



Sea Level Affecting Marshes Model (SLAMM) SAV Updates

Ecological Effects of Sea Level Rise Project

SAV Workgroup Meeting

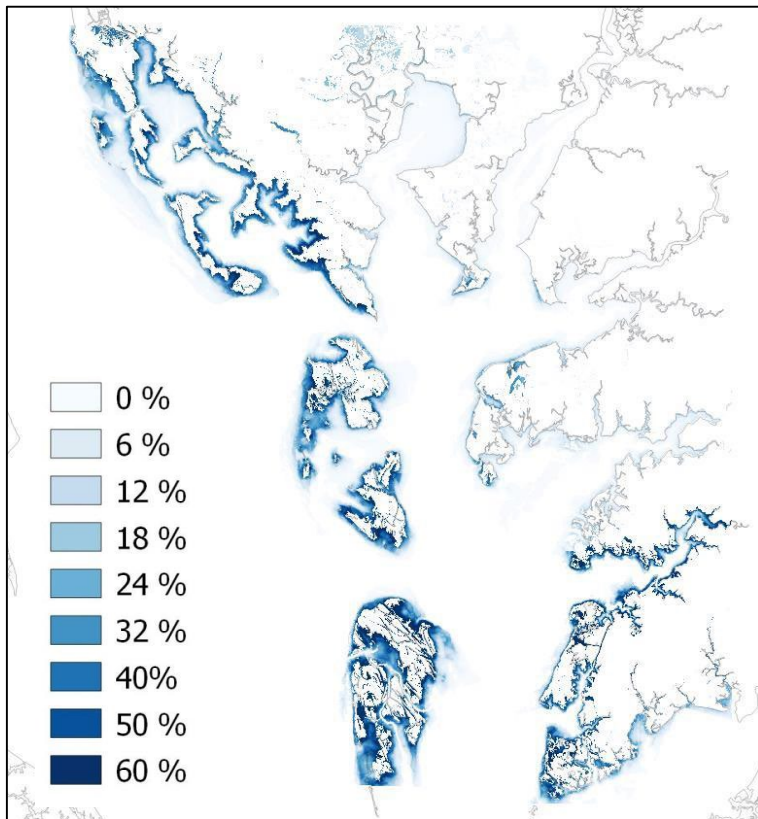
November 1, 2022



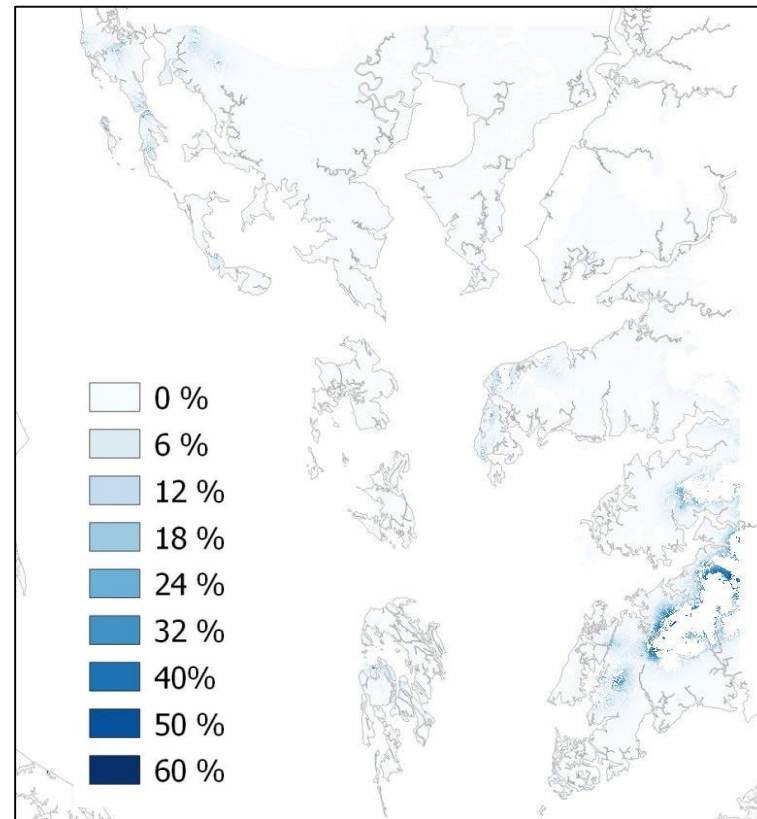
An underwater photograph showing submerged aquatic vegetation (SAV) in a body of water. The water is clear, revealing green and brown plant stems and leaves. The surface of the water is visible at the top, with ripples and reflections of light. The text "SLAMM-SAV Data Overview" is overlaid in white, sans-serif font in the center of the image.

