



Information and Tools for Conservation Planning and Design at Multiple Scales in the Northeast Region

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North Atlantic Landscape Conservation Cooperative

Regional Conservation Partnership Gathering



November 13, 2014

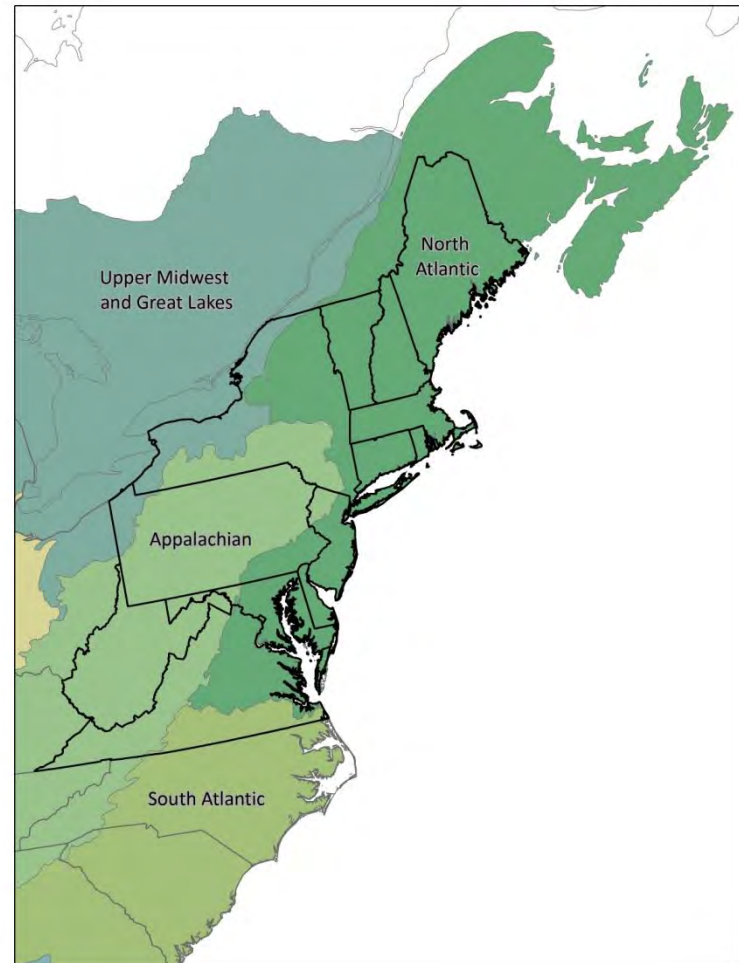


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North Atlantic LCC

...provides a partnership in which the conservation community works together to address increasing land use pressures and widespread resource threats and uncertainties amplified by a rapidly changing climate.

