses as:

[T]he noncommercial, customary and traditional uses of wild, renewable resources by a resident domiciled in a rural area of the state for direct personal or family consumption as food, shelter,

fuel, clothing, tools, or transportation, for the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for personal or family consumption, and for the customary trade, barter, or sharing for personal or family consumption (ALASKA STAT. § 16.05.940 (2009)).

Federal policy, as designated under the Alaska National Interest Land Conservation Act (ANILCA) of 1980, recognizes the difference between Native and non-Native subsistence uses, notably the role of subsistence in Alaska Native cultural existence. Still, ANILCA established a “rural preference” for subsistence uses over commercial and sport uses at times of scarcity. The ‘rural preference’ only applies to Federal lands (Anderson 2016).

Although the importance of subsistence to Alaska Natives is frequently defined broadly as being core to identity, health, and cultures, most research and analyses to date have narrowly quantified the value of subsistence in economic terms in relation to production, distribution, and consumption, including comparative cost estimates and replacement values (e.g., Wolfe 2004). From an Alaska Native perspective, subsistence “encompasses hunting and gathering activities which have a deep connection to history, culture, and tradition, and which are primarily understood to be separate from commercial activities” (Raymond-Yakoubian, Raymond-Yakoubian, & Monicreiff 2017). This perspective does not suggest that Alaska Natives do not engage in commercial or cash economies. Rather, Alaska Natives can and do deliberately engage in commercial and market-oriented economies, while maintaining subsistence practices. Indeed, the cash economy often supports subsistence activity through the purchase of gear, supplies, or other tools. Often referred to as ‘mixed economies,’ this type of economy is characterized by mutually supportive cash and subsistence economies. As such cash economies play a critical role in supporting subsistence ways of life (Aslaksen et al., 2008; Reedy-Maschner 2009).

The subsistence way of life is integral to the nutritional, spiritual, and economic wellbeing of Alaska Natives across the Bering Sea region (Callaway 2020; Green et al., 2020). Subsistence practices and TK are closely linked as TK systems inform where, when, how, and why people practice and adapt subsistence activities that are central to sharing as well as food and water security (Kishigami 2021; Nissin & Evengard 2015; Panikkar & Lemmond 2020; Turner et al., 2013). In turn, the continuation and adaptive integrity of TK systems depend on the continued opportunities for people and their communities to continue practicing their traditions for the subsistence way of life (Wheeler and Thornton 1983).

3. Challenges to achieving the Council's goals related to LK, TK, and subsistence

The draft protocol contains seven guidelines that reflect best practices for working with LK, TK, the social science of LK and TK, and subsistence information. If the Council were to adopt the final protocol as a guiding policy to inform its decision-making process, that would be the starting point for subsequent work as there would likely be a subsequent implementation period to address any onramps selected by the Council (see Section 5). The following section outlines some of the potential challenges the Council could expect in moving this work forward. The discussion on challenges precedes the draft protocol guidelines and potential onramp recommendations because the substance of these challenges provides the reader important context for understanding the Taskforce's approach. **Achieving the Council's goals related to LK, TK, and subsistence would likely require new approaches for communication and coordination, building relationships and trust with LK and TK experts and subsistence harvesters and processors, improving equity, and finding new ways to accessing and using information.**

3.1 Communication, coordination and buy-in

New processes to identify, analyze, and incorporate LK and TK, the social science of LK and TK, and subsistence information would likely require greater communication and coordination among the entities that produce work and materials that inform Council decision-making. When the Council created this Taskforce and tasked a protocol to be developed, the Council also expressed interest in having a protocol that could inform its decision-making *process* rather than a specific component(s) of it. The Council works closely with many partners including the National Marine Fisheries Service (NMFS) Alaska Regional Office when developing its management recommendations. NMFS is the Federal agency responsible for implementing regulations that ensure the productivity and sustainability of Alaska's fisheries and fishing communities. The Council also works closely with the Alaska Fisheries Science Center (AFSC), a Federal entity that monitors the health and sustainability of fish, marine mammals, their habitats, and the communities that depend on them.

If the Council were to adopt the final protocol, the guidelines could act as a first step towards improving communications and coordination among these three primary entities by conveying the Council's approach to working with LK, TK, and subsistence information. However, it is anticipated that working to achieve the Council's goals related to LK, TK, and subsistence via the protocol would require greater collaboration and buy-in to the final protocol and subsequent work overtime.

3.2 Engagement and equity

Encouraging broader engagement in the Council's decision-making process would be important for building the necessary relationships for working with LK and TK holders and incorporating that information into the Council's decision-making process. The Council's decision-making process is engaged by fishery stakeholders and Tribes from across Alaska and the nation. The Council has consistently heard from rural communities and Tribes from across the Bering Sea region about challenges to meaningfully participating in the Council's decision-making process (Raymond-Yakoubian 2009), and the Council has worked to improve its process as well as outreach and engagement via the Community Engagement Committee (formerly the Rural Outreach Committee) and their recommendations.

However, as described above, LK and TK are knowledge systems that live with people. TK is predominantly shared orally so it would be important for Alaska Native Elders to have the means and

ability to share their knowledge and perspectives with the Council and its advisory bodies. The travel costs to participating in Council and advisory body meetings can be significant. Additionally, English may be a second language for Alaska Native Elders that may choose to share TK with the Council and the Council does not currently use language translation services (Berger 1985). Keeping these challenges in mind, the Taskforce has had dialogue, and would encourage the Council to consider, equity in its decision-making process in broader terms than the fair distribution of costs and benefits related to management actions (Anderson et al., 2019; Carothers 2011). Expanding conceptualizations of equity in the Council's decision-making process could include elements related to the ability of different identities and values to be represented and meaningfully engage the Council's decision-making process (Allison et al., 2012; Capistrano et al., 2012; Carothers et al., 2021; Donkersloot et al., 2021; McDermott et al., 2013; Schreckenberget al., 2016).

3.3 Time

Incorporating LK and TK into the Council's decision-making process is going to take time. Alaska's history is tied to the material and cultural displacement of Alaska Native peoples which has fostered mistrust between Alaska Natives and government agencies (Carothers 2010; Gritsenko 2018; Lyons et al., 2019; Stuhl 2016). Some Alaska Native Elders/TK holders that could engage with the Council and its decision-making process may be among some of the early generations taken from their families and communities to attend boarding schools (Torrey 1978). It would be important for the Council and those that work or engage its decision-making process to be mindful of those histories when building relationships with Alaska Native Elders/TK holders (Ban et al., 2018; Hill et al., 2020; Lam et al., 2020; Mastrángelo et al., 2019; Wilson et al., 2003).

Western scientific research also has a long history of extractive methods and approaches (Kovach 2021; Lanzarotta 2020; Nixon 2011; Smith 2021). It is anticipated there could be additional sensitivities for people's willingness to share knowledge with scientists, at workshops, or public comment if doing so means they would lose control over how, where, or when that knowledge is interpreted and used. While unintended, it could be easy to share information in documents that inform Council decision-making (e.g., analyses, presentations, reports, etc.) in a way that does not reflect how the knowledge holders intended it to be conveyed which can erode trust.

3.4 Intellectual property rights and confidentiality

Working to build trust and acknowledge intellectual property rights in an appropriate way with LK and TK holders may require changes to how analysts and scientists approach data sharing and use (Carroll et al., 2019; Johnson et al., 2015; Pulsifer et al., 2012; Walter et al., 2021). For example, the Freedom of Information Act (FOIA) provides the public the right to request access to records from any Federal agency. Federal agencies are required to disclose any information requested under the FOIA unless it falls under one of nine exemptions, which protect interests such as personal privacy, national security, and law enforcement. Although every effort to protect privacy and confidentiality of information may be made, **Federal processes are limited in ensuring full confidentiality given the possibility of a FOIA request.** This reality could impose constraints on people's willingness to engage and share their knowledge with the Council, staff, or AFSC scientists because full protections for privacy and confidentiality cannot be guaranteed.

