

FEB 2023

Progress on integrating social science in the Delta

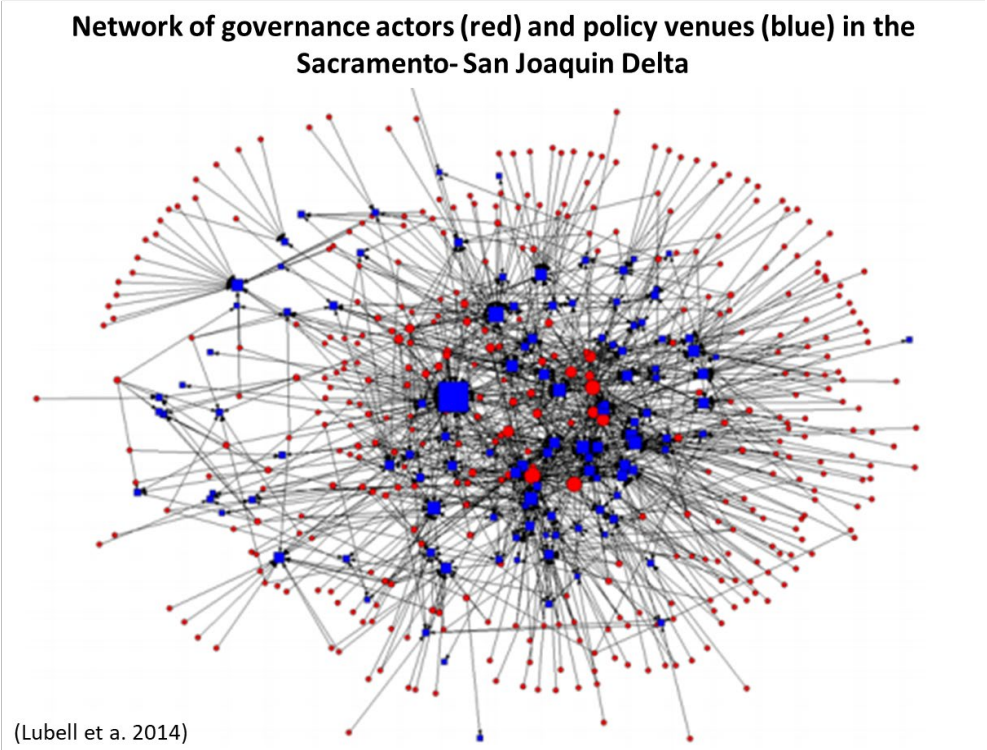


Delta
Stewardship
Council

A CALIFORNIA STATE AGENCY

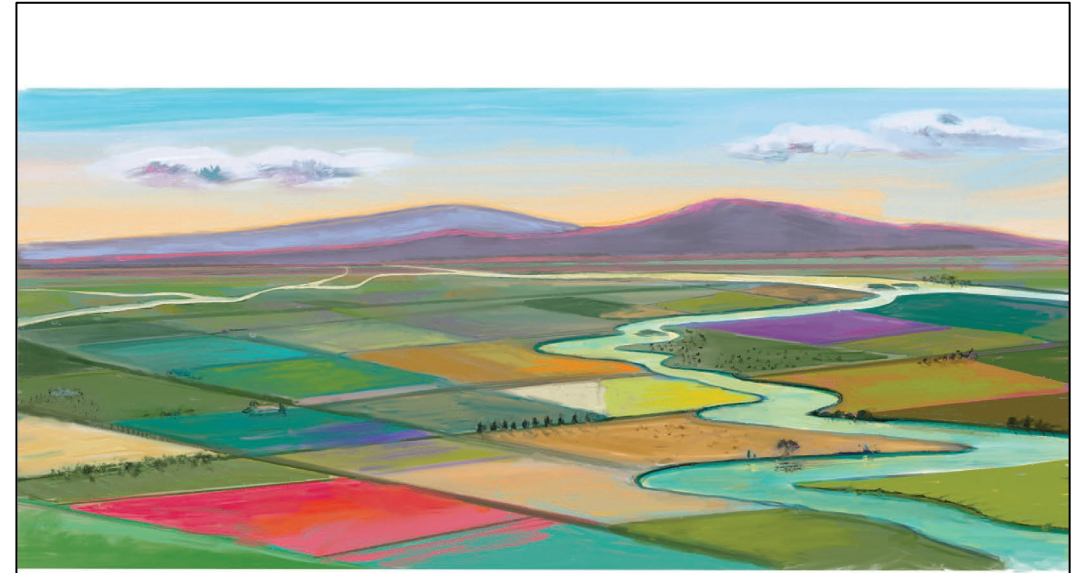
BACKGROUND

The Delta is a complex social-ecological system



Catalysts for Delta social science

- Delta Science Enterprise Workshop (2016)
- ISB review of Delta as Place (2017)
- Human Dimensions of the Delta Workshop (2019)
- Delta Plan 5-year Review (2019)
- Social Science Task Force (2020)



A Social Science Strategy for the Sacramento-San Joaquin Delta

Delta Social Science Task Force
Kelly Biedenweg¹, Ph.D.
James N. Sanchirico² (Chair), Ph.D.
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José Medellín-Azuara⁵, Ph.D.
Christopher M. Weible⁶, Ph.D.