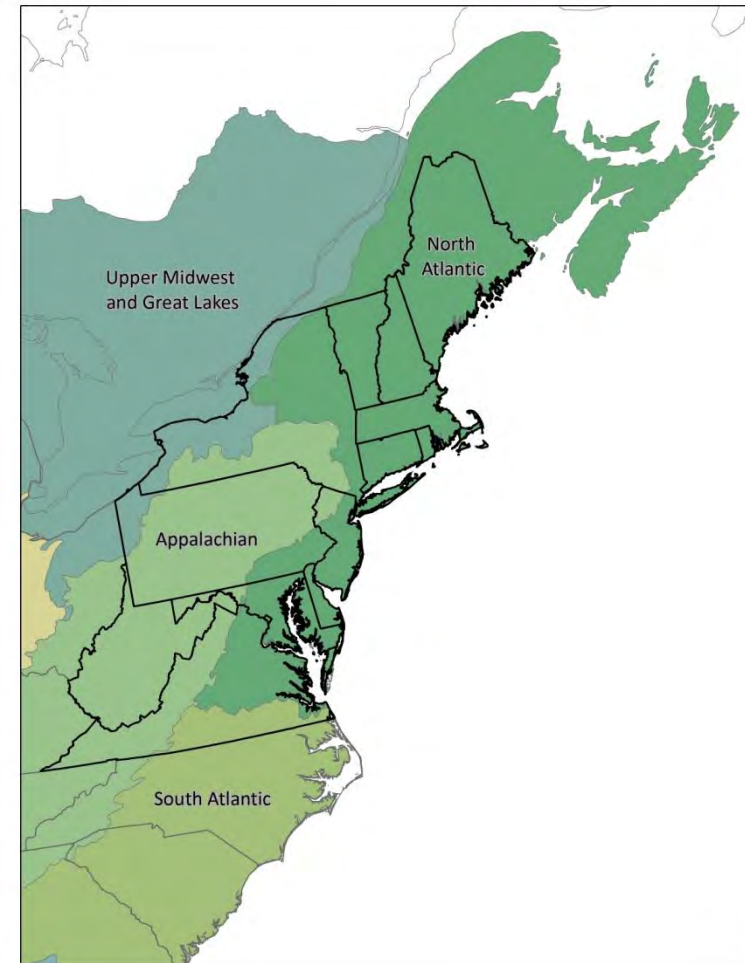
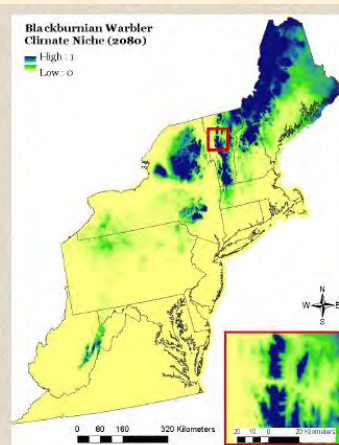
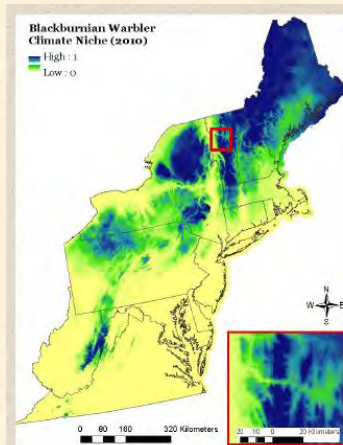
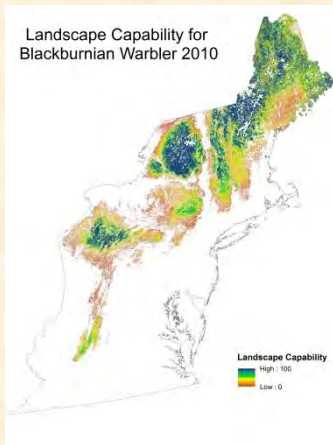


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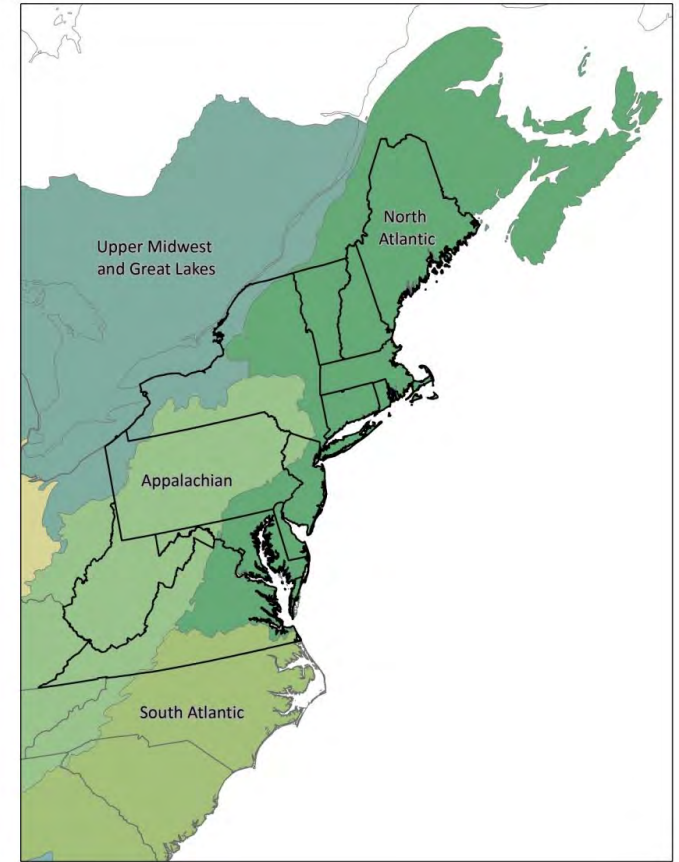
North Atlantic LCC

- Developing and delivering scientific information and tools
- Prioritizing and guiding conservation actions by partners toward common goals.



