Scientific Technical Assessment
and Reporting (STAR) Team Meeting

Thursday, December 19th, 2024

10:00 AM – 12:00 PM

Meeting Materials: Link

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

Minutes

10:00 – 10:05 AM Welcome, Introductions & Announcements

Ken Hyer *(US Geological Survey, USGS) and* **Kimberly Van Meter** *(Penn State), STAR chair and vice chair,* **Breck Sullivan** *(USGS) STAR Coordinator,* **Peter Tango** *(USGS) CBP Monitoring Coordinator*

Goal of today's meeting:

Everyone comes away with consistent understanding of outcomes, outputs, activities and indicators.

Upcoming Conferences, Meetings, Workshops and Webinars

- 14th National Monitoring Conference – March 10-12, 2025, Green Bay, Wisconsin.

- The 35th Annual Environment Virginia Symposium – April 8-10, 2025, Lexington, VA.

10:05 – 11:15 AM *Logic Models for the Chesapeake Bay Program*

Description: Three presentations will provide an overview of logic model components to increase understanding for Goal Implementation Teams (GITs) and partners before they embark on utilizing this approach when assessing current outcomes. Questions and discussion from the presentations will be held until the end of the third presentation. Overall objectives of the meeting are for GITs to learn the difference between an output and outcome so groups may present to the Management Board (MB) with a common understanding of how they are used and gain experience walking through the question of if their outcome is an output or an outcome.

10:05 AM - *Theory of Change for the Chesapeake Bay Program*
Greg Allen (US Environmental Protection Agency, EPA), Breck Sullivan, and Ken Hyer (USGS)

Description: As the Kellogg guide says, logic models are as varied as the organizations that use them; however, there are common types and purposes. Presenters will provide an overview of the Chesapeake Bay Program logic model through the Strategy Review System (SRS). SRS framework is a Theory of Change logic model, and it illustrates how the things the program does are intended to create change to achieve our mission.

Ken: As a partnership and as a program we have a couple different logic models. On slide 1, this is a closed loop theory of change model, which is our Strategy Review System (SRS). Our SRS process is functionally our logic model.

About 19 years ago (slide 2), the Office of Management and Budget (OMB) asked us to provide a copy of the coordinated comprehensive plan for Bay restoration. This brought forth the development of a logic model based on literature - very similar to what the Eastern Research Group (ERG) said. The Kellogg Foundation's model is a strong approach (2004), as is the work by Kaplan and Norton (2008).

Why do we want to have a logic model for our partnership? A logic model provides these benefits that all roll up into our SRS and our adaptive management approach – it lets us find the gaps in the theory or our logic of the program, and when we find a gap, it helps us solve it. The logic model builds on our shared understanding of what we're all working on and how all the pieces come together. It particularly focuses the attention of our management on those connections and the most important tool for strategic planning. Additionally, it provides a process to bring in stakeholders to review how we're doing, to evaluate what changes we want to make going forward - our strategic approach.

We can always evolve and make it better. When considering our CBP Logic-Based Strategy Management System (slide 9), it is important to view it as a closed loop, meaning that you know it's a loop, it's adaptive and we at some point return to the start. Starting on the left, we've got the Clean Water Act, followed by the vision for our Watershed Agreement. As we progress from left to right into the goals and outcomes, we never want to lose track of how what we're working on ties back to the Watershed Agreement vision. In the current agreement, the Principals' Staff Committee (PSC) is asking the workgroups to put recommendations together on the outcomes.

Once we have our outcomes, we come to our management strategies that lay out baseline current conditions, identifying indices, datasets, monitoring and management approaches and tools to assess progress and factors that are influencing success. Then, we have our logic and action plans. The logic and action plans lay out what we will be working on, who's responsible for what, what the steps are, what the timeline is, and what expected response we would see. This culminates into our two-year progress review where we go through the review process and conduct our assessment of what's working, and what's not. This finally loops back into our annual SRS review – the biennial SRS meeting. At this meeting we consider based on what we've learned and based on what's the landscape, do we need to update our goals and outcomes. How do we update our management strategy in the actions associated with that?

This is why the logic model is in place. The logic model connects how everything we do ties back into our vision, our goals and our outcome. It's a process that seems to be working. It helps us understand connectivity, helps us focus our efforts. We should highlight that all these logic models are different. Each logic model can be structured the way you want them to. Ours is this SRS adaptive management cycle that most of the feedback in phase one of the Beyond 2025 effort was really positive.

