



Kelp Restoration and Management Plan Community Working Group

Monday, August 12, 2024
1:00pm - 5:00pm PST



Zoom Considerations and Reminders

- Meeting is being recorded and closed-captions are available
- Technical difficulties viewing the screen share
 - Contact Noelia at noelia@strategicearth.com or 787-383-0265, or send a message in the chat
- Unmuting: To speak
 - Click the microphone on the bottom-left of your screen
 - Use the chat box at the bottom of the screen to ask for help
- Chat Function
 - Troubleshooting and clarifying questions



Zoom Considerations and Reminders (cont)

- Renaming: To help identify yourself and other participants
 - Click “Participants” in meeting controls
 - Locate your name and click “More” and choose “Rename”
 - Enter your full name (first and last) and any identifying sector(s)
- Closed Captioning: To turn on subtitles
 - Click “CC” in meeting controls
- Gallery View: To see more than one speaker
 - Click “View” in upper right corner, and select “Gallery View”



Meeting Agreements

- Be present
- Be prepared to discuss agenda items constructively
- Share if you need to leave early
- Approach discussions from a place of diversity and inclusion
- Focus discussions on strategies and solutions that move conversations forward
- Listen for understanding and seek clarification
- Identify any personal/professional conflicts of interest
- Do not work at cross-interests with the group's goals and objectives
- Personal attacks will not be tolerated
- Take space, make space



Introductions

- **California Department of Fish & Wildlife:** Adam Frimodig, Kirsten Ramey, Kristen Elsmore, Rebecca Flores Miller, Shelby Kawana
- **Ocean Protection Council:** Pike Spector
- **Strategic Earth Consulting:** Kelly Sayce, Noelia Aponte-Silva, Rachelle Fisher, Scarlett Schroeder, Teresa Romero
- **Science Advisory Committee:** Marissa Baskett and Rosa Laucci, SAC co-chairs



Introductions - CWG Members

Please share in the chat:

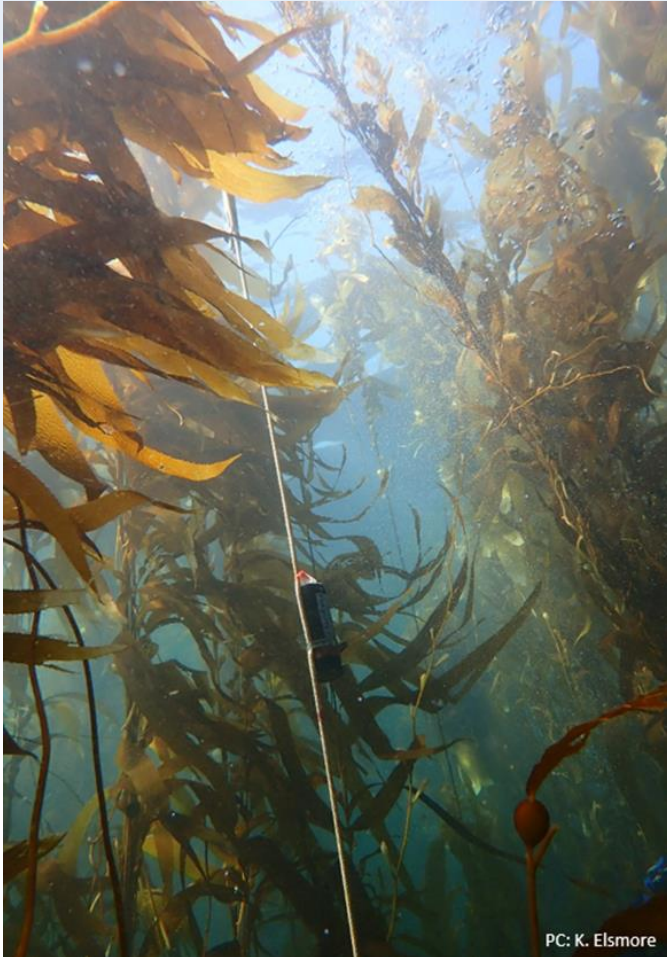
- Your Name
- Affiliation/Sector
- Region (North, Central, or South coast)



