STAC and STAR: Feedback for Biennial Meeting

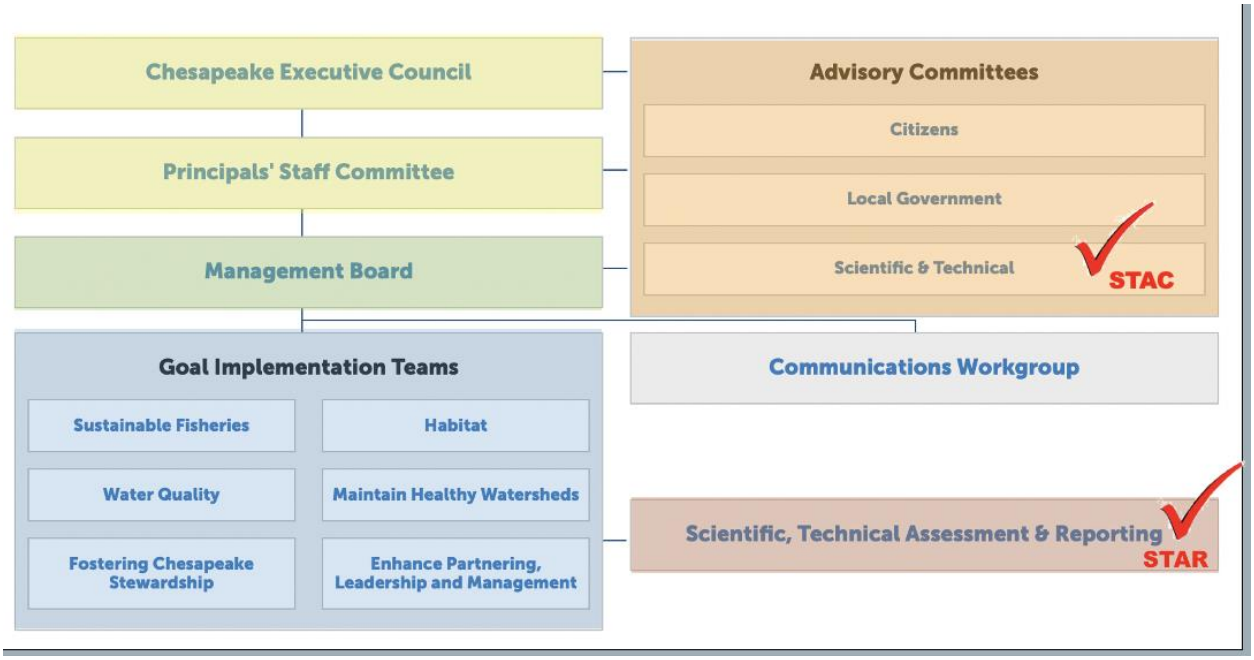
Many different organizations contribute to the science that underpins the restoration of the Chesapeake Bay ecosystem, including local, state, and federal agencies, Tribal nations, academia, nonprofits, and private-sector organizations that have scientific capacity and the ability to contribute financial resources, skills and expertise, facilities, and/or other resources to undertake scientific activities. Collectively this is termed the science enterprise. While we are fortunate to have such a robust and diverse science enterprise, leveraging the work of many across the enterprise in a coordinated fashion is necessary so that implementation of learning can occur as quickly as possible and maximum progress can be made toward restoration. In the CBP, there are two primary organizations that work to do this: the Science and Technical Advisory Committee (STAC) and the Science, Technical Assessment and Reporting Group (STAR). The simplest distinction between STAC and STAR would be the main descriptor of role, and where the lines are drawn on the organizational chart.

STAC is comprised of 38 experts from various research, academic, federal, and private institutions in the watershed. STAC provides **advice**, in the form of independent review and recommendations to the CBP to enhance science (monitoring, modeling, and research) for decision making, and is connected to the Management Board, Principal's Staff Committee, and the Executive Committee. STAR **coordinates** with science providers (STAC is one of these) and Goal Implementation Teams (GITs) to address GIT needs and report on the progress of their scientific actions in a manner that supports decision-making. Another distinction may be the temporal scale which each group mainly inhabits. STAR is primarily a day-to-day science coordinator, and the science needs that it addresses are usually at the 1-3 year time scale. While STAC certainly responds to science needs in this time frame, they have an additional role at looking much farther down the road and pointing out issues that have the potential to impact progress and restoration (e.g., climate change). Both groups work very collaboratively.

A working example of the roles of each would be the Strategy Review System (SRS) process. STAC had a primary role in advocating for the institutionalization of the adaptive management approach, its design, and its implementation, resulting in the SRS process. STAC and STAR then work together to assist each GIT during the SRS process. STAC provides a formal link to the scientific community and assess current efforts to address any of the science gaps. STAR works much more directly with the GITS as they further refine the scientific factors impacting progress on their outcomes while using STAC guidance. STAR also keeps the active repository of science needs that arise during this process (the Strategic Science and Research Framework database) and can identify science activities that can benefit multiple management strategies or satisfy cross-GIT needs. STAR often brings selected science needs to STAC for workshop or technical review activities.

While the science provisioning ecosystem is full of cross-connections (as it should be), the

primary distinction is that **STAC is advisory** (higher level and more anticipatory) and **STAR is implementation** (coordination and reporting on a daily/monthly/yearly time scale).



Challenges

Bay of the Future is not the Bay of the past

- What will the ecosystem look like?
- Will this version of the Bay change the effectiveness of what we already know how to do?
- General Impacts of climate change, Interactions of climate change with other issues; what does it make harder? How can we improve resiliency?

Advancing Monitoring and Assessment

- Understanding thresholds and tipping points
    - What to monitoring? What are the necessary indicators?
- Importance of shallow waters (17 of 31 outcomes)
- Monitoring is inefficient for multiple outcomes

Improved decision-making

- Science Communication (reaching the right audience, capacity to implement)
- Improving living resources cross-outcome linkages
- Integrating social science tools (e.g., , where stakeholders are, diversity)
    - Assessing tradeoffs

Biennial meeting will host one session to provide information on the challenges, a gallery walk to showcase posters on the topics and tools, and a following session using a world café discussion. The discussion will be based on the 10 challenges and provide a long-term vision and short-term next steps asking what tools do we have to address them, what do we not have and need to address them, and how do we start implementing recommendations we already have on these topics.