Climate Resiliency WG: Indicator status update, looking at next steps

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and
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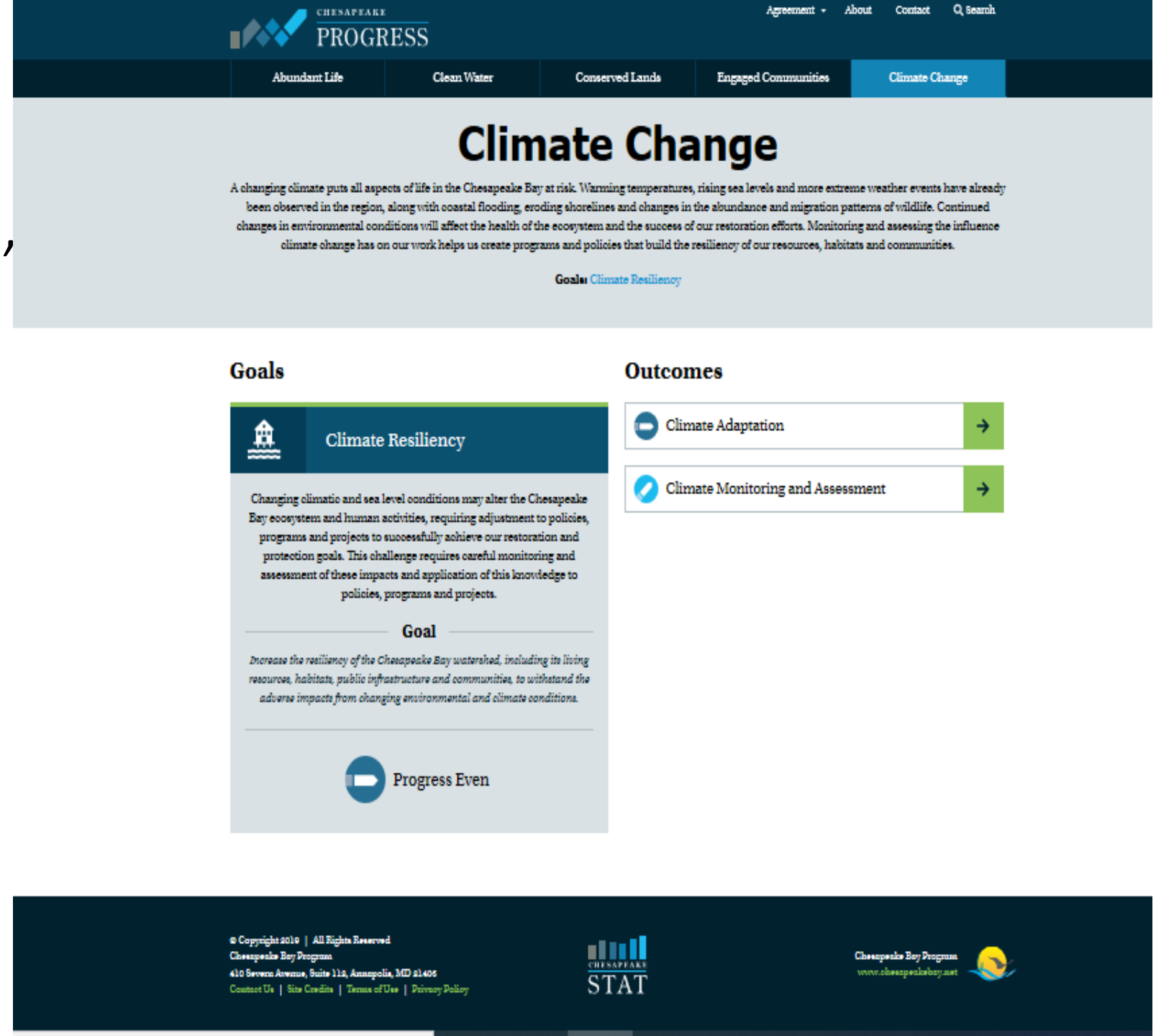
CRWG Coordinator

CRWG Conference Call
12/16/19



Goal: Increase the resiliency of the Chesapeake Bay watershed, including its living resources, habitats, public infrastructure, and communities, to withstand adverse impacts from changing environmental and climate conditions.

- **Monitoring and Assessment outcome**:
  Continually monitor and assess the trends and likely impacts of changing climatic and sea level conditions on the Chesapeake Bay ecosystem, including the effectiveness of restoration and protection policies, programs and projects.

- **Adaptation outcome:**
  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.

Overview – First CRWG indicators project. 2017-18.

- GIT funded project:
  - Eastern Research Group, Inc. (ERG), Chesapeake Bay Program Office (CBPO), and the Climate Resiliency Workgroup (CRWG) worked together.
  - **Conceptualize, select, and partially develop a suite of indicators** that can be used to track progress toward the “Climate Resiliency” goal and outcomes in the 2014 Watershed Agreement.