In the Watershed Agreement, we probably blended our outcomes and our outputs. Phase two of beyond 2025 is challenging us to become more efficient, to streamline, improve our structure and at the same time we're dealing with really complex ecosystem response, ecosystem recovery. The idea of trimming down our outcomes requires thinking strategically about this and thinking about how we improve it, not cutting outcomes or reducing outcomes, or changing outcomes to outputs. We should be thinking of it as how do we become more streamlined through improving strategically?

10:15 AM *Chesapeake Bay Program: Mission to Workgroups*
Greg Barranco (EPA)

Greg: One of the biggest benefits of doing a logic model is to help understand your organization and formulate your strategic plan for how to make it successful. You can have an extremely simple one, as depicted in Greg's diagram (slide 9), or you can have one that's really complex, which I'll demonstrate in my presentation.

The Bay Program is structured in the following way: the Executive Council (EC), the PSC, the MB, Goal Implementation Teams (GITs), workgroups, and other subcategories. It's really structured to support the whole organization and can be

viewed as a simple logic model. When we break it down, we get management strategies, the action plans, and the progress reviews (our review system), and the main pieces of our model, which is the mission, vision, goals and outcomes.

However, if we look at this from right to left rather than left to right, you get the mission, which is the Clean Water Act, Section 117, the vision which outlines that a little bit more clearly and then the goals to define that. So, reading from right to left, we see that our vision helps us achieve our mission, our goals help us achieve our vision and mission, our outcomes help us achieve our goals and supporting resources help us to achieve our outcomes.

The vision is what we're trying to achieve as our big picture for everyone. If you take away all the background noise of workgroups, outcomes, and goals, you can dial in on what are we trying to achieve? We're trying to achieve an environmentally economically sustainable watershed with clean water, abundant life, conserved lands and access to the water, vibrant cultural heritage and a diversity of engaged stakeholders, and these words tie right back to section 117. Climate's the only one that's not really tied in well. Still, all our goals and the GITs tie back to the vision to help us achieve abundant life, clean water and conserve lands. Next question is how do we reach those goals?

We have outcomes and outputs. What are outcomes? Which are SMART outcomes (Specific, Measurable, Achievable, Relevant, Timebound)? Which are outputs? These questions are just debates on semantics – what the outcomes tell you is what we're working on. If your outcome changes into an output or into an indicator, we're still doing the work to make those things happen.

If we continue to move to the left on this spectrum, we get to the resources. We have action teams and GITs and workgroups that all support the work towards these outcomes. As we continue to add more components to our logic model, we consider workgroup resources we have, and what about the financial resources? We can continue to add more and more columns to our logic model to describe our work in the Bay Program, like our action plans and management strategies. The great thing about a logic model is that we can make it as simple or complicated as we need to understand our work. Also consider adding components that will help you identify areas that need improvement, areas where you are finding a lot of success, where you are falling behind, etc. This will help in adjusting your resources to areas that need extra support.

10:25 AM *Outcomes vs Outputs: An overview*
Bill Jenkins (EPA)

Description: Bill Jenkins will go into more detail on the components of logic models, specifically outputs and outcomes and how their definitions connect to the work of the Chesapeake Bay Program.

A simple logic model looks like going from inputs to outputs and the resulting outcomes/impact. Essentially, what is invested, what is done and what are the results. The logic model describes the sequence of events thought to bring about benefits or change over time. It portrays the chain of reasoning that links investments to results. A logic model is a systems model that shows the connection of its parts. It is important to look left to right along the logic model spectrum in thinking and envisioning about what you want to achieve (slide 6).

For some, logic models that are focused on environmental and natural resource issues/programs, add baseline and stressors to get people to start thinking about changes in conditions. Baseline: Where are we starting to see what the conditions are currently at? Stressors: in order of importance, what are the stressors and causes of stressors and where are they most prevalent? There is a temporal aspect to this, and we must use our data to inform our indicators.

What is the difference between an outcome and an output? Outputs are tangible or observable results of an action, project, or process (i..e. inputs/activities). Outputs are more immediate deliverables that can be measured and assessed. Outcomes are the results of the inputs/activities and outputs help achieve the desired result. Outcomes measure the long-term effects of a process, task or activity, such as change in the environment or in people's behavior. Outcomes are often more complex and more difficult to measure than outputs and can take a long time to manifest. Outcomes are the results of the inputs, activities and outputs that help achieve the desired result. What we should start with is thinking about where we want to be and what we envision.