March 2020



Social science contributions to natural resource management

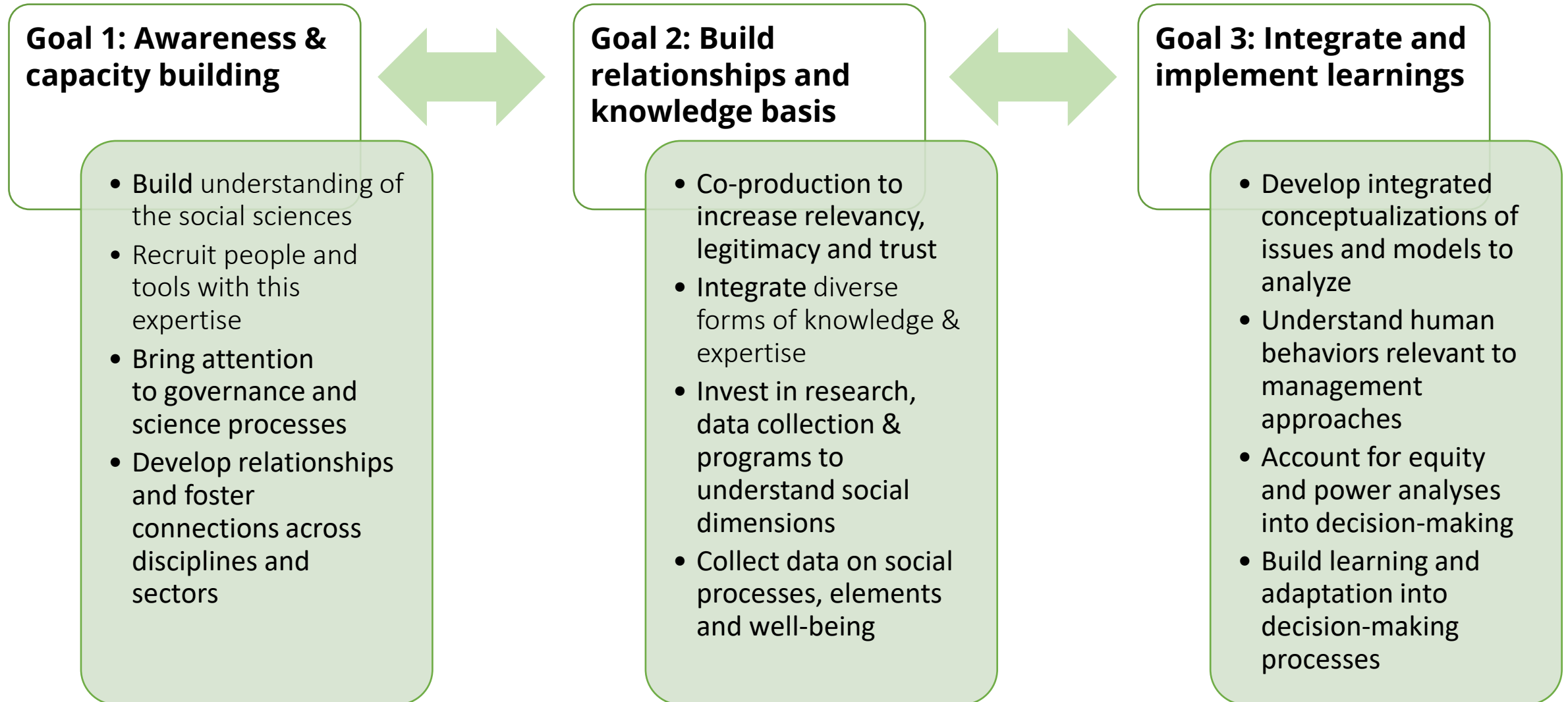


(Bennett et al. 2017)

- ➔ Inform governance structures and design
 - *e.g. How can the governance network effectively, efficiently, equitably and proactively coordinate to manage drought?*
- ➔ Improve equity of processes and outcomes
 - *e.g. Understand how & why different communities are impacted by different climate adaptation approaches*
- ➔ Incorporate understandings of human behavior into management plans or interventions
 - *e.g. Identify drivers of stewardship behaviors on private lands*

DELTA SOCIAL SCIENCE INTEGRATION PRIORITIES

Social science integration steps



Social science integration steps

Goal 1: Awareness & capacity building

- Build understanding of the social sciences
- Recruit people and tools with this expertise
- Bring attention to governance and science processes
- Develop relationships and foster connections across disciplines and sectors

Community of Practice

Social Science webinars

Advancing Interdisciplinary Research Symposium

Goal 2: Build relationships and knowledge basis

- Co-production to increase relevancy, legitimacy and trust
- Integrate diverse forms of knowledge & expertise
- Invest in research, data collection & programs to understand social dimensions
- Collect data on social processes, elements and well-being

Integrated Science Action Agenda

Science for Communities

Inroads for Traditional Knowledge

Funded social science research

Delta Residents Survey

Goal 3: Integrate and implement learnings

- Develop integrated conceptualizations of issues and models to analyze
- Understand human behaviors relevant to management approaches
- Account for ecological power analyses into decision-making
- Build learning adaptation into decision-making processes

Ecosystem Amendment

NCEAS workgroup

Delta Adapts

EJ Issue Paper

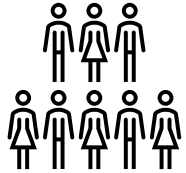
2023 Adaptive Management forum

HIGHLIGHTS

Why should we do more interdisciplinary work?



