



## Local Knowledge, Traditional Knowledge, and Subsistence Taskforce REPORT

April 27-28, 2020: 8:30am-5pm ADT

Zoom Teleconference

*At the second meeting, the Taskforce discussed the Council's January 2020 action which modified the Taskforce's goals and objectives, ongoing work efforts and products, the timing and utility of a case study, and identified next steps for its work.*

### Taskforce members in attendance:

Kate Haapala (Co-chair, NPFMC)	Robert Murphy (APU)	Richard Slats (Chevak)
Sarah Wise (Co-chair, AFSC)	Julie Raymond-Yakoubian	Darcy Peters (Beaver)
Alida Trainor (ADFG)	(Kawerak)	
Rachel Donkersloot (Coastal Cultures Research)	Bridget Mansfield (NMFS)	
	Toby Anungazuk Jr. (Golovin)	

### Members absent:

Simeon Swetzof (St. Paul)

### Others in attendance:

Diana Evans (NPFMC)	Mellisa Johnson (Bering Sea Elders Group)
Diana Stram (NPFMC)	Mega Petersen (Ocean Conservancy)
Lauren Divine (St. Paul)	Raychelle Daniel (Pew)
Stephanie Madsen (ASPA)	Brenden Raymond-Yakoubian (Sandhill, Culture, Craft)
Baine Etherton (ADFG)	Rose Fosdick (Nome)
Martin Dorn (NMFS)	Austin Ahmasuk (Kawerak)
Frank Kelty (Unalaska)	

### Introductions

The meeting began with Taskforce member introductions, which were followed by an update from Dr. Diana Stram on the Climate Change Taskforce's (CCTF) work. The CCTF last met in February 2020 where CCTF members discussed developing a conceptual model for the Bering Sea ecosystem related to climate change impacts. The CCTF also discussed other pathways for providing short term observations and recommendations to the Council regarding long-term climate impacts and evaluations. Dr. Stram discussed that the Local Knowledge, Traditional Knowledge, and Subsistence (LKTKS) Taskforce could potentially help the CCTF develop socioeconomic indicators for the Bering Sea ecosystem climate model and give input to their work developing climate testimonials. It was discussed that a co-meeting between the Taskforces could be mutually beneficial (i.e., the LKTKS protocols and the CCTF's climate report), but **the LKTKS Taskforce discussed this co-meeting should be held in 2021.**

## Updates from the January 2020 Council Meeting

The LKTKS Taskforce dedicated time to discuss the feedback it received from the SSC, the AP, the Ecosystem Committee and the Council at the Council's January 2020 meeting in Seattle, WA. Each of these bodies expressed their appreciation for what the Taskforce had accomplished thus far, noting the expressed pathway forward was ambitious and would add value to the Council's decision-making process. The SSC did ask the Taskforce to consider issues of consent sooner than later, especially with respect to what it would take to collect and/or use multiple forms of data from different groups (e.g., spatial data from Tribes versus commercial fishing hot spots). The SSC also noted that the Taskforce may consider the Norton Sound Red King Crab (NS RKC) fishery as a case study to develop its protocols as there are data gaps and a need to involve a variety of local stakeholders.

The **Council** reviewed the LKTKS Taskforce's draft workplan and [report](#) at the January 2020 meeting, and took action to authorize Goal 1 and modified Goal 2.<sup>1</sup>

*Goal 1 Authorized: 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 (EBFM).*

*Goal 2 Original: To create clear direction(s) for the Council regarding how impacts to subsistence are defined and incorporated into analyses as well as mitigation strategies for potential impacts to subsistence resources or uses of those resources*

*Goal 2 Amended and Authorized: To create a protocol and develop recommendations through which the Council can define and incorporate subsistence information into analyses and decision-making.*

Related, the Council did not adopt Objective 6, instead only adopting Objectives 1-5 found in the LKTKS Taskforce's January report.

