



EPA SNEP PROJECT

Integrating Ecosystem Services Functions and Values into Land-Use Decision Making in the Narragansett Bay Watershed



Stanford
WOODS
INSTITUTE *for the*
ENVIRONMENT



The Nature
Conservancy



INSTITUTE ON THE
ENVIRONMENT
UNIVERSITY OF MINNESOTA
Driven to Discover™

A wide-angle photograph of a person fishing in a large body of water. The person is standing in the water, holding a fishing rod. The background shows a shoreline with some buildings and trees under a blue sky with scattered white clouds. A semi-transparent grey box is overlaid on the center of the image, containing the text 'natural capital PROJECT' in white lowercase letters, with 'PROJECT' in all caps.

natural
capital
PROJECT

OUR THEORY OF CHANGE

Advance science of
ecosystem services

Create user-friendly
approaches & tools

Build and tell
success stories

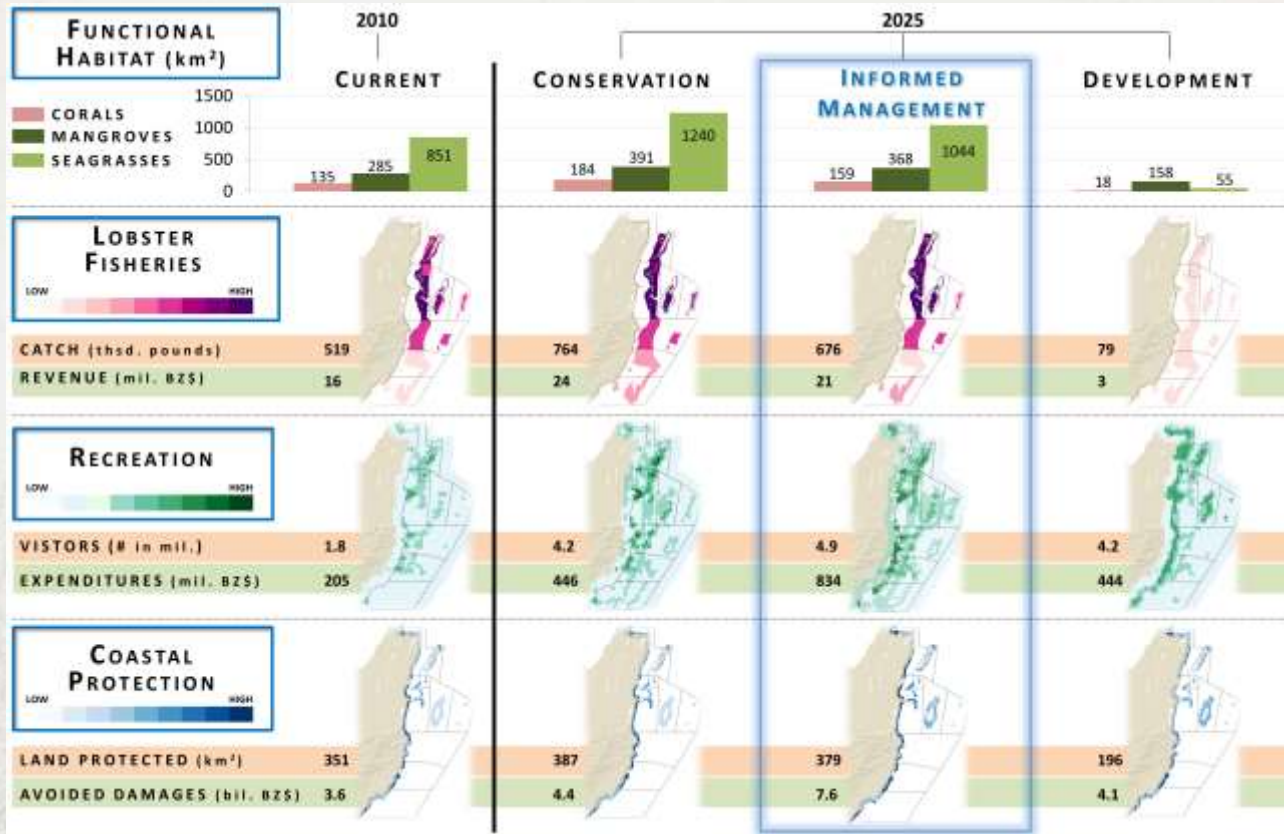
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graph TD; A[Advance science of ecosystem services] --> C[Get information about natural capital into decisions]; B[Create user-friendly approaches & tools] --> C; D[Build and tell success stories] --> C; C --> E[Make decisions with better outcomes for people and nature];
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Get information about natural capital into
decisions