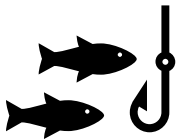
- Understand psychological diversity



- Improve public engagement



- Necessary to understand "wicked problems"



- Realistic resource management

Advancing Interdisciplinary Research Event

Training

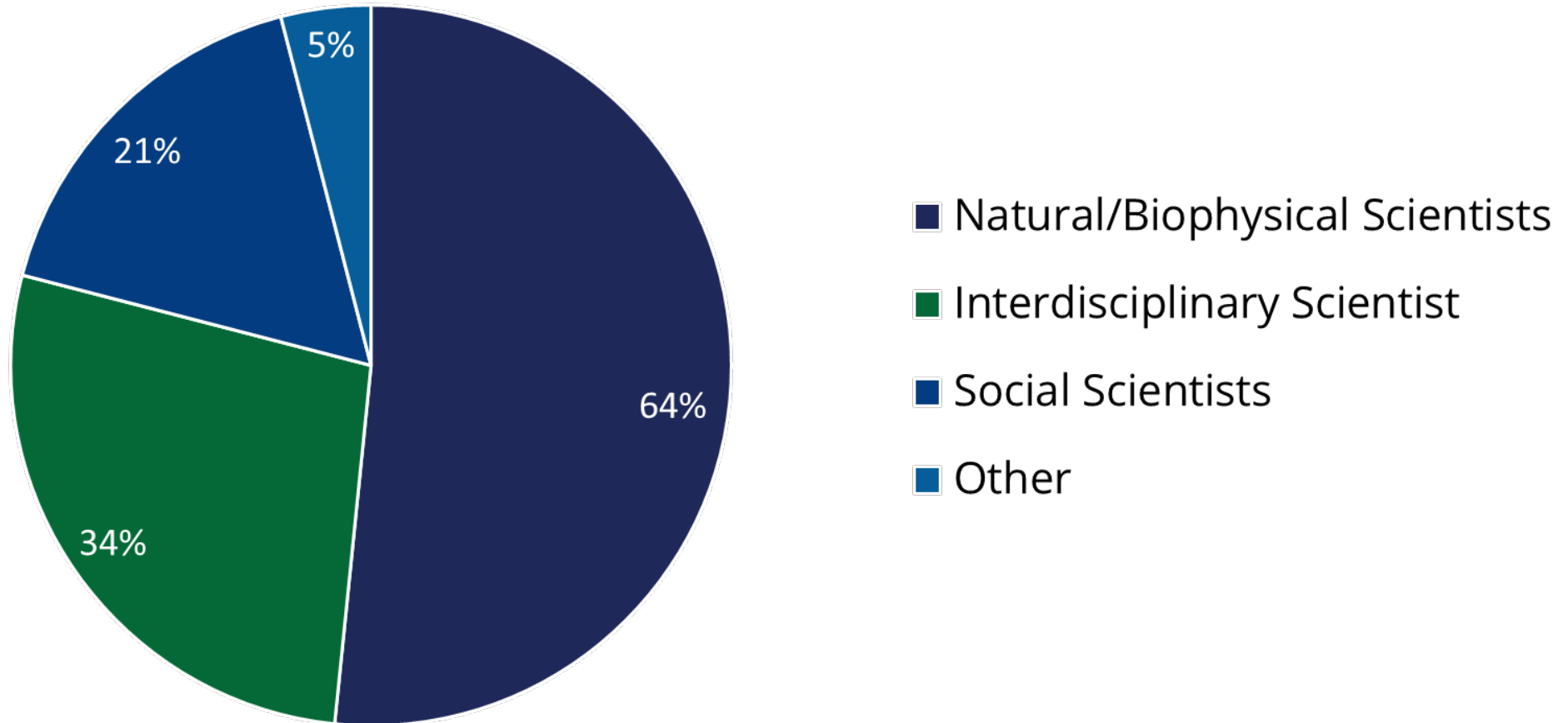
- Broad education about social science disciplines and integrated projects
- Audience polling questions to assess state of interdisciplinary work in the Bay-Delta