SLAMM-SAV Data Overview

SLAMM-SAV DATA



2010



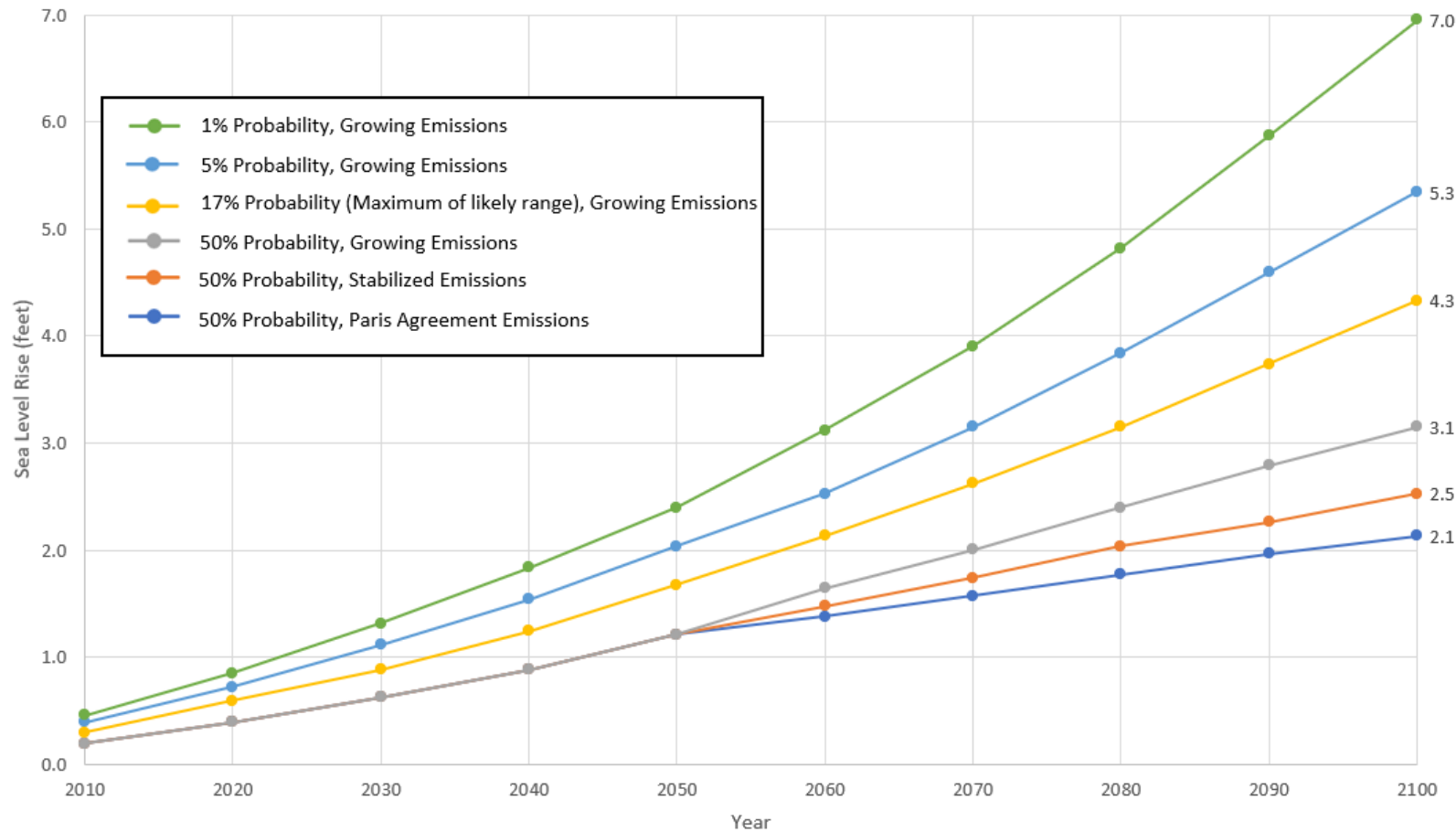
2100

SLR: 1% growing (7 ft)

