

Science and Technical Advisory Committee (STAC) Meeting NOTES
Hatfield Marine Science Center Seminar Room, Newport, OR
October 26, 2017
900AM-300PM

STAC Members attending: Jack Barth, Veronica Dujon, Selina Heppell, Bill Jaeger, Gil Sylvia, Shelby Walker, Craig Young, Elise Granek (virtual)

STAC Members absent: Jan Hodder (joined in the afternoon)

Other invited participants: Cristen Don (ODFW), Tommy Swearingen (ODFW), Dave Fox (ODFW), Andy Lanier (DLCD, virtual)

Other attendees: Lindsay Alsworth (ODFW), Kelsey Adkisson (ODFW), Ashley Knight (ODFW), Jena Carter (TNC, virtual), Nick? (TNC), Walter Chuck, Charlie Plybon (Surfrider), Deanna Caracciolo (DLCD, virtual), Jo? (Audubon, virtual), Fish Commission Rep? (virtual)

Marine Reserves Review (April 13, 2017) [Master Document List](#)

OAH Updates

- Update on [Oregon Coordinating Council on Ocean Acidification and Hypoxia-Barth](#)
 - Senate Bill 1039 passed – calls for OAH Coordinating Council – locally and state level
 - The Council will gather the research, look for actions to be taken in the short and long term, making a roadmap for the state that could influence policy, gather resources, or designate state dept to work on recommendations
 - Calls for a number of members, some have been filled: ODFW co-Chair is Caren Braby and Jack Barth is co-Chair; Jason Minor – NR Advisor and Kristen Sheeran – Carbon Advisor to the Governor ; Andy Lanier from DLCD, OSG – Shelby; OR tribes Rep John Schaffer
 - 6 more positions to be filled by Nov/Dec to begin work in Jan.
 - ODA, ODEQ, OPAC, public participation in the fishing community and shellfish mariculture designees still need to be appointed
 - STAC to appoint someone from the academic community
 - Staggered terms, could be 1 -3 years, so STAC has the opportunity to put someone forward in a four year time period
 - Sept 15, 2018 report due. OA action plan.

- STAC recommendation for participant to [Oregon Coordinating Council on Ocean Acidification and Hypoxia](#)
 - Should we recommend a social scientist? The role needs to be able to fill a balance of socioeconomics, policy analysis or knows how to navigate policy and interface with decision makers, and ecological assessments
 - Developing adaptation and mitigation strategies – this speaks to policy analysis framework – tools, criteria
 - We aren't suggesting that a policy analyst be on the council, but that the Council should understand what it takes to do this work.
 - Primary expected effects on organisms, needs to be somebody who knows the literature on effects on organisms. Need a Biologist who works on OA. A physical oceanographer is already on the Council.
 - Factors for consideration:
 - Field based

Provided only for STAC Members and Invited Speakers. The public is welcome to bring a sack lunch if they desire.

Science and Technical Advisory Committee (STAC) Meeting NOTES

- Experience outside the academic arena
- Natural and/or social science OA field - interdisciplinary
- Tenured? Not a lot of opportunity for publication and a time sink, but leave it up to the faculty member to decide – can complement (and even strengthen) the work of the right junior faculty member, but also need to consider tradeoffs
- Could more comprehensive in our thinking, have we done enough homework
- Nominations
 - Aaron Galloway – new assistant professor at OIMB, OA effects on Dungeness crab, conservation issues, high publication record, also a phycologist – kelp forests, has 1 postdoc, and 2-3 graduate students, building an OA lab
 - Fresh ideas and new energy, thinking about global level work
 - Number one slot
 - George Waldbusser – OA effects on shellfish, worldwide impacts
 - Francis and George will make impact no matter what; favor George in the number 2 slot because has worked in broader implications of work
 - Francis Chan – ocean chemist/ecologist, but he is involved in other facets of the council – research professor
 - Ana Spalding would be great, but has a lot on her plate.
- **DECISIONS: Recommendation: Galloway first, Waldbusser second**
- **Suggest two year term limit to Jack and Caren**
- Update on OAH Monitoring Group Activities
 - ODFW working with wide group of partners to generate maps of OA monitoring across the state (Daniel Sund and Caren Braby)
 - The broader implications of OA (e.g., socioeconomic impact) has not been worked on yet
 - Second fishermen scientist roundtable happened
 - Two species groups: Dungeness crab (10-12 potential projects); Forage fish –need to follow through

Overall marine reserves evaluation-Group Discussion

- Process and criteria for the marine reserves evaluation
 - ODFW MR timeline
 - June 2018 – outline MR syntheses will look like
 - Early 2018 – ecological syntheses complete – whether or not include section demonstrating value for funding
 - SB1510 calls out evaluation component, spells out the deliverable that STAC has to provide to the Legislature
 - Start this process determining “How will the chosen university do this assessment?” Define criteria for the assessment
 - Chosen university selection process
 - Why would any university do this without funding? If no funds are available, then you can’t expect the university panel to be going back and forth