Moving forward, it would be important to ensure knowledge holders are fully aware of confidentiality limitations prior to information sharing. Free, Prior, and Informed Consent (FPIC) is a term used to

indicate the need for a fully informed and transparent consent process before engaging in any activity which may affect past, present, or future research or decision-making. FPIC applies broadly but it is also understood in global governance settings as an underlying commitment to respect for the sovereignty and self-determination of Indigenous Peoples (UNDRIP 2007). As sovereign entities, Alaska Native Tribes have a unique political relationship with the United States government and require some additional considerations as Tribes hold independent rights to govern themselves (Lindemuth 2017).

3.5 Data availability

Being able to incorporate LK, TK, and subsistence information meaningfully and consistently into the Council’s decision-making process would require increased social science capacity and prioritization of research related to LK, TK, and the subsistence way of life or impacts to subsistence. Council staff do not conduct original research when preparing analyses or papers that inform the Council on the potential impacts of management actions. Within a community, LK and TK are rarely recorded in written form (Burgess 1999). The social science of LK and TK often uses ethnographic research methods and oral histories to document these knowledge systems in a written format.

“In communities, TK is not compiled in print. The traditional ways of doing things have been handed down through generations by word of mouth and hands on learning by doing and living the life. Life experiences and observations have been to live the ways of their forefathers and to carry on their traditions, culture, and heritage for the next several generations.” – Alaska Native Elder, personal communication

Council staff’s ability to use the social science of LK and TK in documents that inform the Council’s decision-making hinges on the availability of that information and whether it can be accessed and used in the timelines that analytical staff work under.

Recognizing this challenge, the Taskforce developed a new process for collating source of LK, TK and subsistence information in the LKTKS [search engine](#). The search engine contains sources of LK, TK, the social science of LK and TK, and subsistence information including peer reviewed articles, databases, narrative sources of information, reports, technical memos, and other sources of information. While the search engine could be an important and meaningful step forward for making LKTKS information more accessible, there are significant data gaps. Staff have used the search engine when preparing recent Council analyses (e.g., the BSAI Halibut Abundance-based Management of Amendment 80 Prohibited Species Catch Limit, BSAI Pacific cod small vessel access, and the BSAI snow crab rebuilding analysis) that did not return robust results relevant to the region or scope of the Council’s action.

The absence of accessible and usable LK and TK social science that is process- or action-specific does not mean these knowledge systems do not have contributions to make to the Council’s decision-making process; it rather indicates a need for building the necessary relationships to foster trust and willingness to share knowledge, as well as additional capacity for the social science of LK, TK and subsistence that is specific to the Council’s jurisdiction. This would likely require human resources on multiple levels.

For example, AFSC provides the Council extensive fisheries science to inform its decision-making, but there are limitations in AFSC’s social science capacity. Nationally, there are 12,000 employees at NOAA (of which 4,200 are employed within NMFS) (NOAA 2021). Less than 1% of NOAA scientists are social scientists, and the vast majority of those are economists (Kast and Krepp in development). Within AFSC there are approximately 400 staff, two of whom are non-economic social scientists (Federal Labs 2021). This capacity gap presents a challenge to conducting the necessary social science to work with LK and

TK systems to ensure this information could be incorporated into a variety of assessments, reports, and analyses that inform Council decision-making. One approach to addressing this challenge could be to strengthen internal partnerships across regional and topical fields to build capacity. An additional approach to capacity building is through the Alaska Fishery Information Network (AKFIN). AKFIN is the primary platform through which analysts obtain raw fisheries data. While AKFIN does not currently house qualitative information (e.g., survey responses, interviews, oral histories), it may be possible to expand the database to include relevant qualitative data. Moving forward there could be new opportunities to partner with AKFIN to explore possibilities for greater access to social science data that could be used to inform Council decision-making.

4. Guidelines and best practices for LK, TK, and subsistence information

The following section contains seven high-level guidelines outlining best practices for working with LK, TK, the social science of LK and TK, and subsistence information. Each guideline is followed by some ideas illustrating options for moving forward to help the Council consider what it might look like to put the guidelines into practice. The Taskforce envisions the Council would consider whether to adopt the draft protocol to inform its decision-making process and work in the Bering Sea at a future meeting.

4.1 Guideline 1: Understand and use the appropriate concepts for LK, TK, and subsistence

Having a sound understanding of LK, TK, and subsistence and using mutually understood terminology when working with LK, TK, and/or subsistence information in the Council’s process is essential for creating shared understanding and improving communication and collaboration among the Council, staff, and the public. For this reason, the Taskforce has put forward descriptive definitions for LK, TK, and subsistence that are specific to, and appropriate for, the Bering Sea region (see Section 2). As stated above, the Taskforce intentionally chose ‘Traditional Knowledge’ rather than ‘Indigenous Knowledge’ or ‘Traditional Ecological Knowledge’ because ‘Traditional Knowledge’ better reflects how Alaska Native Tribes and communities throughout the Bering Sea understand and communicate their own knowledge systems.

While TK is held and transferred across generations by Indigenous Peoples, not all people who are Indigenous hold TK (Mauro & Hardison 2000; IPCC 2022; UNESCO 2022; PFRCC 2011). Additionally, phrases like ‘Traditional Ecological Knowledge’ are born from academic and policy circles and may not accurately reflect the ways Indigenous communities think about their knowledge and ways of being (Williams & Hardison 2013; Whyte 2013). Nevertheless, definitions for LK, TK, and subsistence vary across communities, Tribes, and regions so it is important to avoid assumptions that by using the same word, everyone has the same understanding. If or when Tribes hold different definitions for TK, it would be appropriate to use Tribal-specific definitions for their knowledge systems which are more likely to be highly specific and contextualized (Whyte 2013).

Ideas for moving forward:

- To the extent practicable, adjust action planning or work timelines to allow for adequate time to ensure mutual understandings of these key concepts.
- If or when staff are working on documents specific to the Bering Sea, and entities have alternative definitions of LK, TK or subsistence, staff could include a description the alternative definition in the document under review to provide additional context for the Council and its advisory bodies.

- When staff are preparing analyses to inform the Council’s decision-making, they could use the LKTKS search engine as a first stop to understand whether there are written sources of LK, TK, the social science of LK and TK, or subsistence information that could be available to inform an analysis of impacts. The search engine contains sources of LK, TK, the social science of LK and TK, as well as subsistence information including peer reviewed articles, databases, narrative sources of information, reports, technical memos, and other sources of information.
 - AFSC scientists may also find the LKTKS Search Engine useful as they develop project proposals, publications, and annual reports that inform the Council.

4.2 Guideline 2: Demonstrate respect for LK and TK knowledge systems

Demonstrating respect is foundational for achieving the Council’s goals related to LK, TK, and subsistence. Some examples of meaningfully including LK and TK in natural resource management processes and decision-making beyond the Council in the last three decades cite respect and trust as the central tenets of the work as well as the underpinning relationships (Bentley et al., 2019; Djenontin & Meadow 2018; Pelletier, Gélinas & Potovin 2019; Reid et al., 2021). Respect for LK and TK knowledge systems could be demonstrated in many ways throughout the Council’s process but we describe three specific examples here.

First, within the Council’s decision-making process, there are multiple (and sometimes competing) perspectives and values (see Figure 4-1). If knowledge were to be shared directly with the Council (e.g., via public comment), with staff (e.g., personal communications informing their understanding of a fishery), or with AFSC scientists (e.g., during focus groups or oral histories), it would be important to keep an open mind when different worldviews or information related to fisheries and management are shared (Koleszar-Green 2018; Latulippe & Klenk 2020). Second and related LK, and TK holders may feel dismissed when their knowledge is described as ‘anecdotal’ (Huntington 2000; Johannes et al., 2000; Ruddle 1994). There are some additional sensitivities with labeling TK systems as ‘anecdotal’ information as they are based on factual observations about the environment, current and past uses or relationships to particular resources, as well as *key ethics* and *values* that form *culture*, all of which are *central to people’s identities* (Burgess 1999). Finally, and more generally, when the Council or staff engage work with knowledge holders in any capacity—scheduling outreach and engagement trips, workshops, or working to identify or access LK and TK information for Council analyses— a best approach would be *moving at the pace of trust* (an idea shared by First Alaskans Institute, Alaska Native Governance Protocols Dialogue). Related to Guideline 1, moving at the pace of trust could require adjusting working timelines and intentionality with ensuring there is mutual understanding.