Photo by Kristen Elsmore, CDFW



Meeting Agenda



- Welcome and Introductions
- KRMP Updates
- Kelp Restoration Setting the Stage
- Breakout Discussions: Factors & Criteria to Determine the Need for Restoration
- Breakout Discussions: Kelp Restoration Approaches
- Looking Ahead & Adjourn



KRMP Process Updates

- KRMP
 - Science Advisory Committee
 - April 11-12 Meeting
 - Upcoming Meeting : August 15
 - Tribal Engagement
 - Tribal representatives from the CWG
 - Tribal Community Virtual Forum: July 8



Photo by Kristen Elsmore, CDFW



Kelp Restoration: Setting the Stage

- Role of restoration within the KRMP
- Overview of Kelp Restoration in California
 - approaches being explored
 - approaches that are outside the scope of the KRMP





Kelp Restoration

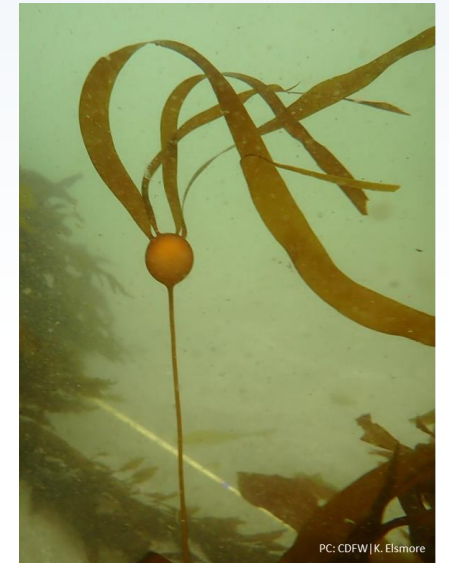
- **Goal:** Promote ecosystem resilience and natural recovery, however, assisted recovery (i.e., restoration) may be needed under certain circumstances.
- **Restoration:** Repair or assist in the recovery of an ecosystem that has been degraded or destroyed as a means of promoting ecosystem functioning and resilience, conserving biodiversity, and maintaining sustainable use and enjoyment by the public.
- These goals and definitions may be refined throughout the KRMP development process, to incorporate scientific, Tribal, and community perspectives.





Kelp Restoration - Toolkit

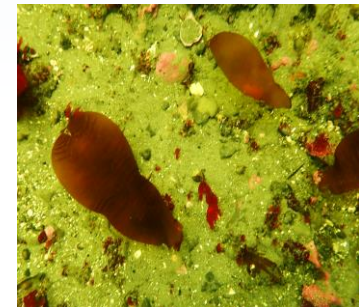
- Restoration approaches that are incorporated into the KRMP will have:
 - demonstrated efficacy
 - science-based success metrics
 - evaluation of the ecological and socioeconomic conditions for efficiency
 - defined strategic decisions on when and how to deploy a given tool or set of tools
- Incorporate knowledge of:
 - natural history, ecology, and oceanography
 - Traditional Ecological Knowledges and other ways of knowing
 - cultural and socioeconomic values
 - cost effectiveness of the restoration action(s)





Kelp Restoration Approaches

- Grazing pressure
 - remove/reduce from system
 - move/relocate
 - modify grazer behavior
 - move/relocate grazer predators
- Competitive species
 - remove/reduce from system
 - move/relocate
- Kelp supply/availability
 - add
 - move/relocate
 - genetic resilience
- Other approaches