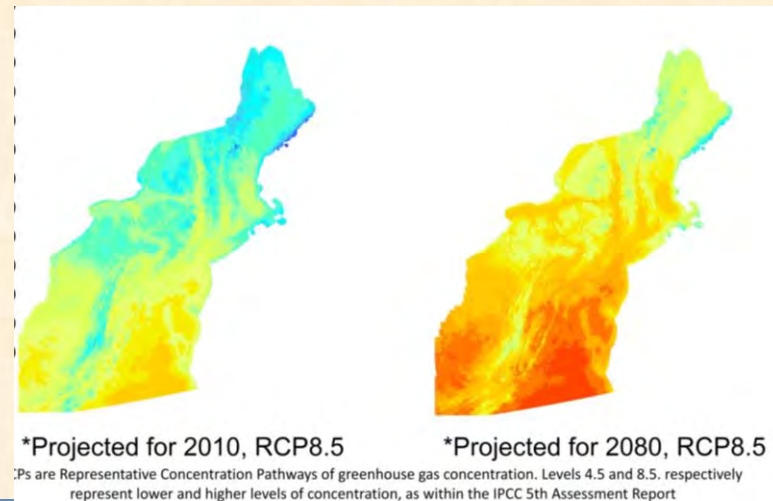
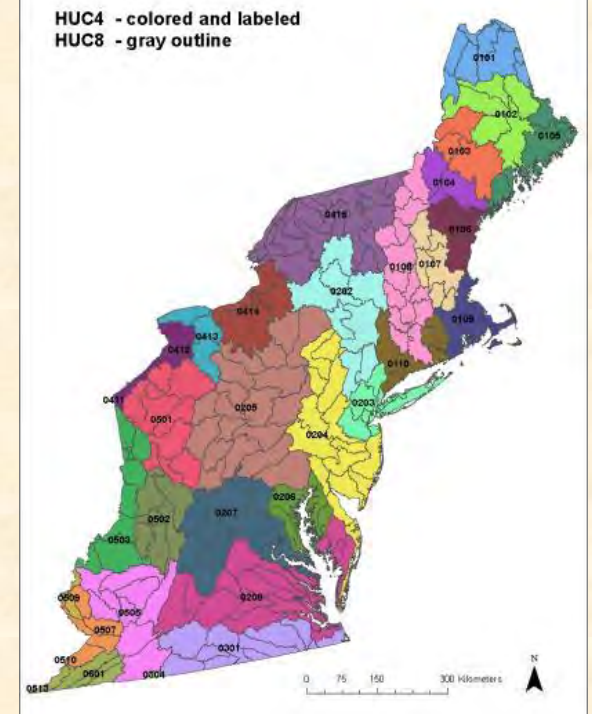
North Atlantic LCC

- 13 states + D.C.
- 4 Canadian provinces
- Multiple partners & partnerships
- Diverse land use
- Predominantly private lands
- Diverse systems/habitats
 - Marine
 - Coastal
 - Riverine
 - Forests
 - Agriculture
 - Mountains



Multiple Scales of Conservation Plan. & Design

- Spatial scales that match partnerships and decisions being made
- Ability to have scales inform each other
 - Regional context for watershed, state and local actions
- Plan based on both current and projected future conditions
 - Climate change
 - Urban growth
 - Relevant time intervals