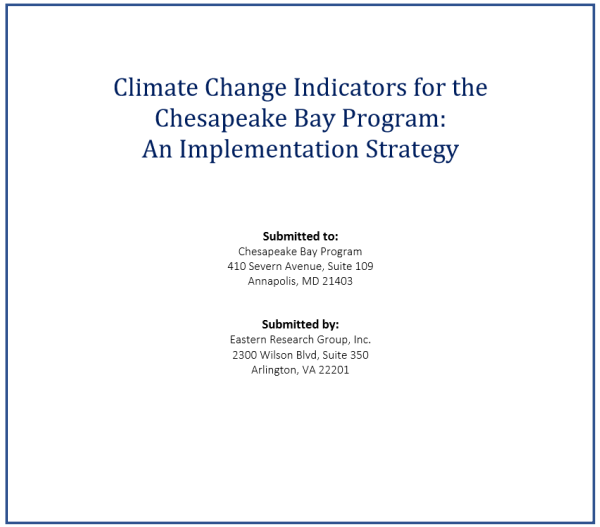
Indicator development process

- Develop a master list of potential topics—the "universe" of topics for consideration.
  - **The resulting list included approximately 210 topics**.
    - See https://www.chesapeakebay.net/who/group/climate_change_workgroup Climate change indicator frameworks theme, Initial Topic List 6-14-17 file.
    - Many sources were sought to develop this list

Criteria were created for choosing indicators for development

- **ERG proposed a suite of 21 indicators for possible development**
  - An implementation plan was produced

    CRWG website:
    https://www.chesapeakebay.net/channel_files/31218/indicator_implementation_plan_-_revised_-_07-13-18.pdf


Climate Change Indicators for the Chesapeake Bay Program: An Implementation Strategy

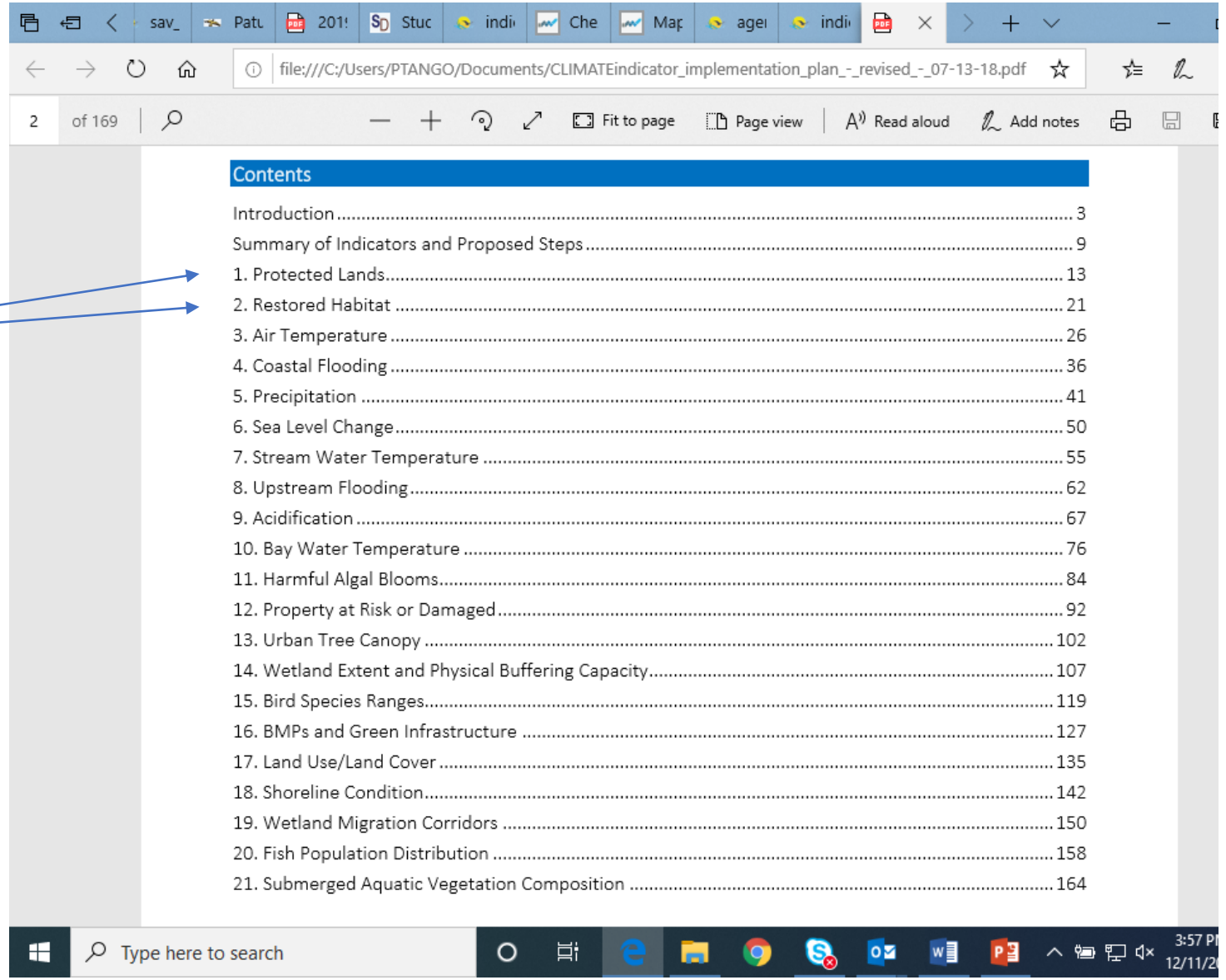
Submitted to:
Chesapeake Bay Program
410 Severn Avenue, Suite 109
Annapolis, MD 21403

