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

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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.

North Atlantic Landscape Conservation Cooperative
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

Region Boundary
IEI scaled by region
Value
High: 100
Low: 1

Hydrological Unit Code (HUC) 8
IEI scaled by HUC 8
Value
High: 100
Low: 1

State Boundaries
IEI scaled by state
Value
High: 100
Low: 1
Resolution

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

- 1200
- 1300
- 1400
- 1500
- 1600
- 1700
- 1800
- 1900
- 2000
- 2100
- 2200
- 2300
- 2400
- 2500
- 2600
- 2700
- 2800
- 2900
- 3000
- 3100
- 3200
- 3300
- 3400
- 3500
- 3600

*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
- Natural Communities
- Ecological Integrity and Resilience

Core area network

Optimization

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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).
Thanks. For More Information:


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