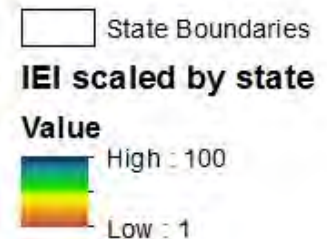
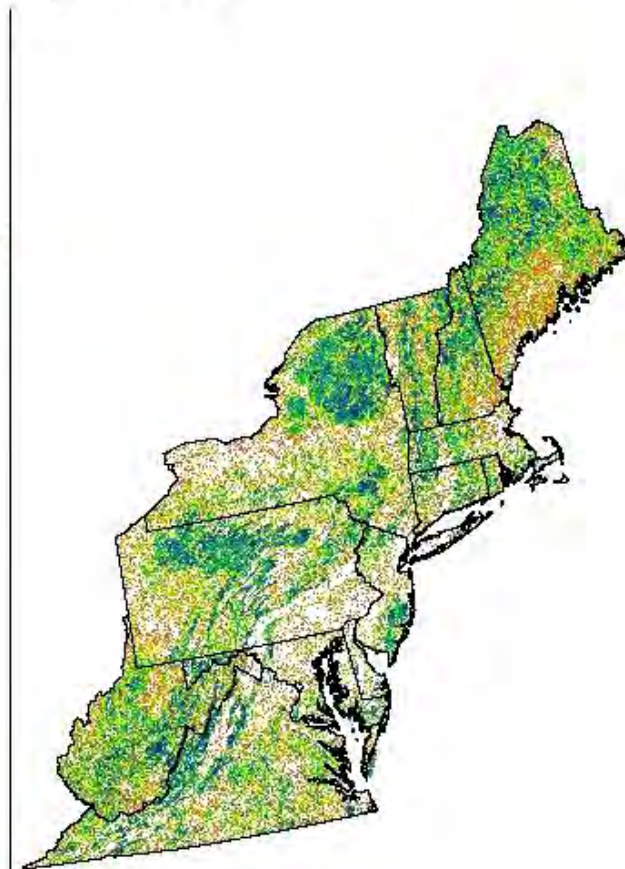
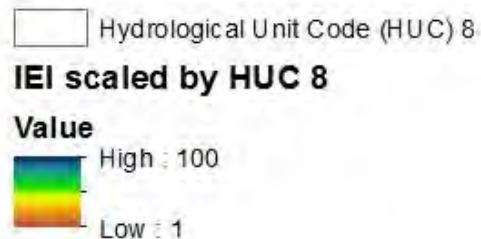
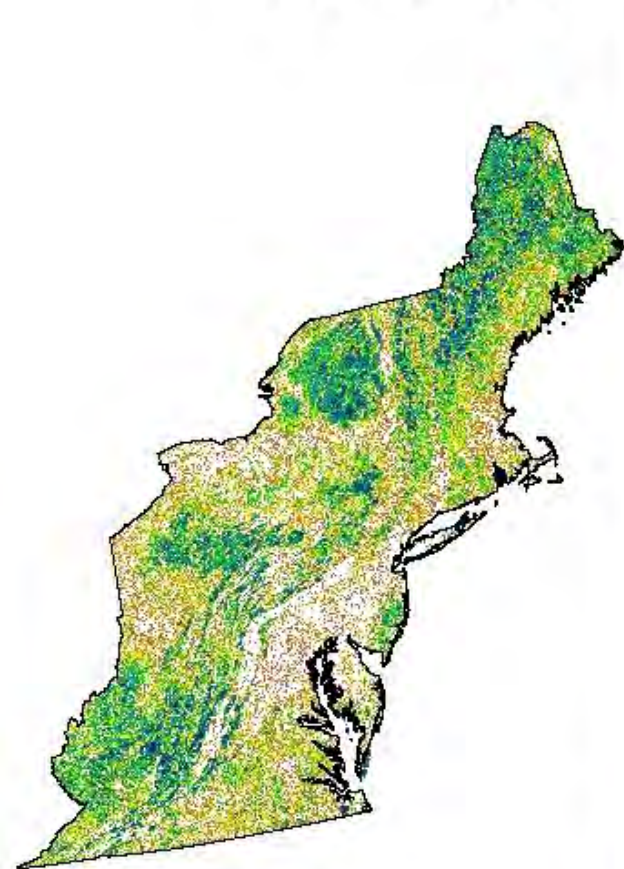


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Regionally Consistent, Scalable Spatial Data



Resolution

- 30 meter cell resolution
- Works at regional and local scale
- Local knowledge and data can be added

