



Climate Resiliency Workgroup (CRWG)

Thursday, May 15, 2025

1:30 – 3:30 PM

Meeting Materials: [Link](#)

CRWG Action Items:

- Email Julia (julia.fucci@noaa.gov) if you want to be updated about the STAC project “Evaluating the performance of nature-based coastal protection solutions for natural capital accounting in Chesapeake Bay” (project lead: Laura Costadone, ODU), have any data to share, or otherwise want to be involved.
 - Laura, Nicole, and Julie follow-up on ideas on how this project can help inform selection of subwatershed areas for adaptation outcome.
- Julia share wetland-related webinars/training with wetland workgroup members.

Partner Actions:

- Email Amy Freitag if you wish to be updated on the Baltimore County community resilience project (amy.freitag@noaa.gov).
- To register for webinars on drones, training on implementing beneficial use projects, and ocean acidification, see the member updates section of the minutes.

AGENDA

1:30 – 1:35 PM Welcome – Mark Bennett, Chair (USGS) and Julie Reichert-Nguyen, Coordinator (NOAA)

Meeting Focus:

Provide an update on Monitoring and assessment framework as well as the Adaptation Outcome from the management board retreat on May 7th and 8th, and STAC will present on their synthesis project that is able to begin work.

Workgroup Announcements:

- Old Dominion University and Tetra Tech’s proposal, “Evaluating the performance of nature-based coastal protection solutions for natural capital accounting in Chesapeake Bay,” has been selected for the STAC Synthesis funding and is now able to start work. Points of Contact: Laura Costadone (ODU) and Vamsi Sridharan (Tetra Tech).

Two additional announcements shared by group members:

- Mid-Atlantic Climate Adaptation Partnership (MARISA) invites you to participate in a survey to help us understand your use of our (and other!) climate data tools. Your feedback is vital to ensuring that our tools meet the needs of communities, organizations, and decision-makers like you. The survey aims to: Understand how MARISA tools are being used. Identify gaps in available climate data and resources. Gather insights to improve our outreach, engagement, and future tool development. Use [this link](#) to access the survey.
- The Maryland Department of Natural Resources is accepting applications for a long-term contractual position in the Office of the Secretary that will help advance wetland and forestry restoration on Maryland's lower eastern shore ([link here](#)). Applications are due May 26th.

1:35 – 2:35 PM Review Feedback from the Management Board Retreat

Presenter: Julie Reichert-Nguyen (NOAA) and Mark Bennett (USGS)

Description: Update the workgroup on feedback from the Management Board retreat on the Adaptation Outcome.

Materials: Presentation

- Slides presented at the Management Board meeting [here](#)
- [Menti results](#)

Discussion Summary

- Menti was run to gather thoughts on a possible new outcome name, with the current working name being 'Adapting to Changing Environmental Conditions'
- See ideas in the Menti results [document](#)
- The group ruled out Hazard mitigation and Nature Based solutions, one for having an emergency connotation and the other for being too narrow

Discussion

- Julie: Our concern with the working outcome name is that people will think our outcome and a proposed CEC (changing environmental conditions) team are too similar, and we do not want to cause any confusion. With discussing the name change, there are no guarantees, but we can put forward ideas and see what happens. We are not the decision makers. Whatever we call the outcome will most likely be the name of the workgroup too, so keep that in mind when proposing ideas. Do any of these ideas resonate with anyone?
- Julie: It is good to know that EPA is comfortable with the proposed name, so if there is comfort in it we might just leave it there.
- Nicole Carlozo (chat): In MD we have used the term hazard instead of climate
- Julie: 'hazard' could work well from a communication standpoint when working with stakeholders in subwatershed areas.

