Status and Trends Workgroup Meeting

Thursday, October 20, 2022

1:00 PM – 2:30 PM

Meeting Materials: Link

This meeting was recorded for internal use to assure the accuracy of meeting notes.

ACTIONS & DECISIONS

- **Given employee turnover and the need to maintain institutional knowledge, all outcomes are requested to share their standard operating procedures related to internal indicators with Katheryn Barnhart (barnhart.katheryn@epa.gov) and Alex Gunnerson (agunnerson@chesapeakebay.net) with their next indicator update to ChesapeakeProgress.com.**

- **Input from Status and Trends Workgroup (STWG) members on the proposed Local Leadership indicators includes:**
  - **Indicator 1b was somewhat more helpful than 1a since it grouped responses by size of community, so the outcome should proceed with 1b.**
  - **Convert y-axes to show percentages when possible for indicators 1a and 1b.**
  - **To reflect both sure and not sure responses, use the stacked column data visualization type.**
  - **For the second indicator, consider breaking it into two categories similar to indicator 1.**
    - **Laura Cattell Noll will ask the Local Leadership Workgroup (LLWG) for their input on this suggestion.**

- **Laura Cattell Noll will bring these proposed indicators to the LLWG in November 2022, then to Goal Implementation Team 6 for final approval in December 2022. Laura and Katheryn will keep STWG updated throughout the process and bring it back to STWG if significant changes are suggested from the GIT.**

- **Next steps for influencing factors:**
  - **By the end of November, please review the email from Katheryn Barnhart (forthcoming) and indicate the top two or three indicators or data-based metrics you feel are strongly influential to your outcome.**
  - **As we update indicator metrics, Alex and Katheryn will reach out to outcomes listed as being influenced by the indicator that has been updated to reflect those changes on the corresponding page.**
  - **Katheryn will make a note of Renee's comment that healthy watersheds should be included under the Land Use Options and Land Use Methods since they are housed under the same Goal Implementation Team.**

Meeting Minutes

1:00   Opening and Roll Call, Announcements – Katheryn Barnhart, Coordinator

- Updated process documents on Status and Trends webpage. Reach out to Katheryn Barnhart at barnhart.katheryn@epa.gov with any questions.

- Ask of workgroup members: share information related to internal indicator SOPs.

    o Given employee turnover and the need to maintain institutional knowledge, all outcomes are requested to share their standard operating procedures related to internal indicators with Katheryn Barnhart (barnhart.katheryn@epa.gov) and Alex Gunnerson (agunnerson@chesapeakebay.net).

1:05   Local Leadership Indicator Proposal – Laura Cattell-Noll

Laura presented a conceptual model on how the new proposed local leadership indicator(s) address the language and science behind the outcome. Status and Trends members had the opportunity to provide any comments or concern for communicating the proposed indicator(s) toward outcome progress and suggest next steps for finalization and updating to ChesapeakeProgress.

Summary

Laura began with some context for the discussion, detailing the three components of the Local Leadership Outcome, the Local Leadership Survey, and the discussions that took place at the May STAR meeting and the June STWG meeting.

Laura described behavior change the principles components of behavior change theory. The two major takeaways are that audience research is essential to understand variables that influence behaviors and evidence-based strategies can be applied to foster behavior change.

Regarding the audience research component, Laura and Local Leadership Team used the Diffusion of Innovation theory to inform who the audience of their outcome and efforts is (see slide 4). The results of the Local Leadership Survey indicated that the major barriers for their audience is a lack of basic watershed knowledge and technical capacity. Local official priorities for the audience were economic development, public health and safety, infrastructure maintenance and finance and education. Local officials from smaller communities and newly elected officials lacked the most knowledge and capacity.