Index of Ecological Integrity at Regional and Local Scales

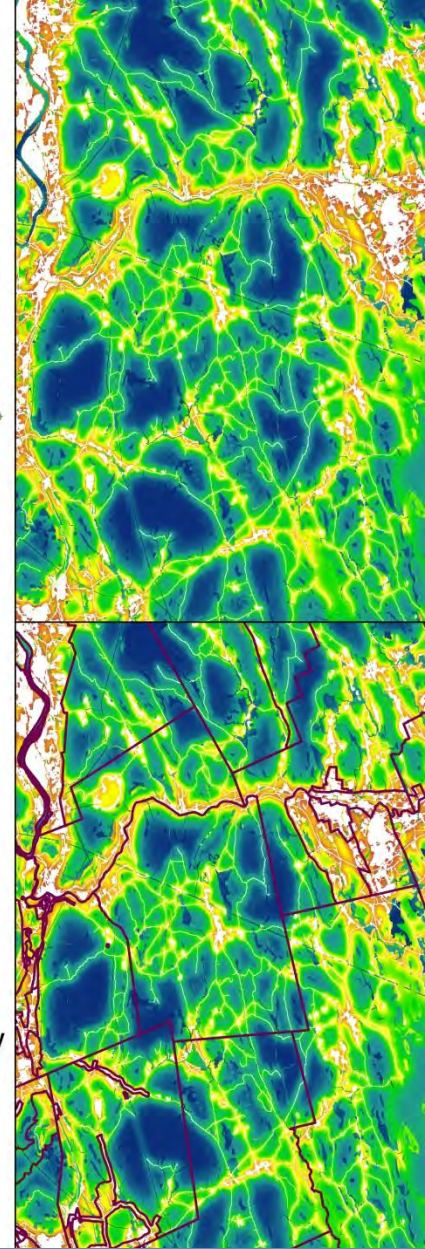


Index of Ecological Integrity

High : 100

Low : 1

Zoning



Components for Facilitating Conservation Planning & Design at Multiple Scales

- Foundational Data (Steve Fuller/Brian Hall)
- Information Management (Steve)
 - LCC Website
 - Conservation Planning Atlas
- Science Delivery (Steve Fuller)
 - Training
 - Partner Networks
 - Highstead/Harvard Forest – RCPs (Brian Hall)
 - Open Space Institute (1:15 session A)
- Conservation Design
 - Landscape and regional scales
 - Connecticut River Pilot (2:45 session A)



Foundational Data

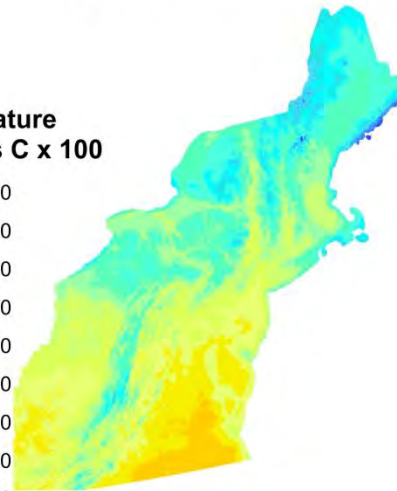
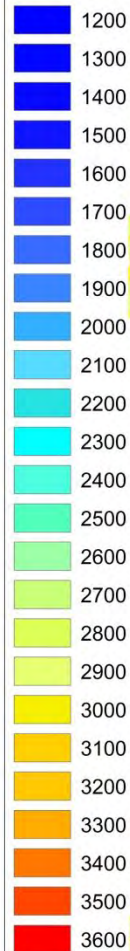
> 100 regionally
consistent,
scalable spatial
data layers
developed



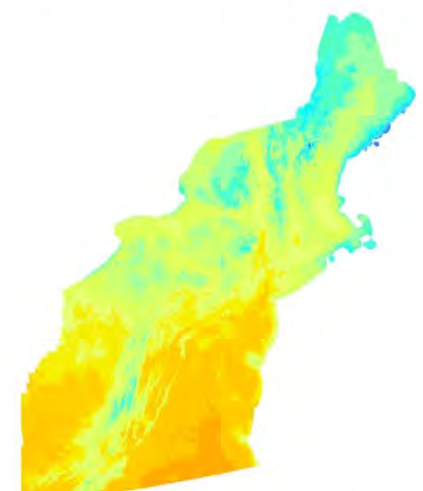
Downscaled climate projections of maximum summer temperature

Prepared by UMass Amherst as part of the Designing Sustainable Landscapes project

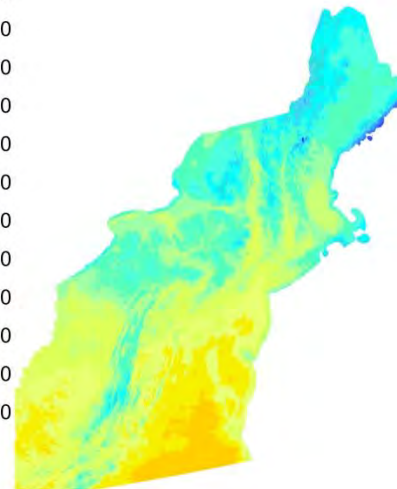
Temperature
Degrees C x 100



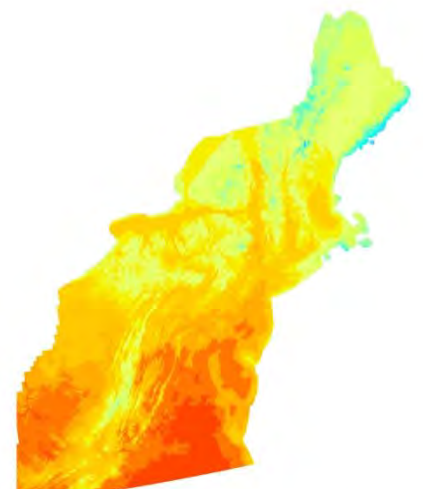
*Projected for 2010, RCP4.5



*Projected for 2080, RCP4.5



*Projected for 2010, RCP8.5



*Projected for 2080, RCP8.5

RCPs are Representative Concentration Pathways of greenhouse gas concentration. Levels 4.5 and 8.5, respectively represent lower and higher levels of concentration, as within the IPCC 5th Assessment Report