Science and Technical Advisory Committee (STAC) Meeting NOTES

- Alternatives for funding university evaluation – Oregon Ocean Science Trust?
- Objective of university– summary review of work that has been done by ODFW and evaluate if it addresses the key questions
 - Addresses gaps and shortcomings, and ask ODFW to address them, and so then when STAC gets it, it will be a more finished product – iterative process
- STAC must submit a draft report 2022 and a final report by 2023. Iterative process will occur for STAC, but do we want to impose them on the university
- How much is STAC involved in the chosen university’s assessment?
 - STAC looks at the RFP, looks at the report by the university, and communicate effectively with ODFW and the university
 - The timeframe of the MR is insufficient to determine significant ecological change language should be include in the RFP
- RFP development
 - Criteria for evaluation – Did ODFW do its job that it was mandated to do – conservation, research and communities with MR?
 - Start with OPAC Recommendations regarding MR Implementation principles and guidelines to draft criteria – looks at process and outcomes
 - Start with what is asked for in the Bill and don’t stray from that
 - Work plan and budget report from ODFW 5 years ago – done for recommendations of MR sites to the legislature
 - Defining adequate in the short and long term – they will compare terms of other evaluations of MR
 - Compare other case studies- ODFW could pull together
 - Need to be careful in wording RFP because university should not evaluate whether MR are working in the state and whether they should continue. University should assess whether ODFW fulfilled mandate.
 - STAC is not mandated to provide a recommendation for MR, but should provide one, but want to avoid the appearance of bias in the university’s work
 - Take recommendations in the ODFW report and university report, STAC should summarize them, and propose recommendations or scenarios
 - Scenario’s presented to legislature about what you are trying to accomplish
 - **DECISION: Base criteria for assessment off of OPAC’s 7 Implementation Guidelines for the implementation component, but add definition of terms and be specific as possible to clarify expectations, and in alignment with OPAC. Outcomes and conclusions not covered in this list.**
 - **Need evaluation of assessment and evaluation of implementation. The OPAC list is just the implementation aspect.**
 - What if ODFW didn’t achieve objectives? What does success look like if they did achieve these?
 - Objectives are good starting point for the assessment piece – is the monitoring adequate for adaptive management

Science and Technical Advisory Committee (STAC) Meeting NOTES

- ODFW writes results, university evaluates if report done well, STAC provides recommendations and options
- If there are obvious gaps between work that was done by ODFW, could clearly point that out
- Looking at the monitoring data and conclusions that came out of the data and what it says about conservation is absent from the list – flesh this out further in 3 and 6
- These are the implementation part – this is the programmatic component, what's not here is the data and analysis outcome
- Need to flesh out and tie the guidelines back to the goals
- Adaptive management – borders in the right place (shape, size, restrictions) – OPAC may not fully understand adaptive management – testing multiple management strategies at the same time, but ODFW does not have the capacity to do this – OPAC did define this term – do the data support the recommendations for change – is there enough data to support bigger reserves, more connected reserves etc
- The MR were not designed to be a network. Called a MR system – collection of individual sites – connectivity was not a specific objective make clear in RFP – designed to be representative
- Opportunity for educating people in this process
- **As it currently designed, are MR the effective ways to achieve the goals proposed? Are the data currently being collected adequate to make recommendations? Did ODFW meet its mandate?**
- Key components of report
 - **ODFW program, socioeconomic short term impacts, and ecological long term monitoring and socioeconomic long term impacts evaluation**
- STAC engagement in evaluation process
 - Should ask the university to weigh in on final observations and conclusions and STAC provides an executive summary and highlight better options. STAC writes the cover letter. Summarizes conclusions the report.
 - **Who makes the recommendations? STAC would like to engage in the recommendation, summary, and conclusions report. Don't get involved too much during the external evaluation, but do "revise and resubmit" check ins**
 - External thought about ODFW interim report – ecological portion – did ODFW build in peer review from the process, input from that would be useful
- Timeline for evaluation process
 - ODFW Data collection to 2020
 - End of 2021 – ODFW would be preparing syntheses and STAC would be selecting university
 - 10 month period before draft due
 - **DECISION: Draft report due July 1, 2022 from university to STAC**
 - **Final report Aug 31, 2022 from university to STAC**