Submitted by:
Eastern Research Group, Inc.
2300 Wilson Blvd, Suite 350
Arlington, VA 22201

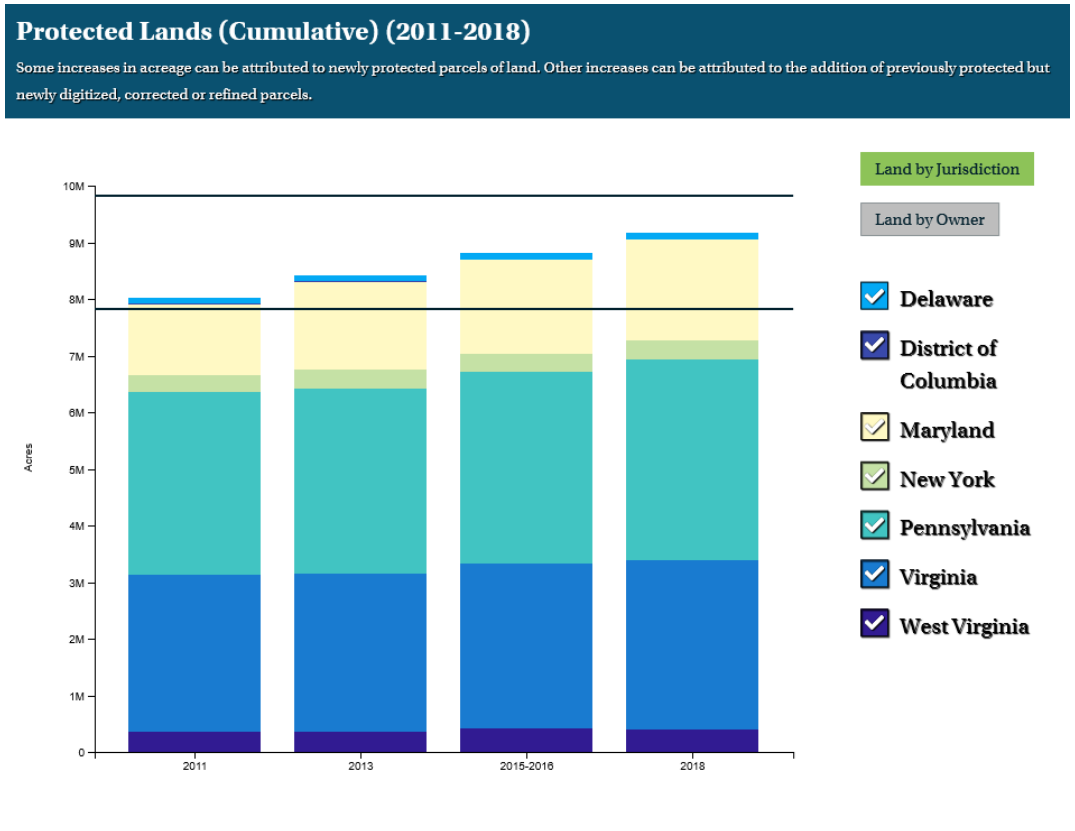
9 Indicators are available

- 2 were existing

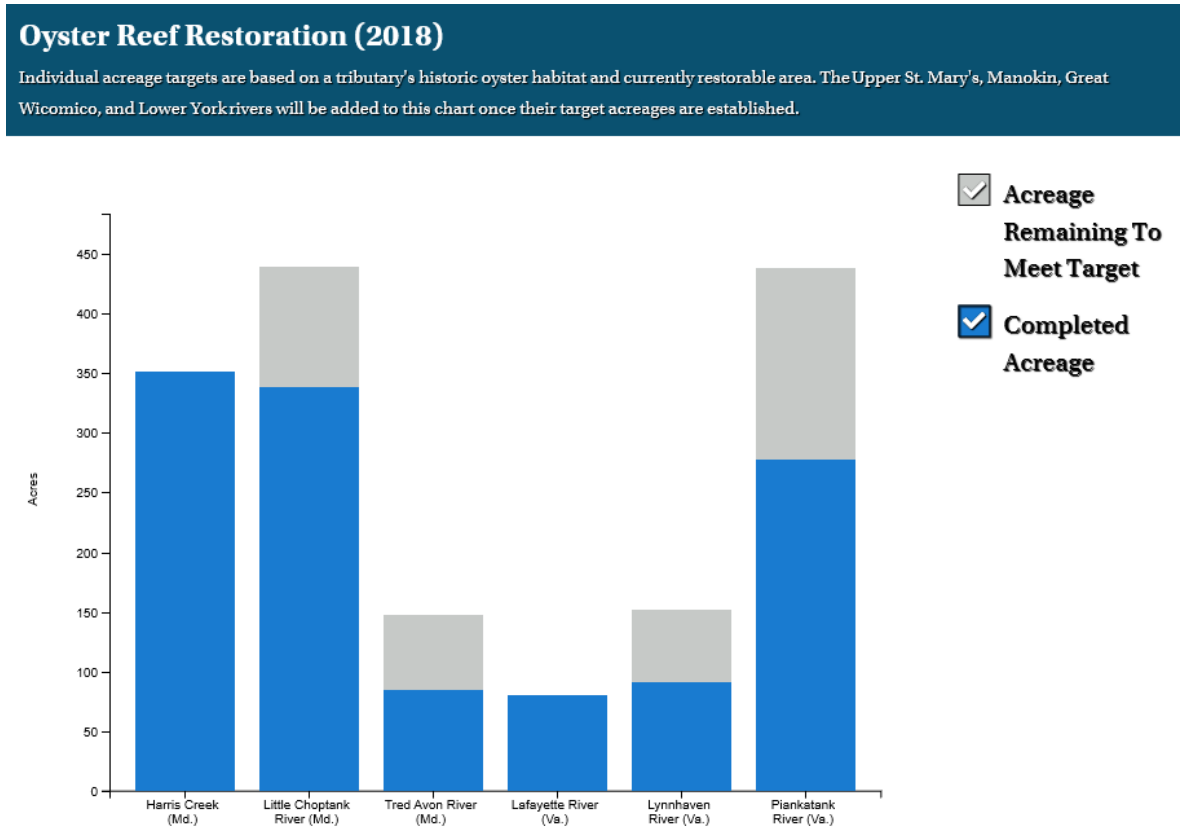
Indicators report Table of Contents



Existing indicators: Protected Lands and Restored Habitat (Oysters, Wetlands)