Make decisions with better outcomes for
people and nature

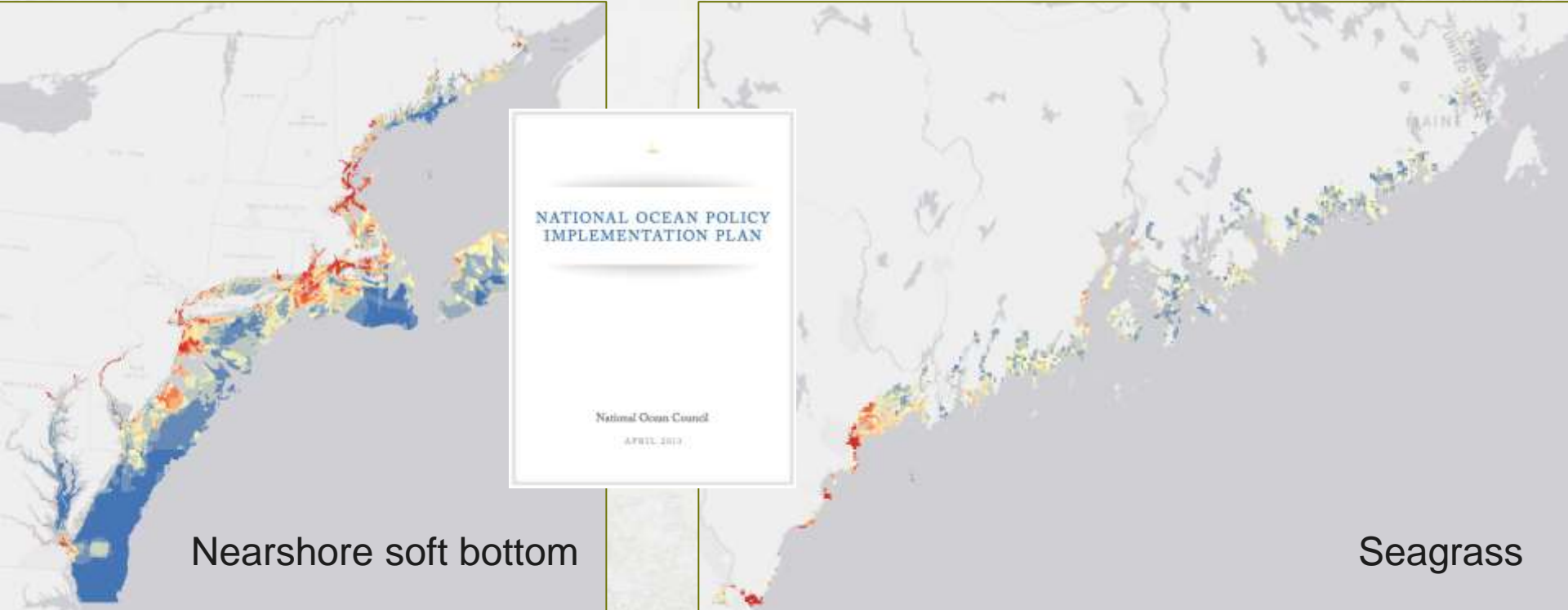
EXAMPLES

BELIZE INTEGRATED COASTAL ZONE MANAGEMENT PLAN



EXAMPLES

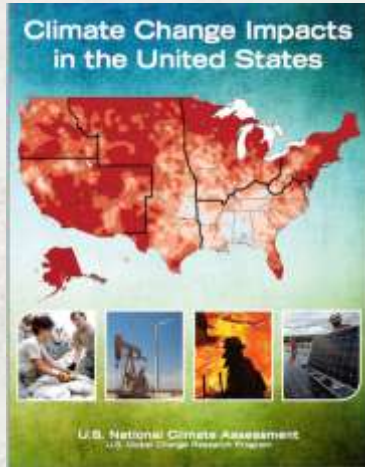
HABITAT RISK ASSESSMENT