Interactive Workshop

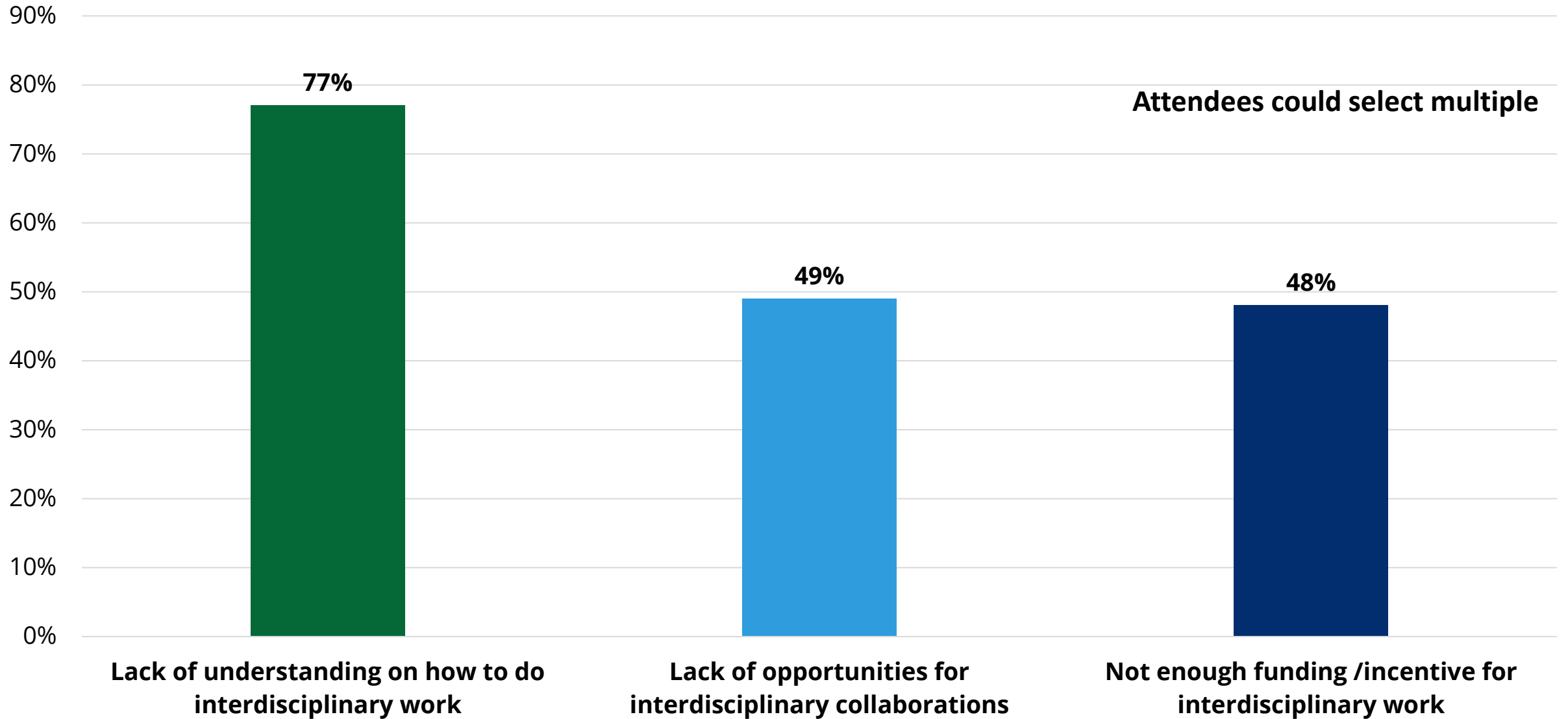
- Build partnerships with potential collaborators from across disciplines
- Develop mock interdisciplinary proposals to inspire creative, innovative ideas

In-person networking event

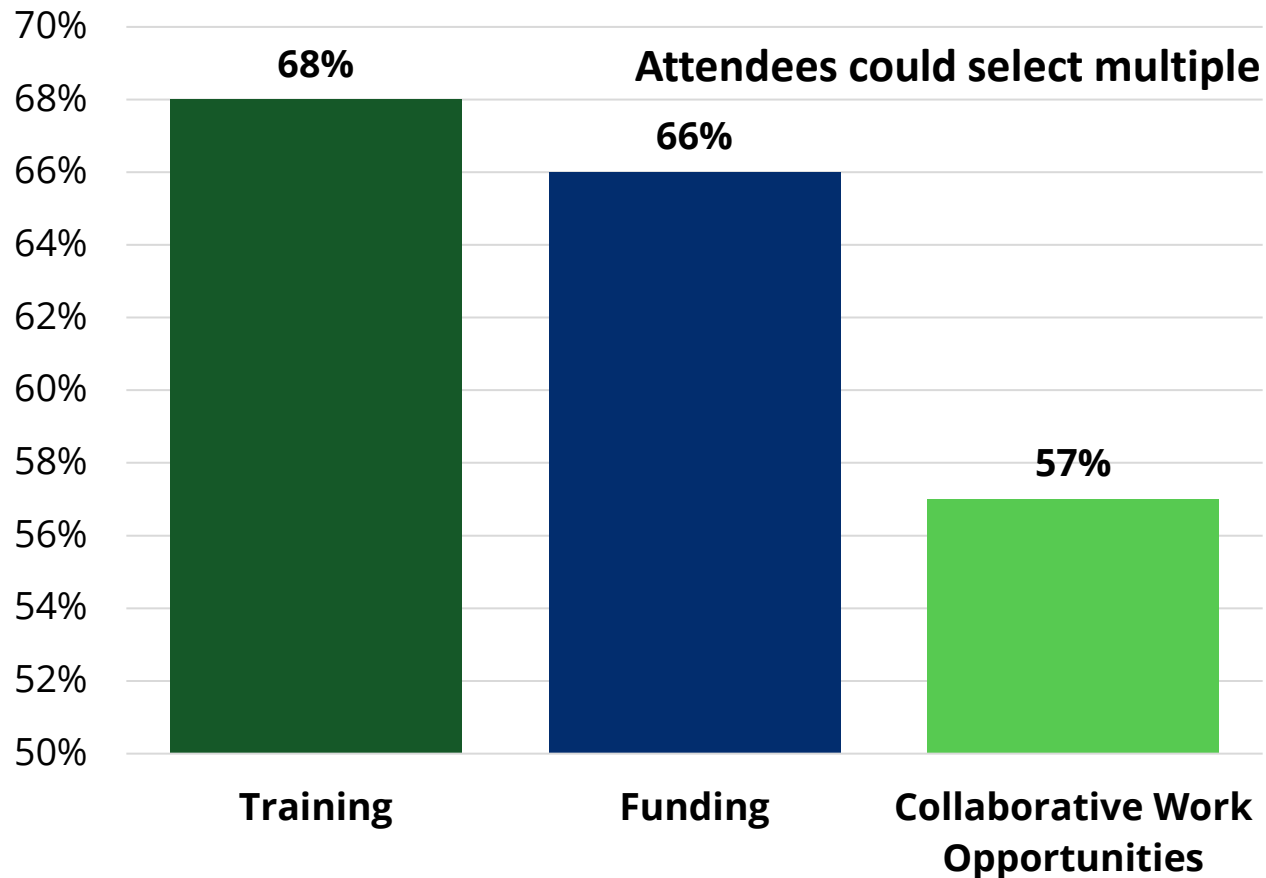
86 People logged on



What is inhibiting progress in the Delta?



