## **COLLABORATIVE SCIENCE FOR ESTUARIES**

WEBINAR SERIES





Pua'ala Pascua

Hawai'i Conservation Alliance Foundation

**Eleanor Sterling** 

University of Hawai'i Mānoa

**Rachel Dacks** 

University of Hawai'i Mānoa

# Cultural Ecosystem Services in Estuary Stewardship and Management



Date: Thursday, September 8, 2022

Time: 3:00-4:00 PM ET



## Cultural Ecosystem Services in Estuary Stewardship and Management A 2020 NERRS Science Collaborative Catalyst Project

Overview by Pua'ala Pascua, Eleanor Sterling, and Rachel Dacks for the **Collaborative Science for Estuaries Webinar Series - September 2022** 











What comes to mind when you think about all the ways you relate to, interact with, and are sustained by the environment in the place you call home?

























Pua'ala Pascua – Hawai'i Conservation Alliance Foundation
Eleanor Sterling, Rachel Dacks – Hawai'i Institute of Marine Biology
Kawika Winter, Shimi Rii, Fred Reppun – He'eia NERR
Coowe Walker, Syverine Bentz, Steve Baird – Kachemak Bay NERR
Erin Betley, Amanda Sigouin, Nadav Gazit – AMNH Center for Biodiversity and Conservation



CES encompass the many ways the environment contributes to human well-being through:

- Experiences
- Connections to people
- Connections to place
- Sustenance
- Relationships
- and more

(Fish et al. 2016, MEA 2005, Pascua et al. 2017, MEA 2005, Winthrop 2014)



#### Including CES in ecosystem services assessments can...

- Provide fuller understanding of an ecosystem and its functioning
- Reduce conflict

- Pinpoint inequities

- Help prioritize areas for action

- Enhance community resilience and trust

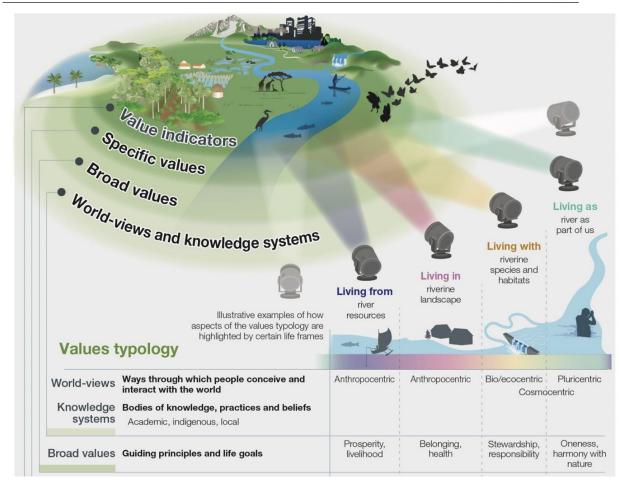
- Deepen stewardship and management efforts

- Meet U.S. Federal mandates

- Reveal values, connections, relationships, and motivations that are critical to include in decision-making processes.



#### IPBES/9/14/Add.2



Modified from: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (Pascual et al. 2022)

#### Other phrases that may overlap with CES include...

- Human dimensions of ecosystems
- Connections to place
- Place-based community interactions
- Connectedness to nature
- Reciprocal relationships with place



## **Our Project's Interdisciplinary Approach**

#### **Synthesis of Existing Concepts and Practice**

• Technical summaries of CES Methods and Key Recommendations Informational briefs, CES case studies, and common CES categories avail on our project page

#### Site-based discussions to advance Practical Application

- Reserve staff and partner workshops and focus groups
- HeNERR/KBNERR in-person Reserve Exchanges

### Co-designed, Co-produced Deliverables for Diverse Needs

- Implementation-focused evaluation of assessment methods
- Community-centered artistic outputs

Some take-home messages on Community Partner Engagement



Seek
opportunities to
honor the
subject matter
expertise of
community
partners



Be attentive to the needs and processes of small non-profit organizations, and be prepared to be flexible and adaptive



Acknowledge
values around
cultural
foods/food
sharing and
leverage other
funding sources
when possible

#### In He'eia

- Paepae o He'eia
- Kākoʻo 'Ōiwi
- Koʻolaupoko
   Hawaiian Civic Club
- Koʻolau Foundation



Photo credit: P. Pascua



Image credit: KHCC





Photo credit: F. Reppun

## In Kachemak Bay

- Kachemak Heritage Land Trust
- Ninilchik Traditional Council
- Homer Council on the Arts



Photo credit: C. Walker



Photo credit: M. McCarty





Art and Language credit: A. Kvasnikoff

## YES! I want to do more Community Engagement!



Photo credit: M. Tupou

Remember that place-centered and adaptive approaches are critical.

When and how you engage your partners may be shaped by factors like:

- Reserve acreage/size
- Reserve age
- Historical relationships
- Inter/intra-partner relationships



What is method good for?