Regarding the evidence based behavior change strategies, five strategies stood out as the most potentially useful:

- Message Framing – tailoring information to an audience increases knowledge
- Trusted Sources – hearing about a behavior from a creditable source

- Social Diffusion – hearing a peer tell you about a behavior
- Social Norms – seeing others engage in a behavior
- Dialogue – open and honest conversation can increase knowledge

Laura then outlined with the logic model how resources and inputs from the LLWG could use evidence based strategies connected to management actions to produce outputs that support the primary and secondary components of the local leadership outcome.

Laura then showcased two versions (1a and 1b) of an indicator for the primary outcome and a second indicator for the secondary outcome.

<u>Discussion</u>

Kristin Saunders said she likes the distilled logic model.

Peter Tango commented it would be informative and instructive to do the same survey of the general public as a measure of comparison. One question to answer might be are elected officials more informed, equally informed, less informed than on average among the general public. Peter expressed appreciation for the work that has been done. Peter asked about combining the results of the eight questions pertaining to knowledge of regulations to create an aggregated score for possible indicator 1a. Laura replied that was partially the idea behind possible indicator 1b, but some of the groups were not statistically significant. Overall, the results showed there was not a statistically significant difference between the knowledge of regulations of elected officials, appointed officials, and senior staff.

Katheryn Barnhart asked if Laura was asking for confirmation and feedback of what is the most informative indicator to go on ChesapeakeProgress, specifically possible indicators 1a and 1b. Laura said yes, she is looking for that insight and if there are other things that can be done to make them more informative or understandable performance indicators.

Breck Sullivan asked about the y-axis label for possible indicator 1a and said the meaning was not clear. Breck suggested changing the label to reflect the spectrum of responses provided: yes, no, not sure. Laura said originally that is how it was displayed and she changed it to the current format for the sake of brevity, but it can be switched back to the previous version. Katheryn added that because the results are anonymous and there is no way to know if the respondent was correct when they said yes or no, the more informative information was whether they were confident enough to say definitively if they knew or if they were unsure. Breck said that helps and with clarification on respondents, list out yes and no responses is unnecessary. Doreen Vetter commented I think we can add clarity through the title as well. Doreen suggested "Local Leader understanding of which regulations their community is subject

to" as a rough idea for the title. Katheryn agreed the title can help. Katheryn said another way to improve clarity can be to break down the respondent information in our communication materials. This can be similar for what was done with the Environmental Literacy and Student outcomes.

Julie Reichert-Nguyen asked about the spatial distribution of respondents and the number of respondents. Laura replied that 400 people started the survey but only 189 people completed the survey because the other half were not the target population (elected official within the watershed). More details about the results can be [found here](#). Julie asked if a color coded map of the watershed could be created to help visualize the responses, as this metric would be informative for the knowledge question and targeting future efforts. Laura said that is a good idea, but she is afraid there are not enough respondents across the watershed. Laura did mentioned that there were only statistically significant results for Maryland, Virginia, and Pennsylvania, and that there was no statistically significant difference between those three states in terms of local officials' knowledge. Breck said this comment on no significant difference among states would be great to add in the communication part on Chesapeake Progress. Katheryn agreed, saying rather than as an indicator itself, the non-significant difference between jurisdictions is interesting to comment on in our communication of the indicator in our materials.

Also thinking spatially, Renee Thompson brought forth ideas for indicator 2, asking if there is a way to draw a connection between knowledge of regulations and the implementation of best management practices to see what policies might be driving conservation success. A geospatial database or visual making this connection can also support other outcomes, like Land Use Options and Evaluation. Laura replied part of the challenge is the survey does not ask about specific regulations they are implementing, so maybe in the future they can ask a question similar to "What's the local rule ordinance or regulation that you have implemented?" There may be some insights from responses to questions about which actions were considered. Katheryn asked if when the survey is updated and sent out again in the future, other outcomes that could benefit from this information, like Land Use Options and Evaluation, can be considered so as to maximize the survey's usefulness. Renee supported this idea.