Ideas for moving forward:

- Be clear and transparent about why staff is reaching out, in what documents or aspects of the Council’s process any shared knowledge may be used, and whether there are any foreseeable potential impacts to sharing knowledge in written or oral forms.
- To the extent practicable, work to have an understanding of community and Tribal history (e.g., how the Tribe refers to itself, primary subsistence species or practices, etc.) prior to visiting communities to build rapport and show respect.
- Try to understand the unique context of the LK and TK. Because this knowledge is experiential, it cannot be separated from the social and environmental context where it is gained or from who it is that holds it.

Figure 4-1 An example of different worldviews in fisheries management

Carothers et al. (2021) discuss the deep, interconnected relationship between salmon and Alaska Natives. Below is an extended quote from Ahtna Elder and coauthor Wilson Justin describing the differences between Eurocentric and Athabascan worldviews of fish and fishery management.

“We're all familiar with how, in English, things get broken into specific aspects of activities and defined by activities. You go to play a hockey game and you know what it's all about. Hockey game has rules. You don't play hockey in a basketball game. Doesn't work like that in Athabascan. It's all one game. It's all one resource. It's all one creation, and it's all one set of responsibility. So you have to learn not only how to accommodate salmon and river streams, you have to consider yourself a part of the salmon world. Not the other way where the salmon is a part of your entitlement for catch. You're intruding into salmon realm, and when you intrude into salmon realm, you have to give fair and just accounting of yourself. You do that with ceremony of prayers and songs. And then it goes another step further. You go caribou hunting. Well, there is no difference between hunting caribou and catching salmon. You still have to account to the caribou; you're still intruding in their world. Okay you go one step further, let's do sheep. Well there's no difference between sheep, caribou, and salmon. You're still assigned the responsibility of accounting for your intrusion into that world. Now that's extraordinarily easy to speak to in Athabascan, and I've found it extraordinarily, virtually impossible to speak to in English, in the western world.

Just think of this term “sustained yield.” {laughing} In Indian, that would translate to, say into salmon, “You owe me your life, so get up here right now and die.” That's the way it would translate in Athabascan from English, the sustained yield concept. That's why you never hear me say sustained yield—you just can't do that. The salmon, you're intruding in the salmon's world. So, it would be so offensive in our way that if you spoke like that they would run you out of camp until you go back to where you come from. That would be enough for the traditional marriages to be broken up and separated, which is almost impossible to do. So that's the level of offense you're looking at when you use these doggone terms like sustained yield. Wilson Justin, interview, Anchorage, Alaska, USA, September 2019

4.3 Guideline 3: Appropriately and accurately identify LK and TK holders, the social science of LK and TK, and subsistence information

Appropriately and accurately identifying LK and TK holders or accessing and using the social science of LK and TK is essential for ensuring the best available information is used to inform the Council’s decision-making process as well as demonstrating respect for knowledge holders.

There is no one-size-fits-all approach to identifying LK or TK holders or subsistence harvesters, gatherers, or processors. For example, it would likely be insufficient to set an arbitrary time standard for knowledge acquisition (e.g., an individual must live in a community or fish commercially for no less than 10 years). LK holders may be identified by their peers as having particular experience and expertise (Ellis 2005; Martin et al., 2007). TK holders are those within Alaska Native communities who have been trained through multi-generational learning and experience to absorb, reflect on, and share TK. In contrast LK may be held by Indigenous or non-indigenous people; but a key difference is the length of study and depth of understanding (years or decades verses centuries of accumulated learning and situated observation) (Absolon 2022; Berkes 2017).

TK holders are recognized by their communities and peers as someone with the expertise and authority to share knowledge. TK holders are often Alaska Native Elders who hold the shared collective knowledge from across generations and are in service to their community sharing knowledge, history, language, and culture. However, in some cases, a community might identify someone as an Alaska Native Elder, though the Elder they may not see themselves that way. Some Alaska Native Elders are among the first generations removed from their communities to attend boarding schools and may feel they are still learning. Other knowledge holders may also be Elders in training, and these are individuals that are younger and learning. Finally, there are Alaska Native Elders who bear the title because of their age but they may not necessarily have knowledge to share.

“When citing experience of others, the Yupik will identify the source or sources of information and the people through whom it has been transmitted. When a person’s own observations and experience confirm such information, then a person can describe it as a known fact to him or her... [TK] is continually discussed in the community and while engaging in the activities that develop and require traditional knowledge, such as hunting, boating, or traveling over or amid sea ice. Children and youth are taught to remember stories and information accurately, to ‘put it into your body,’ by techniques such as keeping one’s head still while listening. Songs may also be used to memorialize notable events. The Yupik language is a key element of knowledge transmission...” – Noongwook et al., 2007, 48

Sharing TK is not taken lightly as holders are recognized as being responsible for protecting and caring for this knowledge and are accountable to their Tribes and communities (FAI, 2021, *Alaska Native Governance and Protocols Dialogue*). TK systems have their own integrity and means for peer review and determining what western science calls validity. Similar to knowledge production within western science, TK holders undergo processes that identify them as experts as the knowledge is vetted across generations and by peers as being expert (Callaway 2020; Donkersloot et al., 2021; Barnhardt & Kawagley 2005).

Figure 4-2 Guidance for identifying different types of expertise

LK holders	TK holders	Subsistence harvesters, gatherers, and processors
<ul style="list-style-type: none"> • Residents in a community • Could be youth, adults, or Elders in a community • In communities, following and learning from Elders • Commercial fishermen • Subsistence fishermen who have fished some seasons • Knows the timing of seasons • Knowledge may be acquired from experience, oral histories, or books and articles • May collaborate on research projects 	<ul style="list-style-type: none"> • Alaska Native Elders who go out and gather • People who have had lifelong mentors • Know how to prepare food, where to go, and the seasonal migrations • Know and make oral histories • Know real life history • Have valid climate predictions based on prior incidents, and they know changing weather • Fished every season for 60+ years • Few Elders give educated input on research projects 	<ul style="list-style-type: none"> • Residents • Active and inactive gatherers • Experience preserving most foods • Followers and leaders are different • Hunt all seasons

Sources: Alaska Native Elder, personal communications; Callaway 2020; Donkersloot et al., 2021; Fienup-Riordan 1990; Green et al., 2020; Johnnes et al., 2000.

Public comment is currently one pathway through which the Council and its advisory bodies could receive LK or TK, though it is anticipated the LK of fishermen related to observed changes in the fishery or ecosystem would be more common because of the existing relationships and familiarity with the Council’s process (in some cases). If a public testifier clearly identifies themselves as an LK or TK holder, and that they are deliberately sharing their knowledge in public comment, it would be appropriate for the Council and/or its advisory bodies to accept that identification. The Council’s process is open to the public and its meetings, as well as the SSC and AP, are recorded. While LK and TK may be shared in these public meetings, prior to those comments being directly quoted, such as in an SSC report to the Council explaining its management recommendations, there could be additional steps to ensure permission has been given to share or use that knowledge further. General reference, however, would be appropriate.