Next, start to think backwards of how teams can achieve this. Consider your goal and the vision under the Watershed Agreement and what is needed to achieve that. Fill in the logic model accordingly. Outcomes should measure the long-term effects of a process, task or activities, such as changing environments or people's behavior. Outcomes can also reflect trends over time.

10:35 AM Questions/Discussion

Q from chat: *Wendy O'Sullivan:* As we do the Outcome Assessments and begin to think about revisions, is the partnership still open to Directional Outcomes?

- **A:** *Ken:* I think B2025 was clear that qualitative outcomes are still reasonable and useful, so I would think directional is acceptable.

- **Reply:** *Gina Hunt:* My opinion - directional outcomes would be fine if you have outputs within that outcome that are measurable/metrics. And there could be many outputs within.

- **Reply:** *Kristin Saunders:* Agreed, it should be acceptable, but we can't assume it will be. Probably need to continue to make the case in those situations where directional is still the best we can do.

- **Reply:** *Jeremy Hanson:* and if directional outcomes are discouraged, we need guidance on alternative paths for such issues, e.g., would EC Directives be the preferred way to set a direction for potential future outcomes instead of directional outcomes?

Comment from chat: *Kristin Saunders:* What has been interesting is that this presentation is in the resources for the Beyond 2025 materials but very few people outside of coordinators and staffers were aware of it or have seen it. Posing the question to this group about whether you think this would be a valuable presentation to MB or PSC or both as we embark on the governance and structure discussions in particular?

- **Response:** *Greg*: Agreed, there are people who have worked in the partnership for years who, after walking through the logic model, said they finally understand how it all fits together. It allows you to see the big picture and connections.

Comment from chat: *Chris Guy:* To me these directional arrows going both ways is the secret to success. In other words, the vertical integration with decision makers and technical resources identified. I am concerned that this is not consistent with the EPA Bay Program directions to the MB that we are using as process and will be voted on at the PSC on Friday. My real concern is this is so weedy for the PSC they won't see the omission.

- **Comment:** *Greg:* The directional idea stems from our conversation in the 2014 agreement where the federal agencies had set certain goals and outcomes that they were working towards. The rest of the partnership was still under Chesapeake 2000, the previous agreement. We had this interim purgatory where we had very clear, mostly SMART outcomes with the executive order for the federal agencies. We knew we were going to change where we wanted to incorporate a lot of those into the new agreement, but in that interim time, when we didn't have the partnership in agreement with the federal goals and outcomes, we said we'll work towards those. However, for the partnership we won't say that we're aiming for 25,000 versus 50,000, for example. So, we were aiming towards that direction but did not set a number until we finalize the new 2014 agreement. Essentially, it's a quantitative

component that we're not being very specific about, but our ultimate work is still leading towards that goal.

- **Comment:** *Jeffrey Lerner:* I've had some experience with logic models in designing programs and particularly grant programs in the past. I think one thing that maybe missing from what I see in the Chesapeake Bay effort is that we're not necessarily identifying and including limiting factors that are affecting our different resources and what we're going to do about it. The way I've seen logic models created (link to a software package - miradi) is to actually create diagrams out and work backwards where you start with what you want to achieve, your outcome. Then you work backwards to figure what are we going to do about it. Before you get there, you have to identify your limiting factors.

  For example, why aren't we getting to more forest buffers? Maybe that's because we don't have enough people in the landscape that are engaging with private landowners who have different lands that we want to have buffers installed on. This gets you through the logic process where you think about where would you make investments? How would you make investments? I think a lot of this is captured in some of the logic and action planning that is happening within the SRS. What I don't necessarily see is that we're not taking those actions, those strategies and necessarily reflecting them into the logic model so that we can then go back and evaluate how are we doing on this particular limiting factor, have we addressed it, etc.? I think this would be beneficial in terms of revisiting the logic model going forward. Please refer to the miradi software package that assists with this process.

  - o **Comment from chat:** *Jeremy Hanson:* I've seen Miradi mentioned as what the Puget Sound Partnership (PSP) uses. If I understand it correctly, the PSP follows logic models based in the Open Standards for the Practice of Conservation. And I think Miradi employs those standards too? Link to those standards.

- **Response:** *Bill:* Appreciate that and on slide 8 I showed the baseline and the stressor column. I think that stressor column is trying to get at the limiting factors or those things you need to think about that may hinder your progress going forward. How are you going to deal with them? How are you going to identify and measure them? What will you do programmatically to deal with those stressors? Thank you for bringing this up.