Science and Technical Advisory Committee (STAC) Meeting NOTES

- Draft report from STAC to legislature due in 2022, month?
- Final report from STAC to legislature due in Spring 2023
- Engagement with OPAC and others before and during evaluation process - **DECISIONS**
 - **Every time STAC meets, report out about what we discussed**
 - **Shelby will relay feedback back to STAC**
 - **Keep others (e.g., Coastal Caucus) apprised of process as STAC moves along as a courtesy**
 - **Continue to post minutes on website**
- TO DO:
 - **Look at guidelines and objectives and see if they work for both outcomes assessment and process implementation evaluation criteria**
 - **Lindsay to share PDF of interim ecological report presentation slides**

Human dimensions component of marine reserves

- Update on plan and current work-*ODFW*
 - Broader implications of multiple HD data streams
 - 2012 monitoring plan – this effort is directly out of the plan, summary of spreadsheet provided about how the studies fit the objectives
 - Analysis of change and economic indicators included in demographic data – community level variables, difference of difference analysis
 - Direct use of the area – extractive and non-extractive users of MR
 - Assessment of nonmarket values – subjective wellbeing and WTP, ecosystem services, spatial ES model other data streams feed into it – can attribute non-market values to specific places along the coast over time
 - Monitoring community change
 - Collect data on different metrics, and use same statistical tools to analyze them, but do a difference of differences statistical analysis, some data does not lend itself to quantification
 - Is there exceptions due to the MR, county level data is too large, micro-community level data is necessary to pull out possible signals. Communities might have a subjective view that MR are having a kind of impact that quantitative data doesn't support.
 - Met with CA MPA approach
 - Fishermen in Port Orford direct selling catch with sustainability sticker because there is a MR nearby – how do you know if you can attribute changes in the community to the MR (e.g., increase price in fish) – market perception too
 - May lack statistical power because not long enough time span or enough samples to draw conclusions (for both ecological and social data)
 - How do we choose communities and define affected communities and the “control” group?
 - Economic and social behavior of the coast is different from the rest of the state for a variety of reasons (e.g., unemployment rate, growth rate, etc)
 - Example study: Not expecting positive outcomes, but no longer expecting negative outcomes from MR – same spot over time
 - Differences of differences: per capita income does not increase on the coast,

Science and Technical Advisory Committee (STAC) Meeting NOTES

- but increased 25% in the valley, and the model will tease out if the MR weigh in
 - assumes that other communities affected to the same degree or you have a large enough sample that the other factors become random
- In biology, any kind of correlative study, you cannot assign causation, but with humans, you can ask them to get closer to causation. But have to be careful about what you interpret from what people say.
- Compare consumers' choices with the word sustainability vs marine reserve to see if there is a change.
- **Assembled many studies and provide data useful outside of the MR, but need to determine how to get back to the core issue of providing useful information to addressing the goals and objectives. Which data streams are those?**
- Have NOAA's indices data available
- Can't scientifically assess if adverse impacts were minimized
- Would like to see some graphs to see where you are headed with these studies
- ODFW should show which studies are connected to which objectives
- **The big, first order question is "Are there adverse impacts of MR?"** but this is difficult to attribute a change in MR, you need before and after data and with or without treatment. No one began collecting primary data before the MR were implemented, so you have to rely on secondary data. With that secondary data as a starting point, what resolution do we have?
 - **Need to consider equity in impacts**
- **Rank top 20 socioeconomic indicators of adverse impacts. Is the data available to analyze them? Match between data, availability and quality, and the mandate by the policy.**
- **Provide graphs of change of these variables over time pre and post reserves.**
- Provide list of top 10 hypotheses prioritized. Years, level of resolution, statistical approach, graphs, link to objectives.
- **Look at the whole state, benefits may be significant across the state, although adverse effects may be concentrated on the coast. Need to look at community, county, and state levels.**
- **If we were to share stories, carefully select which ones to tell**
- **Be clear transparent about methods and data, their limitations and biases**
- Suggestions for ODFW moving forward:
 - Putting together a seminar
 - Develop an interim draft report for review and comment
 - Series of hypotheses
- Recommend additional guidance for ODFW for Human Dimensions-*Group Discussion*
 - **DECISIONS: Recommend ODFW to assemble series of hypotheses to analyze impacts of MR on communities of place and interest and extractive and non-extractive users.**
 - **First step, start with hypotheses, likely followed by a 20 minute seminar (bullet points) to talk about what pieces tell the best story**

Topics for next meeting and schedule

- **DECISIONS: Meet twice a year or more (half day meetings)**
- **ODFW present hypotheses, OAH OR Council updates, frame evaluation, in depth**

Science and Technical Advisory Committee (STAC) Meeting NOTES

discussion on ecological aspect (ODFW give a brief seminar to give useful feedback for the final report, ODFW will work on providing a draft report, and general MR status update). ODFW to provide ecological draft to STAC report by March 1st.

- The week of March 12th is the next meeting – 12-14 tentative hold