Scientific, Technical Assessment and Reporting (STAR) Meeting

Thursday, July 27, 2023
10:00 AM – 12:00 PM
Meeting Materials: Link
This meeting was recorded for internal use only to assure the accuracy of meeting notes.

ACTION ITEMS

✓ Greg Allen (EPA): Follow up with Bill Dennison and Vanessa Vargas-Nguyen (UMCES) regarding any connections between the Global Sustainability Scholars' work and the joint project with EPA and Center on Environmental Economics on the distribution of environmental benefits.

✓ Bruce Vogt (NOAA): Bring to the Beyond 2025 Steering Committee the following topic/question:

   o Status reports such as NOAA's seasonal summaries, the Mid-Atlantic state of the ecosystem report, and the Chesapeake Healthy Watersheds Assessment 2.0 all assess changing conditions and implications for living resources. The University of Maryland Center for Environmental Science (UMCES) Chesapeake Bay report cards put a value statement/score on environmental status, and stakeholder learning sessions can inform these above products. What kinds of interactions and/or alignments can be found between these tools and reports?

✓ All: Subscribe to the STAR Newsletter.

AGENDA

10:00 AM   **Welcome, Introductions & Announcements – *Bill Dennison* (UMCES), *Ken Hyer* (USGS) and *Kimberly Van Meter* (Penn State) - STAR co-chairs and vice chair, *Breck Sullivan* (USGS) STAR Coordinator, *Peter Tango* (USGS) CBP Monitoring Coordinator**

Announcements

Strategic Engagement Team Update - *Marisa Baldine (CRC)*

Marisa said that the Strategic Engagement Team (SET) is waiting for the next Strategy Review System (SRS) cycle to meet with cohorts. They are also working on an internal strategic communications plan for the communications office. The feedback page for responding to the Reaching 2025 Report is now open for comments. The Citizens' Advisory Committee name has been officially changed to the Stakeholders' Advisory Committee.

Marisa shared some recent good news stories:

- Chesapeake Bay Program notes 12% increase in underwater grass abundance, continues work toward its ambitious restoration goals

- [Submerged aquatic vegetation, a critical blue crab habitat, bounces back in the Chesapeake Bay](#)
- [Documenting the return of the terns to Poplar Island](#)
- [The health of streams in the Chesapeake Bay watershed is improving, according to recent data](#)
- [Chesapeake Bay oyster reef restoration acreage surpasses two square miles](#)

Beyond 2025 Steering Committee Update – *Ken Hyer (USGS) and Peter Tango (USGS)*

Ken said that the first meeting of the Beyond 2025 Steering Committee was last month and focused on understanding the Executive Council (EC) charge. The Committee met Environmental Research Group (ERG), a consultant company that was brought in to help with program evaluation. The second meeting of the Committee will be this afternoon from 1-4. Within the EC charge, they identified the 3 pillars science, restoration, and partnership. Looks like they'll break the steering committee up into sub-committees by these pillars, and the sub-committees will craft evaluation questions. The questions have to be broad enough to lead the charge but narrow enough that ERG can assess it. The findings report, which will be completed in a year, will go to the Management Board (MB) which will be responsible for giving recommendations to the Principals' Staff Committee (PSC).

[STAR Accessibility Survey](#)

Upcoming Conferences, Meetings, Workshops and Webinars

- [University of Maryland Symposium on Environmental Justice and Health Disparities](#) – September 11-12 ([virtual](#)) and September 14-16 ([in person](#)), University of Maryland, Stamp Student Union.

- [Chesapeake Studies Conference](#) – September 15-16, 2023, Salisbury University, Salisbury, MD.

- [Potomac Conference](#) – September 21, 2023, Lorton, VA.

- [Virginia Water Monitoring Conference](#) – September 26, 2023, Henrico, VA.

- [Chesapeake Watershed Forum](#) – November 3-5, 2023, Shepherdstown, VA. Session proposals were due June 11. Poster proposals are due July 28.