Predict changes in
distribution of SAV in
response of SLR
scenarios

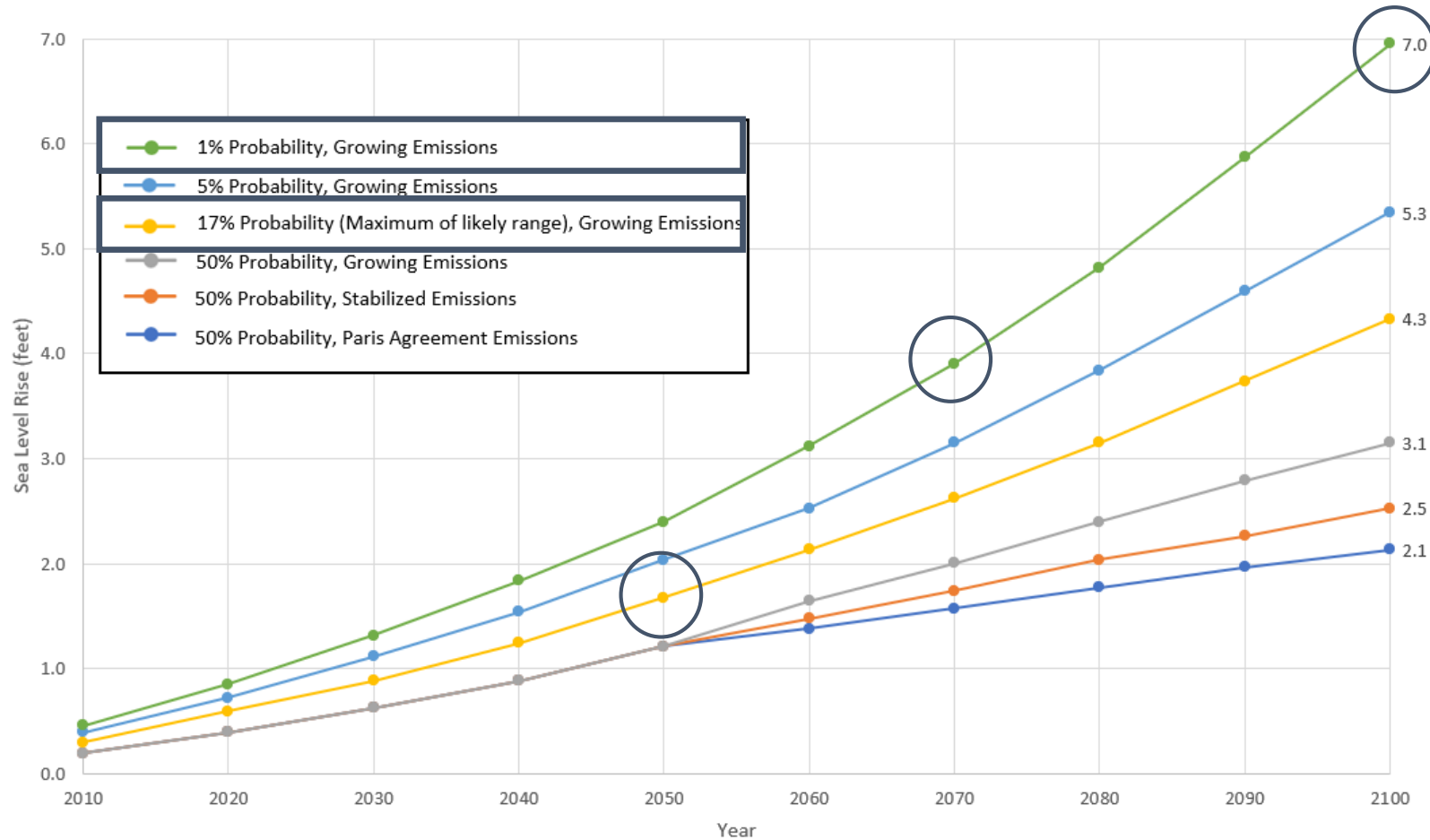
Percent likelihood of
SAV presence

SLAMM-SAV DATA



- Emissions and likelihood scenarios that give a range of possible sea level rise conditions – from 2-7 ft by 2100 – to represent varying risk tolerances
- Relevant to the resilience planning for infrastructure and critical habitat