Rachel Felver asked if there would be a data issue for possible indicator 1a if not every local government respondent needs to have knowledge of a certain regulation. For instance, not every community is a Municipal Separate Storm Sewer System (MS4). Laura replied that because the results are anonymous, there is no way to know if the respondent was correct when they said yes or no. Katheryn pointed out this issue might skew results because someone who is not subject to a regulation is probably not familiar with it, so that might lead to higher numbers of not sure. Laura said this is a good point.

Doreen asked if there is a way to reflect this info from the audience research slide in this presentation of data. Identified local officials from smaller communities and newly elected officials as lacking the most knowledge and capacity. Doreen said she is still a little confused about 1b, and she and Katheryn recommended percentages for the y-axis in possible indicator 1b.

Amy Handen suggested translating indicator 1a to "X% were sure they knew, we want to get it to 100% know." Doreen liked the re-framing of sure versus not sure. Katheryn said we could do a stacked graph to reflect Amy's comment.

Breck asked what the goal of the second indicator is. Laura said it is about getting to the secondary part of the outcome (implementation). Laura said although it is difficult to get there, implementation is important so it should be reflected by an indicator.

Doreen asked about if they have made connections between knowledge and implementation results. Laura said they have not done an in depth analysis, but it appears that larger communities have both more knowledge and implementation than smaller communities. Doreen replied even if that is the case, it would be helpful to showcase connections between knowledge and implementation because it provides insight into the effects of the knowledge and could still be informative. Laura said she will look into this, although she is hesitant to draw too many conclusions since there are many more differences between small and large local governments than just knowledge. Breck and Doreen said these are good points.

Breck and Katheryn asked if the second indicator can be split in the same ways as indicator 1a and 1b for comparison's sake. Laura said she will check with Local Leadership WG.

1:45 [Introducing influencing factor indicators on ChesapeakeProgress](#)– **Katheryn Barnhart, Coordinator**

Katheryn presented on influencing factor indicators, using the example of the Blue Crab Abundance outcome and its incorporation of exploitation rate as an influencing factor on ChesapeakeProgress. She led a discussion around existing indicators and other metrics that could be included as influencing factor indicators for other outcomes and included in the communication of outcome progress/attainability.

Summary

Katheryn began with the context that enhanced documentation and understanding of influencing factors will fortify conversations during adaptive management. Influencing factors are currently accessed on the outcome's page on [ChesapeakeProgress](#) by scrolling down to the green "Learn About Factors Influencing Progress" button. These pages focus on how these factors influence progress towards the outcome.

Some plans for the incorporation of indicators include taking outcomes indicators and using them as influencing factors for other outcomes. One example where this has been used is the Blue Crab Management Indicator was migrated as an influencing factor indicator for Blue Crab Abundance outcome. Using this approach has several advantages: it helps communicate the status and trends of outcomes, outcomes currently without indicators can use influencing factor indicators to inform on outcome, and it helps communicate relationships between outcomes.

Katheryn then displayed a graphic she developed from the Jamboard responses outcome representatives provided about the topic of influencing factors in January 2022. The second slide represents the list, but it has been narrowed down to existing indicators or metrics only.

Discussion

Doreen said this idea will consider not just other outcomes, but also other factors that we have data for or the ability to present. For example, population comes to mind. Katheryn agreed.

Renee Thompson said she thinks that healthy watersheds should be included under the Land Use Options and Land Use Methods Outcomes since they are housed under the same Goal Implementation Team.

Hilary Swartwood asked specific to the Toxic Contaminant Policy and Prevention Indicator (focused on Polychlorinated Biphenyls (PCBs)), if this would mean integrating the PCB story map into this work. For context, the PCB story map is a tool to identify PCB Total Maximum Daily Loads (TMDLs) that already exist, are in development, are planned for development, and impaired segments without existing or planned TMDLs. It's different than the indicator map which only looks at tidal segments that are fully or partially impaired by PCBs. The StoryMap can be found here. Katheryn asked if this StoryMap is a fully reported metric that is being considered for reporting towards the outcome. Hilary replied it is separate but tangential to the indicator. Hilary said the StoryMap needs to be updated, and could be included on ChesapeakeProgress. Renee added that it is currently available on the Targeting Tools Webpage under the water quality improvement tab.