- Joe Galarraga (chat): I feel like hazard and hazard mitigation have connotations with emergency management
- Fredrika Moser (chat): @Joe - agree Hazard for this group could be problematic where it is less so with DNR.
- Julie: Maybe something like changing landscapes?
- Julie: What do people think about just calling it nature based solutions? Pretty straight forward.
 - Jim George - MDE(chat) : not a fan
 - Fredrika Moser (chat): I think NBS is very narrow.
 - Adrienne Kotula(chat) : I don't think that encapsulates everything that will be covered.
 - Katie Brownson, USFS (chat): It is somewhat narrow, but also seems to be the focus of the new outcome targets
- Jim George - MDE (chat): Prep and response to env change
- Fredrika Moser (chat) : or simplify - Environmental Change Adaptation
- Julie: I like that Fredrika, a little bit more specific, and a shorter version of the working name. Is anyone from EPA here that can weigh in?
 - Keith Bollt: I raised this point to say that the working name we have might be where we are at; however decisions are being made at a higher level.
- Julie: Alright, thanks everyone I appreciate the input, I will bring this back to Mark and STAR leadership and see if we want to generate any alternatives to be considered. We are a little ahead of schedule, so let's do member announcements first.

2:15-2:21 Member Announcements and Wrap-up

Discussion

- Julie: While we are waiting for 2:30, any updates? Amy, do you want to give an update on the Baltimore County project looking at indicators development for community resilience?
- Amy Freitag: My update is lack of update. All of you helped in November to polish up final results and we wrote a memo, and it has been stuck in policy review since January. I will drop a link to the data in the chat, it is available. If you want to be emailed updates, or want to learn more, email me.
 - [Data Link](#)
 - If you want to be included in our final email when our report is eventually released, please email me amy.freitag@noaa.gov
- Taryn: We have an upcoming workshop on how to use drones in surveying. If any one has any curiosity about what the group talked about or recommended, the PDF is now available and we have a webinar in the start of June. If you are planning to fly a drone in the wetland environment, it will discuss things you should think about. Registration is open, share with your networks!
 - Coastal Geospatial Horizons (aka Coastal Drone monitoring) workshop [proceedings released](#):

- Also upcoming [webinar](#): Drone flights in tidal wetlands: Design and post-processing June 4th 1:00-2:00
- Julie: We could share that webinar to the wetland workgroup as well, that might be something they would be interested in.
- Joe: Chesapeake Bay Environmental Center (CBEC) is hosting a workshop training on implementing beneficial use projects in July.
 - MD DNR and TNC MD/DC are hosting a training on planning and implementing beneficial use projects in July. Also great for the wetland workgroup!
 - <https://www.coastaltraining-md.org/event-6153507>
- Julie: Another webinar I was forwarded:
 - Mid-Atlantic Ocean Acidification State of the Science and Technical Workgroup; July 15-17 at the Smithsonian Environmental Research Center. Hosted in partnership with the NOAA Ocean Acidification Program, this workshop will highlight new research on acidification monitoring in estuarine and ocean waters, risk and vulnerability assessments, multi-stressors, mCDR and permitting considerations, and nature-based solutions. It will also feature hands-on training, with a field trip to SERC's Global Change Research Wetlands and lab demonstrations of carbonate chemistry monitoring and QA/QC. View the draft agenda here. [Registration Link](#)

2:21 – 3:15 Nature-based solutions and capital accounting

Facilitators: Laura Costadone (Old Dominion University)

Description: Laura Costadone will present on the objectives of the STAC Synthesis project, “Evaluating the performance of nature-based coastal protection solutions for natural capital accounting in Chesapeake Bay” and information on Natural Capital Accounting (NAC). There will be time for discussion and questions.

Materials:

- [Presentation](#)

Discussion

- Julie: During our last SRS, we identified as one of our top science needs for the adaptation outcome was for better understanding of the resilience effectiveness of natural infrastructure, climate change impact, and the need to better determine and quantify unintended benefits. This project will support progress on this science need supporting guidance on design of nature-based solutions related to maximizing benefits and cost effectiveness to managing changing climate conditions.
- Laura: I am an assistant research professor at ICAR and ODU, here at ICAR we interface between science and practice. I am very excited to move forward with this project and this discussion
- Jim George: Sounds like you are still developing the underlying methodology to a degree. how do you gather the data in an operational sense that is not so labor

intensive? Are there ways of doing remote sensing, to be able to do this on some kind of scale?