- [CERF 2023 Conference: Resilience & Recovery](#) – November 12-16, 2023, Portland, Oregon. [Abstracts](#) were due May 10, 2023.

- [National Conference on Ecosystem Restoration](#) – April 14-19, 2024, Albuquerque, New Mexico. [Abstracts](#) are due September 1, 2023.

10:15 AM   **[UMCES Chesapeake Report Card](#)** – *Bill Dennison and Vanessa Vargas-Nguyen (UMCES)*

Bill and Vanessa will provide an overview of the most recent Chesapeake Report Card, identify new metrics, and discuss the take home points of the report.

Bill said that he began using report cards in the 1990s in Australia. This generated media attention, and he was asked to do freshwater indices for other parts of Australia. Bill then brought the environmental report card concept to UMCES. At the time, the Chesapeake Bay Program (CBP) had a lot of data but no synthesis. CBP had 101 indicators with no ranking of priority. UMCES completed an initial report on the Chesapeake Bay in 2006, and they have created a Chesapeake Bay report card for watershed indicators as well as Bay health since 2019. The report cards are reports of the previous year's data. Bill noted that the one-year lag time was more appropriate for Bay health indicators, and with addition of more watershed data which may have different data reporting time frames, adjustments may be required.

The 2022 report card, released by UMCES on June 6th, 2023, has 3 suites of indicators: economic, ecological, and societal, for the Bay and the watershed. The economic indicators were created with the help of Council Fire. An Environmental Justice (EJ) index was recently created by the Center for Disease Control (CDC), which is composed of social vulnerability, environmental burden, and health vulnerability. The report card tries to get to the finest geographical detail the data can provide, but it can be challenging to get as much specificity in the watershed as in the Bay.

Bill then provided an overview of the report card results. Overall, the Bay is improving based on the indicators in the report, showing that reductions in nutrient inputs are effective. However, the Upper Eastern shore stands out with a degrading trend. The Choptank River isn't doing well either, as well as the Lower Eastern shore. Overall ecological conditions are pretty good; except for the Eastern shore. Streams feeding into the Chester River, Choptank River, etc., are not doing well, especially on the stream Index of Biotic Integrity (IBI).

A new measure included in the 2022 report card is the fish community index, developed by the EPA. For this index as with other indices, the Eastern Shore is degraded, as well as the Lower Potomac and the James Rivers. The headwaters are doing well in this index, however.

The societal conditions index (composed of stewardship, walkability, heat vulnerability, and social indices) also shows the Eastern shore is degrading, consistent with other indices. Economic conditions are moderate, but there are disparities at the county level. For all conditions, the Eastern shore was declining until 2013, then there was a bump up, and now it's declining again. Overall, there is a negative trend.

Bill ended by saying that community health is relevant to Bay health, and that it's necessary to think more systematically about Bay restoration including social, economic, and ecological factors.

Vanessa then discussed the Environmental Justice Indicator, emphasizing the importance of addressing EJ issues for accountability and increasing equity. Many students in the

environmental science graduate program at UMCES are passionate about EJ, so Vanessa and Bill taught a graduate level course on developing an EJ index. The graduate students produced a newsletter with their findings and presented at the STAR meeting. The EJ index that they developed is issued using a suite of indicators. Vanessa added that developing this index alone isn't very powerful unless the Chesapeake Bay Program also incorporates diverse knowledge and engages communities. EJ related indicators were incorporated in the 2021 and 2022 report cards, and the CDC's EJ index is incorporated in the 2023 report card.

Vanessa wrapped up saying that the report card is continuously being updated and additional indicators are being evaluated. They are hoping to include a governance category in the future. Current indicators are also being evaluated for updates and for improving strategies for communications, rollout, and engagement. Chesapeake Bay report card serves as model for global report cards, and smaller scale report cards are also under development, such as the Potomac River report card. Finally, Vanessa summarized the stakeholder listening sessions that the Global Sustainability Scholars held over the summer.