- **Response:** *Jeff:* I think a good idea would be to bring this to the MB's awareness. The diagram format of the logic model doesn't capture everything but if we were to show this to the MB, they will see how the Partnership is doing to address these factors and how we plan on getting to where we want to go. I think doing this would be clearer because a lot of people are unaware of these logic models, and we aren't using them as communication tools with the MB on a regular basis.

Comment: *Chris Guy:* A lot of this is going to fall under governance too. We're not addressing this yet in the process, but I don't really know how you separate the two. My first thoughts on the logic model are who are the decision makers? Who are the ones who actually decide things? It's my understanding that this would be the PSC. The EC are the final decision makers, and the technical resources are the MB. So, the MB is not a formal decision maker in this process, though a gateway to the decision makers and they're the ones who are supposed to synthesize all this material. That's one thing I kind of want to point out because the materials that Bill just presented are a little bit different than what was presented to the MB from the EPA Bay Program side last week, and they were not directional back and forth. There was no vertical integration there. Only that they will provide recommendations to the MB and then the MB will decide what to do with those recommendations and provide them to the PSC. There's no feedback loop that we've just spent a huge amount of time talking about the need for to actually come to a consensus around what those recommendations should be. There's a disconnect and I have provided that to my decision maker, but I'm not sure the PSC is going to pick up on that tomorrow. Where do we go from that? I know that GIT chairs have put at least 2 emails forward that have outlined this need and I'm not sure that I've seen it being responded to by the MB or the EPA Bay Program.

- **Response:** *Ken:* I can at least share what I think the goal team chairs are trying to drive towards. The idea is that as these recommendations come forward to the MB and as we get MB feedback, there will be a review team. So, if at the MB meeting a GIT recommends to update an Outcome, the MB might say, sounds like a pretty good idea, there is supposed to be a review team that would have the GIT heavily involved, if not leading the charge, there might be some MB input to that update. The idea was that the MB wouldn't be the right group to actually do any sort of updates and texts.

- **Response:** *Chris:* Where I'm concerned is that for some of these outcomes, the folks on the MB outside of the GITs aren't that familiar with the work. For instance, Black Duck and Brook Trout, there have been decisions trying to be made to streamline and consolidate and make less outcomes, we'll just get rid of those. Our GITs wouldn't be too happy with that, and they will defend this in their justification. But if they put it through and the MB still says something along the line of "in an effort to streamline and reduce outcomes, we are going to say no to this because they're not broad enough or we would be better without them." There's no ability for any additional feedback, that this becomes the decision, but they're not the decision makers. There remains some disconnect in what Bill just presented and what we've been given in the presentation at the MB last Thursday.

- **Comment:** *Kristen Saunders:* I understand what you're addressing and it's of concern to many of us. The best suggestion I have been able to come up with so far is to the extent that we see things going in that direction in the conversations on particular outcomes or goals, that we all should be connecting with interested PSC

members that we have access to. There is sort of this process that is converging at multiple points: the MB is working on their piece of the outcome review; the PSC is going to be looking at the vision, principles and goals; and, because one affects the other, they are going to have to come together at certain points along the process. I did hear Lee say yesterday when we were doing the pre-brief meeting with Josh and Dave for the PSC meeting tomorrow, that they're trying to look at the timeline for the MB and add in the Gantt chart pieces that connect the PSC at those important decision points. That's not perfect yet, because there's a lot of moving parts, but I think we just need to stay aware of it. I don't know if we're going to fix the governance issues that keep popping up, for instance, the separating out jurisdictions or signatories from the rest of the MB. GIT 6 will be tackling some of that governance concerns but I think those instances where we see the challenges and problems like Chris just noted, perhaps we can tackle them in in multiple ways, both in utilizing the relationships that we have at different levels in the partnership, but also putting them on a parking lot for when the governance gets looked at later on this year.