- Laura: Good question. The work we will be doing in this project is being done in parallel to my research effort, and it is a robust statistical method adopted worldwide, so there are so many case studies already available. You can use satellite data, GIS, indicators, for example: when I was in Finland, I developed a method to quantify the value of changes in greenspaces. We thought about the ecosystem services the greenspace provided, and we developed indicators with the municipality because we wanted them to be reasonably comprehensive. We decided to go for flood mitigation and runoff mitigation. To quantify these we used different models like inverse model tool, the more data you have the more precise the modeling effort is. You can translate these into economic terms like avoided damage, I used a lot of modeling tools and available data. One challenge though is that data is disappearing (no longer can access), but I am confident we will still be able to find the data we need. The STAC proposal aims to gather available data and develop an indicator. Having to dig and create your own data takes a long time; the STAC Synthesis project will provide a basis for us.
- Julie: We do have some partners that provided letters of support for this project that have agreed to share some of their data from sites where they are implementing some of these nature-based solutions. If you have data you are interested in sharing please email me or Laura and see where these connections can be made.
- KC: Just want to say thank you to Laura and her team for getting this work out there, it will bring value to communities across the bay watershed and it is data that is crucially missing in our discussions across the bay program. Discussions about engaging more with local governments and their needs, and this is strategic to their needs and how NBS can fit in with their needs and how we can pitch this to decision makers, so really excited for this to get started.
- Laura: Yes, it is very important to develop things with municipalities, otherwise you produce a publication that just sits on the shelf, what is the point? If we want to see changes that is the way you do it.
- Nicole Carlozo (chat) : Could this work help us with targeting subwatersheds for our new outcome?
- Julie: Do you have any thoughts on how we would go about that?
- Nicole: It depends on the scale of work that is going to be done. Looking at specific project sites, I don't know how much help it would be, but looking across our area of focus, trying to come up with that economic ecosystem evaluation we could compare that between sub-watersheds to identify areas of focus for preservation or adaptation areas.
- Laura: I like that a lot, I have a comment and maybe we can discuss more after this meeting. A couple of months ago I was involved in a project with the local government in Thailand doing something similar, they had flood issues. We ran these inverse models that can provide a spatially explicit map that can tell you how ecosystem services change and quantify benefit, this is a good exercise especially if we want to involve the community.

- Julie: Similar to the marsh adaptation project, it is almost trying to balance where the data is showing us adaptation is strategic to where there is the interest from stakeholders in doing the adaptation projects.
- Julie: Next steps; for folks here in the workgroup, if you are interested in getting involved there is an advisory committee being formed but we are keeping it below 10 people. Other ways include meetings to share ideas, share data, develop a project distribution list to share updates.

Next Meeting: TBD

Attendance

Name	Affiliation	Name	Affiliation	Name	Affiliation
Amy Freitag	NCCOS	Taryn A Sudol	MD Sea Grant	Larry Sanford	UMCES
Marisa Baldine	Alliance for the bay	KC Filippino	STAC	Nicole Carlozo	MDNR
William Nardin	UMCES	Jim George	MDE	Ellen Egan	Aqua Law
Kristin Saunders	UMCES	Angela Jones	DoD U.S. Department of Navy	Keith Bollt	EPA
Gabriel Duran	CRC	Celso Ferreira	GMU	Adrienne Kotula	VA Chesapeake Bay Commission
Gabrielle Rosario	VA Sea Grant	Meg Cole	STAC	Katie Brownson	USFS
Julie Reichert-Nguyen	NOAA	Laura Costadone	ODU	Frederika Moser	MD Sea Grant
George Doumit	DE DNREC	Neil Ganju	USGS	Kerry McClaughry	UMD
Amanda Small	MD DNR	Julia Fucci	CRC	Michael Maddox	University of MD Climate Resilience Network

Arianna Johns	VA Department of Environmental Quality	Erin McNally	EA Enginee ring	Kate Vogel	NWF
Joe Galarraga	The Nature Conservancy	Ian Blair	WW	John Denniston	MDOT
Allison Welch	CRC				