https://www.chesapeakeprogress.com/chart/protected-lands



https://www.chesapeakeprogress.com/?/abundant-life/oysters

9 Indicators are available

- 2 were existing
- 7 were new

2

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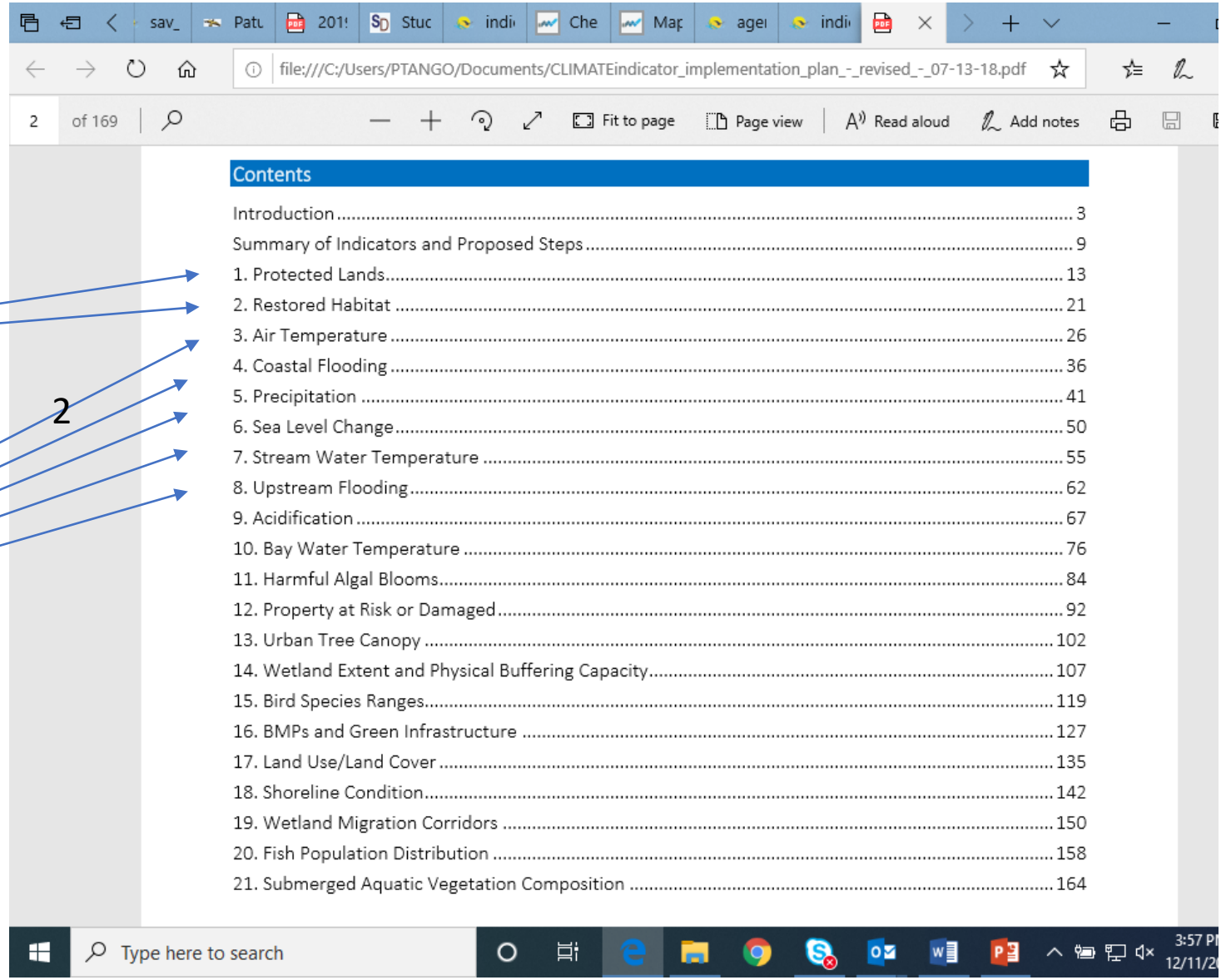
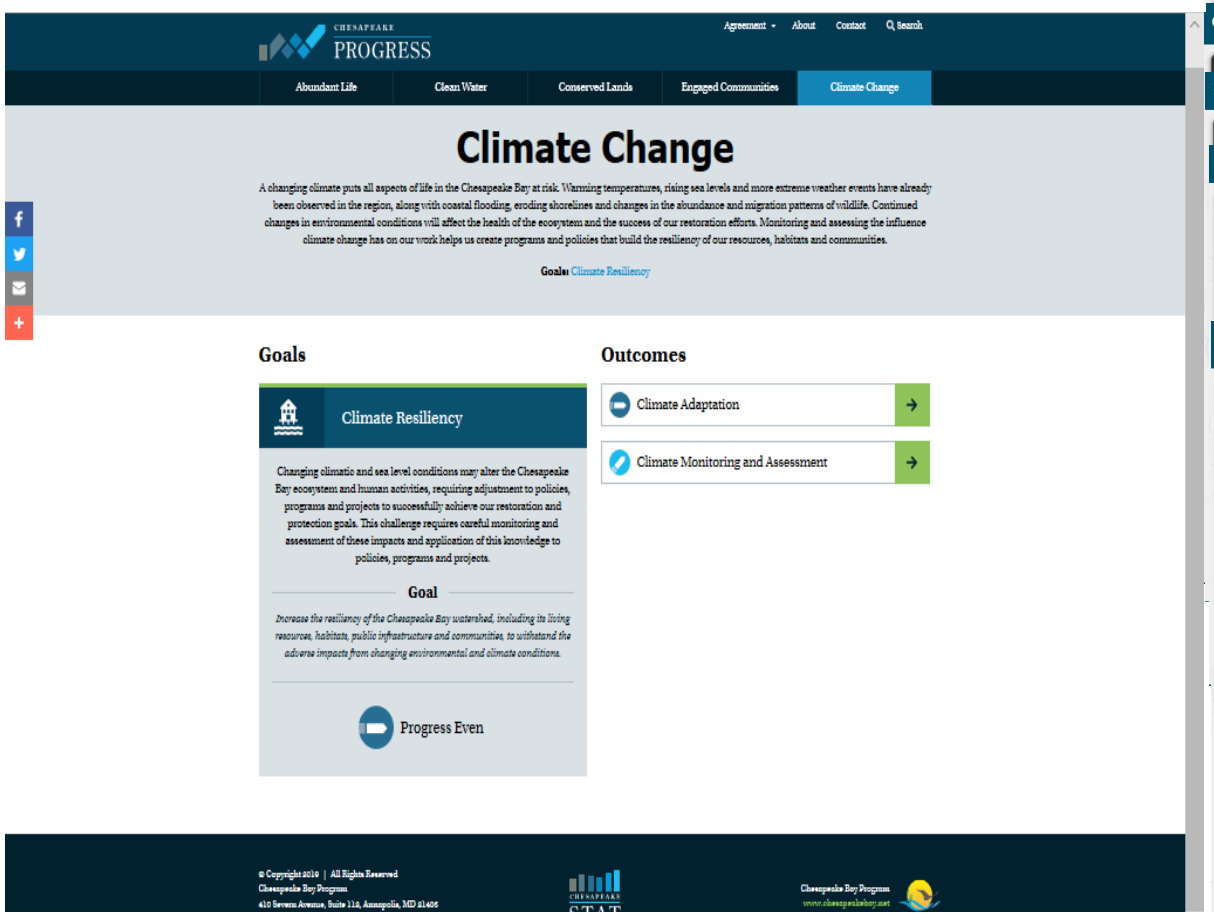
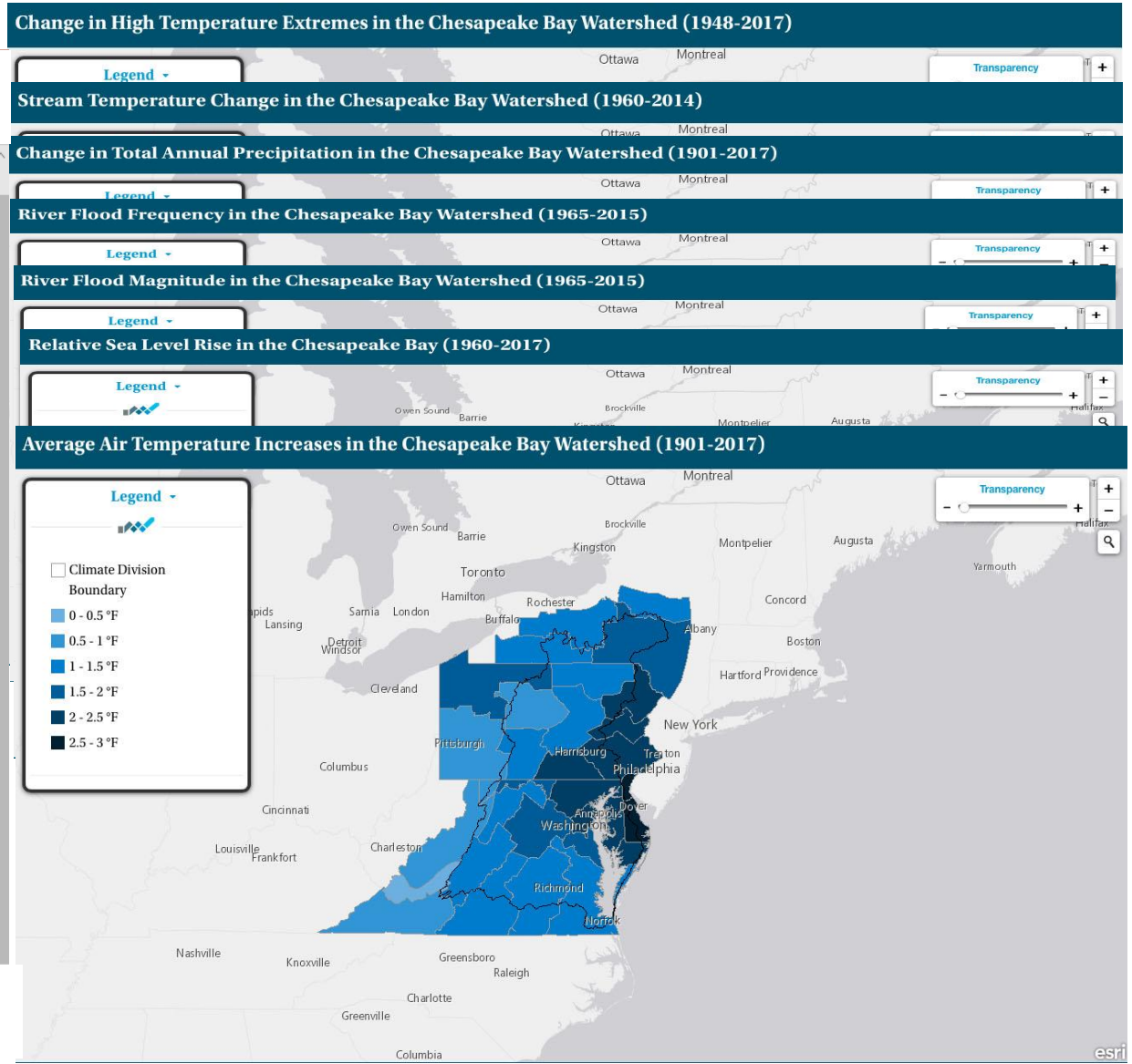