SLAMM-SAV DATA



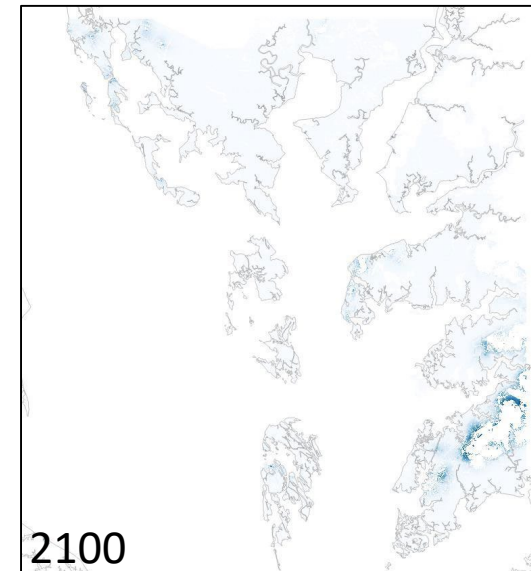
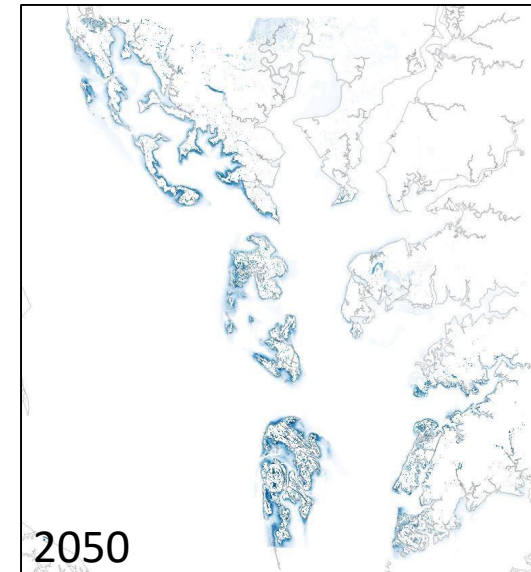
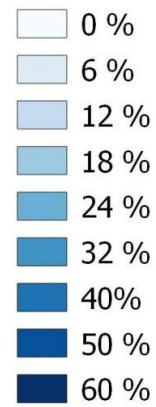
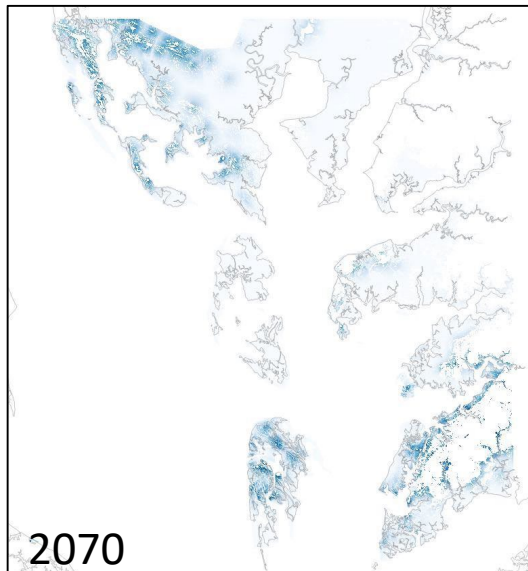
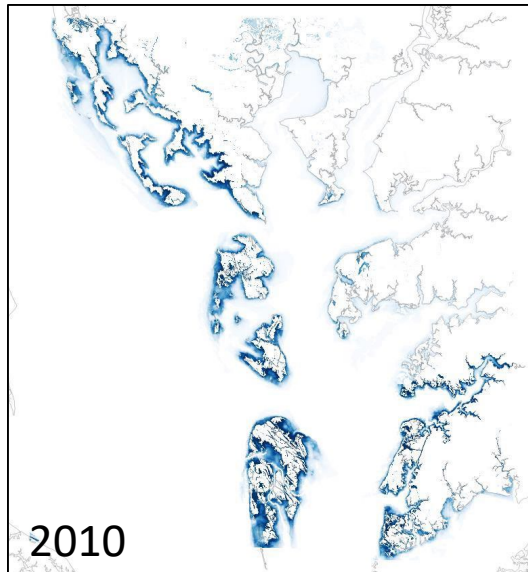
- Emissions and likelihood scenarios that give a range of possible sea level rise conditions – from 2-7 ft by 2100 – to represent varying risk tolerances
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SLAMM-SAV DATA