Chat comments:

- Peter Tango (USGS): Expanding the report card metrics moves us beyond the often-narrow water quality focus but a system wellbeing that includes the human dimension in an integrated fashion. The report card is more of a sustainability index to me, as you say - more holistic. Great work!
- Kim Van Meter (Penn State): I agree, Peter. Really interesting and important.
- Julie Reichert-Nguyen (NOAA): Coastal flooding and adaptation would be great to include. This indicator would align well with the climate resiliency outcomes in the Chesapeake Bay Agreement.

Discussion:

Ken Hyer (USGS) commented that it seemed like the stakeholder listening sessions were pop-ups rather than preplanned and advertised and wondered if that limited engagement.

Bill explained they did a little bit of advertising with local riverkeepers. They wanted to reach a broader community than they normally talk to. The CBP can be a bubble of the same people. With the listening sessions, they got a lot of input. People talked for over an hour.

Vanessa said that there was good engagement and that boaters, sailors, and people who used the areas for recreation were happy to learn about the initiative. They felt like nobody is taking care of the river.

Ken said he likes the idea of moving to a local scale. At the recent SRS biennial, the importance of connecting locally was emphasized.

10:45 AM   **Global Sustainability Scholars Report Out –** *Bill Dennison (UMCES) and the Global Sustainability Scholars*

The Global Sustainability Scholars for summer 2023 will reflect on their work this summer and what they heard in community listening sessions for the Potomac Report Card.

Kameryn Overton (Tuskegee University) presented on her project, which focused on diversifying stakeholder engagement. The Global Sustainability Scholars conducted 3 listening sessions as outdoor pop-ups, and Kameryn was responsible for the social networking station. Almost everyone the Scholars spoke to at these listening sessions were White, middle class, and retired or over 40 years old. The listening sessions were missing out on representation from a lot of minorities. Ideas and decisions made from these listening sessions could disproportionately affect minority groups, and the environmental justice index shows us many times that minorities are living in vulnerable communities. When we're not speaking to people from these communities and spaces, their desires and visions for a sustainable future are not being accounted for. Kameryn asked what she could do in the short time that she was there to help expand the view and opinions the CBP was receiving. She asked why CBP has not considered engaging with faith-based groups. Kameryn is part of faith-based groups and witnessed how historically, faith-based groups are left out of environmental conversations. However, faith-based communities are historical pillars in minority groups. They are where crucial information is distributed and are trusted by the communities they serve.

To address this gap, Kameryn facilitated a listening session with a church close to DC called Capitol Rivers Church. She showed that it was important to go to where people already are, instead of expecting people to go out of their way to share their viewpoints. This makes a difference in the input that is received. Additionally, be aware of preconceived notions and don't assume that churches don't have connections to the environmental field. A large proportion of the church community members that Kameryn spoke with were educators or worked within the environmental field already such as environmental engineers or people who worked for NOAA. Kameryn also shared the importance of timing in connecting with communities; this listening session occurred on a Sunday when people were already gathering. Other listening sessions were weekdays from 10am-5pm, hours in which many people are working.

Kameryn shared her findings from the listening session she held at the Capitol Rivers Church. She found that while most people she spoke with were aware of environmental issues such as water pollution and climate change, they did not necessarily connect the environmental issues directly with their own spaces, homes and families, and that this session was a learning space to explore those connections more. She explained that during the listening sessions, there is a systems dynamics modeling station where people can draw on a causal loop. In that station, job availability has always been present in the diagram, but at this listening session, job availability was interacted with more in depth. Significant issues were workforce development, bringing

more Black and Brown people into the environmental workforce, green jobs and green spaces, and building wealth within communities.

Kameryn ended her presentation by emphasizing how going to faith-based communities will help with building lasting connections, communication to spread environmental literacy, and diversify stakeholder engagement for the future.

A video of the other Global Sustainability Scholars' work was played.

Discussion:

Bill commented that connecting peoples' lives to the Bay is a common theme and that these weren't just listening sessions but also learning sessions.