I think they're going to start looking at that in the May, June time frame and bringing some of these real case scenarios in so that we can address them going forward. Second, I want to add some history to the directional thinking that Greg was sharing where at the time the agreement was being drafted, there was a big push for new thematic work like climate, diversity, environmental literacy, etc. that were relatively new compared to some of the other work that had been going on in either the federal agencies or in the Chesapeake 2000 Agreement. The best advice that STAC gave us was that for those things that weren't quite mature enough or ready to be fully detailed in SMART form (they couldn't necessarily be specific, what they were going to measure), they knew it was important to get a foothold in this version of the agreement in 2014. So, STAC helped us write the language that was directional, and when we got into the discussion about the EC charge several months ago, it was mentioned by Denice and Kirk and others from STAC the importance of allowing for directional outcomes or goals in certain instances because it sounded like the PSC was going in the direction of "we want everything to be smart." Some of us are looking at this exercise as reductive, meaning how do we reduce the number of outcomes and goals and really streamline, but there are others who feel really strongly that in order for this next generation of the agreement to be more representative and fully effective of the things that we know need to happen, we need to be slightly more expansive. The EC charge was specific about wanting to head in the direction of SMART, it's important for all of us to think about those instances where something is not going to be ready to be a fully SMART outcome or goal. Stakeholders that care about this work are also going to be really essential in helping to make that case.

Lastly, I wanted to touch on what I have heard some jurisdictional reps who are a little bit more removed from the SRS process, ask: what are the goal teams working

on? Why are they doing this work? This isn't a priority, and we haven't told them to do it. A lot of times the work that they're doing is a priority for that workgroup because they're trying to address the factors that affect their work and that is represented in their work plan. It was part of the original logic and action plan template because we wanted people to step through that thinking of "what is it we're trying to address, and what's affecting our ability to do this work now that we moved away from the logic and action plans." I think intuitively we still know what a factor is that we're trying to address, but it may not be so clearly visible to people who aren't immersed in that work. So, trying to figure out a way that we represent that in a version of the logic model may make some sense. I know it's already very complicated and hard to read, but if we're able to show all the ties and connections in one place it might be useful to making the case for that that kind of work, that people might not even understand the nuance of why we would be doing that kind of work in the field.

- **Response:** *Amy Handen:* I feel like there's some recognition that last time we conflated the two. I hope this time, while it's an uphill climb because of the reference to the quantitative outcome in the EC charge, we can collectively agree on a path forward and align ourselves to make it right this time. If we are making these changes, we need to consider how to articulate outcomes and outputs. We need both to be successful; we can't just have one or the other. I know we are tasked with revising our outcomes, so maybe the outputs will go into a future work plan or logic in an action plan.

Comment: *James Martin:* I want to start by saying at our meeting yesterday, we approved Kirk Havens as the new chair of the SRS Workgroup. Kirk is one of the fathers of our SRS process and lays a solid foundation for SRS moving forward. He's absolutely in tune with the idea that SRS is being implemented in a way that is too cumbersome. It's not that it's unnecessary or not critical, but we need to find ways to make it less burdensome for the goal teams and outcome leads.

The second point is to build off Kristen's comment about the logic model. I'm imagining a logic model that works from another direction. It would help you see on one page how all of our organizational structures, workgroups, Bay Agreement Outcomes, and outputs are connected. But what if we had a logic model for each outcome? We could understand the outputs driving the outcomes, the inputs needed, and the factors affecting them. We've effectively done this through the SRS process, but it's in a document rather than a table or logic model map format.

If we overlay all of those outcomes, it would help us understand how they interrelate and which ones should be outcomes and which should be outputs of outcomes. Many outcomes likely have common factors affecting them. If we address or fail to address a specific factor, it could impact several outcomes. Think about what that map would look like if we built it for each outcome and then overlaid them. We'd have a map

linking everything together with a common understanding of factors, outputs, and efforts. The last thing we want is one outcome's efforts counteracting another. Understanding these interrelations is crucial.

- **Response:** *Ken:* Building on your thought and Amy's, the goal is to connect these outcomes better and ensure consistency with what the management board sees. We want to avoid showing one or two outcomes that align with a specific logic model while others continue blending outcomes and outputs. Achieving consistency is key. Amy, I love your idea of agreeing on a collective pathway. For each outcome, we could develop an associated logic model to share with the management board and the PSC. This would clarify why an outcome is critical to the partnership and highlight the value added, which is often emphasized.

- **Comment:** *Gina:* To James's point and Ken's suggestion about a logic model for each outcome, it's a lot of work but makes sense. Perhaps it could be part of the two-pager or additional materials we submit. Visual connections are vital because management board members may struggle with lengthy documents. A diagram might help them better grasp the connections. I've referred to this as the "bowl of spaghetti," where outputs and outcomes overlap. For example, brook trout connect to fish passage and stream health. Highlighting these interconnections could foster collaboration.

  - **Response:** *Ken:* we have a lot of these pieces in the SRS, the logic and action plan. We are just framing it a little bit differently here.