Nearshore soft bottom

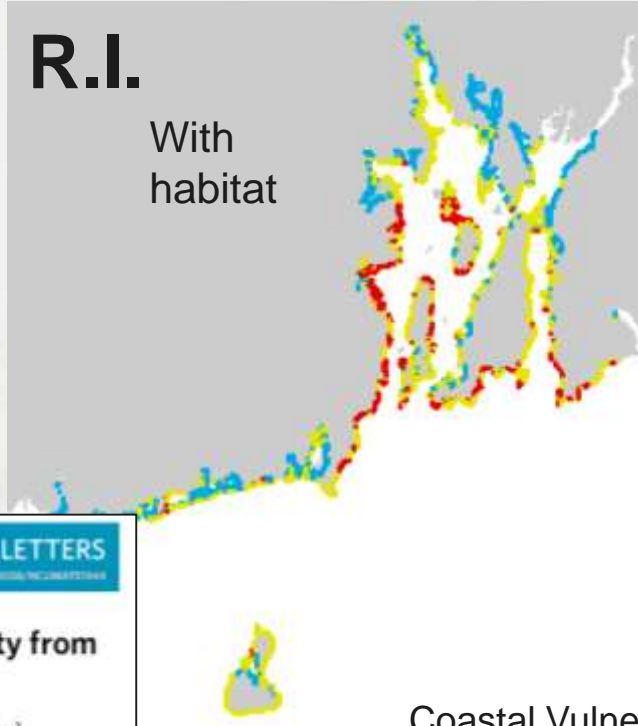
Seagrass

EXAMPLES

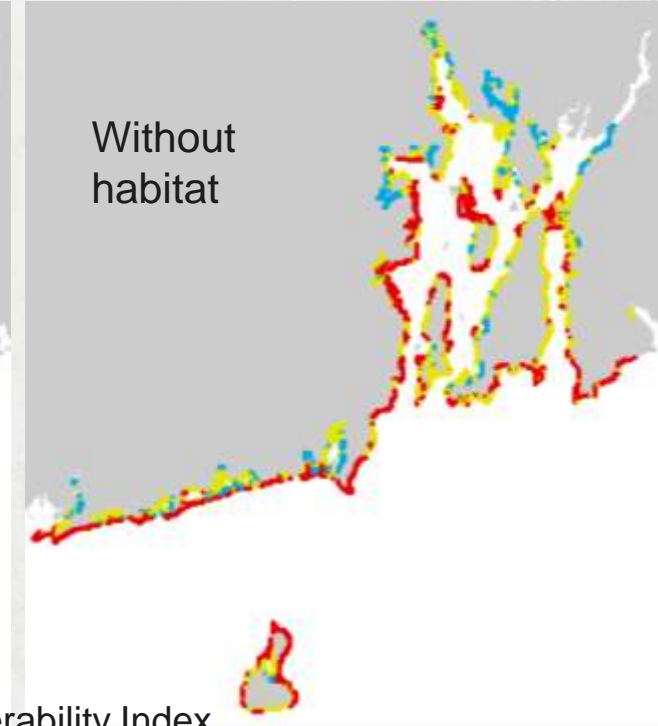


R.I.

With
habitat



Without
habitat



nature climate change LETTERS
PUBLISHED ONLINE: 22 MARCH 2014 | DOI: 10.1038/ncc1407