Staff writing analytical documents that inform the Council’s decision-making are often produced under relatively tight timelines. While some actions may take several years to move through the Council’s decision-making process (i.e., from initial idea to discussion paper and so on), the time in between reviews compared to the amount of information that must be analyzed and conveyed can be constraining and Council staff do not conduct original research in support of Council actions. For this reason, the Taskforce put effort to developing a new process for collating sources of LK, TK, and subsistence information in the LKTKS [search engine](#) so staff can more readily identify potentially relevant sources. As mentioned previously, the search engine contains sources of LK, TK, the social science of LK and TK, and subsistence information in the form of peer reviewed articles, databases, narrative sources of information, reports, technical memos, and more. The search engine is designed to grow and evolve over time as additional information becomes available.

Ideas for moving forward:

- To the extent practicable, documents prepared to inform Council decision-making that include LK or TK should describe the *type* of information that is being accessed and used as well as any permissions that were obtained to access and use them.

- As appropriate, engage and work with “bridging people” – these are people familiar with the Council process (e.g., have a sense of the timing of upcoming meetings and agendas) and may know who in their network, community, Tribe or fishing association could provide relevant knowledge and be willing to connect.
 - This approach could be relevant for many elements of the Council’s process, but especially as staff work to schedule workshops, outreach trips, or inform Alaska Native Tribes about upcoming actions.
- To the extent practicable, work with knowledge holders or bridging people to review the methods and approach for identifying and analyzing LK and TK in impact analyses.
- As appropriate and needed, staff could have open dialogue with LK and TK holders about confidentiality constraints (i.e., FOIA and the Council’s public process more broadly) and whether they would be identified/attributed.

4.4 Guideline 4: Engage in early and frequent communication with relevant entities

Engaging in early and frequent communication with all relevant entities (examples include Alaska Native Tribes or Tribal Consortia, fishing or processing associations, co-management bodies, CDQ groups, etc.) can help build relationships and provide sufficient time to partner with LK and TK holders or subsistence experts so the best information can be included to inform the Council’s decision-making.

What is considered “early” communication would likely differ depending on who is being engaged and in what context. For example, ‘early’ in the Council’s decision-making process could be as soon as the Council initiates an action with a discussion paper. From a Tribal government’s perspective, early could mean engaging with NMFS Alaska Regional Office via Tribal Consultations as soon as a discussion paper is tasked by the Council or even earlier as ideas on issues take shape. Two-way dialogue and opportunities to participate are meaningful to Tribes and communities, and they could help to show the Council is listening to Tribal concerns in a meaningful way (Personal communication, Alaska Native Elder).

Early and frequent communication would likely require well-established communication pathways, but often the most effective communication happens through shared reciprocal relationships. If a long-standing relationship exists, and it is one built on trust and respect, people can pull from that history to re-engage with each other. While a particular action may end, the relationships with knowledge holders could continue.

Ideas for moving forward:

- If or when the Council is looking to engage entities (e.g., provide outreach presentations, participate in outreach trips, create communications materials about its decision-making process) that may be impacted by a management action, Council staff could prioritize work with AKFIN to identify those communities and associated Tribes or Tribal Consortia most substantially engaged in, or dependent on, the Federal fisheries likely to be impacted by the action.
 - With this information in hand, staff could then identify the appropriate bridging people or knowledge holders (see Guideline 3), depending on how the Council would like to engage or move forward.
 - Staff could share this information with NMFS Alaska Regional Office to support any potential future engagement or Consultation sessions.
- To the extent practicable, staff could continue to look for opportunities to print and mail Council or advisory body meeting materials, participate in outreach presentations as requested by Tribes, communities, or the meetings of other regulatory bodies.

4.5 Guideline 5: Acknowledge and account for differences in capacity among relevant entities

There could be different opportunities for individuals, communities, fishing associations, Tribes, etc. that may hold or able to share LK and TK to engage the Council's decision-making process, which could in turn impact the extent to which the Council is able to engage and incorporate these knowledge systems. **Acknowledging and accounting for differences in capacity among relevant entities is important for constructing an environment that is inclusive of LK, TK and subsistence experts and building relationships with them.**

For example, some fishing associations or Tribal Consortia have full-time staff that regularly engage the Council's process while others do not. Representation can provide opportunities for two-way information sharing (e.g., fishing sectors learn about upcoming issues that may impact their fishery and in turn provide public comments) and relationship-building as people participate in the Council process and become familiar with one another. Additional differences in capacity to engage could include ceremonies and celebrations occurring in Tribal communities as well as key subsistence harvesting seasons.

The Council has received public testimony from Alaska Native Tribes and their representatives, as well as rural communities, about the logistical challenges to participating in its process. The Council has also worked to address these challenges through its Community Engagement Committee (formerly the Rural Outreach Committee). There is significant overlap between this Taskforce and the Community Engagement Committee on some aspects of the Taskforce's work because incorporating LK, TK, and subsistence information would likely require stronger relationships with, and greater engagement with knowledge holders in the Council's process.

Ideas for moving forward:

- To the extent practicable, the Council and its advisory bodies could continue to prioritize virtual participation options for their meetings.
- To the extent practicable and depending on the advisory body's membership or the anticipated attendance, advisory body meetings could be scheduled to avoid key ceremonies, celebrations, and subsistence seasons. More generally, it would be important to avoid making assumptions about capacity and be aware that a lack of initial response may not necessarily signal disinterest in participating.
- As staff are able, solicitations for nominations to Council advisory bodies could be written to include information on the Council's ability to facilitate or support participation on the advisory body as opposed to waiting to include that information (or refer the nominee to) in the Terms of Reference.
- As staff are able, preparing, posting, and even mailing meeting materials could be a meaningful approach to accounting for capacity differences. People value time to digest information and opportunities to share their notes or comments with their community, Tribe, or other leadership prior to participating in meetings.

4.6 Guideline 6: Adhere to local and cultural protocols that entities have established for sharing and communicating LK, TK, or subsistence information

Many Alaska Native Tribes and communities have protocols for sharing information and intellectual property in place (Holm 2016). **Adhering to these existing local and cultural protocols that entities have established for sharing and communicating LK or TK is foundational for demonstrating respect and a first step towards meeting FPIC principles.** Staff may look to work LK or TK holders that are members of Alaska Native Tribes or communities for a variety of reasons that could require asking whether local protocols for information sharing exist, such as scheduling or facilitating Council

workshops or accessing Tribal archives in support of analyses. In these instances, staff could contact bridging people who may point staff to the appropriate contact or reach out to Tribal/Alaska Native Tribal Consortia/Organization's offices directly (see Guideline 3). It would be important to make this effort early in the process to allow for adequate time for meaningful engagement and thoughtful dialogue (see Guideline 4).

It is expected that Tribal protocols could vary across communities and Tribes and from this protocol which was developed for the Council and its decision-making process. For example, the Native Village of Kotzebue developed a protocol that is specific for researchers working in that community outlining clear principles for researchers to follow when engaging with the village.

*“All researchers working in **Qikiqtagruymiut** (Native Village of Kotzebue Citizens) territory or with **Qikiqtagruymiut** have an ethical responsibility towards our Tribal culture, environment and citizens. The following principles have been adopted to provide guidance for researchers in any and all fields. This statement intends to promote mutual respect and communication between scientists and the Tribe.”⁶*

The Village of Kotzebue specifically crafted these principles related to communication, planning, confidentiality, Intellectual Property Rights, etc. to reflect the ideas and concerns resonate within that community.

If Tribal entities or communities do not have local and cultural protocols in place for information sharing and communication, it would still be important for staff to convey their purpose for reaching out and how information could be shared. Knowledge holders may feel uncomfortable or be reluctant to share information because the Council's process is open to the public, the meetings are recorded, and written materials are available online.

“No library is safe. As with the unwritten laws, some things are not ever in print. If TK is stored, it will only collect dust. There needs to be TK holders in place for the benefit of the Council.”— Alaska Native Elder

Just as Tribes and communities have protocols in place for information sharing, so too do fishing associations. Staff looking to identify and engage LK expertise could consider the nature of the fishery of interest and who may have the appropriate decision-making authority and personnel relevant to the Council's action or objectives. When engaging fishermen or associations to work with forms of LK, it is important to clearly describe the purpose of the work, how the shared information would be used, and any limits to data confidentiality.

