Kelp Restoration Management Plan
Science Advisory Committee Meeting #5
Tuesday, October 1, 2024

Meeting 5 Notes Summary

Welcome & Meeting Overview

The fifth meeting of the Kelp Restoration Management Plan (KRMP) Science Advisory Committee (SAC) was held virtually on October 1, 2024 with ten KRMP SAC members and the KRMP Project Team (i.e., California Department of Fish & Wildlife (CDFW), Ocean Protection Council (OPC), and California Sea Grant (CASG)). Background materials and a participant agenda were shared in advance to help prepare the SAC for a productive meeting. CASG provided context and instructions to facilitate a group discussion focused on reviewing indicators and associated variables for the social and ecological state of kelp in California.

Meeting Objectives and Project Timeline

The KRMP Project Team shared a timetable situating Meeting 5 within the broader scope of SAC activities.

- Meeting 4 focused on prioritizing indicators for the kelp social-ecological system
- Meeting 5 aims to:
    - Refine measurable parameters for prioritized indicators
    - Identify datasets and monitoring programs required to assess the state of kelp
    - Begin evaluating pressures to predict kelp health trends
- Upcoming meetings:
    - Meeting 6: Establish thresholds for management action
    - Meeting 7: Develop decision tree for management responses & interventions
    - Meeting 8: Explore restoration strategies
    - Meeting 9: Design a harvest framework
- This process/timeline remains iterative, with room for future adjustments.

Indicators Review

Identify any missing variables or comments, regardless of prioritization.

- Some indicators may not be included either because they were not prioritized highly or because they were combined with overlapping indicators (e.g., measuring kelp abundance/size structure can capture recruitment).
- The SAC provided suggestions for measurement metrics/variables:

    - Include stipe density to 'plant' density, at least for giant kelp.
    - Combine grazer - predators (e.g., fish, invertebrates, otters) across taxa to account for collective impact of predation.
    - Variables to characterize consumption of kelp:
        - Separate detritivores (drift kelp consumers affected by kelp loss) from herbivores (live kelp grazers affecting kelp loss).
- The SAC discussed importance of baseline indicators:
    - Emphasis on pre-crisis baselines to compare current to historical conditions.
    - Variability within indicators can be seen as a potential warning signal for systemic instability.
- The SAC proposed including spatial extent, temporal frequency, and logistical aspects of management actions and interventions (this will be the focus of Meeting 6).
    - Management relevance: Indicators should be directly linked to and/or prioritized by actionable management decisions (e.g., costs, feasibility).

Data Feasibility

- Evaluate the feasibility of measuring prioritized indicators across different spatial and temporal scales
- Identify available datasets and note gaps or limitations
- Existing data sources: CASG's initial data mining efforts were acknowledged but need expansion to less-available datasets and gaps
- Automation vs. manual data collection:
    - Balance the use of automated sensors vs. fieldwork-dependent collection methods
    - Consider datasets requiring post-collection processing
- Challenges highlighted:
    - Geographic focus varies across datasets (state-wide vs. regional/local)
    - Reliability of funding streams (e.g., PISCO funding cessation) impacts monitoring program stability

Next Steps & Wrap-Up

- Action Items:
    - Consider:
        - Reliability of funding streams
        - Spatial and temporal considerations
        - Cost implications (e.g., low-cost if not state-funded)
- Identify existing datasets for gaps and overlaps