- **Comment:** *Amy:* We haven't discussed indicators yet, but I want to share something PSP does well. They link indicators to multiple outcomes, unlike our one-to-one approach. For example, a single outcome can achieve progress across multiple indicators. Visualizing these relationships helps clarify how goals and outcomes achieve various benefits. I'll send around a report that illustrates their approach. Hopefully, it'll provide insight into how we distinguish outputs from indicators. Outputs could be specific actions, like adopting best management practices (BMPs), while indicators measure the actual impact, like water quality improvements.

  - **Response:** *Katherine Brownson:* The PSP Diagram (below) maps biophysical and human well-being conditions, linking outcomes and activities through vital sign indicators. This framework recognizes external drivers like climate, which we often overlook. By aligning our work within similar categories, we can better articulate the interplay between ecosystems and communities while emphasizing ecosystem services.
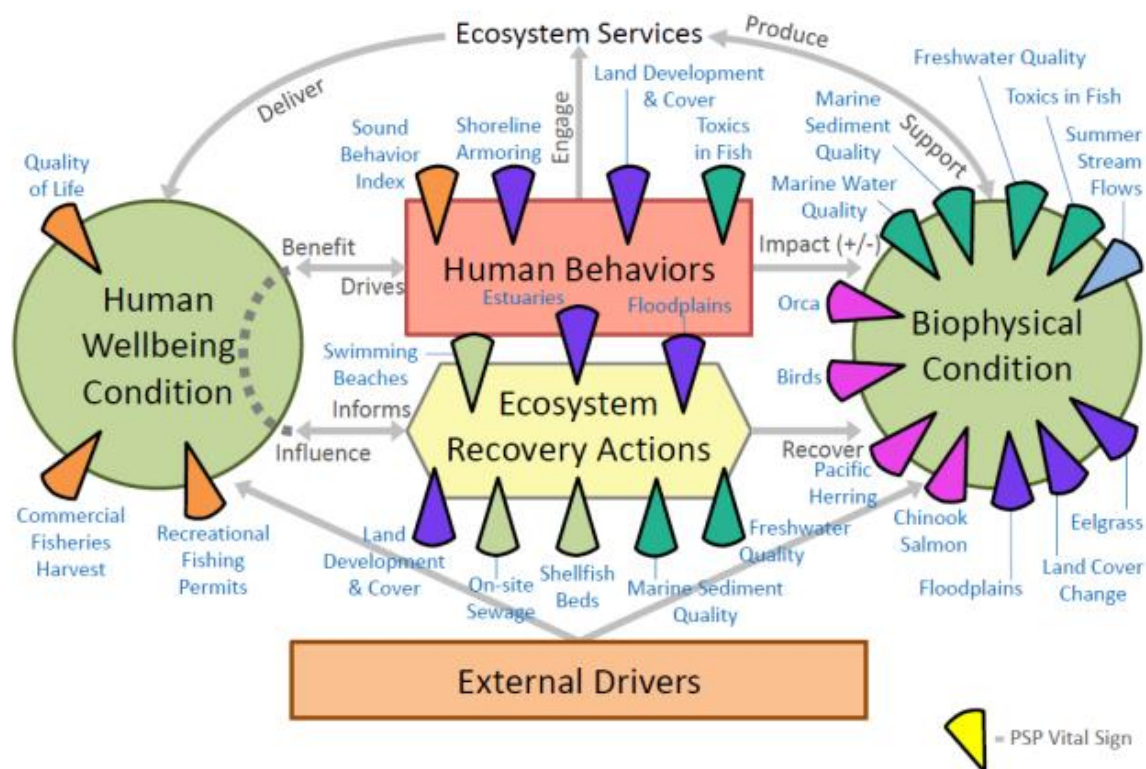
Figure 6: Integrated Ecosystem Recovery Conceptual Model + PSP Vital Signs. The 21 Vital Signs were mapped to the conceptual model to illustrate where PSP monitoring and reporting efforts are focused. The colors of the Vital Sign wedges relate to colors of the six goals represented in the PSP Vital Sign Wheel (Figure 1).

- o *Comment: Amy:* I love the model. It places biophysical and human well-being conditions on equal footing. Regarding outcomes as directional and outputs as quantitative, this distinction could make agreements more adaptable, with outcomes serving as long-term aspirations and outputs defining short-term commitments.

- o *Comment: Jeremy:* The PSP represents climate as an external driver, focusing on measurable and actionable outcomes. Unlike Puget Sound's unified approach, our multi-jurisdictional framework complicates alignment. Misalignments arise when partners prioritize metrics over broader outcomes. How do we shift this paradigm and rally around shared logic models? That's the challenge we need to address.