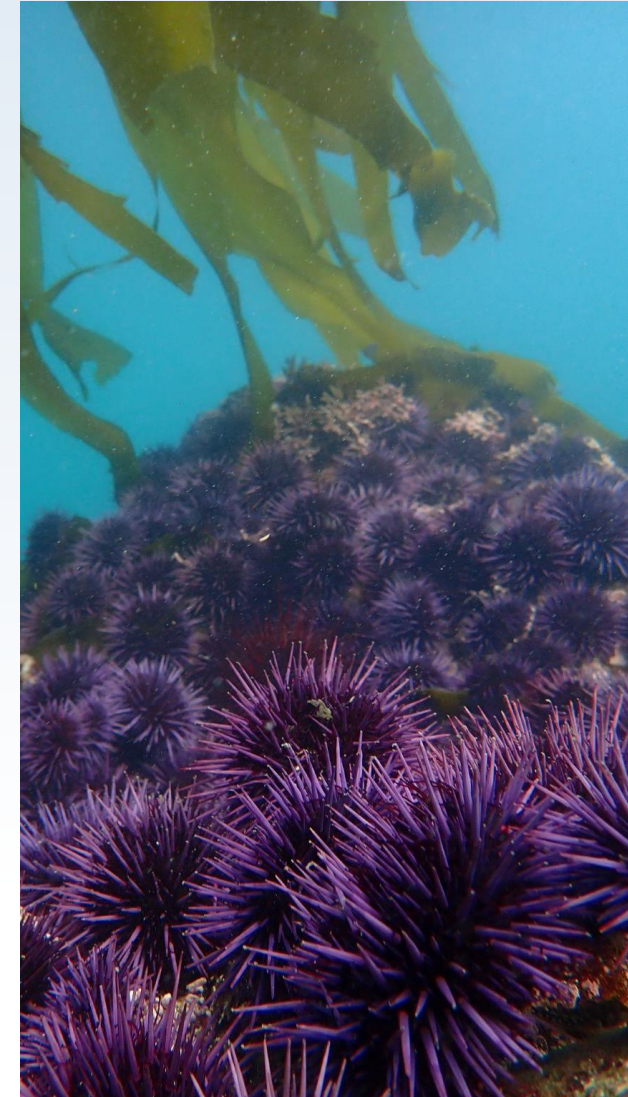


Photos by Kristen Elsmore, CDFW



Approaches: Grazing Pressure

- Management of grazing pressure
 - remove/reduce from system (e.g., harvest, cull *in situ*, trap)
 - move/relocate (e.g., translocation of urchins or other grazers)
 - modify grazer behavior (e.g., drift kelp enhancement)
 - move/relocate grazer predators (e.g., move sheephead, lobster, sunflower stars)





Approaches: Kelp Supply/Availability

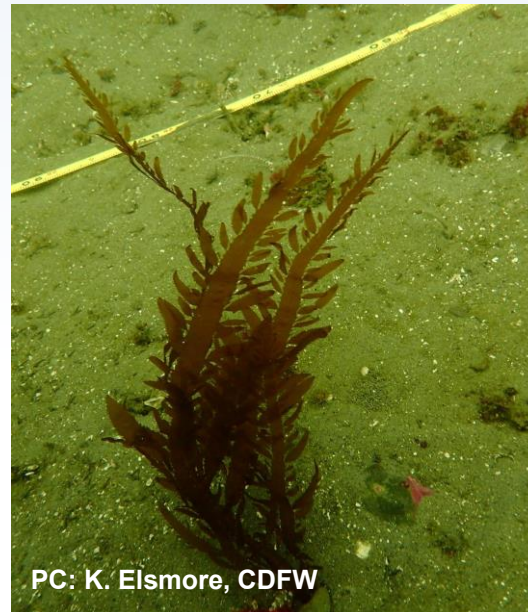
- Management of kelp supply/availability
 - add (e.g., outplanting/spore bags, seeded substrates/lines, “spore duster”, young sporophytes/juveniles)
 - move/relocate (e.g., translocate juveniles or adults from within the system)
 - genetic resilience (e.g., enhancing genetic diversity, thermally tolerant/resistant kelp)



