# **overall recommendation: Update – Add Quantitative Elements; modify to Holistic Watershed Approach**

**BIG QUESTION:** In reviewing your outcome, provide advice to the Management Board on whether "to consolidate, reduce, update, remove, replace or add new outcomes.”

**RECOMMENDATION:** UPDATE OUTCOME. The Adaptation Outcome under the Climate Resiliency Goal states, *“Continually pursue, design and construct restoration and protection projects to enhance the resiliency of Bay and aquatic ecosystems from the impacts of coastal erosion, coastal flooding, more intense and more frequent storms and sea level rise.”* This outcome language is qualitative and is not in a SMART format, which has made it difficult to assess progress. Partner feedback supports the need for an adaptation outcome given climate change impacts now and in the future on our natural resources and communities. Partners also expressed that the adaptation outcome allows for more focused investments and legislative change at the state level. Partners have expressed that to make it SMART, it needs to include quantitative elements. Ideas included using a place-based approach and/or focusing on timebound objectives for developing and implementing a menu of adaptation options. There is also interest in modifying the outcome to a more holistic watershed approach that includes both tidal and nontidal waters. A larger scope beyond coastal adaptation would require more dedicated resources to be effective. See the assessments below for more details.

# **Considerations and Assessment**

**CONSIDERATIONS:** Consider if the Outcome is SMART (Specific, Measurable, Achievable, Realistic, Time-bound). Consider the timescale for completing the outcome (5, 10, 15 years). Determine if achieving the outcome is an incremental step or is it a final outcome.

**ASSESSMENT:** The adaptation outcome is not SMART. The current language is qualitative without a measurable objective or achievable milestones established. It is not timebound as it states to “continually” do the work. While climate change will cause a need to continually adapt, clearer language with objectives that the partnership could incrementally work towards would allow this outcome to be more realistic. Ideas for making the outcome SMART includes incorporating place-based language and/or establishing strategies with timebound objectives to address or minimize impacts of changing climate conditions. An example of place-based language is, “within six adaptation focus areas, plan and implement nature-based strategies that enhance the longevity of habitat and ecosystem function and services beyond 2050.” Timebound objectives could be structured where a menu of adaptation options are developed for forecasted problems within different future timeframes (to 2050, 2050-2075, after 2075 to end of century, etc.) and success measured by how many of these strategies are implemented within certain timescales (e.g., 10, 20, 30 years). Similar SMART strategies have been implemented with success in supporting marsh adaptation through a GIT-funded project where six focus areas were identified using existing marsh resilience metrics, jurisdictional conservation indices and environmental justice data, and partner outreach leading the integration of adaptation options into the planning and design of marsh restoration and protection projects.

**CONSIDERATIONS:** Consider how the outcome relates or could relate to the Bay Agreement mission, vision, and themes/pillars and goals. Consider the challenges to and opportunities for achieving the outcome. Should the outcome be moved or restructured within the Agreement Themes or Goals?

**ASSESSMENT:** Climate Change is a theme, a principal and goal within the Bay Agreement.

Climate is an elevated priority by the 2021 Executive Council (EC) Directive on Climate Change. The Directive states, “We recognize that each partner has established policies and programs to embrace climate adaptation and resilience, but given the magnitude of the threats, we must build on existing efforts as a united partnership.” Challenges for achieving the outcome include lack of monitoring and metrics for tracking and measuring success of adaptation projects and methods to evaluate resiliency enhancement. Another challenge is how the climate adaptation outcome is structured under STAR, the science support team of CBP, given that the outcome also focuses on implementation, which needs jurisdictional support. While the Climate Resiliency Workgroup has been able to help advance scientific understanding and products for coastal adaptation planning, to achieve the current outcome, there is a need for a more formal GIT, climate advisory board, or other structured group within the partnership that has jurisdictional representation to advance implementation. There is an opportunity to reevaluate how the partnership tackles climate adaptation when working on the governance and structure of the program beyond 2025. Other groups, like the National Marine Sanctuaries, structure their climate work under multiple subgroups (e.g., science, adaptation/implementation, communication). The EC has clearly stated climate change as a priority, but the partnership needs to translate the words into action now and ensure the partnership’s organizational structure effectively advances this integration–both science support and implementation. From the science support side, expertise within the partnership exists to support metric development for measuring resilience enhancement. However, there is a need for dedicated research funding that aligns with implementation of adaptation-related restoration and protection projects to have success metrics become a reality. Feedback from partners included that adaptation should overlap with land conservation goals and that more granular modeling of ecosystem services-related climate scenarios could help form “climate stewards” within communities. There is also a strong interest to modify the outcome to a more holistic watershed approach that considers both tidal and nontidal adaptation in an achievable way. A larger scope would require more resources and enhancements to the programmatic structure to be successful.

**CONSIDERATIONS:** What value is added by having the Chesapeake Bay Program work on the outcome? Consider how the Outcome, as written, benefits the public. Does the outcome reflect [public input already received](https://d18lev1ok5leia.cloudfront.net/chesapeakebay/Beyond-2025-Report-Comments.pdf) and have the potential to galvanize public support/engagement? Consider the risk or unintended consequences of removing or changing the Outcome.

**ASSESSMENT:** Climate change affects our watershed, natural resources, shorelines, and communities in a variety of ways – sea level rise drowning tidal wetlands and exacerbating nuisance flooding, increased precipitation increasing runoff and flooding, warming causing unsuitable habitat and/or species migration, changes in crop yields and more. The EC has stated, “While we can address some of these challenges within our jurisdictions, successful restoration of the Chesapeake Bay requires a collaborative response.” A public comment stated, “The Bay Program has a long history of providing cutting-edge science to practitioners. We need the Program to continue filling this important niche, especially regarding climate-smart practices...” The adaptation outcome has facilitated collaboration bringing climate resilience experts and implementers together to enhance science-informed adaptation strategies for restoration and protection projects. It has also fostered collaboration in filling knowledge gaps on climate change impacts across GITs and workgroups and has enhanced capacity for partners to integrate climate resilience in their planning and design. The climate adaptation outcome has led to collaborative successes, such as the Marsh Adaptation workshops and worksheets that helped partners use existing data to justify proposed restoration projects in their climate resilience BIL/IRA funding proposals. It has also served a role in connecting climate change science with community resilience guidance. Partners expressed during assessment feedback meetings that the removal of the adaptation outcome runs the risk of losing partners, including federal agencies, non-governmental organizations and foundations who invest in and leverage this work. It was also expressed that having the climate resiliency goal and adaptation outcome has helped partners drive legislative change at the state level. Overall, multiple groups provided public comment on the Beyond 2025 report for state leaders and the Bay Program to prioritize climate change data and resiliency projects. The climate resiliency goal and the adaptation outcome helps facilitate this prioritization.

**CONSIDERATION:** Consider resource needs to achieve the Outcome (high, medium, low) and availability/commitment of such resources

**ASSESSMENT:** For the current outcome language, building science products to inform planning/design range from low to medium resources needed. Projects range from $80,000 to $250,000 with the larger values corresponding with more analysis and/or modeling needed for larger geographic areas. Examples of recent funded science support projects include the STAC Synthesis funding for quantifying resilience effectiveness of coastal nature-based solutions (~$125,000) and the University of Michigan SEAS Master Student Program to support the further development of marsh adaptation products. The construction of projects related to nature-based solutions for adaptation have high resource needs typically in the millions of dollars.