- *Q: Peter Claggett:* There are clear linkages among outcomes, goals, and outputs that aren't fully reflected. While creating the Bay wide watershed logic model was a significant effort, it lacks the interconnectedness of reality, which resembles spaghetti. By focusing on these connections, we'd be better equipped to integrate goals and outcomes into a cohesive agreement rather than continuing with silos.

We're currently forced to work within silos to adjust templates and other elements. How do we emphasize interconnectedness more effectively?

- o **Comment from chat:** *James:* If we could have the combined logic model of all outcomes, outputs and factors for the 4/10 MB meeting that would be amazing. This approach could address interconnectedness more comprehensively.

Comment: *Keith Bollt:* I'd like to highlight two points. First, incorporating the EC Climate Directive into outcome reviews and governance discussions is crucial. Second, we need a sound theory of change to ensure our logic model's plausibility. For example, are we providing sufficient resources to achieve our goals? A robust theory of change ensures collective actions lead to desired outcomes.

- **Response:** *Ken:* The EC Climate Directive underscores integrating climate considerations into both outcomes and outputs. Outputs should align with achievable goals informed by climate science.
- **Comment from chat:** *Keith:* A decent definition for theory of change: An explanation for why the collective inputs (partners' time and money) and the collective activities and outputs (the widgets we make) are likely to achieve the outcomes. A gut check that we're setting ourselves up for success as a partnership for each outcome

11:15 AM Outcome working/brainstorming session

Description: Participants will step through an outcome assessment to identify if it is an outcome or output based on the presentations of Logic Models and discussion. Outcome leads may also use this time to share their progress on their outcome assessment and consider cross-outcome collaborations.

Ken: Using the Water Quality Standards Attainment & Monitoring (WQSAM) outcome language as an example for this discussion:

"Continually improve the capacity to monitor and assess the effects of management actions being undertaken to implement the Bay TMDL and improve water quality. Use the monitoring results to report annually to the public on progress made in attaining established Bay water-quality standards and trends in reducing nutrients and sediment in the watershed."

As a team, we've discussed updating this outcome, focusing on breaking it into four components. The first part, "continually improve our capacity to monitor and assess," represents an action—maintaining our monitoring and assessment teams, like the load and trend team. According to the Kellogg theory, this is an activity.

The final part, "use those monitoring results to report annual progress," is also an activity, emphasizing communication and sharing results across the partnership. We've identified these as activities.

Attaining water quality standards and trends, however, is more of an output. It involves assessments of tidal waters and watershed trends, producing tangible outputs like maps and data products. Outputs are critical because they provide the foundation for achieving outcomes. When we analyzed this outcome, we identified two activities and one output. While these components are important, we believe the outcome itself should focus on progress in watershed trends and tidal water attainment. This would refine the outcome to a higher level.

Christina Garvey: Here's an update from the Fish GIT. We met with all our workgroups in December, including blue crab, forage fish habitat, and the Maryland and Virginia oyster restoration teams. Feedback has been positive overall.

For blue crabs, we decided to remove the management outcome as it was deemed complete, but we will continue with the abundance outcome and update its language. Forage and fish habitat groups met jointly on December 9th. There was less consensus, with some members favoring streamlining and others wanting new objectives. We proposed consolidating the outcomes with revised language addressing post-2025 shallow water habitat recommendations. For oysters, we met on December 11th. This group had already started revising their outcome language and will continue doing so.

We updated the executive committee this past Tuesday and are awaiting additional feedback. We've scheduled office hours for January 7th at 11:00 AM to gather input from the broader Fish GIT membership. Let me know if you'd like to join or share details. The office hours for the Fish GIT Beyond 2025 is Tuesday, January 7th, 2025, from 11 AM – 12 PM (link here).

- *Q: Ken:* have there been discussions about whether certain outcomes might actually be outputs or indicators?

    - *A: Christina:* Yes, particularly around forage. There's some confusion about how forage might fit under fish habitat. We're still working through this and appreciate these meetings to help clarify our approach.

    - *Comment: Chris:* Following up on Ken's question, we're holding office hours tomorrow at 11:50. These will be habitat-focused, unveiling our process and scheduling special sessions for workgroups in January. While most groups

can refine their outcomes quickly, distinguishing between outcomes, outputs, indicators, and metrics remains confusing. The chairs are working on this, but momentum has been slow. The STAR meeting today is a good step forward.