Time and materials needed

Potential strengths and challenges

Potential applications for NERRS



Malicious Mangrove Masking Many Memories Mangower Makes More Creative Writing: Poems from Squish, Sqlash, Slam, Slap different outs grow taller, wider perspectives Kson wonders why







Some take-home messages on the Importance of Site-based Exchanges

#### **Creates real-time opportunities to...**



Draw from and build upon existing skill sets



Broaden perspectives and understanding of unique contexts



Share and compare lessons learned

## Deliverables to meet Diverse Needs:

## A compilation of project outputs

For casual browsing:

- NERRA Blog Post <a href="https://www.nerra.org/living-as-the-world/">https://www.nerra.org/living-as-the-world/</a>
- Brief project overview video

For introductory learners:

- Background Primer
- Common Frameworks and Categories
- Compilation of Case Studies

To inform advanced application:

- Methods Pilot Summary
- White Paner



Available at: http://nerrssciencecollaborative.org/project/pascua20

## **Initial Impacts and Outcomes**

- Reserve staff seeing themselves in this work
- Strengthened relationships across partner Reserves and catalyzed expansion to additional partners
- Enhanced relationships between partner Reserves and their community partners
- Expanded toolbox of engagement and assessment tools
- Initial steps toward developing shared language at the individual Reserve, System, and



## Catalyzing Further Action

Synergies and resonance with related work by:

- NERRS Human Dimensions Working Group
- NOAA Coral Reef Program
- NOAA Educational Environmental Literacy
- NERRS DEIJ Indigenous Subcommittee
- NOAA OCM Infrastructure
- California Cooperative Oceanic Fisheries Investigations
- Pacific Birds
- Among others



## Science Transfer

Reciprocal Relationships in Reserves: Establishing a Community of Practitioners for Identifying and Using Cultural Ecosystem Services Approaches

- Extend this work to additional Reserves through the creation of a community of practice
- Three virtual workshops (with surrounding follow up meetings)
- Learn More: Methodological Approaches for Exploring Cultural Ecosystem Services (Cross-sector AM session)





















### Q: How important is it to be comprehensive of all CES in a place, and can the methods that you presented do that?

- A: As a group, we tried to focus on what types of CES these different methods
  did capture. I think it's important to use more than one method with the same
  group, but each group may need to have different sets of methods, depending
  on whether it's partner or community group.
- In any situation, you need to work with the important members of your community to figure out what the most important values are and identify what you're missing. If you're just measuring the ones that are easily measurable or that have been measured in the past, determine whether the methods that you're missing actually drive behaviour for effective stewardship and maintenance. There are a lot of places that tend to focus in on the easily measurable but potentially less important factors because they want something standardized, but they are missing things that are really driving important parts of the system.
- Some of the methods we have mentioned would be used in order to develop
  other methods. You might to some participant observation in order to figure out
  what questions you want to put into a survey, or what questions to pose in a
  focus group. In this way, methods are done in combination sometimes.





## Q: I'm wondering if you can share more on what you're learning about how to consider and communicate ecosystem services beyond/in addition to the anthropocentric lens, bio ecocentric and pluricentric?

- A: A couple people in the chat were saying that cultural ecosystem services affect them in so many ways they don't even know about. What we try to do is raise awareness about those things by bringing out these connections and these relationships that people value appreciate, and even make decisions based on but are not really thinking about. We try not to use academic language about these relationships, but instead focus in on actions and behaviours and tie them to ways that relations are happening in a place. Examples of this include a sense of place in a fishing community or the health benefits of recreation.
- One quick example that resonates across places is this lifeways/livelihoods category of benefits that we often see. Livelihood can be perceived through the lens of economic benefits, but if your livelihood centers on local practices like fishing, farming, other ways of maintaining these really strong connections to a place through your activity to a place, you're being provided for in so many more ways. For us, it's important to try and identify the multiple layers that may be encompassed when you ask somebody the ways that they interact with or benefit from a place. One side, the economic side, might say income or jobs, but if you dig more through some of the methods that we shared today, it's easier to illuminate the layered and multidimensional facets that contribute to wellbeing.
- Another project I'm involved in looks at a systems mapping approach to understand relationships between humans and oceans. We did not want the guiding question to be specifically anthropocentric. We weren't specific to humans, because we don't just want to hear what's helping humans access oceans, we want to know all the different relationships. Another example is a learning cohort that we have all been involved in which refers to other living things as people too. By using that people-word to acknowledge that they are also living, sentient beings shifts the focus from an anthropogenic model.





## Q: Were any of the piloted methods co-created with the communities? Is that done in this type of work?

- A: This is absolutely done in our work. That said, coming into this project we had this really strong plan that we were going to pilot all the methods with our community partners. We then realized through initial listening sessions (which are critically important to include in your project) that maybe the partner relationships weren't at the right place to come in with a suite of methods to try together. In that light, the co-creation happened by adapting our pathway to take the community's queues about how they want to tell us about things in place. We co-created the method by co-creating the engagement strategy. A lot of the methods like the art-based component were informed by community partner organizations and their existing work. Co-creation of methods and approaches happens at multiple scales and levels in projects like these, and we are fully supportive of all of it when it is done so in ways that meet the needs of your place.
- We hope that some of that co-creation of these methods occurs in the science transfer project.

