Informing the North Coast MPA Baseline: Traditional Ecological Knowledge of Keystone Marine Species and Ecosystems

A Tribally-driven Project by the:
Tolowa Dee-ni' Nation (lead)
Cher-Ae Heights Indian Community of the Trinidad Rancheria (co-lead)
Wiyot Tribe (co-lead)
InterTribal Sinkyone Wilderness Council (co-lead)

Overview

- Baseline characterization
  - Nearshore marine habitats (rocky intertidal, soft-bottom intertidal and beach, kelp and shallow rock (0-30 m), offshore rocks)
  - How Tribal citizens interact with and manage selected keystone species within the habitat (consumptive and non-consumptive uses)
  - Areas of concern and perceived threats
  - Perceptions of the MLPA process and potential impacts from designated MPAs
  - Policy and management recommendations
  - Long-term monitoring recommendations

Overview

- Selected keystone species: abalone (4), clams (12), mussels (2), seaweed (6) and smelt (2)

- Archival and tribal community participatory research

- Each partner Tribe/Tribal org conducts research for their given geography and affiliated tribe(s)

- Ecotrust/Point 97 developed data survey tool for participatory research

Archival Research

- Data gathered from 120 sources

- Relational database schema with (potential) to link to GIS
  - Place > Resource > Activity > Media > Source

Table 4. Archival Materials Reviewed Related to Keystone Species

Tribe/Nation/Tribal organization	Places Documented with a Relationship to a Keystone Species	Archival Sources
Tolowa Dee-ni′ Nation	58	33
Trinidad Rancheria	31	43
Wiyot Tribe	41	25
InterTribal Sinkyone Wilderness Council	78	19
Total	**208**	**120**

Archival Research – examples of key findings

Types of "Use"

- Only two (2) references to (indirect) "recreational" use
    - Tolowa and Wiyot women using discs made from mussel shells for a "dice-like" game (Drucker 1937; Curtis 1924).
- "Commercial" use was never explicitly mentioned
- Several excerpts related to "trading" of resources and/or opportunity to harvest at a particular coastal place
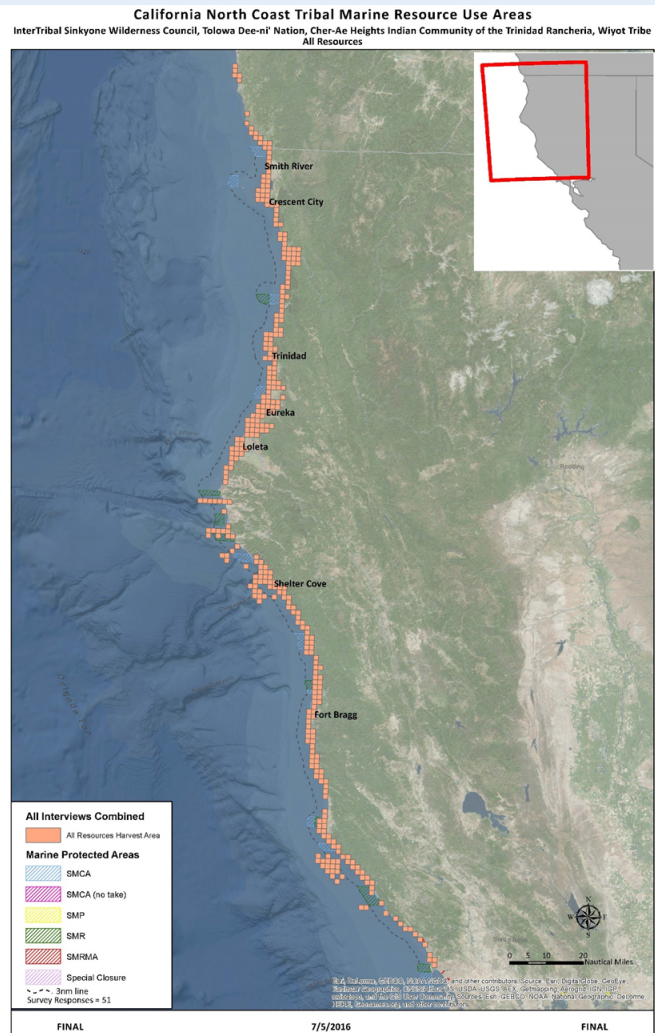
Excerpts

Interviews

- Data gathered from sixty-nine (69) interviewees
- Number of Interviews by Project Partner
  - Tolowa Dee-ni′ Nation-26
  - Trinidad Rancheria-10
  - Wiyot Tribe-10
  - Sinkyone Council-23
- Age
  - Range: 32-91 yrs old
  - Average: 60

Table 5. Enrolled Tribe of Interviewee (n=69)