“...working with an owner-operated fleet may require a broad outreach campaign. Alternatively, achieving credibility with a rationalized fleet may necessitate conversations with the fishing cooperative to design methods that reflect the fleet's collective nature. Unlike owner-operated fisheries, fishing and business decisions in rationalized fleets are not made solely by the captain, but as a collective of multiple corporate- and vessel-based perspectives.”—Murphy et al. (2020 Marine Policy)

Staff working with entities sharing or representing knowledge holders would likely need to adjust their timelines for completing work to the extent practicable to allow for early and ongoing communication to determine what information could be shared publicly. All parties would need to have a clear understanding of how information could be used in the Council's decision-making process and where

⁶The full Native Village of Kotzebue Research Protocol can be found here: https://www.arcus.org/files/page/documents/27026/native_village_of_kotzebue_research_protocol_updated_july_2018.pdf

(e.g., written documents and/or presentations). While unintended, not following local or cultural protocols could have unintended negative consequences for knowledge holders (e.g., reputational and economic costs) as well as the Council's overall decision-making process (e.g., loss of rapport, impacts to relationships, individual's loss of willingness to engage in the future).

Ideas for moving forward:

- The Council could consider MOUs for long-term and specific data-use agreements with Tribes and communities providing LK and TK information, such as environmental changes and/or spatial mapping of subsistence harvest and processing activities.
- As able, staff could ask questions to better understand an entity's established hierarchy for sharing information (e.g., a crew member may need permission from the captain to share information) and share how other existing protocols informed their methods and approach in an impact analysis.
- It would be important for the Council, staff, and advisory body members to be mindful of the questions they ask and who may be in the room when information is shared. For example, some fishermen might prefer to talk 1:1 or be hesitant to discuss their operations in public testimony.

4.7 Guideline 7: Build appropriate capacity for working with LK and TK systems and subsistence information

Achieving the Council's goals with respect to LK, TK, and subsistence would require ensuring there is the appropriate capacity to work with these knowledge systems within and across the Council's decision-making process. The draft protocol refers to capacity building in broad terms because it involves having the means and ability, such as cultural awareness trainings, disciplinary backgrounds, etc., to work with these knowledge systems. In the case of TK, this includes an understanding of Indigenous worldviews, histories, and values that inform TK.

This effort would require a prioritization of LK, TK, and subsistence research by the Council, AFSC, and related funding entities such as the North Pacific Research Board. As described in Section 3, there is a need for greater scientific information related to LK, TK, and subsistence that is specific to the marine environment and fisheries under the Council's jurisdiction. In many ways, increased capacity in the form of accessible and effective social science based on LK and TK that is appropriately process- and action-specific is at the crux of meaningfully incorporating LK, TK, and subsistence information into the Council's decision-making process. Council staff do not perform primary/original research, instead relying on secondary data when preparing analytical documents. Increasing capacity could include increased non-economic social science expertise across the Council's decision-making process to increase the utilization of existing data, such as additional representation on the Science and Statistical Committee (SSC), as well as increased focus on this work at AFSC and staff.

Ideas for moving forward:

- The Council could continue to cultural awareness trainings on an ad hoc basis for advisory bodies, new staff, and Council members.
- To the extent practicable, the Council could consider additional non-economic social science expertise across the Council's decision-making process.
 - This could include support for additional non-economic social science expertise at AFSC, encouraging cross-functional workgroups composed of AFSC and Council staff to collaboratively identify data gaps, priorities, and synergies that could be reviewed by the Social Science Planning Team, should the Council choose to reconstitute that body with a Chair or co-Chairs.
 - The Council could consider adding non-economic social science expertise to its SSC.

5. Onramps for LK, TK, and subsistence information

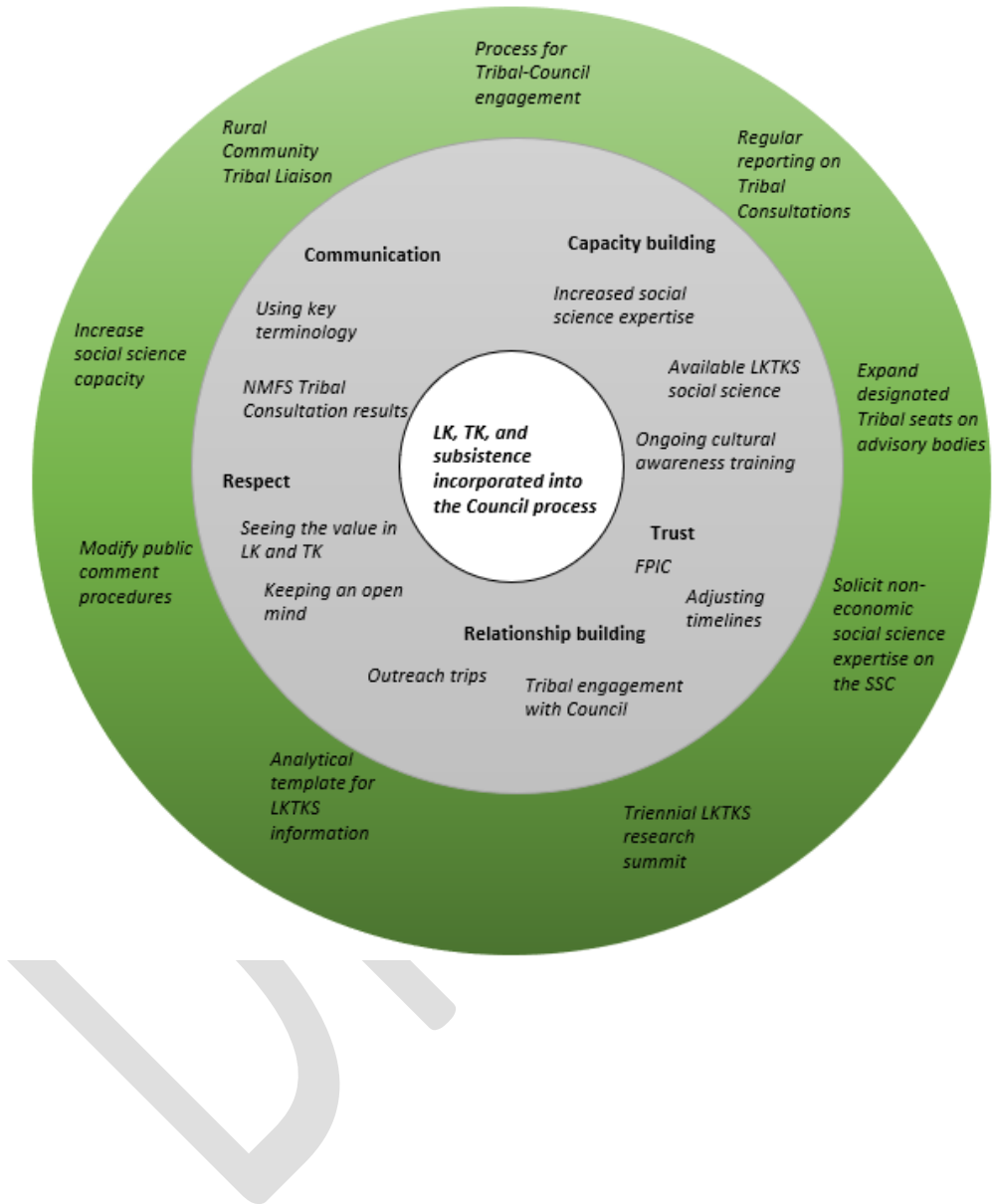
**Please note all onramps in this draft protocol, while written in the language of recommendations, are still being considered by the Taskforce at this stage in our work.*

At its January 2020 meeting, the Council tasked the LKTKS Taskforce with identifying potential onramps for including LK, TK, the social science of LK and TK, and subsistence information into the Council's decision-making process. The following section presents nine draft recommendations for the Council to consider. The Taskforce envisions the Council would have an opportunity to consider each onramp recommendation and determine whether it would want to initiate any process changes at a future meeting. To help the Council in its decision-making, the Taskforce has provided additional context and rationale for each onramp as well as ideas for moving them forward.