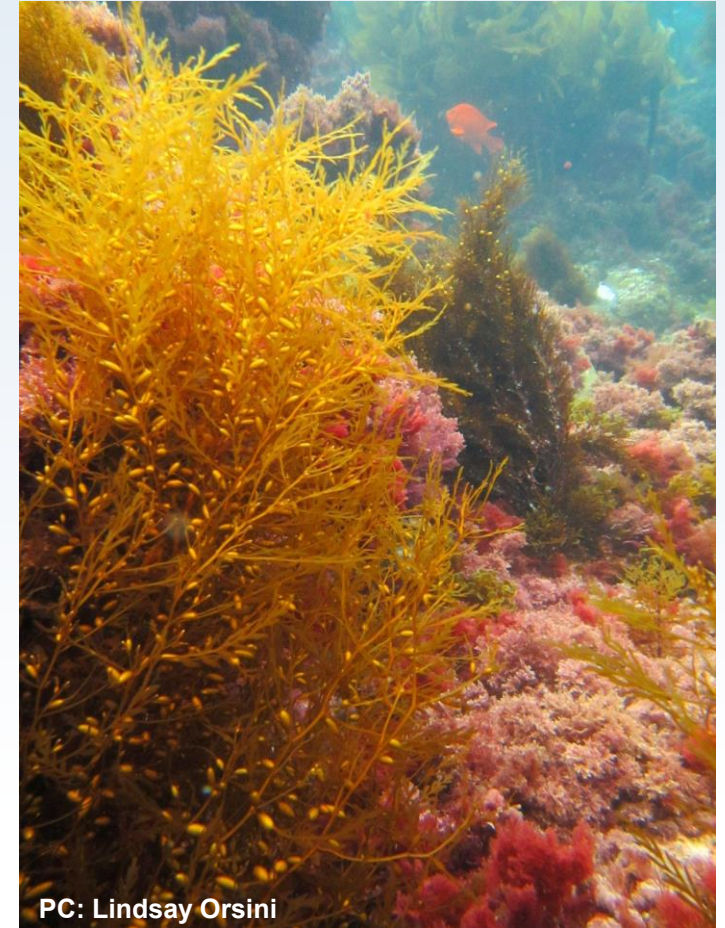


Approaches: Competitive Species

- Management of competitive species
 - remove/reduce from system (e.g., invasive spp.)
 - move/relocate (e.g., native spp)



PC: K. Elsmore, CDFW



PC: Lindsay Orsini



Approaches: Other

- Appropriate habitat
 - Water quality
 - Artificial Reefs
 - The KRMP is focused on recovering naturally occurring kelp systems. Artificial reefs create new and/or convert existing habitat.
 - Linkages to kelp restoration may be discussed, but ultimately, the California Artificial Reef Program Plan (CARPP) will determine the policy and decision-making framework for artificial reef placement in California
 - For questions, reach out to: ArtificialReefs@Wildlife.ca.gov
- Emerging approaches



Approaches Not Being Considered by the KRMP

- Disease or Chemical Introduction
 - Risk of unintended consequences too high (e.g., eradication of purple urchins, transfer to other spp., impacts to non-target species)
- Genetic engineering, including transgenics for all taxa (e.g., urchin sterilization)
 - Risk of unintended consequences and impacts to existing genetic composition too high
- Sea Otter Reintroduction
 - Outside of the scope of the state's authority/jurisdiction
 - For questions, reach out to US Fish and Wildlife Service at [Exploring Potential Sea Otter Reintroduction | U.S. Fish & Wildlife Service \(fws.gov\)](#)

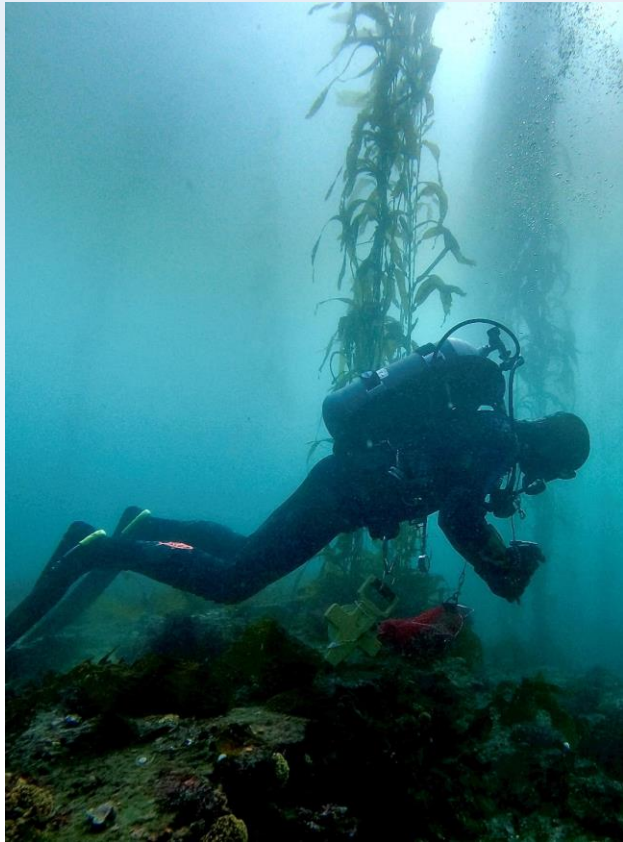


Factors & Criteria to Determine the Need for Restoration

Please approach these questions from through the social, economic, and community lens. The SAC will be looking at this through the scientific lens.

