February 4, 2021 Joint Partners & Social Science Working Group Call

Attendees: Güray Hatipoğlu, Cindy Hu, Mike SanClements, Kira Sullivan Wiley, Jody Peters, Jaime Ashander, Melissa Kenney, Chris Brown
Regrets: Cliff Duke

Agenda and Notes
1. Introductions

2. Actionable Science, Co-production, Community Science
    a. Melissa Goodwin from Thriving Earth Exchange spoke to the Partners group in December. Slides 2, 4, and 5 from her presentation seem relevant to thinking about actionable science or as Melissa notes in her slides, community science.
    b. 2015 Report to the Secretary of the Interior, Advisory Committee on Climate Change and Natural Resource Science how-to-guide on collaborating to develop scientific information useful to those who make decisions about conserving biodiversity and cultural resources in a changing climate
        i. Appendix IV (pg 40-53) which provides guiding principles and recommended practices for co-producing actionable science.
        ii. Pages 53-59 provide some actionable science case studies.
        iii. Here is a link to just Appendix IV and the case studies.
        iv. Cliff's perspective as one of the co-developer of the report

3. Notes
    a. Actionable science has come up individually within both groups before so we thought it would be a good topic for a joint call.
    b. What does co-production look like from the social science group?
        i. A lot of methods are deployed in partnerships with producers and users of forecasts
        ii. Work is not done in isolation. Engagement with partners is critical for success
        iii. NOAA and other gov't agencies are becoming more engaged with users/stakeholders than they have in the past.
            1. Before the goal was proof of concept. Get products created.
        iv. 2 ways of getting feedback
            1. Informal feedback mechanism. This is asking for feedback and taking feedback from those who provide it. Challenge is that it is not empirically based. You get squeaky wheels that respond and provide feedback. So get over feedback from people who love/hate a resource and do not get feedback from the entire community.
            2. Empirically/evidence based mechanism. This allows feedback from the bulk of the users.
                a. Understand how to prioritize/improve products.

b. See what is useful to a wider set of user groups
c. Amount of investment made in developing forecasts on the front end typically is substantial compared to the investment to thinking about all the people using it on the back end. Thinking about users at the beginning is a tremendous investment
d. Communication and use of the products
e. Forecast aggregation and scoring rules - assessing the usability forecasts is also an important element in the social science fields. Link forecast with market/non-market valuation and behavioral response to the forecasts and products
f. Overlap with partners is the co-design, testing, co-production and embedding it into the forecasting process

v. From Melissa: Mike Gerst and I could present at a future joint meeting about some of the work we have done in terms of testing indicators/visualizations with "general public" users
1. This would be good to open up to larger EFI community. Actionable science and co-production is something that seems of interest and applicable to the larger group
2. Melissa/Mike could give a presentation later this spring as some of their examples are getting finalized now
3. Examples: NOAA precip/temp, water watch, US climate assessment
    a. Motivating reasoning for interpreting climates graphics
    b. Graphics that are complex are equally hard to understand by Republican/Democrats/lilberal/conservative leanings
    c. Lessons learned from this bundle of examples on how to design static forecast graphics (as compared to user controlled graphics)

vi. Studying integration where co-production has resulted in actionable science is useful. Need a model of human behavior. If science has been co-produced so start with a decision and know what the response will be to certain outputs.

vii. NESDA side - interest in quantifying value of services. This could use agent based models that model human decisions. If it can be based on integration into co-production, it will be more ground truthed and more buy in from communities that it relates to.

viii. Tornado warning example - the information shared to the public is important to making correct decisions (e.g., used to have 5 minute warnings and people would go to the basement immediate, vs. now 30 minute warnings and people started getting in their cars and driving, which is not the behavior desired by the forecasters so there was work

done to update communication of the danger to urge people to take cover)

1. How much data/analysis should be shared with the public?
2. Not sure how NOAA changed their messaging to handle people's decision

ix. Guiding principle 5 - evaluating the success of interactions and process of co-production. This is a place some types of social science work takes place.

x. NEON Forecast Challenge - could provide an opportunity for some social scientists to look at the assessment or research into a new community of practice working on co-production. Social science question to ask of the process-based work

1. Aquatic Challenge example - worked through the technical side of the forecasts and not the communication side of the forecast materials. Could be good to include the communication side of the forecasts into the Challenge.
2. This is too big of an ask to bring in outside organization to be really early adopters for the NEON Challenge forecasts at this time.
3. But as more forecasts are submitted over the next year, it will provide a great opportunity to assess the forecast graphics and think about adding a graphics/communicating forecast component to the Challenge in a future year

c. Trick from NEON side right now - NEON is transitioning their cyberinfrastructure right now. So it will evolve over the next year. NEON is thinking about putting out a timeline on these changes and could share that/test it out with this group

d. Making connections - who are the partners? Who are the users? How do we make sure that we are inviting all the people who aren't obvious? How do we get people to know about resources/forecasts and how to share that information?

i. Important to think about who is not there

ii. Going through this with Satellite Oceanography. Trying to expand to all users. So many different layers of users. Thinking about the different layers by the value chain (generators - NOAA, NASA, super users - people within weather service - concentrate focus on specific users before going out more broadly)

iii. Is there a set procedure for reaching out?

1. NOAA - was ad-hoc and was regional/parochial. But now trying to streamline it and bring the different offices together with specific people responsible at the office level and higher umbrella NOAA level. But this has only been developed in the past 2 years to do so in a unified fashion. Some disconnect between NOAA umbrella group and office level. Communication between the groups it the key
2. Seems like it is a marketing issue as well.

3. NEON - has communication team, but this type of conversation constantly comes up in all discussions
4. Mathematica - reaching out to partners and identifying decision makers by leveraging a lot of networks. If they reach out to their network then the network reaches out to their communities and then those communities have members that reach out for opportunities

   iv. Here is the official link to the Report (https://www.eenews.net/assets/2017/08/17/document_cw_01.pdf) - perhaps we could put it on the Social Science/Partners website to make it more broadly accessible

e. Another presentation option - what is NOAA doing in regards to actionable science and working with decision makers - what is their approach? Experiential review. Include this presentation with Melissa and Mike as a panel for the full EFI community?