Conservation Design: *Connecticut River Watershed Example*

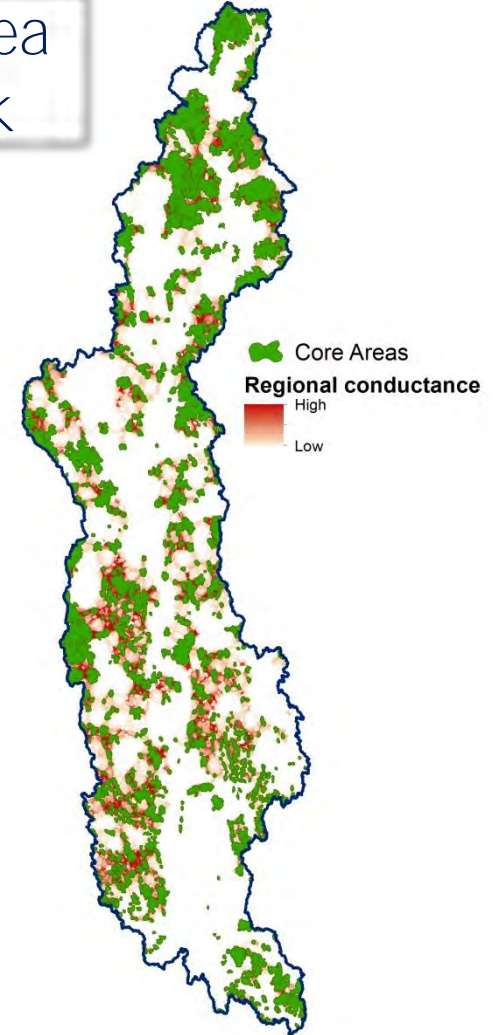
Surrogate
Species

Rare and
Unique
Species

Nat.
Ecological
Integrity and
Resilience

Core area
network

Optimization

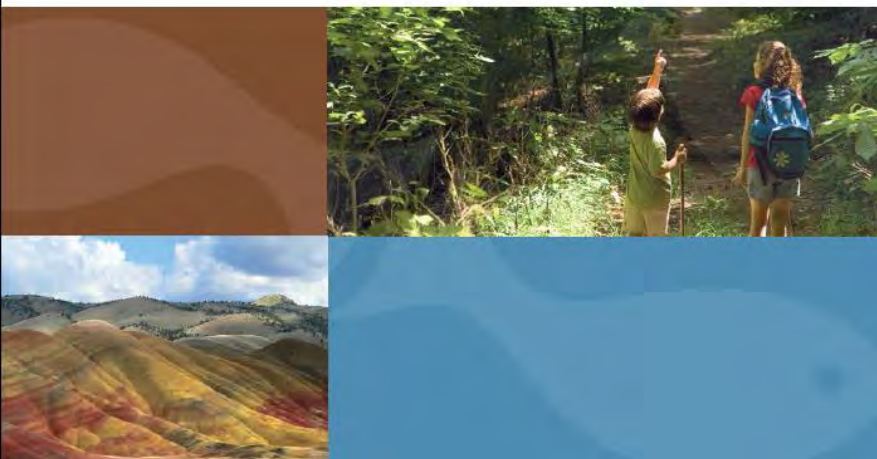


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NATIONAL *fish, wildlife & plants*
CLIMATE ADAPTATION STRATEGY



Strategy 1.1: Identify areas for an ecologically-connected network of terrestrial, freshwater, coastal, and marine conservation areas that are likely to be resilient to climate change and to support a broad range of fish, wildlife, and plants under changed conditions.

ACTIONS

1.1.1: Identify and map high priority areas for conservation using information such as species distributions (current and projected), habitat classification, land cover, and geophysical settings (including areas of rapid change and slow change).

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Thanks. For More Information:

- North Atlantic LCC: <http://northatlanticlcc.org/>
- Cons. Planning Atlas: <http://nalcc.databasin.org/>

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