One consideration for the Council with respect to onramps is how to address a potential implementation period, should the Council select some onramps for further development. More specifically, the Council would need provide feedback on who should move the work forward. Would its preference be for staff to move forward with further developing these onramps, this Taskforce as a reconstituted body, or a Taskforce with new or modified membership? The ideas and next steps for moving each onramp forward are written in a way that indicates Council staff would carry out any future work because the Taskforce was originally formed to complete its work over a 2–3-year time period, after which it would disband.

As stated in the Introduction, each component of this draft protocol is interrelated. Figure 5-1 shows the relationship between the end goal of incorporating LK, TK, and subsistence information into the Council's decision-making process at the center, steps for moving forward the guidelines outlined in Section 4, and the subsequent draft onramp recommendations as the outer ring.

Figure 5-1 Interconnectivity among the Council's goals, guidelines, and onramps



5.1 Draft onramp recommendations

1. **The Taskforce supports the Council and Executive Director’s decision to add Rural Fishing Community and Tribal Liaison responsibilities to Council staff.**

The Taskforce sees this addition to staff responsibilities as a positive step towards supporting vital relationships, improving community engagement, facilitating and building relationships, and including LK and TK expertise.

2. **The Taskforce recommends the Council initiate a process whereby Tribes could engage directly with the Council.**

The Council has experienced consistent and increased engagement from Alaska Native Tribes and communities in its process. Alaska Native Tribes are sovereign nations with constitutions, bylaws, and a right to self-determination (Lindemuth 2017). This legal status distinguishes Tribes from the different fishery stakeholder groups engaging in the Council’s process.

Implementing a Tribal engagement process could afford the Council, Alaska Natives Tribes and/or Tribal Consortia meaningful opportunities for deliberative and inclusive dialogue as well as opportunities to build relationships and mutual trust. The Taskforce understands NMFS is the Federal agency responsible for undertaking Tribal Consultations under EO 13175, and it is not suggesting the Council engage formal Tribal Consultations. However, TK is held by people, and it is primarily shared orally. It is possible but not guaranteed that TK could be shared directly with the Council during these engagement sessions. The oral nature of sharing TK can make it challenging for Council staff to attain and use written forms of TK or the social science of TK to include in analytical documents, though its absence in written form does not mean TK does not exist on a particular issue. Additionally, given the rapid pace of change in social and ecological conditions across the Bering Sea region, there is an urgent need for timely and responsive information.

If the Council were to move forward with this recommendation, the Council would need to consider the administrative details of structuring these sessions. Points for consideration include participation, staff involvement, the timing of the sessions (e.g., during a Council meeting or on an ad hoc basis), and more.

Ideas for moving forward

- Task Council staff with developing a conceptual model for Tribal engagement. In making this determination, the Council would need to consider its own goals for pursuing Tribal engagement (e.g., receive regular input on specific actions). implementation phase.
3. **The Taskforce recommends the Council request NMFS engage with Tribes on issues related to the Council in a regular and ongoing fashion, and that the results would be communicated to the Council early in its decision-making.**

The Council has received consistent feedback from Alaska Native Tribes and their representatives on the importance of early, ongoing, and meaningful communication. The outcomes of Tribal Consultations could play a meaningful role in helping the Council understand Tribal perspectives, as well as the potential impacts of various actions. The Taskforce has discussed that there can be a disparity in timing between when the Council makes

a decision and when NMFS conducts Tribal Consultations. EO 13175 directs agencies to have "an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." However, NMFS has historically conducted Tribal Consultations after the Council selects a Preferred Alternative and this can make it challenging for Tribes and their representatives to having meaningful and timely input in the development of fisheries management and regulations.

The Taskforce has noted that engagement and Consultation sessions occurring earlier in the Council's decision-making process as well as more frequently with NMFS and Tribes could allow for more meaningful input as alternatives are analyzed and discussed. The Council's Tribal and Rural Community Liaison could work with NMFS Alaska Regional Office to develop a process for communicating the results and outcomes of Tribal Consultations. This would take cooperation and collaboration from the agency, but the liaison role could anchor a direct pathway for communication among Tribes, the Council, and the agency. The Council's Tribal and Rural Community liaison could provide reports to the Council on the outcomes of Tribal Consultations.

Ideas for moving forward

- If the Council were to move forward with this recommendation, it could task Council staff with coordinating with NMFS Alaska Regional Office staff, and particularly their Tribal Engagement Team, to create a communication plan for the outcomes of Tribal Consultations and engagement sessions.

4. The Taskforce recommends the Council modify the TOR and/or Council SOPPs for existing advisory bodies to include specific language to add one designated Alaska Native Tribal member seat.

The Taskforce supports the Council's recent action to add one designated Alaska Native Tribal seat to its Advisory Panel at the October 2022 meeting. The Taskforce is making this recommendation to facilitate expanded Alaska Native Tribal representation across the Councils advisory bodies (meant collectively to include Plan Teams, Committees, and the Science and Statistical Committee (SSC)). Modifying the TOR and/or Council SOPPs to add one designated Alaska Native Tribal seat across the advisory bodies could encourage Alaska Native Elders, Tribes, and communities to participate in the Council's process, feeling as though added representation is a meaningful invitation to participate.

Because there is a wide range of capacity and expertise among Alaska Native Tribes, the Taskforce is not recommending specific advisory bodies for one additional designated seat. Individual Tribes and Tribal Consortia are best equipped to recommend highly qualified individuals who have the skill set for specific Council bodies. For example, someone identified by the Tribe or community as a TK holder who meets the membership criteria of a particular body and has the interest and resources to support participation, should the Council choose to solicit for nominations.

If the Council were to move forward with this recommendation, the Council would need to consider the advisory bodies for which it may want to solicit nominations, how many seats the Council would consider, and whether regional or issue/action-specific expertise would be most beneficial. The Council would then need to task staff with drafting solicitation language or other points of consideration.

Ideas for moving forward

- The Council could task staff with developing a report that includes the following information a) the affiliation, discipline, and representation within all Council bodies (e.g., this would include disciplinary training, fisheries sector, regional and organization affiliation, and more); b) an approach and timeline for how the Council could consider adding one designated Alaska Native Tribal seat to its advisory bodies (e.g., take a tiered approach to ensure the Council is not reviewing all nominations at one time).

5. The Taskforce recommends the Council solicit nominations for expanded non-economic social science expertise on the SSC.

The SSC plays a vital role in the Council's process by reviewing all assessments, analyses, and reports for their scientific/analytical approaches, validity, and utility to inform the Council's decision-making. The Taskforce is not asking for a designated non-economic social science seat or for a particular count of seats. At the time of writing, the SSC currently has one non-economic social scientist out of the current 18 seats (October 2022). Strengthening expertise in non-economic social sciences could better support the use of best scientific information available across the Council's decision-making process. Additionally, expanded SSC expertise could provide analytical staff and AFSC scientists additional feedback on the methods or approaches used for assessments, analytical documents, and other reports through the Council's iterative process.

Ideas for moving forward

- The Council could direct staff to write a solicitation for SSC nominations that includes explicit language signaling the Council's interest and intent for nominating non-economic social science expertise.

6. The Taskforce recommends the Council host a workshop or summit on a triennial basis in concert with its research priorities process to solicit broad public input on selecting core research questions to assist the Council in managing the nation's resources.

The Council has received public comment from Alaska Native Tribal Consortia and fishery stakeholders that the current research priorities process is difficult to navigate and lacks transparency. Currently, the Council receives public input on its research priorities through the Plan Teams, which then make recommendations to the SSC. The SSC then reviews and prioritizes the research priority recommendations. It can be challenging for the public, particularly those that reside in remote communities, to participate across multiple Plan Team meetings. The research priorities that emerge from the Plan Team process often focus on stock assessment priorities.