Greg Allen (EPA) said that EPA and Center on Environmental Economics is launching a program to answer whether the value of Bay restoration accrues evenly across the watershed, with emphasis on whether underserved and underrepresented communities benefit proportionately. They are going to launch listening sessions with help from ERG. They want to follow up and see how they can leverage and learn from what the Global Sustainability Scholars have done. ACTION

Bill said the listening sessions were held mostly outdoors and they tried to draw people in with activities.

Chat comments:

- Bruce Vogt (NOAA): I really like the outreach you all did. And love the term learning sessions. The learning goes both ways.
- Julie Reichert-Nguyen (NOAA): What a great program and great job by the scholars.
- Bruce: The report cards are a great communication tool. I am curious about the interactions and/or alignments you see between status reports such as the seasonal summaries and Mid-Atlantic state of the ecosystem report that assess changing conditions and implications for living resources, the report cards that put a value statement/score on the environmental status, and stakeholder learning sessions which can inform both above products. Probably a discussion for another day.
- Renee Thompson (USGS): I agree, Bruce, and the Chesapeake Healthy Watersheds Assessment 2.0 can also be used to assess changing ecosystem and implications for living resources. So, understanding how these tools and reports can be aligned would be a useful endeavor.
- Kristin Saunders (UMCES): Renee and Bruce, it would be awesome if your combined question could be seeded with the ERG and Beyond 2025 Steering Committee, because as they look over the next year at how our system and tools support (or don't) our future work, putting this out as a potential complement or addition to the model we use for TMDL might help get us to that broader need we see without necessarily developing new tools or models, but using a combination of these existing assessments to inform and guide our work. ACTION

- Kristin: Maybe the members of the steering committee who are most versed in these tools could advance that idea as they work to refine questions at the meeting later today or in the coming meetings.
- Bruce: I'll be at the meeting today but an hour late due to a conflict. I do agree our starting point should better synthesize and utilize what we have before making a decision to develop new models.

11:15 AM   [**Updating the Chesapeake Conservation Partnership (CCP) Priority Habitat Dataset of the Chesapeake Conservation Atlas: A Scoping Project**](#) *– Bianca Boggs (Skeo)*

This 2022 GIT Funding scoping project was sponsored by the Stewardship GIT, with the hope that the information generated from this project will be used to help update the Chesapeake Conservation Partnership (CCP) Priority Habitat dataset. Skeo and an advisory team have been working to research various potential approaches, and associated resources required, for the updated, watershed-wide dataset of important habitat to guide land conservation and terrestrial and aquatic habitat conservation, restoration, and stewardship. Bianca will present the findings from this project and next steps.

Objectives of the update included identifying where utilizing higher resolution land cover data would improve understanding of vital lands and habitat, and identifying other considerations and data that could improve the Priority Habitat model. Skeo conducted 8 subject matter expert interviews to provide feedback on the current model and insights to consider for the update. They also held 3 workshops (2 for internal CBP staff and 1 for external stakeholders) to collect further feedback.

Bianca shared Skeo's recommendations for a model update: to create a dynamic web-based interface to house the new CBP Habitat Model that will provide flexibility in viewing individual data layers, changing scales, and adding data relevant to specific geography and programs (such as 1-meter land cover data set, state habitat models, social vulnerability data, climate resilience and other priorities to evaluate multiple benefits as appropriate); integrate the new dynamic web interface into a landing page such as the CBP Targeting website to contain metadata, instructions, resources, and scenarios for utilizing the CBP Habitat Model for conservation funding and priorities; and invest in funding for outreach, education and technical assistance to integrate the new CCP Habitat Model into relevant conservation programs, priorities and funding throughout the Chesapeake Bay. Skeo proposed potential development scenarios the CBP could take and considerations for using 1 meter (1m) vs 30 meter (30m) land cover data.

Discussion:

Bill asked, how did you select subject matter experts?

Bianca responded that Skeo had a workshop first and gathered subject matter expert suggestions from the participants of this workshop. They also had a great project team who suggested people. They spoke to people from EPA, the Southeast Conservation Blueprint, USFWS, and different states to get an understanding of what each state was doing and what their requirements were. They also spoke to the Delaware Conservation Blueprint.