Coastal habitats shield people and property from sea-level rise and storms

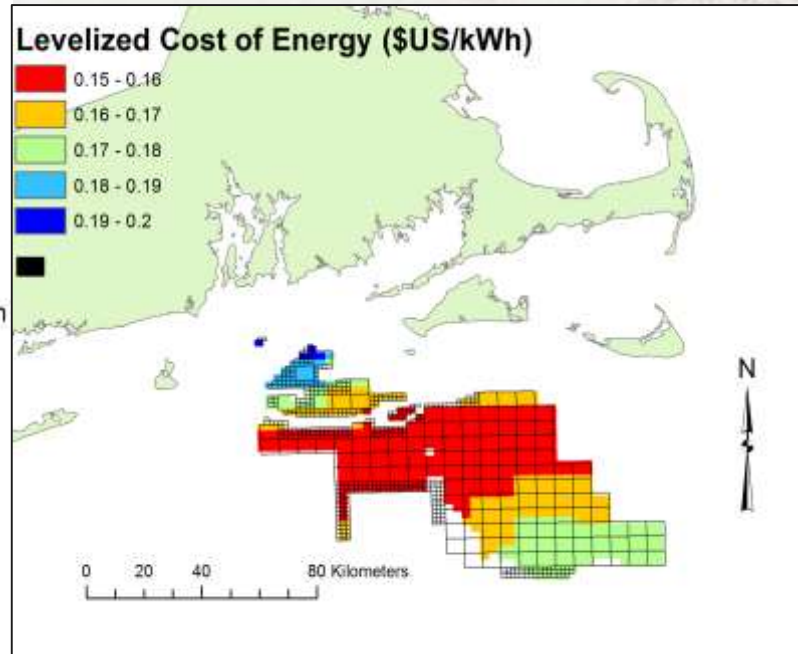
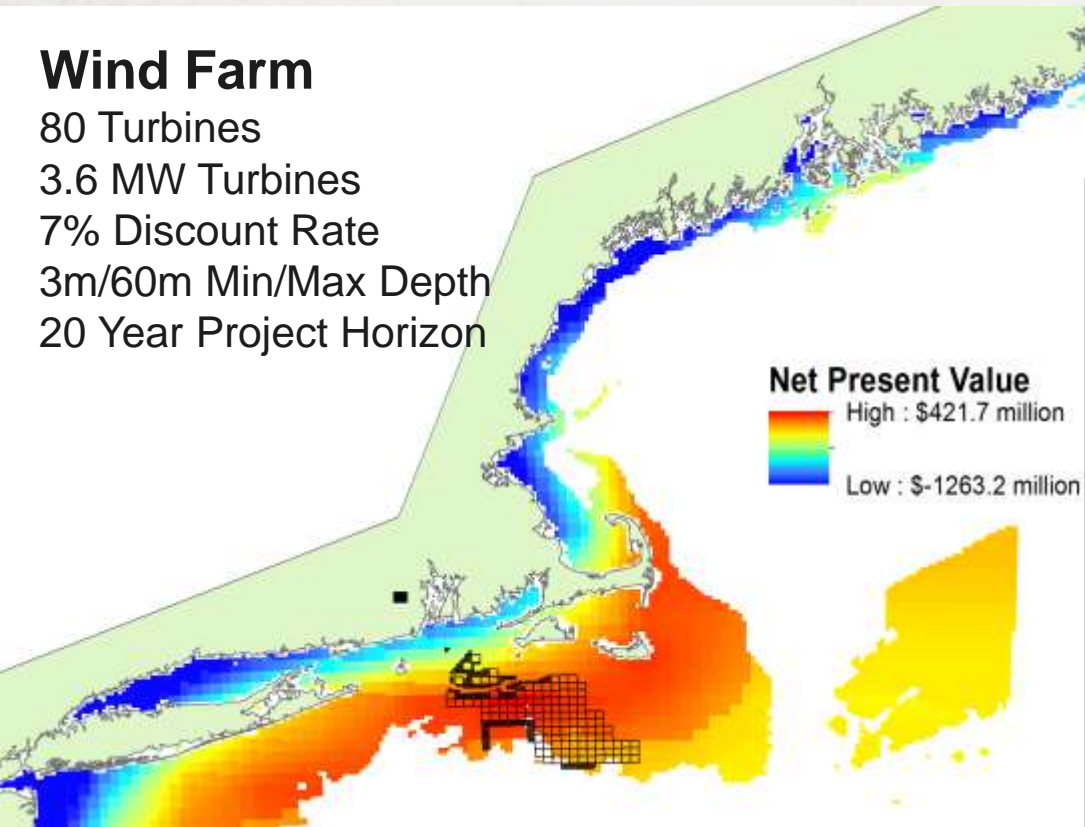
Katie K. Arkema^{1*}, Greg Guannel², Gregory Verutes³, Spencer A. Wood², Anne Guerry², Mary Ruckelshaus³, Peter Kareiva⁴, Martin Lacayo² and Jessica M. Silver²

EXAMPLES

OPTIMAL SITING DECISIONS

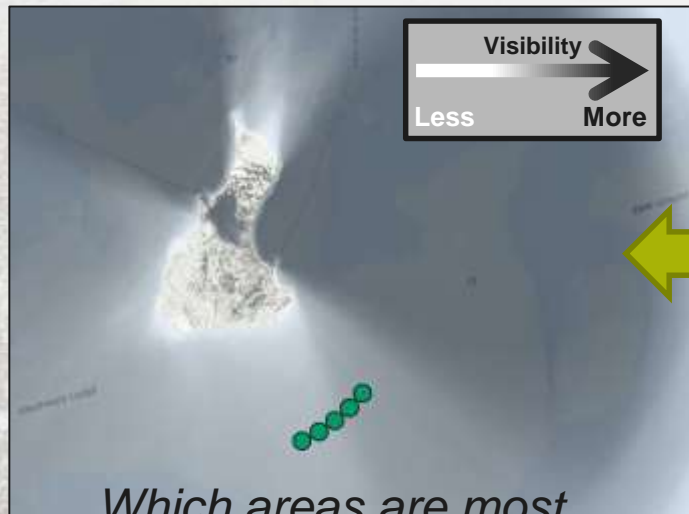
Wind Farm

- 80 Turbines
- 3.6 MW Turbines
- 7% Discount Rate
- 3m/60m Min/Max Depth
- 20 Year Project Horizon