- o *Comment: Peter:* Healthy Watersheds is facing similar struggles. For example, land use outcomes often resemble outputs. We can't control economic factors affecting land use, but we can help localities make better decisions. Outcomes need to be achievable and measurable, yet this often shifts them into the output category.

    - ▪ *Response: Ken:* The distinction between outcomes and outputs can sometimes feel semantic. What's important is the work we're doing and how it aligns with our vision. We must communicate this effectively to the management board.

    - ▪ *Response: Greg:* Outputs are activities, while outcomes represent short-term and long-term impacts. Indicators measure changes on the ground. As long as we're working toward our goals, the terminology matters less.

- *Comment: Jeremy:* Agreement outcomes could link multiple steps in a logic model. For example, an outcome statement might include activities, outputs, and outcomes. This approach helps connect the dots and sell potential changes.

    - o *Response: Ken:* What we talked about is we may just revise the text to say the outcome is to see progress and improvement in nontidal and tidal water quality attainment and then get into the activities and the output. So, I agree with you. In a well-done outcome statement in the agreement, I like your distinction. There's management theory of what an outcome is, and then there's the agreement. Our outcome statement in the agreement for WQSAM may be a paragraph that captures some of the how we will achieve the outcome and how to include outputs and activities.

    - o *Response: Amy:* I see the agreement as a place to hold pivotal goals and outcomes. Then there's a separate place where we articulate how we will achieve the outcomes. This will enable us to be flexible in the years to come and perhaps identify time bound parameters to these outputs and activities that will allow us to be more flexible in the future.

        - ▪ *Comment from chat: Peter:* agree with Amy - it's a 3-piece puzzle to me: the Agreement, our Logic and Action plans, and our Management

Strategies. They are a cohesive package, all essential, as we have used them.

  - ▪ **Comment from chat:** *Keith:* Agreed Amy- and all workgroups being framed around the evergreen expertise/outputs rather than the changing medium-term outcomes?

12:02 PM Adjourn

Next Meeting: STAR is offering to host three meetings for the outcomes presenting to the Management Board (MB) in between the time their materials are due and the MB meeting. This meeting will serve as an opportunity to share and discuss information from their outcome assessment. It will also provide space to discuss larger picture considerations such as combination of outcomes, changes in structure, integration of overarching topics (conservation, climate, DEIJ). These meetings are open to the public, so please share meeting information with anyone interested. If you have any suggestions on the date/time of the meetings, please reach out to Breck Sullivan (bsullivan@chesapeakebay.net).

- **Feb 6th:** meeting for first group of outcome assessment
- **Feb 20th** (Afternoon so to not overlap with Wetland Workgroup meeting): meeting for second group of outcome assessment
- **March 7th:** meeting for third group of outcome assessment

Attendees:

Sushanth Gupta (CRC), Gabriel Duran (CRC), August Goldfischer (CRC), Breck Sullivan (USGS), Gary Shenk (USGS), Jeremy Hanson (CRC), Marisa Baldine (Alliance for the Chesapeake Bay), Wendy O'Sullivan (NPS), Kenneth Hyer (USGS), Bill Jenkins (EPA), Sophie Waterman (USGS), Gregory Barranco (EPA), Rachel Felver (Alliance for the Chesapeake Bay), Amy Handen (EPA), Peter Claggett (USGS), Ashley Hullinger (PA DEP), Ann Foo (UMCES), Kristin Saunders (UMCES), Fred Irani (USGS), Katherine Brownson (USFS), Sarah Brzezinski (EPA), Meredith Lemke (CRC), Laura Cattell Noll (Alliance for the Chesapeake Bay), Chris Guy (FWS), Suzanne Trevena (EPA), Jeremy Hanson (CRC), Julie Reichert-Nguyen (NOAA), Gina Hunt (MD DNR), Tom Parham (MD DNR), Peter Tango (USGS), Gregorio Sandi (MD DNR), Meg Cole (CRC), Christina Garvey (CRC), George Doumit (DNREC), Jennifer Olszewski (USGS), Stephanie Nummer (ICPRB), James Martin (DCR), Dede Lawal (CRC), Jeffrey Lerner (EPA), Alex Gunnerson (USGS), Melinda Cutler (MDE), Qian Zhang (UMCES), Nick Staten (CRC), Tou Matthews (CRC), Douglas Austin (EPA), Ottilie Wilcox, Keith Bollt (EPA), Meredith Hudson (EPA).