What could advance interdisciplinary work in the Delta?

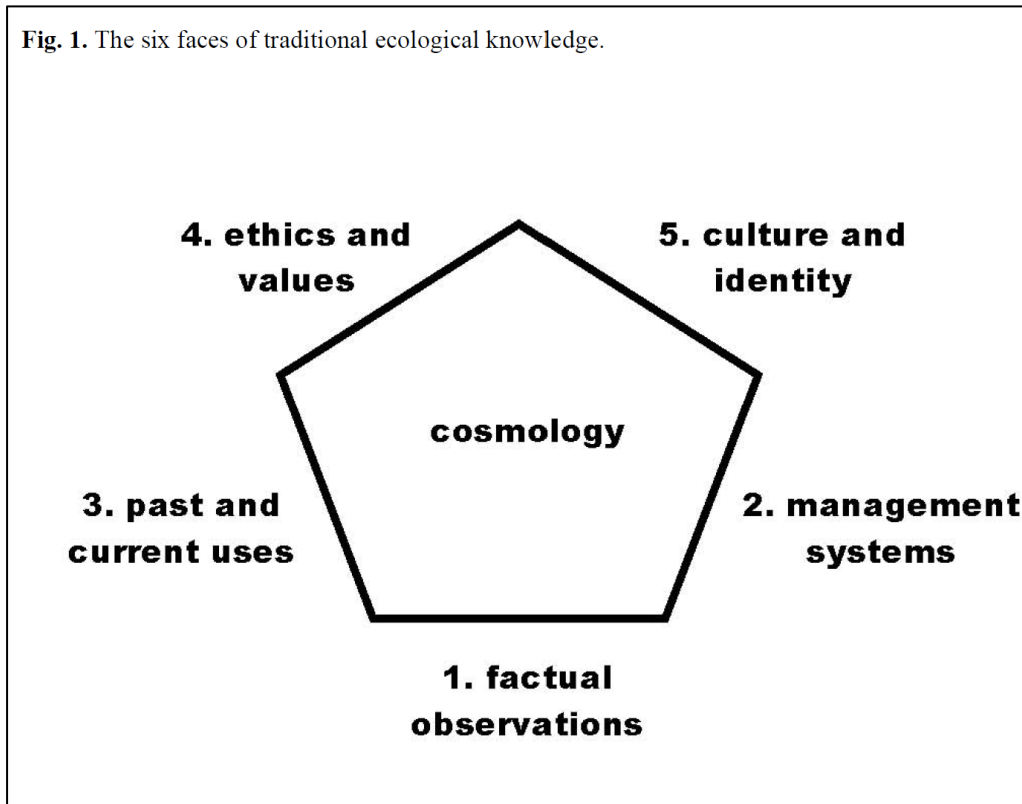


Opportunities Identified for Social Science Integration

- Collaboration with agricultural community for regenerative farming
- Wetland restoration guidelines for ecosystem services
- Drought scenario planning focused on community impacts

Assessment of Inroads for Traditional Knowledge in Delta Science and Decision-Making