~~Objective 6: Identify existing measures and potential opportunities to mitigate impacts to subsistence resources and subsistence resources users~~

The LKTKS Taskforce discussed the Council's modification of Goal 2 and the removal of Objective 6 at length with many Taskforce members expressing concern and disappointment over the changes. Although the Taskforce understood the Council's action as a point of clarification, providing direction that the Council has primary authority for developing mitigation strategies, the 'mitigation' and 'impacts' language reflects the [Bering Sea Fishery Ecosystem Plan](#) (BS FEP). The BS FEP was developed with significant input from Bering Sea researchers, Council staff, and regional stakeholders. Some Taskforce members involved with the development of the BS FEP also noted that this Action Module was developed with an understanding that there are currently gaps to understanding impacts to subsistence which the LKTKS Taskforce was specifically designed to address. Finally, those Taskforce members who engage in a subsistence way of life emphasized that point that Council actions can have material and direct impacts for subsistence resources and users underlying the need for best available science to support effective decision-making. For these reasons, **the LKTKS Taskforce recommends the Council authorize the original Goal 2 language, including the language of mitigation and impacts.**

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<sup>1</sup> The Council's motion from January 2020 on the LKTKS Taskforce's goals and objectives can be found here: <https://meetings.npfmc.org/CommentReview/DownloadFile?p=ce213a15-6672-4d0b-9fad-6b0719388804.pdf&fileName=D3%20MOTION%20.pdf>

## Workplan Revisions

The Taskforce discussed and provided feedback on the updated [workplan](#), including new language outlining the benefits of LKTKS for the Council's process (i.e., more responsive to National Standards 2 and 8, addressing data gaps, and improving local relevancy), clarifying that LK and TK includes ecological elements as well as people's values and perceptions related to the environment, changes to the definition of subsistence, and work to date on work products.

After the January 2020 meeting, the Taskforce wanted to revisit its working definition of subsistence which aligned with the Council's January 2020 motion tasking the group to create a glossary of terms. Taskforce discussion on subsistence emphasized the complexity of this terminology; and that state or federal definitions of subsistence are limited as they pertain to subsistence use rather than its social, cultural, and spiritual value.

Although the Taskforce discussed different pathways for communicating subsistence to the Council and its committees like a narrative format, the Taskforce has not yet reached consensus on a definition for subsistence. A plan of action was developed and agreed upon to move this task forward. This work will continue in the development of the LKTKS workplan and glossary of terms.

## Work Products

### *Sources of LKTKS*

The LKTKS Taskforce reviewed and discussed how to best organize sources of LK, TK, the social science of LK and TK, as well as subsistence for effective and appropriate access. Part of the Taskforce's discussion on LKTKS sources included an update from Dr. Bobby Murphy who co-led a course with Dr. Brad Harris at Alaska Pacific University for the Spring 2020 semester. Graduate and undergraduate students supported the Taskforce's work by identifying some published sources of LKTKS and curating a [bibliographic spreadsheet](#). The Taskforce thanked Dr. Murphy and the APU students for their work and envisions this type of tool will support protocol development. Further, the Taskforce discussed how a bibliographic spreadsheet or database might be useful for analysts working to include LKTKS in Council documents and analyses. To date, a draft application has been created using R (R Core Team 2020) and the package *shiny*, which enables the end user to query the LKTKS temporary database using a variety of search terms and parameters.

The Taskforce discussed the parameters of the database as well as identifying (and designing for) appropriate users. Topics discussed included some concern over characterizing what counts as an authoritative or legitimate source of knowledge. For example, peer reviewed publications constitute one form of knowledge. Additional sources of information such as metadata or subsistence maps based on LK and TK expertise is no less valid, but may not have undergone academic peer review, though they may have undergone other types of legitimate peer review (e.g. marine mammal hunters reviewing maps of marine mammal harvest areas). White papers or technical reports may be informative as well. Taskforce discussion also emphasized the bibliographic tool is only a start to this work and will not be exhaustive at completion. As such, it can be considered an evolving document, and should not be understood as a stand-in for the necessary relationship building with LK and TK holders. Moving forward, the Taskforce will further identify sources of LKTKS, build out the spreadsheet, obtain potential user feedback, and identify potential platforms for housing this tool while considering confidentiality, ownership, and copyright issues.