Tribe	Interviewees
Tolowa Dee-ni′ Nation	25
Cher-Ae Heights Indian Community of the Trinidad Rancheria	9
Wiyot Tribe	8
Sherwood Valley Rancheria of Pomo Indians	4
Scotts Valley Band of Pomo Indians	3
Hopland Band of Pomo Indians	3
Redwood Valley Band of Pomo Indians	3
Coyote Valley Band of Pomo Indians	3
Dis-enrolled/not enrolled in federally-recognized Tribe	3
Yurok Tribe	2
Round Valley Indian Tribes	2
Potter Valley Tribe	2
Cahto Tribe of the Laytonville Rancheria	2
Total	**69**

California North Coast Tribal Marine Resource Use Areas
InterTribal Sinkyone Wilderness Council, Tolowa Dee-ni' Nation, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Wiyot Tribe
All Resources

Resource Use

Table 12. Interviewees that Harvest the Five Keystone Species (n=69)

Resource	Total Respondents	Percent of Respondents
Abalone	36	52%
Clams	54	78%
Mussels	54	78%
Seaweed	53	77%
Smelt	63	91%

Stewardship

- Overarching Themes
  - Live in a good way and give thanks—prayer
  - Don't take more than you need and can care for—don't waste
  - Inter-connectivity and inter-reliance of everything—community/responsibility to more than self
  - Abide by teachings passed down through generations—protocols and laws
  - Manage in a way than ensures species health and abundance that sustains Tribal citizens—maintain balance
- Techniques (e.g. spatial, temporal, seasonal, gear, morphological)
- *Excerpts*

Areas of Concern and Perceived Threats

- Overfishing
- Water Pollution
- Water Temperature

North Coast Tribal Marine Areas of Concern
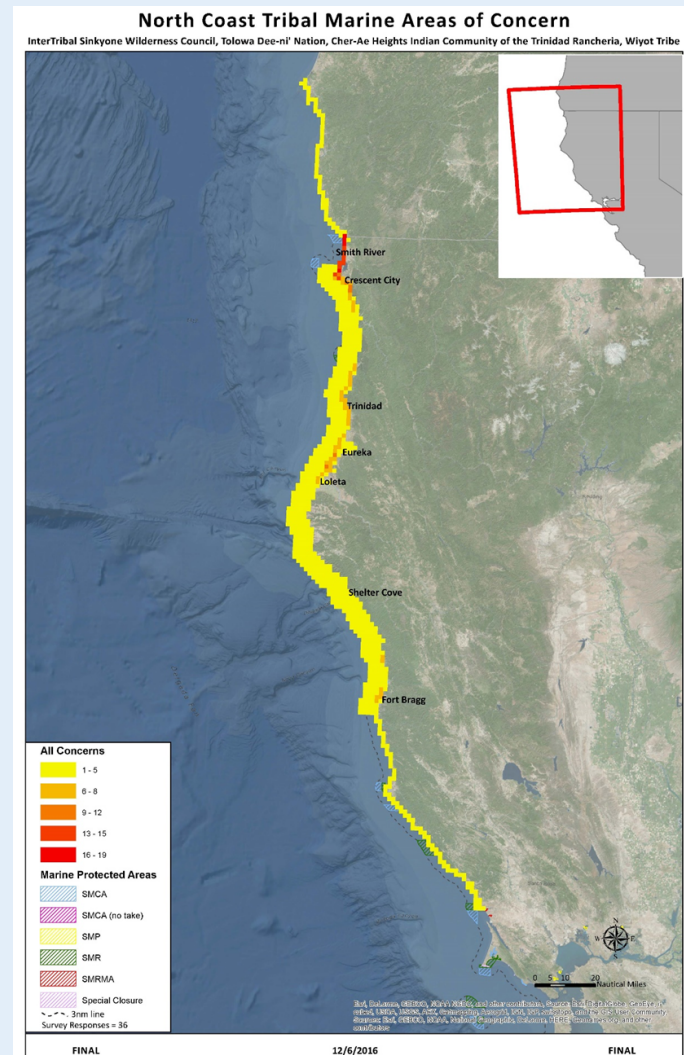
Participation and Perceptions of the MLPA process and outcomes

- Majority (69%) did not (directly) participate (n=67)
  - 54% not at all; 15% shared concerns with someone involved
- 66% are either neutral, dissatisfied or strongly dissatisfied with inclusion of local input (n=50)
- 96% are either neutral, dissatisfied or strongly dissatisfied with State license requirements for "tribal take" (n=55)
- 88% would purchase Tribal license, if Tribe issued them (n=66)
- 8 MPAs identified as directly impacting Tribal harvest

- Policy, Management and Long-term Monitoring Recommendations
- Lessons Learned…
- Questions…