Houde 2007



Hankins 2018

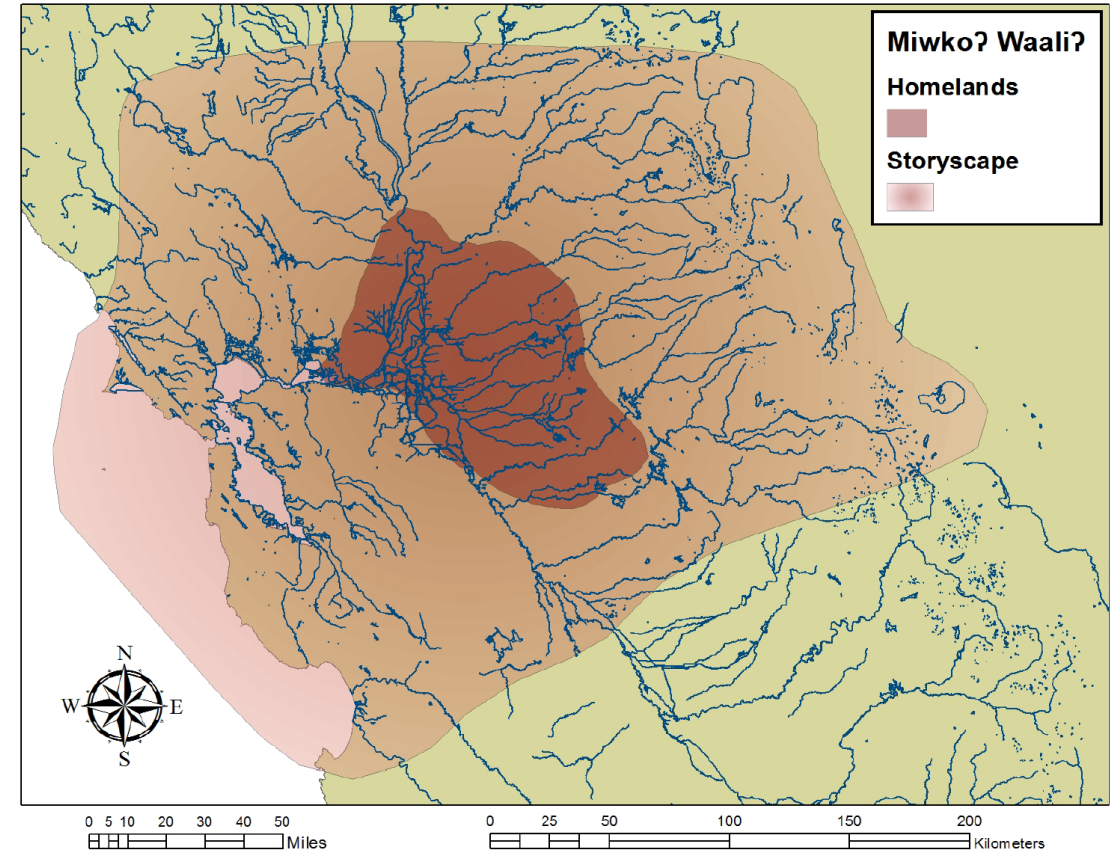
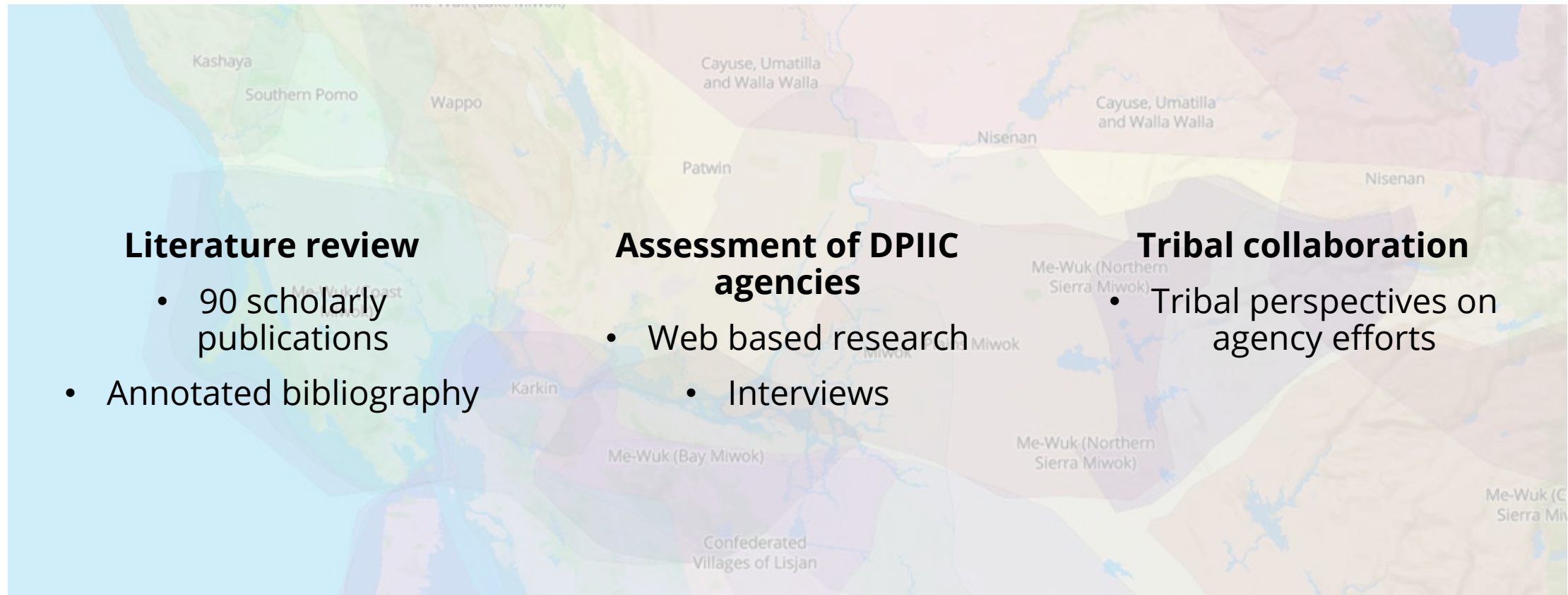


Figure 1 Map depicting approximate location of Miwko? homelands within the storyscape

