



# Discussion of SAB Review of Indigenous and Local Ecological Knowledge (ILEK)



## A Presentation to the NOAA Science Advisory Board

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# Outline



- Purpose
- Issue
- Presentation of Briefing
- NOAA Coordination and Views
- Desired Outcome



# Purpose

- *To discuss NOAA's response to the SAB's recommendations on **indigenous and local ecological knowledge.***



# Issue

- NOAA commends the SAB for taking on this very important issue
- NOAA recognizes it could improve how it integrates ILEK into various programs and processes
- The most effective way to do this is by encouraging and empowering existing programs to adopt these principles regionally



# Development of guidance and strategies



## Recommendations for NOAA as an organization

- i. Creation of **NOAA-wide policies** for engaging with both ILEK holders and ILEK experts at the stages of acquiring ILEK and applying the knowledge in assessments and other uses would help NOAA personnel in the engagement process.
  - ii. Greater opportunities for **training and other support** for NOAA personnel working with ILEK holders and ILEK experts - including cross-regional coordination and collaboration - would help NOAA personnel in the engagement process.
- Discussion: We believe a strategy or guidance document implemented regionally through existing NOAA programs would be a more effective approach.



# Funding

## Funding for ILEK research and engagement

- i. Dedicated funding for ILEK would help in the access and integration of ILEK in NOAA's resource management initiative.
- ii. The creation and funding of an internship program for undergraduate/graduate students and postdoctoral fellows in ILEK at NOAA line offices would assist NOAA in the access and integration of ILEK in NOAA's resource management mission.

### Discussion:

- Funding provided by other sources to gather, track and manage information would be useful for NRDA
- Look at current funding sources for data and research
- Focus on a national perspective



# ILEK and MSEs (a path for formal and quantitative integration in management)



## ILEK engagement in management

- iii. The creation of a proactive strategic team with NOAA members from each region who are skilled in ILEK, ILEK holders/leaders, and experts from outside NOAA would help NOAA staff in the access and integration of ILEK in NOAA's resource management mission.
- iv. The further development of protocols to incorporate co-management with indigenous and local communities including tribal authorities, where appropriate, would likely encourage participation in ILEK programs, help foster trust, and potentially enhance the efficacy of management planning.

### Discussion:

- ILEK's integration in resource management can be achieved via Management Strategy Evaluation (MSEs). MSEs involve formal and quantitative assessment of the consequences of a range of management strategies or options to assist determine which approach will be the most appropriate to meet the operational objectives of, for example, a target fishery.
- MSEs include quantification of best available science and, as appropriate, knowledge of indigenous peoples and local knowledge systems.
- MSEs involve decision-makers and stakeholders/local indigenous peoples (e.g., via workshops) throughout the process to ensure the performance statistics capture the management objectives and are understandable. See for example:  
[https://www.nefsc.noaa.gov/press\\_release/pr2017/features/stakeholder-mse-herring/](https://www.nefsc.noaa.gov/press_release/pr2017/features/stakeholder-mse-herring/)



# Examples where Sea Grant (SG) is already working with ILEK



- In Louisiana, SG is working with tribes and other LK experts in determining risk perception and impacts of projected sea-level rise to enhance local stakeholder mitigation planning through visualization tools;
- Hawai'i SG is partnering with Native Hawaiian stakeholders to perpetuate and revitalize traditional resource management and stewardship practices that sustained self-sufficient and resilient coastal communities for centuries;
- The Great Lakes Indian Fish and Wildlife Commission, Wisconsin SG, and the Wisconsin DNR are developing protocols to retrieve “ghost nets” that have broken and drifted from whitefish and trout fishing areas. In the process, commercial, recreational, and tribal fishermen are protecting fish and the environment while resolving conflicts over use of lake resources;
- North Carolina SG has utilized a longstanding tradition of pairing local knowledge experts from its coastal communities with scientists to undertake joint fact finding research projects;



# Examples where Sea Grant (SG) is already working with ILEK (continued)



- Alaska SG has been working to conduct coastal resilience workshops in western Alaska and Southeast Alaska. These workshops have led to collaborative monitoring and adaptation strategies that integrate local knowledge of key cultural species important for subsistence. One outcome is an Adapt Alaska website to provide information on key environmental changes, local knowledge of changes, a toolbox of adaptation strategies, links to other tools available on the web important for Alaskan communities, as well as a platform for collaboration;
- Current research being done through California SG is drawing on tribal knowledge to enhance the baseline characterizations of culturally and ecologically important coastal species;
- The Sea Grant program at the University of Guam provides opportunities for people to learn about the history and relationships of Chamorros and other Pacific peoples to natural resources.



# How Sea Grant (SG) incorporates ILEK research, extension, and education?



- SG research, extension, and education staff will be included in this effort to share and learn each other's experiences and perspectives on utilizing LK in their work.
- This *network visioning* opportunity is a mechanism by which the conversation that began at the 2016 SG Week TEK workshop can continue and further SG's leadership role in local knowledge integration for extension, applied research, and decision-making.
- This effort will provide best practices for community based monitoring in long-term research projects that include local communities as well as how SG programs incorporate LK formally into their research funding opportunities.
- This effort could also be used to help understand how to build collaborative programs that integrate local communities with state, federal, and nonprofits for enhancing resilience.
- Extension includes helping community leaders improve their understanding of changing conditions in their communities and implement adaptive strategies. In terms of education, local knowledge and key cultural understanding of the environment could be integrated into education activities at the local level.



# Research and Management



## For NOAA researchers and managers

- i. NOAA staff engaged in natural resources management would benefit greatly from the creation of a Best Practices handbook for ILEK information procurement, sharing, evaluating, and integrating with information from other knowledge systems.
- ii. NOAA researchers and managers would benefit from a web-based place to exchange ideas and experiences, containing examples, summaries of new publications, etc.
- iii. NOAA staff would benefit from greater exposure to existing tools and development of new tools for the integration of quantitative scientific data with quantitative and qualitative ILEK information.

## Discussion

- A handbook would be more useful than a policy statement
- Will consider use of a website in the future



# Regional Engagement



## For engagement efforts by NOAA regional offices

- i. Workshops on ILEK offered through the regional programs would be beneficial. These workshops could identify intersections between ILEK and NOAA resource management needs.
  - ii. NOAA regional programs would benefit from hosting a list of ILEK practitioners within the communities in their areas of jurisdiction for each NOAA office as well as names of NOAA staff with a history of interacting with the practitioners, and ensure that this list is shared within NOAA.
- Workshops covering specific programs would be useful
  - Need to be conducted with permission, guidance and participation of ILEK holders



# NOAA Coordination & Views



- Presentation summarized NOAA's feedback on SAB's recommendations
- Coordination with:
  - NOS
  - NMFS
  - Sea Grant



# Desired Outcome

- Informational briefing to provide feedback and facilitate a discussion on NOAA's response to the SAB's indigenous and local ecological knowledge report recommendations.