However, as indicated elsewhere in this draft protocol, there is a need for increased work centered on LK and TK. A workshop or summit held in advance of the SSC's review of Plan Team research priorities, could provide a meaningful opportunity for the SSC and Council to solicit broad input on the key research questions and needs for future management. This approach could also provide a streamlined and inclusive opportunity for Alaska Native Tribes and Consortia,

industry, community representatives and more to bring forward their proposals and ideas on these important questions or topics.

Ideas for moving forward

- The Council's next review of research priorities is tentatively scheduled for February 2024. The Council could task staff with developing a workshop prior to, or in conjunction with, the February 2024 Council meeting to receive streamlined recommendations from Alaska Native Tribes and Consortia, industry, and community representatives on the key research questions and topics to inform fisheries management. The Council may also consider soliciting members from the SSC and/or AFSC to form a workshop planning subgroup.

7. The Taskforce recommends the Council initiate the development of an analytical template to formalize a pathway for including LK, TK, the social science of LK and TK, and subsistence information into the Council's decision-making process.

An analytical template that is specific to LK, TK, the social science of LK and TK, and subsistence could provide direction to analytical staff working with LKTKS information and an approach for incorporating that information in a standardized way to support Council decision-making. The template could also be shared with AFSC and NMFS Alaska Regional Office staff, if deemed desired and appropriate. Examples of the guiding questions that could be included in such a template are:

- Are there sources of social science of LK and TK in the LKTKS search engine related to the issue or action?
- Are there long-term (e.g., a generation or more) patterns of use of a particular resource for subsistence that would be impacted by the issue or action?
- What is the area(s) that long-term subsistence use of a resource has been established?

Ideas for moving forward

- The Council could task staff with developing an analytical template which could be reviewed by the SSPT.

8. The LKTKS Taskforce recommends the Council modify its public comment procedures to allow individuals who identify themselves as Indigenous or Alaska Native to provide an extended, culturally appropriate introduction without it counting against their allowed time limit for providing comments.

Alaska Native people have a unique way of introducing themselves which is an important step for relationship building as people get to know each other better. Traditional introductions often center the person in relationship with their family and community among other things, emphasizing the importance of connectivity.

Ideas for moving forward

- The Council could task staff with updating its SOPPs to reflect these changes to public comment procedures.

9. **The Taskforce recommends the Council develop a plan to increase capacity in non-economic social sciences, and LKTKS expertise more specifically.**

The Taskforce is making this recommendation because, in order to include LK, TK, the social science of LK and TK, or information about the subsistence way of life into the Council’s decision-making process, the science must be there. While the LKTKS search engine is a useful tool, and it is anticipated it could help analytical staff more easily locate sources of LKTKS information, there continues to be a dearth of social science research specific to the Council, its process, and regularly occurring actions. As stated above, LK and TK can yield broadscale observations about environmental and climate changes, shifts in species distribution, the importance of particular cultural or subsistence practices and more. It is the non-economic social sciences (e.g., marine anthropology, sociology, human geography, political science and others) that are uniquely positioned to collect and analyze LK and TK because of the methodologies that are required to work with these knowledge systems.

Ideas for moving forward

- The Council could direct the SSPT to complete and report to the SSC and Council its data gaps analysis. This analysis is an important first step towards understanding the current gaps and opportunities for social science, but particularly LK, TK, and the social science of LK and TK, in the Council’s process.
 - The Council could direct the SSPT to identify overarching social science projects or efforts that could directly inform the Council’s decision-making. Potential examples of such projects include large-scale, regularly occurring IFQ holder surveys, oral histories with Bering Sea crab skippers, etc. These types of broad-scale projects could be designed to achieve multiple research goals (e.g., understanding social and economic impacts or changes in a fishery as well as environmental observations).
- Determine the type(s) of capacity it would like to increase before determining whether existing staff might fulfill the desired role(s).

Table 5-1 Crosswalk of protocol guidelines and associated onramps

GUIDELINE	ASSOCIATED ONRAMPS
1. Understand key concepts and definitions related to LK, TK, and subsistence	4, 5, 7
2. Recognize and respect multiple knowledge systems	2, 7, 8, 9
3. Identify LK and TK holders, and other sources of LK, TK, and subsistence information	2, 5, 6, 7,
4. Engage in early and frequent communication with relevant entities	1, 2, 3, 6
5. Acknowledge and account for capacity limitations among relevant entities	1, 3, 6, 7
6. Adhere to local and cultural protocols that entities have established for sharing information, conducting research, and communicating LK or TK	2, 5, 8, 9
7. Ensure appropriate capacity for accessing and using LK, TK, the social science of LK and TK, and subsistence	4, 5, 6, 7, 9

6. Conclusions

The draft protocol provides guidance to the Council for identifying, analyzing, and incorporating LK, TK, the social science of LK and TK, and subsistence information. There are at least three key takeaways for the Council to consider. First, achieving the Council's goals related to LK, TK, and subsistence (namely better incorporating these knowledge systems into its decision-making process) *would take time*. In part, this is because of the *vital importance of building relationships and rapport with knowledge holders*. Because LK and TK are living knowledge systems, relationships and trust are foundational for moving forward. Additionally, incorporating LKTKS information into the Council's decision-making process would require *additional capacity*. As stated above, the Taskforce has defined capacity building broadly. However, incorporating these knowledge systems into analyses, reports, and other scientific documents or processes that inform Council decision-making would require additional social science of LK and TK that is relevant to the Council's jurisdiction and process.

In terms of next steps, the Taskforce envisions the Council would consider whether to adopt the protocol (Sections 1 – 4 of this document) to inform its decision-making process at a future meeting. At that same meeting, the Council would have an opportunity to consider each onramp recommendation and determine whether it would want to initiate any process change(s) at a future meeting. Implementing the onramps would require an implementation period. The Council would need to provide direction on its preference for completing any future work, namely whether Council staff would move forward with further developing/implementing onramps the Council selects, reconstitute the current Taskforce, or whether to solicit nominations for new or additional membership.

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Appendix A Taskforce Ground Rules

The LKTKS Taskforce is a nominated Council advisory body composed of Indigenous and non-Indigenous experts with diverse backgrounds

The Taskforce began its work with a flagship meeting in Anchorage, Alaska in January 2020. It was decided during the first meeting to use a consensus model to identify and prioritize objectives given the diverse worldviews and knowledge systems present in the group. The Taskforce planned for two to three meetings per year over the duration of the Taskforce's projected existence (projected for 2-3 years, i.e., 2020-2023). The anticipated timing of the meetings (e.g., January, April, and November) reflects the prioritization of subsistence hunting and fishing seasons and scheduled Council meetings. With the onset, and continuation, of the global COVID-19 pandemic, the Taskforce moved to a virtual setting in April 2020.

At the February 2020 Council meeting, the Council gave direction to the Taskforce for the duration of its work by taking the following action⁷:

The Council adopted two overarching goals, five related objectives, and several final work products:

Goals

1. To create processes and protocols through which the Council can identify, analyze, and consistently incorporate TK and LK and the social science of TK and LK into Council decision-making processes to support the use of best available scientific information in ecosystem-based fishery management.
2. To create a protocol and develop recommendations through which the Council can define and incorporate subsistence information into analyses and decision-making.

Objectives

1. Identify and define sources of LK and TK, and the social science of LK and TK, to support the use of best scientific information available in Council decision-making.
2. Provide guidance and analytical protocols to the Council on how to evaluate and analyze LK and TK, and the social science of LK and TK.
3. Provide guidance on how LK and TK, and the social science of LK and TK, could be included in Council decision-making processes.
4. Identify relevant and appropriate sources of subsistence data and information to use in Council decision-making processes.
5. Provide guidance on how subsistence data and information can be included in Council decision-making processes.

