

June 10th, 2022 (12-1pm ET)

Materials:

- [Coastal Climate Signal White Paper](#)
- [Recapitalization Spreadsheet](#)
- [2021 Recommendations Report](#)
- [Infrastructure Recommendation Letter](#)
- [NOAA Response to 2021 Recommendations Report](#)
- [CLIVAR Workshop Proposal](#)
- [Letter to IOOC](#)
- [June 27th Agenda](#)

1. **Attendees:** Sara Graves, Dan Rudnick, Dan Costa, Susan Yee, Molly McCammon, Oscar Schofield, Josie Quintrell, Nick Rome, Krisa Arzayus, Schuyler Nardelli
2. **Review discussion summaries from May meeting:**

The PWG reviewed the Coastal Climate Signal White Paper recommendations and the discussion from the May public meeting. It was noted that there has been no official update on the CLIVAR workshop proposal or letter to the IOOC.

May Meeting Summary:

1. The Coastal Climate Signal White Paper recommendations should be endorsed. NOAA and NOS endorsement can help emphasize the role IOOS and the RA's play in addressing their missions.
 - i. Rec #2 should be highlighted (recapitalization).
 1. The plan for IOOS recapitalization should be refocused, summarized, and shared with the IOOS FAC. (10-15 pages)
 - a. Start with recapitalization spreadsheet
 2. An optimization assessment based on size and placement of observing assets, in terms of their contribution from models and finding, should be considered to ensure that recapitalization is efficient.
 - ii. Rec #4 (regional data integration services) should have a "how" component added.
 1. There needs to be a clear leader in coastal climate signal. Suggested recommendation to NOAA to endorse IOOS as that leader.
 - iii. Sustained, long term observations and datasets are vital to understanding climate change. Suggested recommendation to identify long-term datasets and a call to assess how these could be included/augmented in future efforts. This could provide a basis for getting RAs standardized datasets across the nation. Use of OSSEs could also help determine which datasets are most valuable, if they can be leveraged, and where the gaps are.

- iv. Ask the IOOC to endorse a Coastal Climate Signal Task Team and begin the work through the proposed CLIVAR workshop. The FAC asked the IOOC to express support to the program and submitted workshop proposal. (*Completed*)
- 2. To ensure recommendations are holistic, the PWG should:
 - i. review the response to the 2021 Recommendations Report to understand where the climate recommendations stand.
 - ii. consider cross theme recommendations

Following the review, the members agreed to outcomes from the May meeting discussion and discussed a few key items:

- D. Rudnick inquired about the infrastructure spending plan (recapitalization).
 - M. McCammon noted that the spending plan is in the form of a spreadsheet now, but it is not set into a context that looks like a final report. There was a plan to work with J. Quintrell to make this a more polished report with contextual language explaining the various components.
 - S. Graves agreed with the understanding from M. McCammon and noted that the goal is to make the plan more compact and emphasize RAs involvement in where the infrastructure plan came from.
- S. Graves asked about sustained long term observations and cataloging them with recognition of what RAs have along with other long-term datasets and standardized datasets. She noted that we should highlight long term datasets before there's some standardization.
 - O. Schofield noted that we should highlight long term datasets, but we want to be climate relevant, our data has to be standardized, so we shouldn't separate it out of the recommendation. Long-term measurements might not be relevant for the climate story if they are coming from different sensors and are QA/QC differently, which might cause these time series to not have as much value as we hoped.

3. Address actions, information gathering, and consensus for recommendations

In addressing the next steps and consensus for recommendations, the PWG agreed to:

- Develop recommendations in parallel with the recapitalization plan
- Reframe the Coastal Climate Signal recommendations with reference to the white paper.
 - Providing an introduction to the recommendations on how we can better design a coastal climate observing system and these recommendations help address that need.
 - ****The reframing and context for each recommendation will be focused on implementation.**
- Addressing both NOAA and the IOOC with these recommendations

4. Drafting recommendations

The PWG members selected the coastal climate signal recommendations that they would like to reframe and provide implementation language to (Listed below with notes).