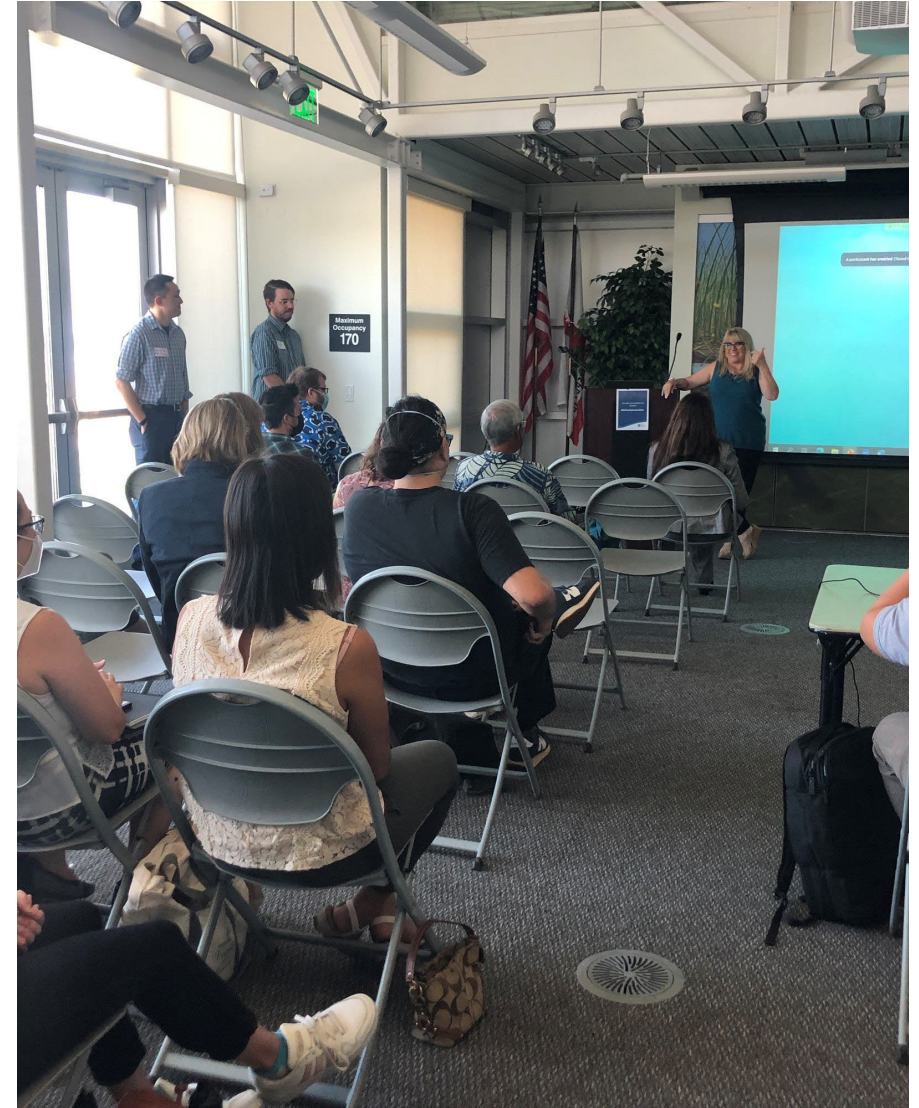
Assessment of Inroads for Traditional Knowledge in Delta Science and Decision-Making

Image: native-land.ca



Science for Communities

- An initiative to bring scientists and community organizations together to:
 - Build trust
 - Improve scientific relevancy
 - Allow communities to direct science
- Occurred on October 6, 2022 at Big Break Recreation Regional Shoreline in Oakley, California.
- The following organizations were represented:
 - California Indian Environmental Alliance
 - The Sacramento Regional Coalition to End Homelessness
 - Sustain Our Abilities
 - Public Health Advocates
 - Restore the Delta
 - Little Manila Rising
 - 13 scientists from academic institutions or state agencies
- The connections formed will affect our work going forward and those outside our agency.



Delta Adopts

- One of the largest outreach efforts in Delta Stewardship Council History
- Developed unique social science to support the vulnerability assessment including:
 - Social Vulnerability Index
 - Economic impact assessment for flooding
 - Economic impact assessment for water supply
 - Agricultural economic optimization modeling
- The Adaptation strategy takes this further:
 - Cost analysis for adaptation
 - Economic analysis of benefits for investment
 - Landscape metrics for land-use and economics
 - Farmer outreach to best represent agricultural decision making
- In sum, Delta Adopts is one of the largest multi-disciplinary natural and social science projects in agency history



Delta Adopts: Creating a Climate Resilient Future



Delta Residents Survey

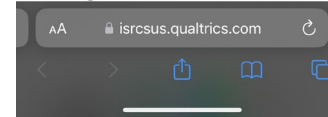
- Addressing data gap: well-being, sense of place and attitudes of Delta residents
- Launched in late January 2023 to 80,000 residential addresses in rural, urban and suburban Delta



