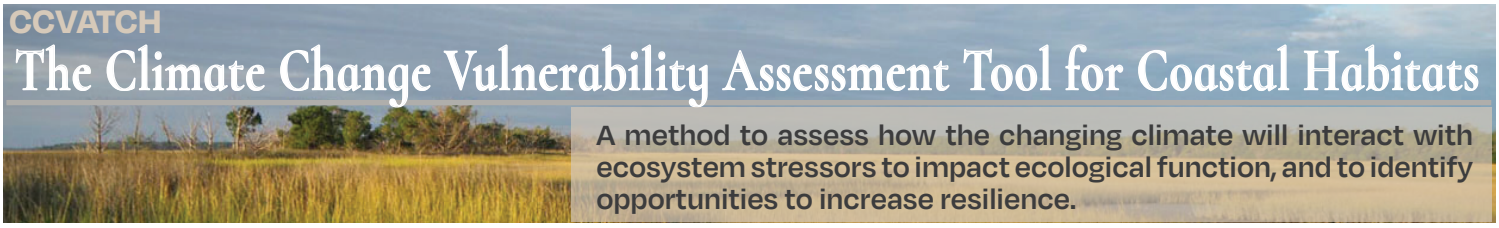
CCVATCH

The Climate Change Vulnerability Assessment Tool for Coastal Habitats



A method to assess how the changing climate will interact with ecosystem stressors to impact ecological function, and to identify opportunities to increase resilience.

Concept

Changes in Climate (Exposure)

⬆CO, ⬆Temperature, ΔPrecipitation, ΔSea Level, ⬆Catastrophic Events

Ecosystem Stressors (Sensitivities)

Invasive Species, Nutrients, Erosion, Sedimentation, Contamination

Potential Response of a Habitat

Sources of vulnerability, Opportunities to increase resilience

Adaptive Capacity

Fragmentation, Migration, Regeneration, Diversity, Managment, Human response

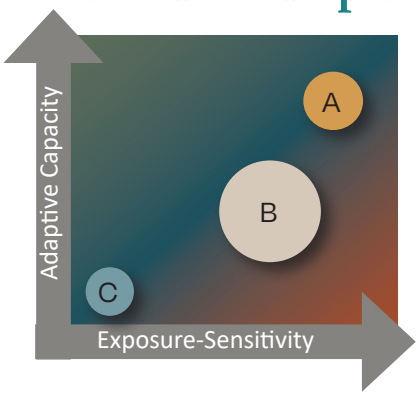
The CCVATCH was built from an established vulnerability assessment framework that considers how changes in climate (exposure), will interact with ecosystem stressors (sensitivities), and the ability of the habitat to accommodate impacts with minimal disruption (adaptive capacity), to affect the ability of a habitat to persist and maintain functions.

Process

1. Define goals and questions about vulnerability for a habitat area of interest
2. Invite a team of managers and researchers with local knowledge
3. Compile and review relevent information, resources and research
4. Evaluate effects of climate, stressors, and adaptive capacity
5. Identify managment actions based on findings

CCVATCH is an *evaluation process* that brings researchers and managers together to create a shared understanding of how changes in climate and management practices will make a habitat more or less vulnerable to climate changes. CCVATCH provides guidance and a format for compiling and evaluating information to create an assessment of vulnerability that can be applied to adaptation planning.

Results- an Example



A — This site has a high exposure-sensitivity, but also has high adaptive capacity. Current management practices may be sufficient.

B — This site has moderate exposure-sensitivity and adaptive capacity, but there is a high degree of uncertainty associated with the assessment (indicated by larger circle size). Further research that addresses the sources of uncertainty would be beneficial at this site.

C — This site has an overall low vulnerability due to the low exposure-sensitivity, but ways to increase the adaptive capacity may exsit that would further boost the reslience of this site.

Contact
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ClimateVulnerability.app

A way to complete the vulnerability assessment (VA) process *virtually* and *asynchronously*, while still maintaining the collaborative input and decision making of the CCVATCH process.