## *Onramps for Local Knowledge, Traditional Knowledge and Subsistence*

The Council authorized the LKTKS Taskforce to produce an onramp document identifying and providing rationale for potential points of entry for LKTKS into the Council's process. After significant time discussing a list of possible onramps, the Taskforce recommends exploring these four onramps further:

1. **Tribal liaison: The Taskforce recommends the Council consider adding a Tribal liaison to staff.** In support of previous stakeholder requests to appoint a tribal liaison to facilitate relationships between tribes and the Council across regions. This recommendation is in line with recent conversations by the [Community Engagement Committee](#). Fulfilling the Tribal liaison role may require a new hire with training and expertise in cultural awareness training and mediation or shifting the tasking responsibilities of an existing staff member who could also be dedicated to LKTKS issues and analyses. The Taskforce felt a Tribal liaison would expand communication networks and facilitate the transfer of flagged and valuable information across rural fishing communities and Council staff in a reduced timeframe. The beneficial role in such "bridging" personnel has been well documented across resource management systems globally (e.g., Berkes 2009; Salomon et al., 2011; Weiss et al., 2013), and in US fisheries (e.g., Johnson 2011; Johnson and McCay 2012; Levesque et al., 2017; Wilson and MacDonald 2018).
2. **Tribal engagement in the B Reports: The Taskforce recommends the Council initiate a process whereby Tribes or a designated representative be invited to give a report and update in the Council's B Reporting process.** This report could be an opportunity for tribes to regularly engage the Council to receive input and LKTKS information on a regular and timely basis. This coordinated approach could also reduce the time and travel burden for some stakeholders who may otherwise choose to engage the Council process individually. It is possible that establishing this process could require dedicating staff resources to work with tribes as appropriate or needed. The Taskforce sees tribal engagement in the B Reports as an opportunity to build relationships, trust, and understanding between the Council and Tribes. Moving forward, the Taskforce will further develop guidelines or parameters on how to structure this type of reporting. Some potential considerations include whether such reporting should be included at all Council meetings, whether it is appropriate to give specific time allowances, how to make the opportunity available to tribes in an equitable manner, and identifying the appropriate authorized tribal representatives to engage the Council.
3. **Council analyses: The Taskforce recommends a section for LKTKS be included within Regulatory Impact Review (RIR) and Social Impact Assessment (SIA) documents.** RIRs required by Federal law and are completed by analysts to help the Council draw conclusions about how the alternatives analyzed may provide for [or put at risk] the sustained participation of fishing communities and/or minimize adverse economic impacts on such communities, per the language of National Standard 8. SIAs are tools to gauge the sociocultural impacts of particular management actions and the specified range of alternatives. The Taskforce noted the Communities section of an RIR and SIAs are an appropriate place for LKTKS to be included in legally required analyses. The Taskforce would like to review staff templates for these documents, and make recommendations in its protocols for how to identify, analyze, and incorporate LKTKS.
4. **Expanding Tribal, LKTKS, and social science expertise: The Taskforce recommends the Council consider increasing tribal, LKTKS, and social science expertise on its Plan Teams, Committees, and in developing research priorities.** This pathway was preferred over a standing committee for LKTKS as it may require less time and financial commitment from the Council

and stakeholders (compared to creating a new committee). Adding this additional expertise as appropriate could reduce the existing gaps in data and expertise, further helping to balance diverse voices including those of traditional and local knowledge holders, and tribes. Inclusion of tribal, TK, and/or LK representation on various committees or Plan Teams would also provide opportunities for real time knowledge transfer during meetings, and an enhanced approach for input and recommendations when reviewing LKTKS information across all issues going before the Council.

The Taskforce agreed to explore and discuss these four initial recommendations further in its protocol development, and to revise and update the current onramp document draft for its next meeting.

### **Norton Sound Red King Crab Case Study**

At the [January 2020 Council meeting](#), the SSC reiterated its February 2019 recommendation to the NS RKC stock assessment authors that LK and TK related to the summer and winter NS RKC fisheries could make a valuable contribution to understanding the spatial patterns, size distributions, changes in spatial distribution, and migratory behavior. Related, the SSC suggested the LKTKS Taskforce could use the NS RKC fisheries as a case study to advance its work on protocol development, while working alongside the CCTF on their work on long-term, strategic recommendations on how to adapt to climate change.