Guiding Discussion Questions

- **Describe the conditions under which restoration of a kelp forest is necessary.** Be specific. Include considerations for a hypothetical site in different places along the California coastline.
- **What social and community considerations are important for evaluating** the need for and success of restoration efforts in an area?
- How can kelp restoration projects be **inclusive and benefit your community?**



Photos by Kristen Elsmore, CDFW



Kelp Restoration Approaches (cont)

- Grazing pressure
 - remove/reduce from system
 - move/relocate
 - modify grazer behavior
 - move/relocate grazer predators
- Competitive species
 - remove/reduce from system
 - move/relocate

Please approach these questions from through the social, economic, and community lens. The SAC will be looking at this through the scientific lens.

- Kelp supply/availability
 - add
 - move/relocate
 - genetic resilience
- Other approaches
 - habitat viability



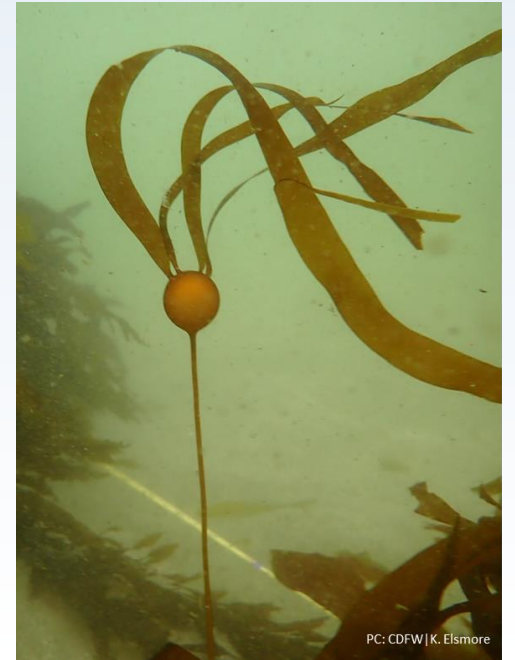
Photos by Kristen Elsmore, CDFW



Kelp Restoration Approaches Guiding Questions

Guiding Discussion Questions

- **How** do the proposed restoration **approaches** and concepts below **align with your community's needs and values**? How can they be better tailored to fit your community?
- Can you **share** observations about **successful past or current kelp restoration approaches** in your area? Why was it successful?
- How can **management tools** be tailored to **accommodate the restoration needs** of both bull kelp and giant kelp? Are there any missing?





Looking Ahead

Group	CWG Meeting Schedule			SAC Meeting Schedule		
Year	Date	Topic	Details	Date	Topic	Details
2024; Q3	Aug 12	Restoration, EBM	Virtual	Aug 15	Prioritize indicators that inform status of resource	Virtual
2024; Q4	Dec-Jan	Harvest, connections to Restoration, EBM	Virtual	Oct	Measurable parameters for priority indicators, existing monitoring programs & datasets	Virtual
				Dec	Social and ecological criteria, thresholds, and trends of indicators that trigger management action	Virtual
2025	To be determined, more information will be shared in September			Mar	Build decision-making tree and identifying management strategies	In-person



Continued Communication



Questions, comments, or requests for additional KRMP information
Email kelp@wildlife.ca.gov



Information sharing amongst KRMP Community Working Group Members
Email: krmp-cwg@gaggle.email



Tribal Specific Engagement Opportunities
Email kelp@wildlife.ca.gov



Updates, Informational Materials, Upcoming Opportunities and Events
KRMP Website: <https://wildlife.ca.gov/Conservation/Marine/Kelp/KRMP>



Photo by Shelby Kawana, CDFW