Project Set-up

Project Leader(s)

- Identify target areas
- Define the goals and questions of the VA
- Determine the timeline
- Develop the climate scenario
- Invite assessment team members.

Facilitated Assessment

Team Members

- Add information about potential impacts
- Interact through comments function of the app.

Assessment Review

Project Leader(s)

- Review the input of team members to determine if there are information gaps.
- Initiate the scoring section of the app and invite team members to begin scoring.

Vulnerability Scoring

Team Members

- Assign impact scores for each exposure-sensitivity by selecting from verbal scoring levels
- Assign a confidence level to each score

Score Reports

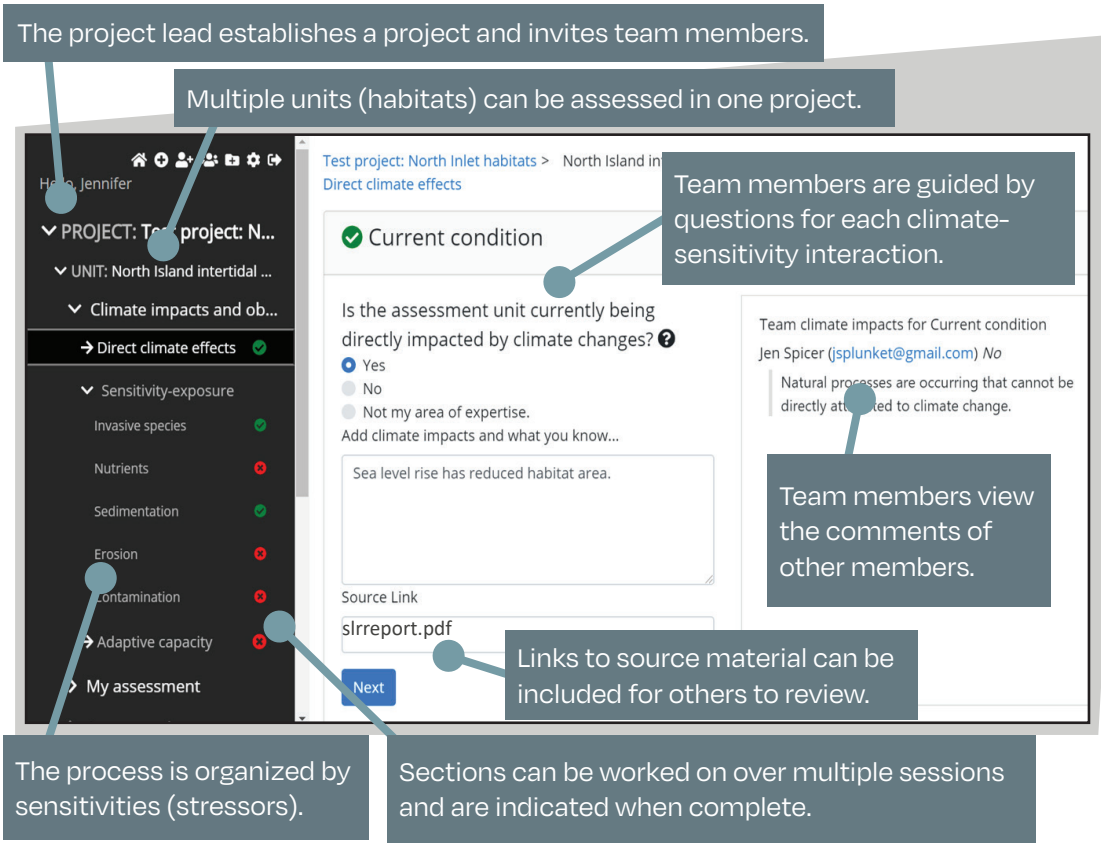
Web Application

- An overall vulnerbility score is calculate for each unit (habitat).
- Aggregated team scores for each climate-sensitivity are reported.

Next Steps

Project Leader(s)
Team Members

- Teams review scores to identify priority units, significant stressors
- Certainty scores can help direct future research
- Adaptive capacity assessment may indicate potential managment actions.



**The ClimateVulnerability.app is under development. The user interface may be modified from the above screen shot.*

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