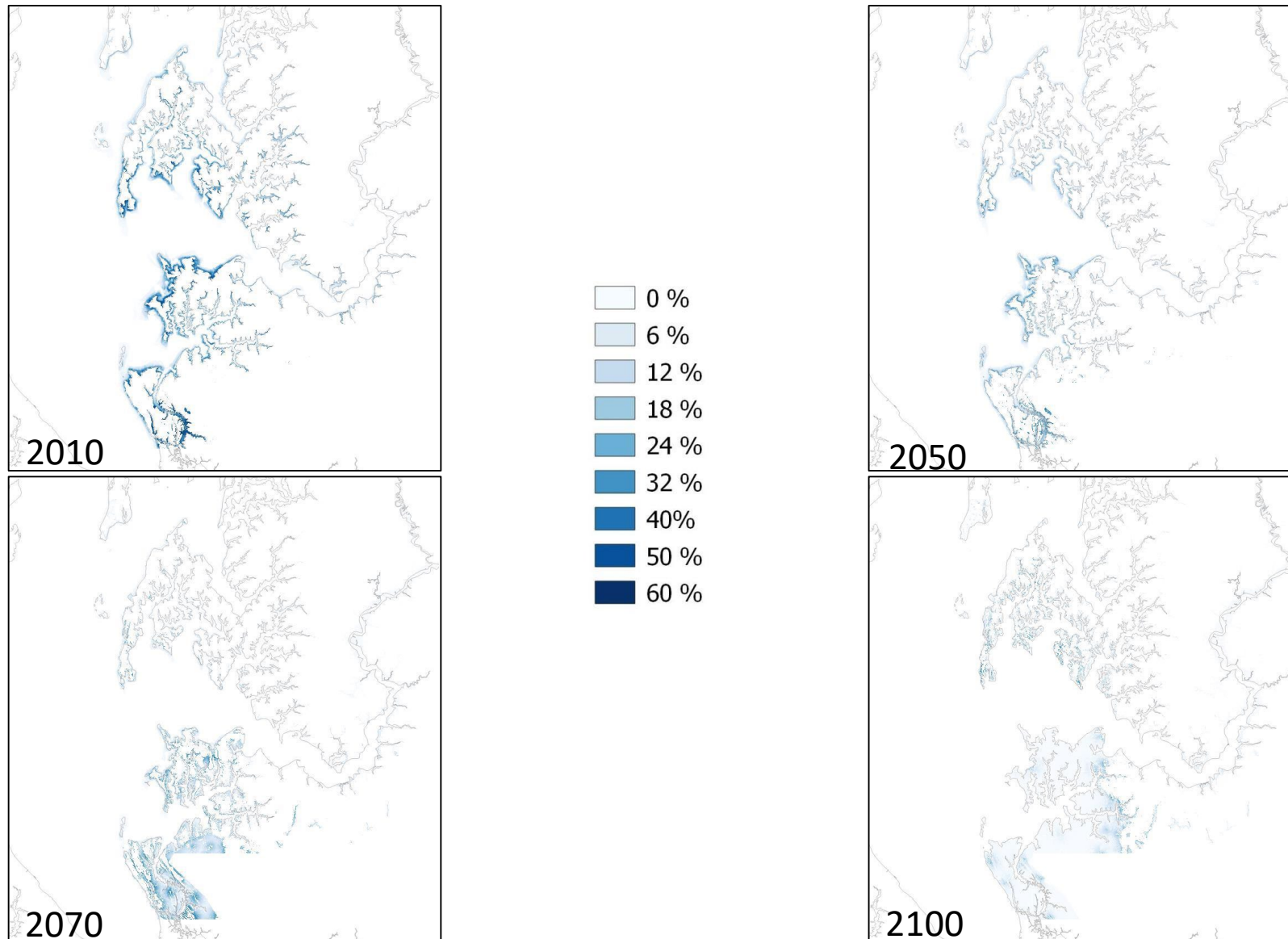
- Predict future SAV distribution for Choptank River & Tangier Sound
- For a number of timeframes and SLR scenarios:
 - 2050
 - 2070
 - 2100

Year	Scenario Name	Probability	Emissions Pathway after 2050	Planning Relevance	SLR (ft)
2050	Upper Limit of Likely Range, Growing	17% probability SLR meets or exceeds estimated value	Growing Emissions (RCP8.5)	Habitat/Wildlife Conservation	1.6
2070	1% Growing	1% probability SLR meets or exceeds estimated value	Growing Emissions (RCP8.5)	Capital Infrastructure	4.7
2100	1% Growing	1% probability SLR meets or exceeds estimated value	Growing Emissions (RCP8.5)	Capital Infrastructure	7.0