Bill asked these were people who were users of the results?

Renee Thompson (USGS) responded that the project team had a series of different types of experts, and they considered users to be stakeholders. They had internal stakeholders (within CBP), and external stakeholders like planners and land conservation professionals. Then they had a separate group of subject matter experts who are technical experts at developing high value habitat datasets like this. They consulted a wide breadth of stakeholders.

Bill commented that he wondered how dynamic this will be because as land use pressures change, the priorities of conservation areas change. How will this be used as a dynamic decision making tool?

Bianca responded that in regard to the 1m data, there are different data sets for different time scales. Those can be compared to see change over time. Those were considerations the project team added to the report. If folks decide a 1m dataset is needed, that will require annual updates to the 1m data which will be a large amount of effort.

Bill commented that having geographic specificity will make the tool more relevant and useful for local planning commissions and counties.

Ken Hyer (USGS) said that now that CBP has this new 1m high resolution land cover data set as well as land change data, it is good to see demonstrations and applications in different modeling tools by workgroups and goal teams.

11:45 AM   Follow up from the STAR Coordination Quarterly Meeting – *All*

This time is reserved for any needed follow up discussion from the STAR Coordination Quarterly meeting on July 20th.

Ken stated his appreciation to all the coordinators and chairs of the STAR workgroups, and to Breck, Alex and August for putting the meeting together. It was useful to reflect on 2023 activities, priorities looking forward, and how can STAR support its workgroups and their needs. Future opportunities are to look to gaps among the workgroups, and to identify synthesis and connections between efforts within STAR and outside of STAR with Goal Teams.

Alex Gunnerson (CRC) shared that the STAR webpage has been updated with the revised STAR Scope and Purpose. He encouraged signing up for the STAR newsletter, which you can do at the bottom of the STAR Scope and Purpose section, and you can also view archived newsletters.

Bill suggested thinking about doing is have lightning talks from young faculty showcasing their work, which would create more networking opportunities.

Peter Tango (USGS) provided some comments on the Beyond 2025 effort. Part of the process is understanding the CBP's strengths and where CBP needs some help and what kind of help, whether CBP's goals are set properly, how to support those goals and whether they can be supported, and how to step forward with that understanding, looking at internal and external factors. He said that STAR representatives to the Beyond 2025 committee will bring what they learn from those meetings back to STAR and get STAR's input.

Ken said that Reaching 2025 is a sprint and Beyond 2025 is a marathon.

Bill said there are benefits to moving fast and benefits to moving slow and it might be helpful to think of it as a set of sprints with breaks in between to take stock and re-align.

Kim Van Meter (Penn State) said sprints can be both energizing and exhausting but it's good to be building that kind of structure into this planning and work.

12:00 PM   Adjourn

Participants

Alexander Gunnerson (CRC), Alexandra Fries (UMCES), Amy Handen (EPA), Ann Foo (UMCES), August Goldfischer (CRC), Bailey Robertory (CRC), Bianca Boggs (Skeo) Bill Dennison (UMCES), Claire Buchanan (ICPRB), Doug Bell (EPA), Gina Hunt (MD DNR), Greg Allen (EPA), Jamileh Soueidan (CRC), John Wolf (USGS), Kameryn Overton (Tuskegee University), Katheryn Barnhart (EPA), Katie Brownson (USFS), Kaylyn Gootman (EPA), Ken Hyer (USGS), Kim Van Meter (Penn State), Kristin Saunders (UMCES), Marisa Baldine (CRC), Mark Nardi (USGS), Matthew Kierce (IWLA), Meg Cole (CRC), Mike Mallonee (ICPRB), Peter Tango (USGS), Qian Zhang (UMCES), Renee Thompson (USGS), Sophie Waterman (CRC), Tou Matthews (CRC), Vanessa Vargas-Nguyen (UMCES), Bruce Vogt (NOAA), Doug Austin (EPA), Julie Reichert-Nguyen (NOAA), Kate Allcock (EPA)