7 new Climate Indicators on Chesapeake Progress:

Temperature, Precipitation, Flooding and Relative Sea Level Rise





13 remaining indicators are evaluated for their implementation readiness

- Implementation plans provided for the other 13

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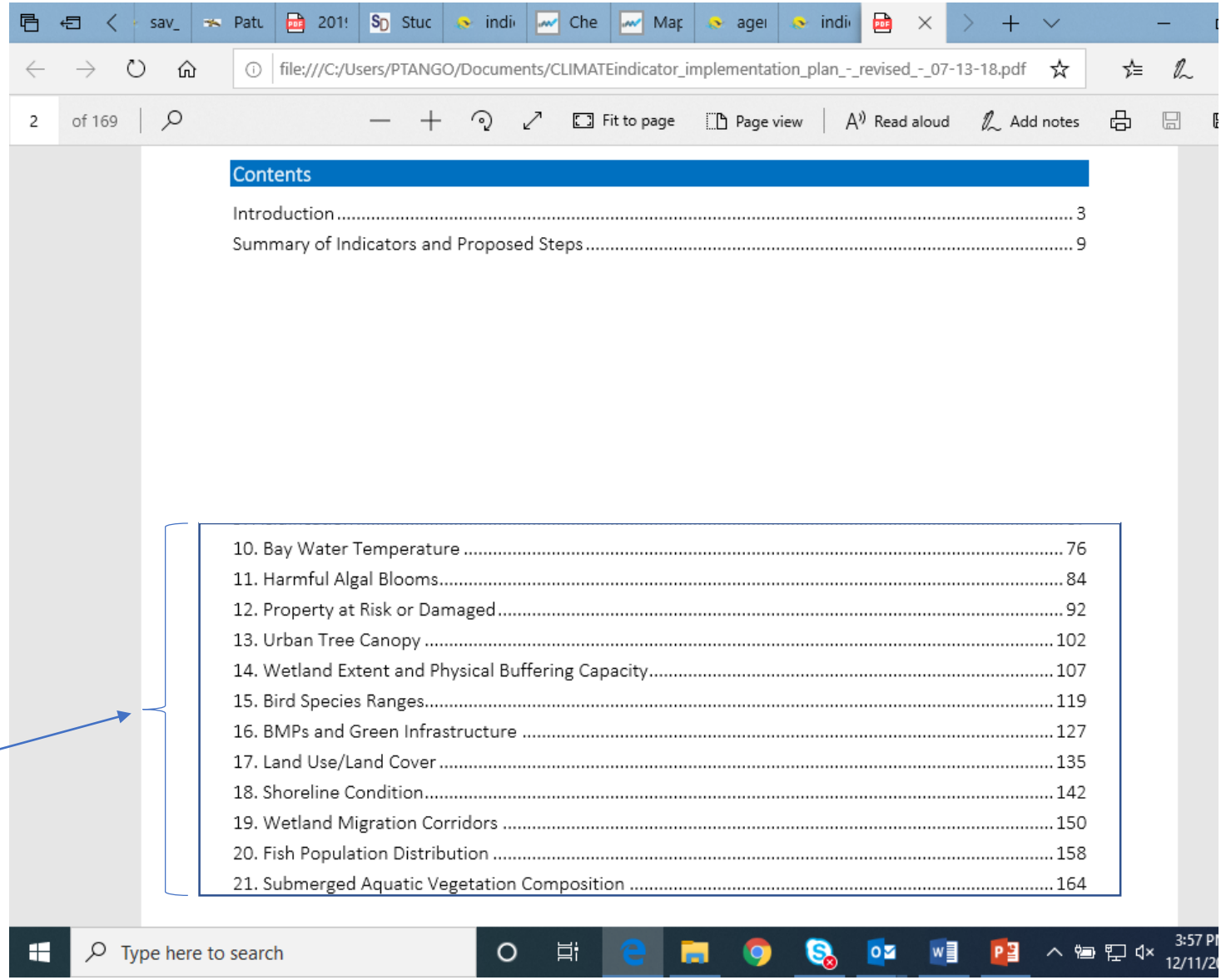
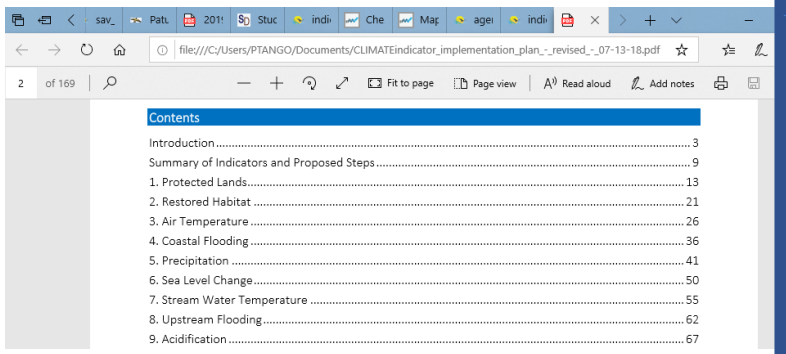
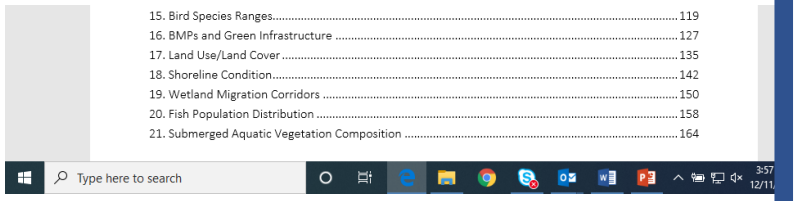


Where do we go from here?

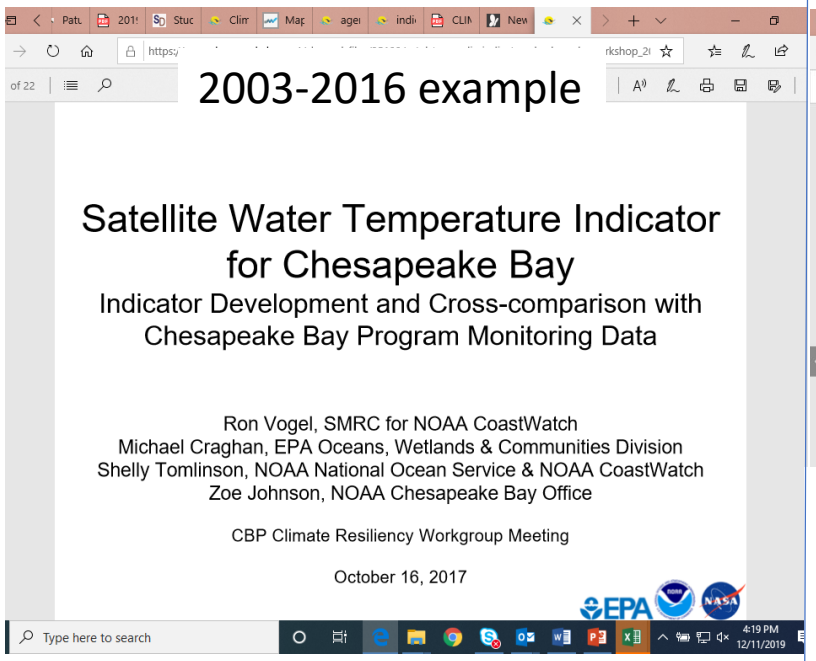
- Continue down the list?
- Example: Bay Water Temperature