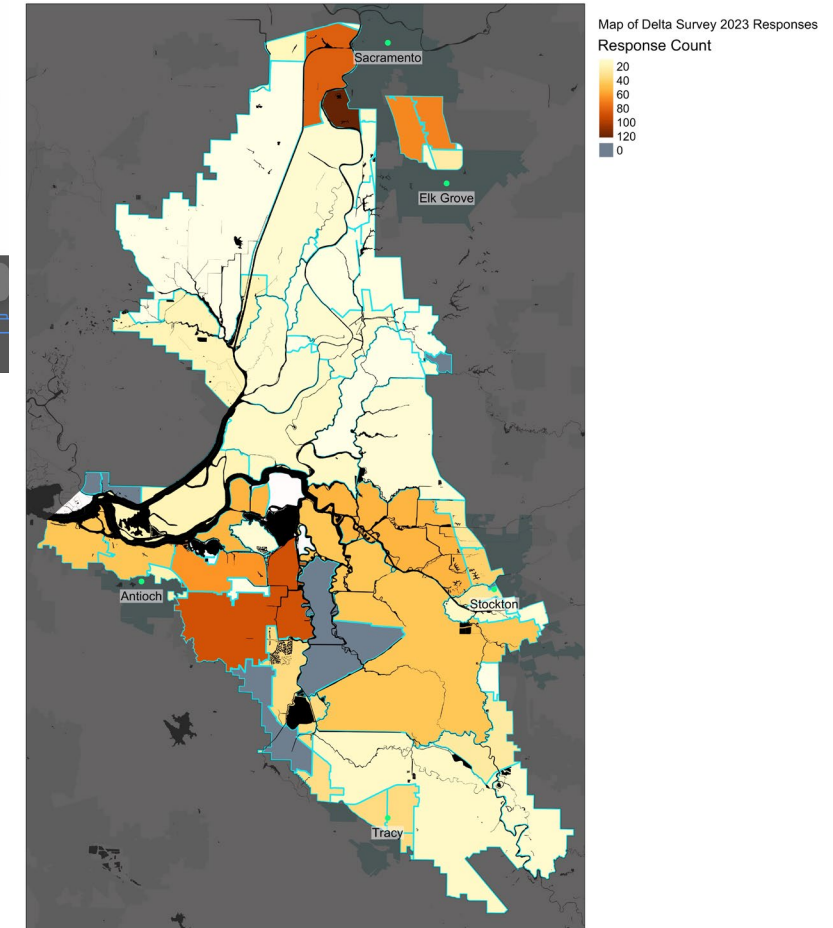
English

2023 Delta Residents' Survey

Your address has been selected to participate in an important survey about the Sacramento-San Joaquin Delta because you live in the region. This survey aims to better understand residents' opinions and experiences with social and environmental issues in the Delta. This is a research study being conducted cooperatively by University of California's Sea Grant Program and Sacramento State's Institute for Social Research, with funding from the Delta Science

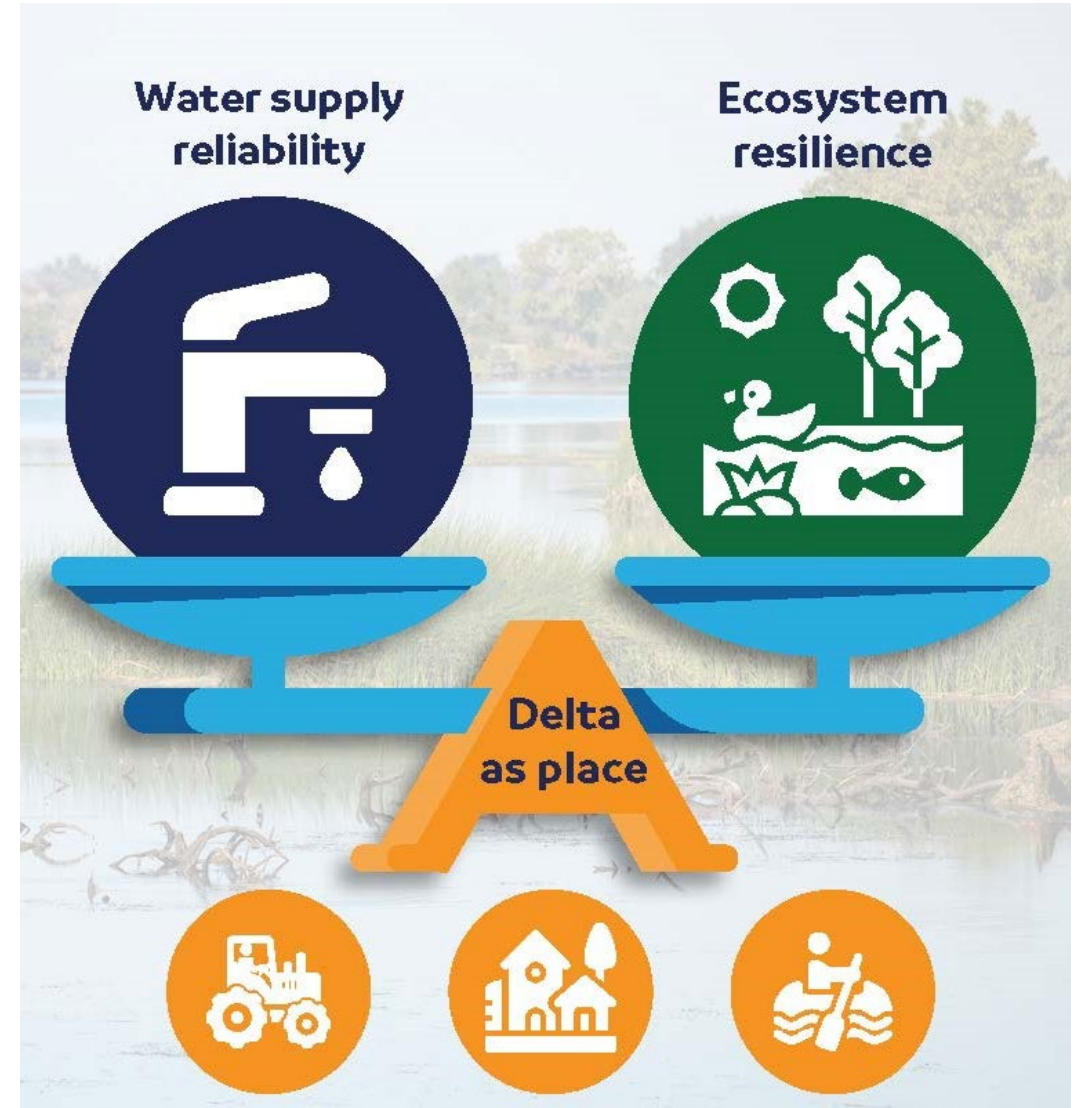


~1300 responses received as of mid-Feb 2023



Upcoming efforts

- EJ Issues Paper
- Delta Plan 5-year review
- 2023 National Center for Ecological Analysis and Synthesis (NCEAS)
 - Focus: social-ecological research
- Upcoming competitive research solicitation
 - Today: Dr. Lubell presentation on research funded by the Delta Science Program



Thank you

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