Julie asked about interpreting the matrix and if the outcomes in black beneath the Climate Resiliency Goal require more effort from the Climate Resiliency Workgroup. Katheryn replied that this would not require any extra work from the Climate Resiliency Workgroup, it would just involve linking those other influencing factor outcomes on ChesapeakeProgress so the connection is made. Julie said she is not sure if they have enough information to make the linkage between these influencing factor outcomes and the climate resiliency outcome clear. Katheryn said that would be a conversation for the workgroup to have, since one can know there is a connection between outcomes but not have the data or language to describe it clearly. Workgroups are encouraged to look at other workgroup's data to address this gap.

Doreen commented that there are a lot of connections and that not all of these outcome connections should be reflected to avoid ChesapeakeProgress becoming bloated. Doreen suggested only listing the top three workgroup identified influencing factors. Other connections can be made through the partners and data providers portion of the page. Katheryn agreed, saying the factors influencing need to be up to date as much as possible and that only the top two influencing factors indicators should be reported on the ChesapeakeProgress page. Doreen agreed, saying the influencing factors flow from the management strategies and logic and action plans, so those should be the guiding documents.

Brooke Landry commented her only concern about this is that the SAV Management Strategy includes "Factors Influencing Success," and those factors won't match what is here exactly. We would also have more outcomes to add to this list that Brooke will email Katheryn. Some examples are stewardship and healthy watersheds. Katheryn replied there is a slight difference between how the identified factors influencing success and influencing factors indicators are communicated, and that is represented in the two different documents.

Katie Brownson commented some of the outcomes listed are more strongly connected than others. Additionally, some outcomes should be incorporated across all the outcomes (like Diversity), but they are not really influencing factors. Katie said we should identify the top three influencing factor indicators where there is really a strong case to be made. Doreen agreed

Julie asked what the end goal of these influencing factors are since the role of the Climate Resiliency Workgroup is science support and cannot fill other data or policy support roles that these influencing factor indicators fall under. Katheryn replied the goal is not to create more work or indicators, but instead cross list indicators already being reported, such as human population. Doreen added that where there are opportunities to enhance our communication around your outcome, we want to do that but we don't want to add a ton of workload at all. Julie said that's helpful and asked if is there a list of other data sources that we can use, such as existing quantifiable indicators. Katheryn said that is a good idea and she can send out a full list of indicators and other data-based metrics the partnership has to outcomes for them to select the top three to represent on ChesapeakeProgress.

2:25   Next Steps & Actions and End of Meeting Survey – Alex Gunnerson

Meeting participants will be given the opportunity to complete an [end of meeting survey](#) to inform STWG leadership about how to best organize these meetings going forward. If you have specific feedback and wish to submit it anonymously, this form is the opportunity to do so.

Action items and next steps are listed at the top of the document.

2 :30   Adjourn

Participants: Alex Gunnerson, Alison Santoro, Amy Goldfischer, Amy Handen, Angie Wei, Aurelia Gracia, Breck Sullivan, Brooke Landry, Caroline Johnson, Chris Guy, Chris Moore, Doug Austin, Doreen Vetter, Hilary Swartwood, Jake Solyst, Jamileh Soueidan, Jeff Sweeney, Jennifer Starr, Jeremy Hanson, John Wolf, Julie Reichert-Nguyen, Justin Shapiro, Katheryn Barnhart, Katie Brownson, Katlyn Fuentes, Kristin Saunders, Laura Cattell-Noll, Mandy Bromilow, Peter Tango, Qian Zhang, Rachel Felver, Renee Thompson, Scott Heidel, Sophie Waterman, Susanna Pretzer.