Coastal Climate Signal Recommendations:

1. Expand coastal observations and support regional-scale models that collectively can be used to monitor trends, detect changes, provide forecasts, and deliver tailored information products to users for decision making to improve coastal resilience. A first step is to fully fund the recently approved regional cooperative proposals for the next five years, which were developed with significant regional stakeholder input.
 - i. *May not need to be re-written. Emphasize the first three words.*
 - ii. *What would a new and improved coastal system look like to inform climate? Could be considered in introductory language.*
 2. Recapitalize and modernize existing infrastructure for continued success, including the national network of moorings, profiling gliders, high frequency radar and shore stations, updating sensors, and expanding to comprehensive physical, chemical and biological change detection. **(Josie Quintrell)**
 3. Invest in technological innovation for new types of observing tools and sensors and to improve regional scale models, reducing costs and improving the understanding and delivery of information. In particular, focus on the transition of new technologies such as environmental DNA (eDNA) to operational status, and accelerate development of coupled physical-chemical-biological models that can detect and forecast ecological impacts and changes. **(Oscar Schofield)**
 - i. *O. Schofield: This recommendation needs help; eDNA on it's own is not a climate variable. Separate the models from the eDNA. Emphasize the technologies that would improve the models.*
 - ii. *M. McCammon: Add specific technological advances, e.g. Argo floats that work in the Arctic; fill in the continental shelf and slope observations*
 - iii. *O. Schofield: Intensified nearshore lower cost sensors to improve wave modeling, sea level rise in urban areas. Need a scalable approach. Prioritization is needed in order to determine which technologies.*
 4. Expand regional data integration services to better integrate IOOS with other coastal and global climate programs and to better provide products and services for communities. This can be achieved by supporting smart platforms that can more rapidly communicate information, alerts and warnings to users, thereby building synergies, filling critical gaps, and developing cost-effective solutions. **(Sara Graves and others)**
 5. Increase engagement with historically underrepresented communities that are often disproportionately affected by climate impacts by co-designing observation systems and tailored products to ensure all have access to the information and tools needed to fully prepare for and respond to coastal change. **(Molly McCammon)**
- 5. Next Steps**
- The PWG members will flesh out their assigned recommendations with implementation context and a doodle poll will be sent out to schedule their next call to discuss progress.
 - O. Schofield will lead the report out for the July 27th public meeting.

April 13th, 2022 (3-3:30pm ET)

1. **Attendees:** Sara Graves, Dan Rudnick, Dan Costa, Susan Yee, Molly McCammon, Oscar Schofield, Nick Rome

2. **General Scope ([Work Plan](#))**

The working group was asked to review the details within the work plan and asked if there were certain topics which would be most influenced by FAC recommendations.

- D. Rudnick noted the [Detecting The Coastal Climate Signal: The IOOS Contribution](#) white paper which was released in 2021 would be a great area for this PWG and the IOOS FAC to focus on. He noted that there are already recommendations listed in the paper and the FAC could review, select priorities, and respond.
 - O. Schofield agreed with D. Rudnick's suggestion and noted that focusing on the recommendations in the paper and getting a statement from the FAC would be a great starting place. He also noted that the recommendations point to quality data and equipment for RAs and IOOS at large.
 - D. Costa agreed and added that certain recommendations could also be fleshed out by the FAC. He asked if there was an implementation plan that went along with the white paper.
 - M. McCammon noted that there was no implementation plan, but the white paper authors and IOOS Association were leading webinars on the subject and planning a workshop in the future. She also added that hearing from Ko Barret on the President's Budget and climate will be helpful in moving these white paper recommendations forward.
 - S. Graves agreed and added that a discussion on the NOAA budget and infrastructure will help the FAC in moving these forward.
- D. Costa asked if we could add a recommendation on data harmonization. He noted that he was worried whether or not RA data streams were comparable.
 - O. Schofield noted that the basic measures are there for a baseline, but we need calibration and other standards that are followed by the RAs. He added that this is important for RA leadership to have front and center on their plates.
 - M. McCammon noted that in order for RAs to get certified (RICE), data streams coming into the RAs need to be described (metadata). Some data subsets do hit climate quality standards and others do not.

3. **Recommendations and Timeline ([2021 Recommendations Report](#))**

The working group was asked to review the 2021 FAC recommendations report and provide feedback on the format and timeline of the new recommendations.

- The group agreed that the report format is good and noted that, depending on the information provided on the NOAA budget planning process, it may be beneficial to provide some key recommendations early in the budget process via letter.
 - It was noted that any variation in the timeline will be dependent on budget information provided, other PWGs, and the general pace of the FAC on developing a statement to send forward the white paper recommendations.

4. Report out and discussion leads at Public Meeting ([Draft Meeting Agenda](#))

The working group was asked to volunteer one person to report out on today's meeting and lead the deliberations during the public meeting.

- D. Rudnick agreed to report out and lead the Climate Services deliberation.
 - A general outline for the deliberations was prepared by the group:
 - i. J. Quintrell to provide a brief update (informal-no slides) on outcomes of the follow-on activities outlined in the white paper.
 - ii. D. Rudnick will present the report out from the initial PWG meeting and recommendations in the white paper and lead the discussion on each with the FAC.
 - iii. It was noted that the [Detecting The Coastal Climate Signal: The IOOS Contribution](#) should be provided as a read ahead to acquaint the committee with the paper.