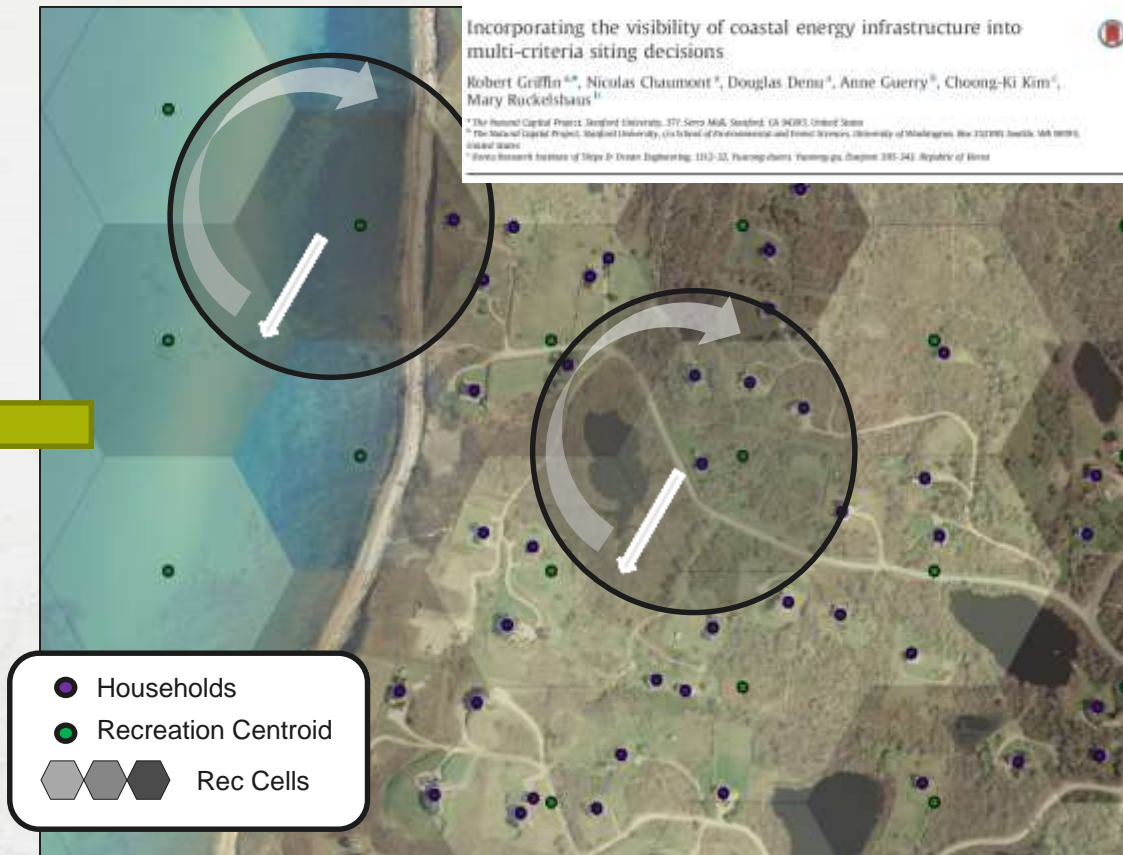


EXAMPLES

Visibility derived from E-911 and social media data



Which areas are most visible? How many people are impacted by the siting of a visual (dis)amenity?