Work Products

1. Glossary of Terms.
2. Onramps (or 'points of entry') document that identifies where within the Council process to include LKTKS information and data (e.g., public testimony, analyses, etc.).
3. Protocol outlining best practices for the Council to identify, analyze, and incorporate TK and LK into Council decision-making documents as appropriate.

⁷ The Council's motion from February 2020 can be found here: <https://meetings.npfmc.org/CommentReview/DownloadFile?p=ce213a15-6672-4d0b-9fad-6b0719388804.pdf&fileName=D3%20MOTION%20.pdf>

4. Guidelines or protocols for Council staff for soliciting/identifying, analyzing, and using subsistence data and information in analyses.
5. Final report for the Council.

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Appendix B Related Executive Orders and Federal policy directives

Adopted and put into practice, the draft protocol can help the Council’s decision-making process be more responsive to a myriad of Executive Orders, Federal policy directives:

[Executive Order \(EO\) 12898](#) (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) was signed on February 11, 1994 and was a response to broader social and environmental concerns (59 Federal Register [FR] 7629; February 16, 1994). This EO directed Federal agencies “*to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.*”

[EO 13175](#) (Consultation and Coordination with Indian Tribal Governments) was signed on November 6, 2000 (65 FR 67249; November 9, 2000). This EO was promulgated “*in order to establish regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, to strengthen the United States government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes.*”

The [Presidential Memorandum of January 26, 2021](#) (Tribal Consultation and Strengthening Nation-to-Nation Relationships) affirms that the Administration “*...is committed to honoring Tribal sovereignty and including Tribal voices in policy deliberation that affects Tribal communities. The Federal Government has much to learn from Tribal Nations and strong communication is fundamental to a constructive relationship*” (86 FR 7491, January 29, 2021).

In November 2021, CEQ along with the White House Office of Science and Technology issued a [memorandum](#) naming Indigenous Traditional Ecological Knowledge as an “*...important body of knowledge that contributes to the scientific, technical, social, and economic advancements of the United States and to our collective understanding of the natural world*” and relates this knowledge directly to federal decision making.

Signed in January 2021, [EO 13985](#) (Advancing Racial Equity and Support for Underserved Communities Through the Federal Government) requires federal agencies to pursue a “*comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality*” (86 FR 7009; January 25, 2021).

Also signed in 2021, [EO 14008](#) (Tackling the Climate Crisis at Home and Abroad) directs federal agencies to “*make achieving environmental justice part of their missions by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts*” (86 FR 7619; February 1, 2021)

Appendix C Working with Alaska Native Tribes and their members

- *Understand and respect the sovereignty, intellectual property rights, and confidentiality of Tribes.*
- *Learn how a community refers to itself as a group of people (e.g., what is the Tribe's name?).*
- *Be honest and clear about who you are and the organization(s) you represent.*
- *Create long term relationships that are not solely for you or your organization(s) benefit or agenda.*
- *Listen and observe more than you speak.*
- *Be comfortable with long pauses in conversations and learn to value quiet moments.*
- *Casual conversation is important for building rapport – be genuine and a person first.*
- *Avoid jargon and acronyms.*
- *Be open about your knowledge of Alaska Native cultures and invite people to educate you on the cultural protocols in their community.*
- *If you are visiting a community and offered food or beverage, it is important to accept it as a sign of respect.*
- *Make promises you can keep.*
- *Obtain Free, Prior, and Informed Consent before conducting any research or using any information that you hear. Use only that information which is gained by working in the community for presentations, case studies, research, reports, technical memos, and so on with the expressed written consent of the individual, Tribal government, or Alaska Native Consortia you are working with.*
- *Allow people to introduce themselves and tell a story before asking questions.*
- *Be mindful of the questions you are asking and try to avoid intrusive questions early in the conversation. As trust builds, more personal and specific questions may be possible.*
- *Be patient and allow conversations to flow freely without being rushed.*
- *Ask for permission to take pictures or record meetings.*

**Language adapted from “American Indian and Alaska Native Culture Card: A Guide to Build Cultural Awareness.” <https://store.samhsa.gov/sites/default/files/d7/priv/sma08-4354.pdf>*

Appendix D Additional Resources

- American Indian and Alaska Native Culture Card: A Guide to Build Cultural Awareness. <https://store.samhsa.gov/sites/default/files/d7/priv/sma08-4354.pdf>.
- For additional Community Engagement Committee's final report. <https://meetings.npfmc.org/CommentReview/DownloadFile?p=7b10e15f-e306-446b-9f49-21b33e04ff1a.pdf&fileName=D1%20CEC%20Report%20February%202021.pdf>
- Working Effectively with Alaska Native Tribes and Organizations. 2010. USFWS. https://www.acf.hhs.gov/sites/default/files/documents/ana/native_affairs_desk_guide_fws.pdf
- Principles for Conducting Research in the Arctic, National Science Foundation. <https://www.nsf.gov/geo/opp/arctic/conduct.jsp>
- Circumpolar Inuit Protocols for Equitable and Ethical Engagement. 2022. <https://iccalaska.org/wp-icc/wp-content/uploads/2022/06/EEE-Protocols-LR-1.pdf>
- United Nations Development Group's Guidelines on Indigenous Peoples' Issues. 2009. <https://unsdg.un.org/resources/united-nations-development-groups-guidelines-indigenous-peoples-issues>

Appendix E Glossary of Terms

At its January 2020 meeting, the Council tasked a glossary of terms be completed by the Taskforce to guide its internal work.

Local Knowledge

Local Knowledge includes the observations and experiences of local people in a region, and people with significant experience or expertise related to a region, species, or fishery (e.g., people from outside the Bering Sea region may be considered Local Knowledge holders). Local Knowledge is often acquired over the course of a few generations or less, and it is the product of knowledge formation and dissemination based on personal, shared and inherited experience.

Traditional Knowledge

“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. [Traditional knowledge] 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 nonhuman 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 [traditional knowledge] – does not preclude change, nor does it equal only 'the past'; in fact, it inherently entails change.”—Raymond-Yakoubian et al., 2017

Subsistence

There are different ways of understanding or defining subsistence in Alaska, and those understandings influence how communities access resources and engage a subsistence way of life. For example, the State of Alaska has historically approached defining subsistence as traditional or customary use of resources and considers all Alaska residents qualified subsistence users. Federal policy, as designated under the Alaska National Interest Land Conservation Act of 1980, also focuses on the uses of wild resources while establishing a “rural preference” for subsistence rights for resource access and use on federal lands (Anderson 2016). While the State and Federal policies diverge on who can participate in subsistence activities, both definitions focus on the use and harvest of wild resources without recognizing the broader context in which they exist. An “Indigenous perspective” expands the understanding of subsistence by recognizing how hunting and gathering related activities are deeply connected to history, culture, and tradition (Raymond-Yakoubian, Raymond-Yakoubian, Monicreffe 2017). The importance of subsistence for Alaska Native communities, and the continuation of subsistence-related practices, is that it is a critical linkage to linguistic and cultural survival (Active 1999). Participation provides opportunities for different generations to learn from one another and pass on critical knowledge and value systems. As such, subsistence practices are meaningful beyond the harvest of nutritional and cultural goods as they create and reproduce linkages across multiple social and ecological domains.

Subsistence Data

Information which can be, or has been, observed and recorded as it relates to subsistence. Recorded subsistence data may include oral, written, or living memories of values and practices.

Protocol

A framework which articulates a series of steps or procedures to be followed in each situation. In the context of the Council, a protocol may explicate a series of best analytical practices for engaging and respecting human subjects on work related to Local Knowledge, Traditional knowledge, and Subsistence.

Consent

In the Council context, consent is a voluntary acknowledgment and agreement to participate in research, or to have one's information available or used, for analysis in decision-making. Consent is a process where the participant (i.e., individual or entity) is informed of both potential risks and benefits.

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