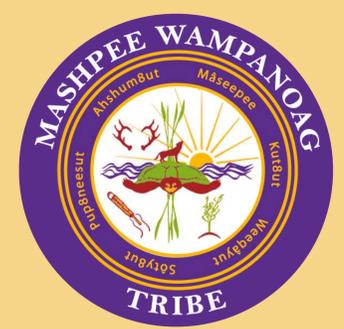


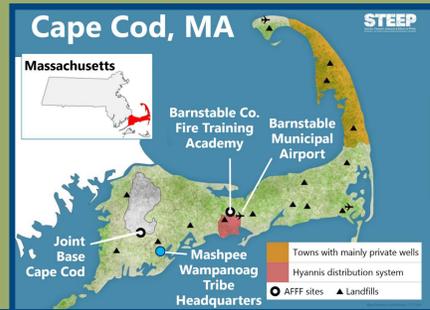
STEEP Community Engagement Core: Evaluating & Communicating PFAS Contamination with Tribal Communities on Cape Cod

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Background

- The Mashpee Wampanoag Tribe has concerns about PFAS exposures due to their proximity to sources of PFAS-contaminated groundwater
- Tribal members' traditional reliance on fish and shellfish harvesting from local waterways may lead to elevated exposures of PFAS, mercury, and other contaminants that can biomagnify in food webs
- Traditional public health guidance that focuses on reducing consumption often fails to recognize Indigenous cultural identities that value connections to local resources



Cape Cod, MA, with Mashpee Wampanoag Headquarters and sites of PFAS contamination

Objectives

- Understand Tribal risk perceptions and knowledge of PFAS
- Document connections between Tribal identities and consumption of local fish/shellfish and how PFAS may threaten those connections
- Co-design risk communication strategies that acknowledge Tribal cultural practices while mitigating exposure risks from PFAS

Methods

- Three focus groups and 13 interviews with Tribal members, Elders, and fishermen (March 2021 to May 2023, n=25).
- Community-wide online survey launched in July 2023 to evaluate Tribal cultural identities, fishing practices and consumption habits, PFAS knowledge, environmental risk perceptions, communications preferences, and trust in information sources.
- All data covered by Data Sharing and Ownership Agreement between URI. Data collection facilitated by a member of the Tribal government.

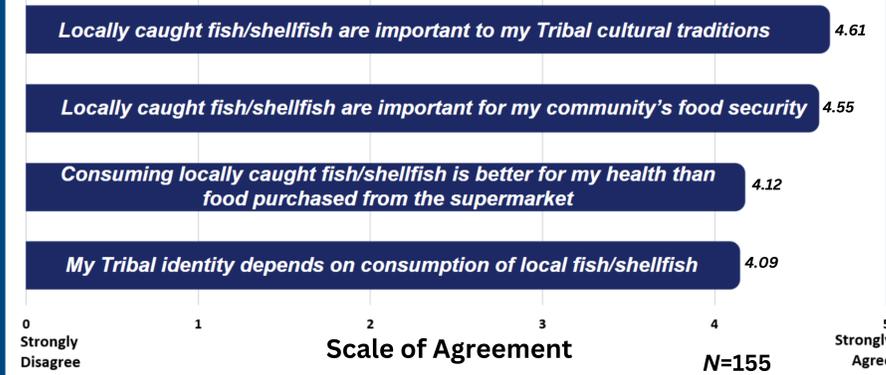


Recruitment postcard sent to all Tribal member households

Results

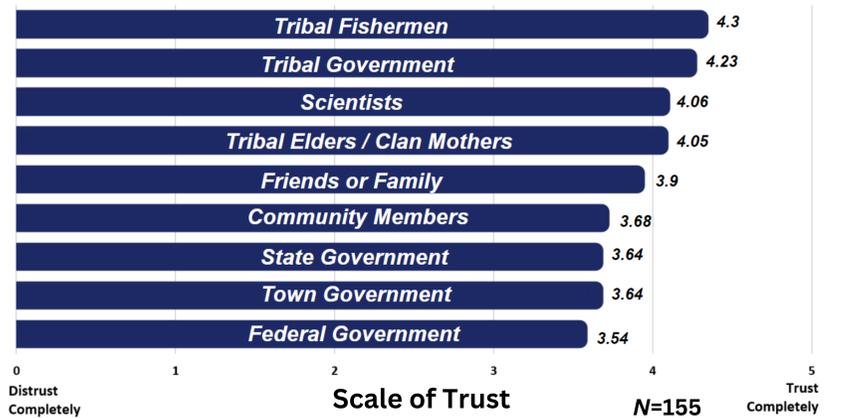
- 46% of survey participants eat fish multiple times per week, and **71% source fish/shellfish primarily from within the Tribal community**
- Losing access to fishing/shellfishing viewed as a **threat to Tribal identity**
- Participants rated cultural importance of fish/shellfish as 4.31 out of 5

Cultural Importance of Local Fish/Shellfish



- 65% of participants were "extremely concerned" about environmental contaminants in their community**, but only 28% were "concerned" about harmful health effects of consuming fish/shellfish from local waterways
- Tribal fishermen **rely primarily on physical markers of contamination** to determine safety of waterways (which cannot be used to indicate PFAS)
- 47% of participants had prior knowledge of PFAS, mainly from news or online. Interviews suggested generally **low levels of understanding about what PFAS are, their health risks, and how to avoid them**

Trust in Various Sources for Information about Contaminants



- The most trusted sources for information about PFAS were **Tribal fishermen, the Tribal government, and scientists**
- Desire to build up Tribal capacity for testing motivated by mixed trust in state and local government waterway closures

Discussion & Next Steps

- Traditional public health communication strategies (e.g., closing fishing areas, avoiding consumption of certain species) can conflict with Tribal cultural identities and practices. Culturally-grounded communication strategies about PFAS and other contaminants for Tribal groups are needed
- Future focus groups and workshops will allow us to co-create messaging strategies with Tribal members to effectively convey PFAS levels in local fish/shellfish and related health risks
- We will also explore additional environmental testing with the Tribe, which could include drinking water, house dust, and home-grown produce

“[Fishing] is something that we've done forever, and it's something that we should continue to do. It's a part of our identity.”
“I'm concerned for my kids, you know, and their children too. Is it going to harm us? Are we going to get cancer from this?”

Community Engagement & Tribal Outreach

STEEP's Community Engagement Core has engaged with Tribal members at community events to share information about PFAS and the STEEP SRP

- Hosted an information booth at the annual Mashpee Wampanoag Powwow to share resources on PFAS contamination and exposures, reduction tips, and about STEEP
- Presented about STEEP and PFAS at EPA Region 1 Tribal Summit hosted by the Mashpee Wampanoag Tribe



- Led hands-on activities and lessons about movement of PFAS and other chemicals through our bodies and ecosystems at the Preserving Our Homelands Tribal Ecology Summer Camp (with STEEP trainees)
- Planning for a PFAS film screening and panel session for members of the Tribal community in Spring 2024

Acknowledgements

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