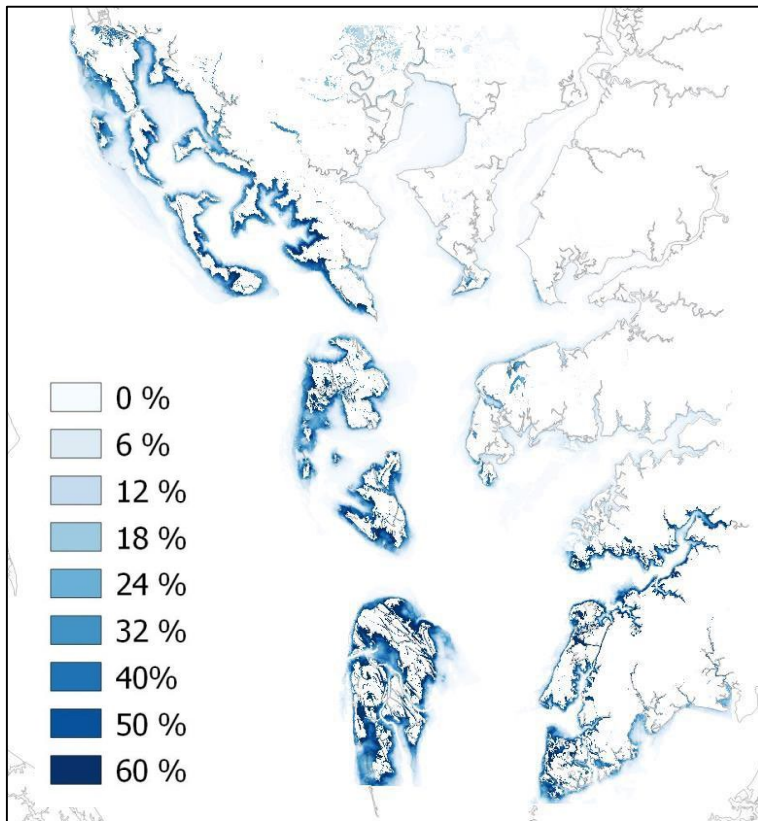
Model Results – Tangier full model



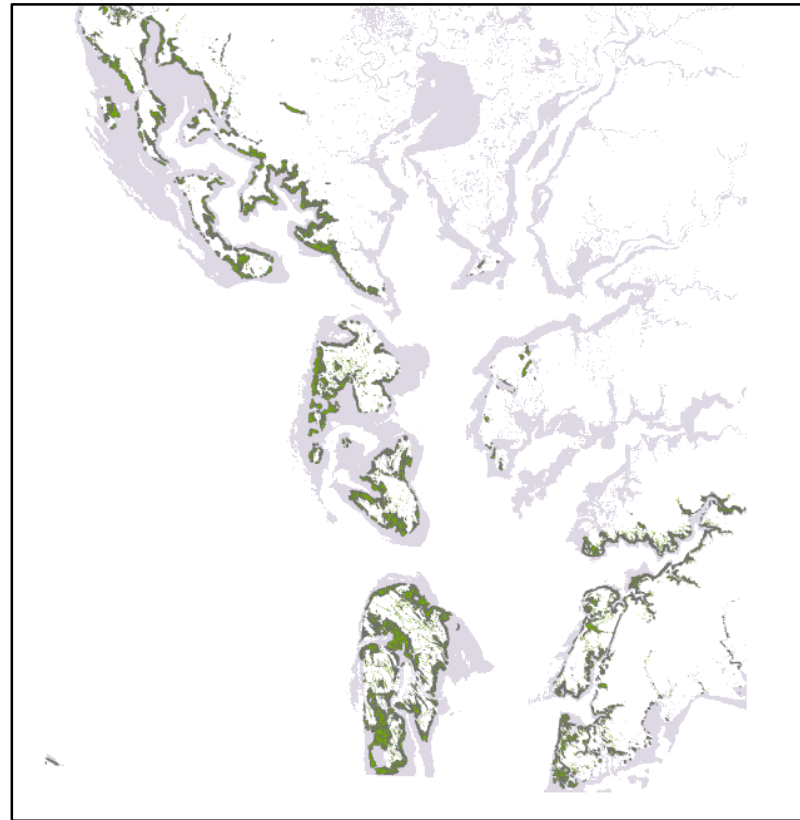
Model Results – Choptank full model



SLAMM-SAV DATA



% Likelihood



Presence

Predict changes in distribution of SAV in response of SLR scenarios

Reclassified to reflect binomial response (presence/absence)

An underwater photograph showing seagrass plants in a shallow, clear water environment. The seagrass has long, thin green leaves and some brownish, bulbous structures. The water surface is visible at the top, with ripples and reflections of light. The text "SLAMM-SAV Data Visualization Options" is overlaid in white, sans-serif font in the center of the image.