Dr. Sarah Wise gave a presentation on the potential of using the NS RKC fisheries as a case study for the LKTKS Taskforce, highlighting opportunities to groundtruth the proposed framework and protocols, identifying sources of LK and TK, articulating the appropriate pathways for collaboration between the Council, LK and TK holders, and others. Taskforce members from the region noted this was a timely case study, especially considering ongoing climate and economic impacts to the fisheries. However, the Taskforce also discussed the importance of developing a community-driven case study, which may not coincide with the NS RKC. For this reason, **the Taskforce would like to better understand regional interest in this work before moving forward**. Also of concern was the feasibility of any activity in the field while the threats of Covid-19 exist. Maintaining the underlying commitment to “do no harm,” the Taskforce believed it would be wise to revisit the idea at our next meeting. Similarly, some Taskforce members noted a case study may be more useful to the Taskforce’s protocol development later in the process once a framework has been identified. The Taskforce noted the importance of developing guidelines and best practices for the Council, but also the need for its protocols to be action-oriented. As such, the Taskforce discussed it may be necessary to consider approaching protocol development while looking at a singular case study as well as the Council’s process. **The Taskforce will revisit this case study in 2021**, in line with the timeline of the CCTF communicated by Dr. Diana Stram.

### **Ongoing Online Fishing Community Mapping project**

The Taskforce received an update from Dr. Sarah Wise on ongoing work by the Alaska Fishery Science Center and staff who are developing the Bering Sea Fishery Ecosystem Plan Dashboard, Community Profile Dashboard, and community-centric story maps. These web-based tools can provide staff and the public new ways of interacting with and engaging social and economic data related to federal fisheries. The Taskforce dedicated time to discussing how subsistence information might be displayed on these web-based tools, noting the need to address confidentiality issues, how frequently the data will be updated, community consent for displaying subsistence data, and acknowledgment that tribes may have subsistence data that is not appropriate to share in open, public-facing formats. This data may be relevant; however more detailed discussion is required regarding access and confidentiality. While members agreed

that the Taskforce is a strong first step in building and maintaining relationships, it was emphasized that the process is in fact just beginning and requires continued commitment and shared understanding.

### **Public Testimony**

The Taskforce received public testimony from Raychelle Daniel and Brenden Raymond-Yakoubian. Raychelle Daniel supported the Taskforce's recommendation to re-include the language of mitigation and impacts to subsistence in Goal 2. Ms. Daniel also noted the importance of cultural training, encouraging the Taskforce and staff more broadly to engage expertise within the region. Brenden Raymond-Yakoubian emphasized the importance of TK. He stated that TK should be included alongside western science in all documents produced by the Council. Mr. Raymond-Yakoubian also noted that TK has the potential to inform decision-making, and the LKTKS Taskforce has a role in designing systematic processes for integrating TK. One suggestion offered to the Taskforce for systematically integrating TK across the Council's decision-making process is to evaluate the Council's process as a whole and at each onramp individually.

## References

- Berkes, F. (2009). Evolution of co-management: role of knowledge generation, bridging organizations and social learning. *Journal of environmental management*, 90(5), 1692-1702.
- Johnson, T. R. (2011). Fishermen, scientists, and boundary spanners: cooperative research in the US squid fishery. *Society & Natural Resources*, 24(3), 242-255.
- Johnson, T. R., & McCay, B. J. (2012). Trading expertise: The rise and demise of an industry/government committee on survey trawl design. *Maritime Studies*, 11(1), 14.
- Levesque, V. R., Calhoun, A. J., Bell, K. P., & Johnson, T. R. (2017). Turning contention into collaboration: engaging power, trust, and learning in collaborative networks. *Society & Natural Resources*, 30(2), 245-260.
- Salomon, A. K., Gaichas, S. K., Jensen, O. P., Agostini, V. N., Sloan, N. A., Rice, J., & Babcock, E. A. (2011). Bridging the divide between fisheries and marine conservation science. *Bulletin of Marine Science*, 87(2), 251-274.
- Weiss, K., Hamann, M., & Marsh, H. (2013). Bridging knowledges: understanding and applying indigenous and western scientific knowledge for marine wildlife management. *Society & Natural Resources*, 26(3), 285-302.
- Wilson, L., & MacDonald, B. H. (2018). Characterizing bridger organizations and their roles in a coastal resource management network. *Ocean & Coastal Management*, 153, 59-69.