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ELSEVIER

INTEGRATING THE VISIBILITY OF COASTAL ENERGY INFRASTRUCTURE INTO MULTI-CRITERIA SITING DECISIONS

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Production function models

changes in ecosystems →

changes in ecosystem services →

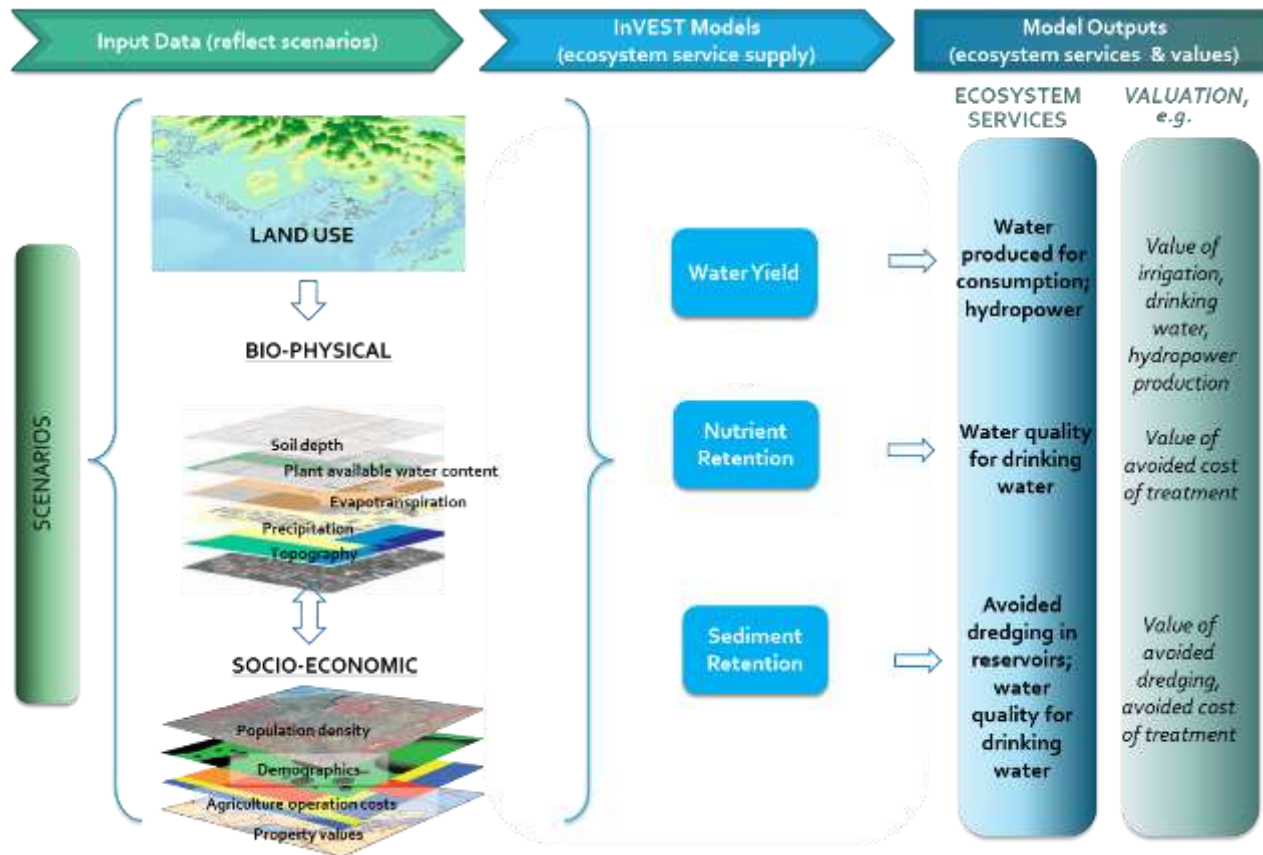