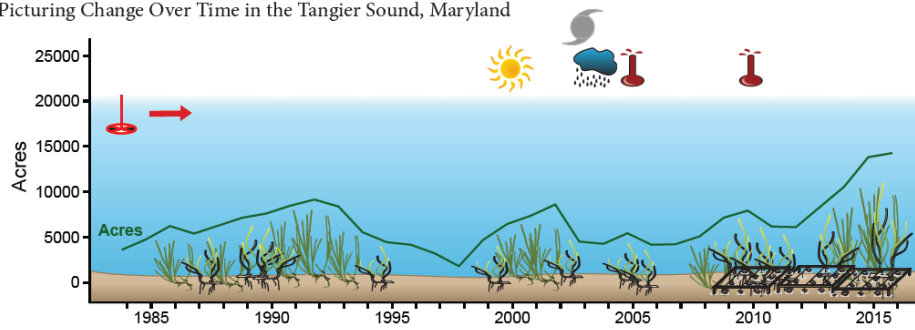
SLAMM-SAV Data Visualization Options

SAV Visualization Options

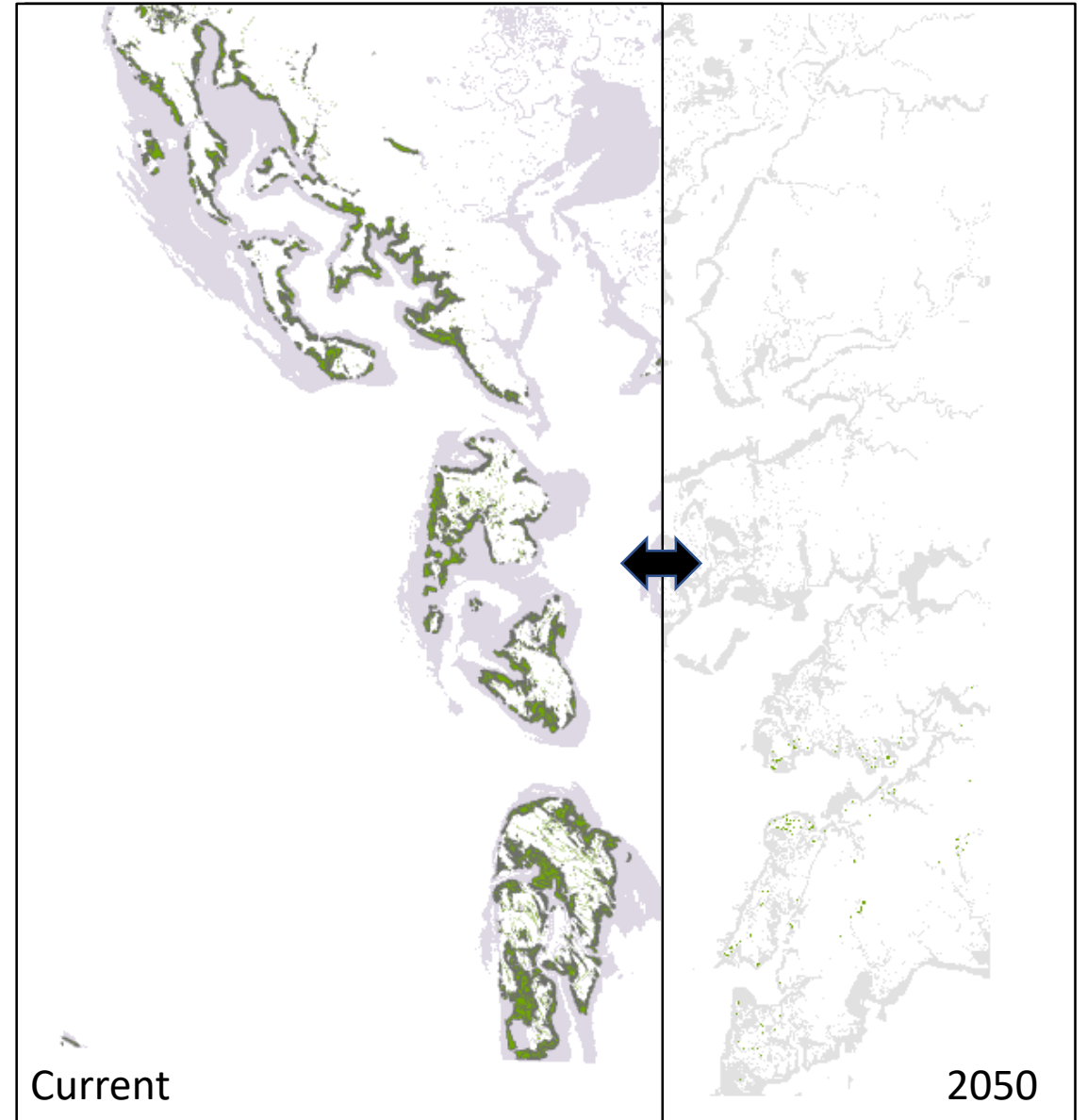
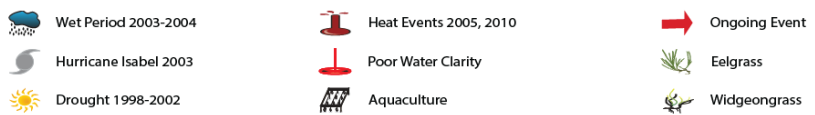
ESRI Story Maps