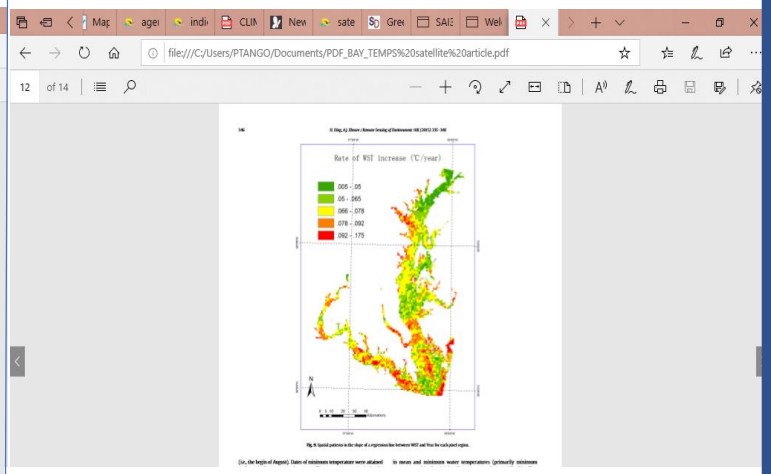


#10: Bay Water Temperature



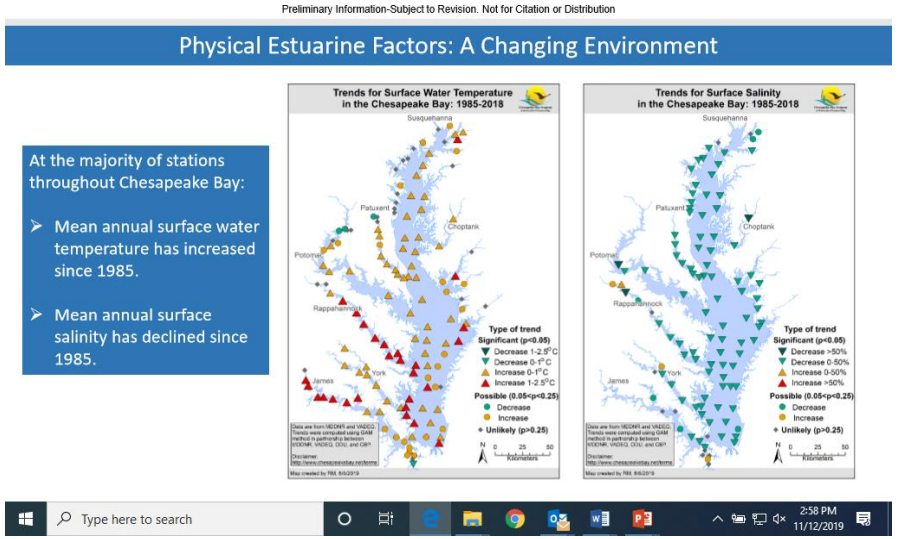
2003-2016 example





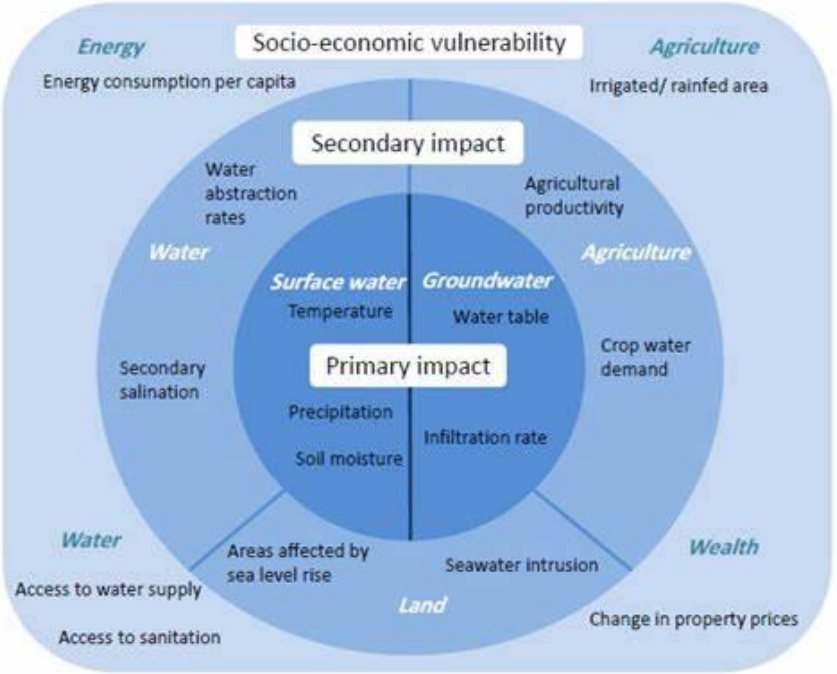
2015. Remote Sensing journal Landsat-based temperature assessment Chesapeake Bay

Chesapeake Bay Long-term Water Quality Monitoring Program
1985-present station-based temperature, salinity. GAMs assessment.



Suggested next steps on indicator work for the CRWG

- Within CRWG:
  - Ensure any annual updating on existing indicators is addressed
  - Share the list of 13 candidates from the original 21 for considering 1 or more new indicators for development, approval and implementation in 2020, and/or,
  - Share the 200+ list of candidate topics and re-evaluate if anything new has risen to the top due to new science, reporting, available information?
- Interact with STAR and the GITs to evaluate cross-GIT indicator needs for prioritizing new indicators from:
  - The remaining 13 short-list candidate indicators
  - The original 200+ list for highlighting priority needs based on the past SRS cycle findings
  - Understand if there are previously undocumented indicator needs rising up as priorities since 2016.




Thank you