changes in benefits to people

InVEST

integrated valuation of
ecosystem services
and tradeoffs

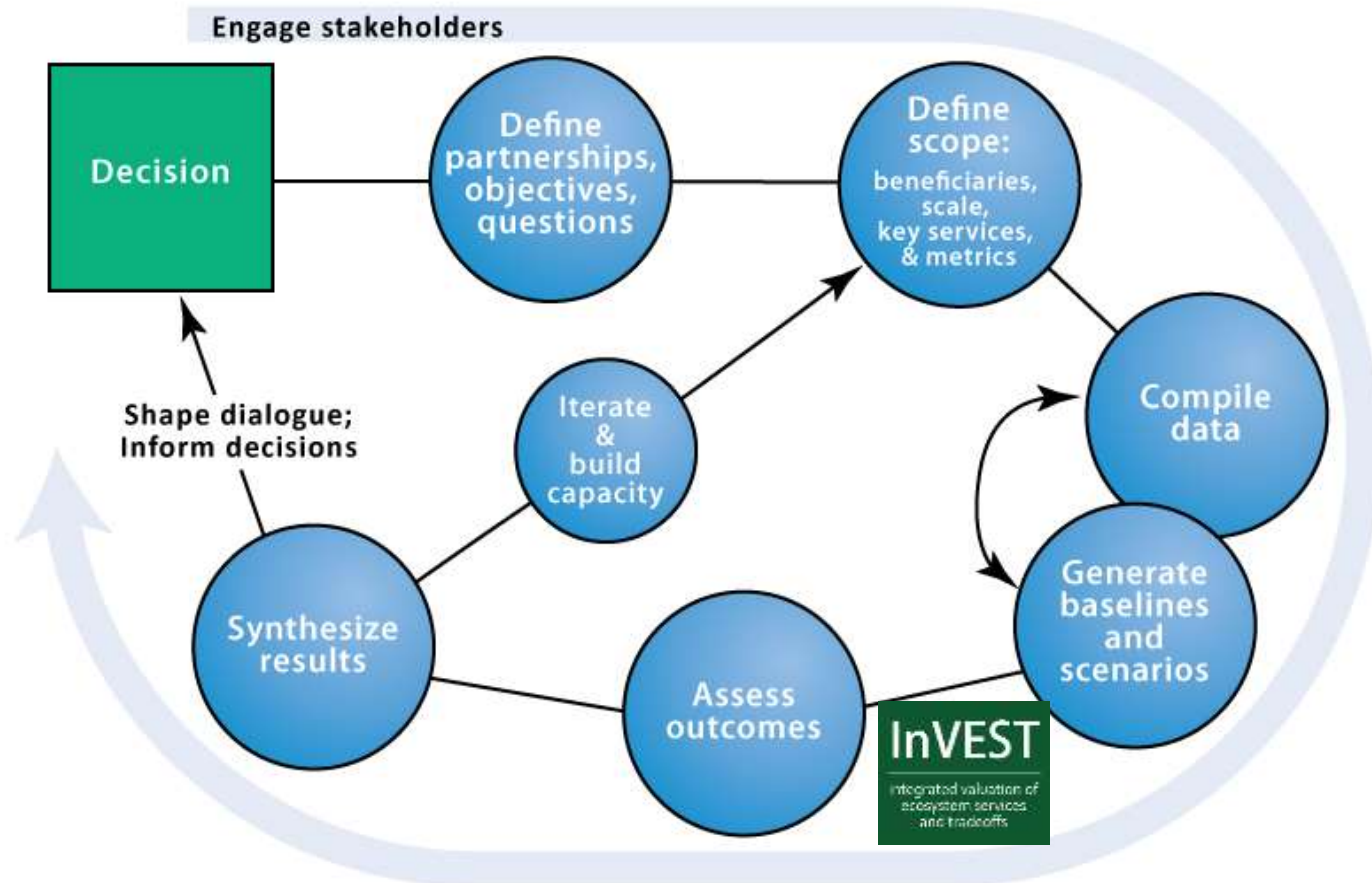
Free & open source

INVEST & SCENARIOS



InVEST
integrated valuation of
ecosystem services
and tradeoffs

NatCap – Engagement



SNEP PROJECT

QUICK FACTS

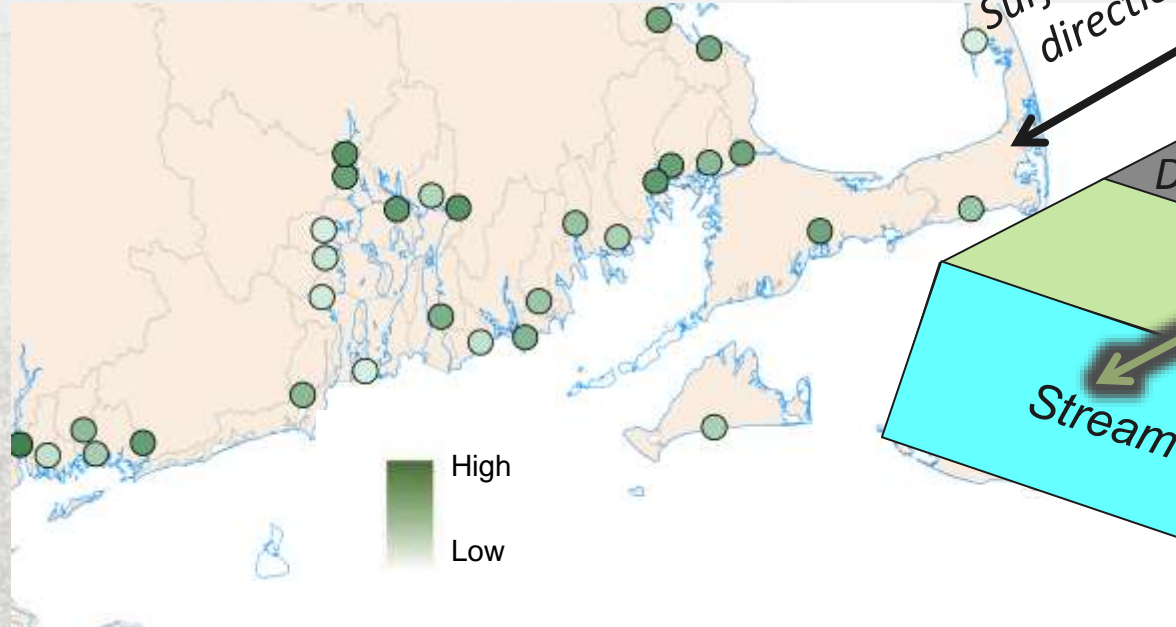
Project team