Picturing Change Over Time in the Tangier Sound, Maryland



Key

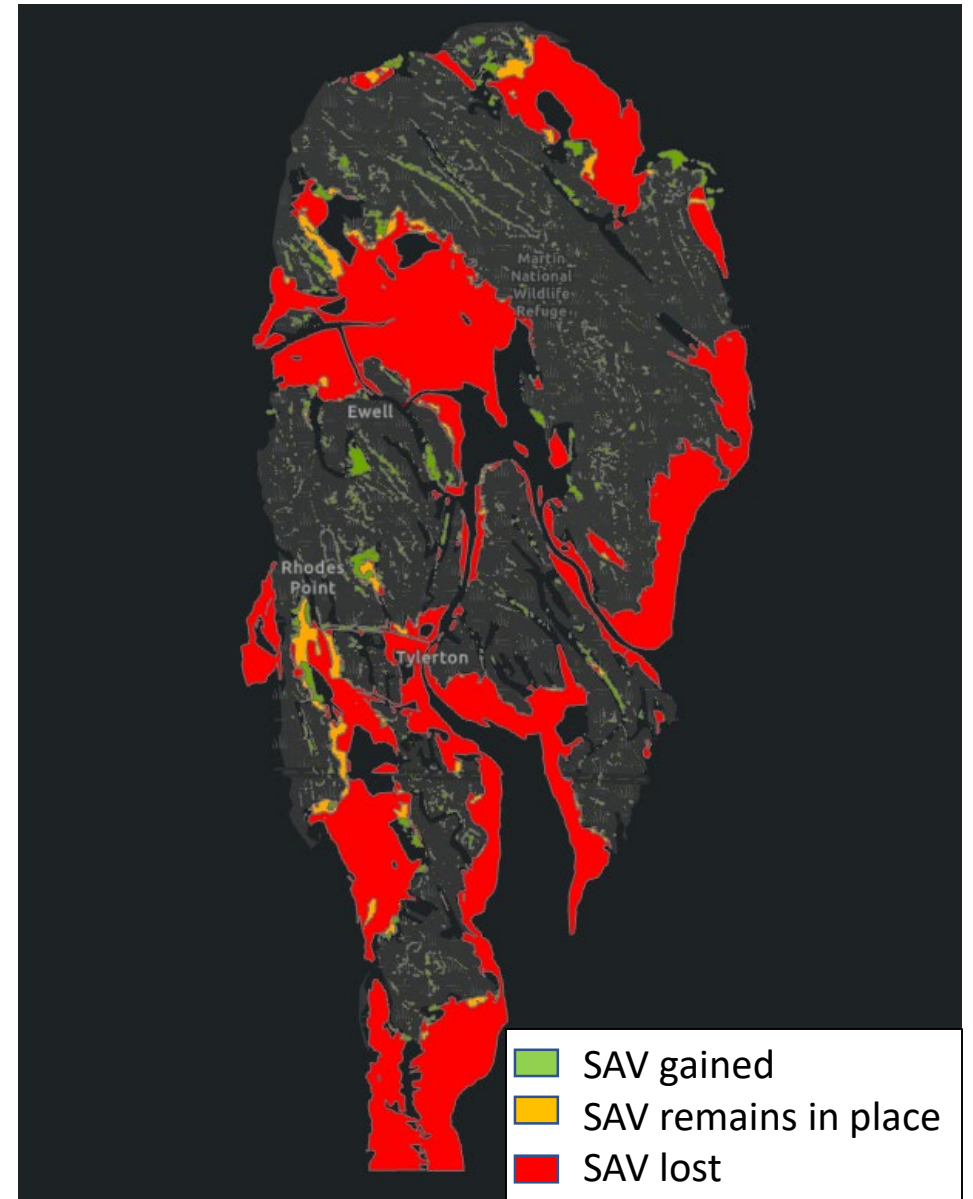


SAV Visualization Options

Option: Synthesize SLAMM data to show where SAV will be gained, lost, and remain

Decisions:

- Time period of change
 - 2050
 - 2070
 - 2100



An underwater photograph showing seagrass plants with long, thin leaves and bulbous, segmented stems. The water is clear, and sunlight filters through from above, creating shimmering patterns on the seagrass and the water surface. The text "SLAMM-SAV Data Visualization Options Feedback" is overlaid in white, sans-serif font in the center of the image.

SLAMM-SAV Data Visualization Options Feedback