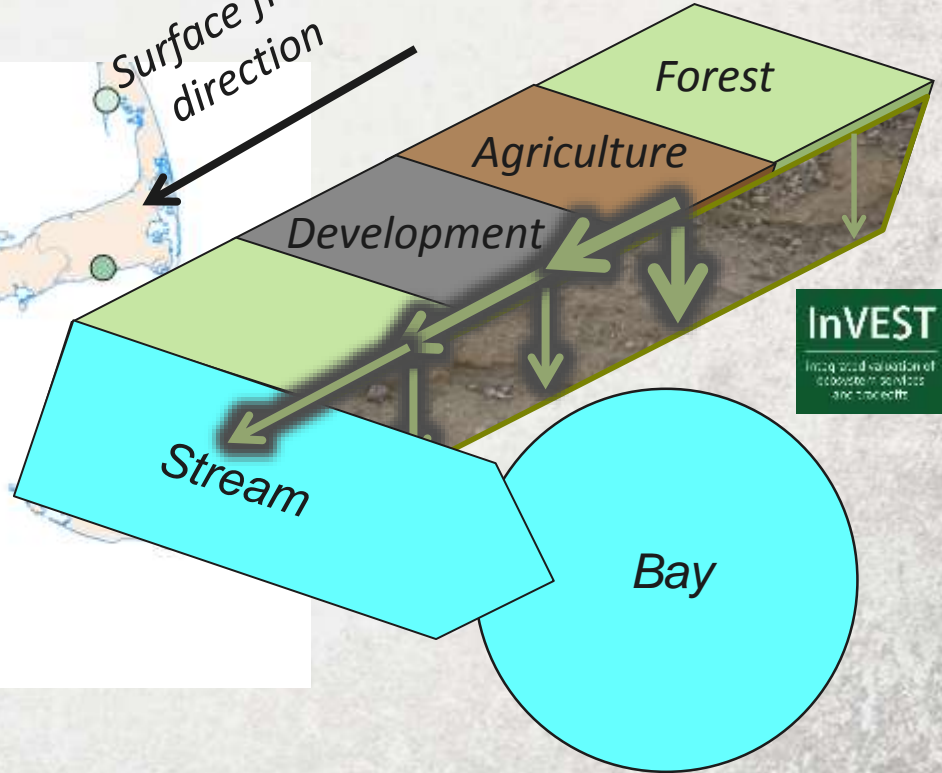
SNEP PROJECT

QUICK FACTS

Scope



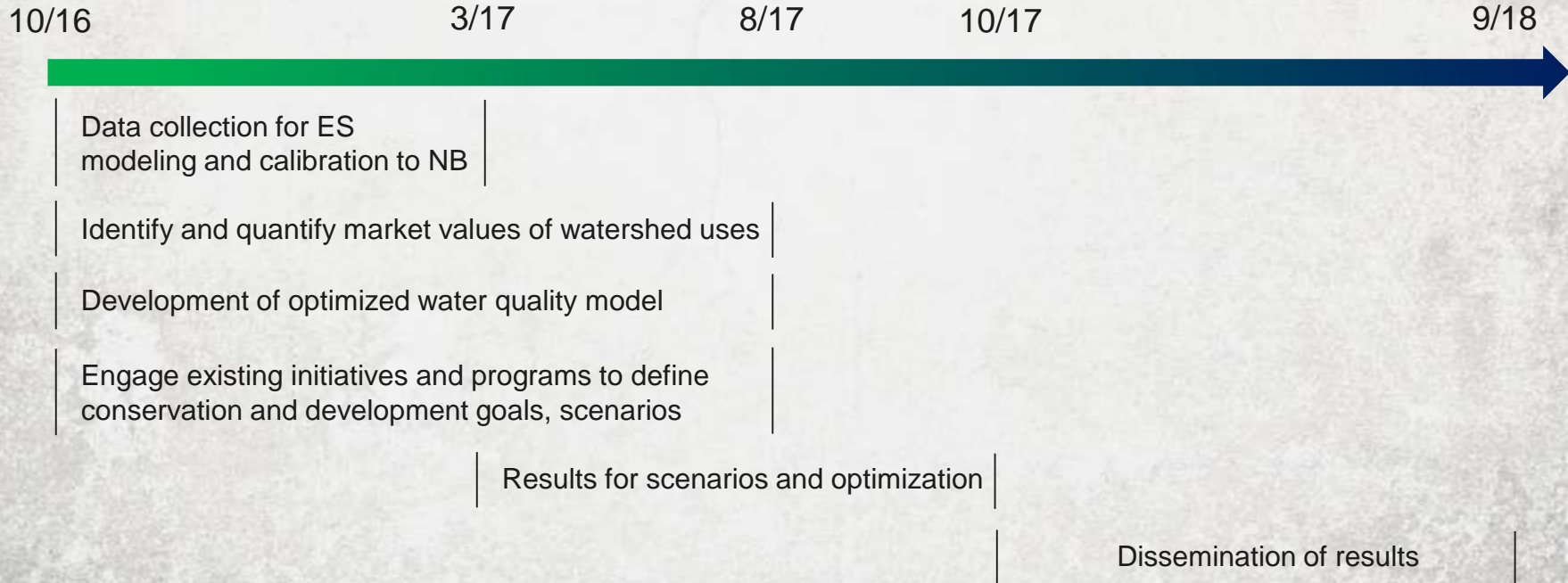
Nutrients/Sediment



SNEP PROJECT

QUICK FACTS

Timeline



SNEP PROJECT

QUESTIONS FOR YOU

What are you most interested in? In terms of:

Modeling and outputs

Scenarios

What are you lacking to make land use decisions in your community?