

Working Across Borders



Trilateral Commission for Wildlife and Ecosystem Conservation and Management



April 2015

Landscape Conservation Cooperatives (LCCs) are developing landscape conservation projects and designs to achieve the vision of an ecologically connected network of landscapes and seascapes.

- Increase awareness of trans-boundary LCC projects
- Explore opportunities of tri-national interest and collaboration in Landscape Conservation Design

Objective:

Request Trilateral Committee endorsement to continue the coordination and implementation of trans-boundary LCCs in the U.S., Canada, and Mexico.



Landscape Conservation Cooperatives

Trans-boundary Science: Supporting landscape-level planning

Water delivery data and model integration for the Colorado River Delta

- Links multiple models from Minute 319 pulse flow to provide faster, unified outputs for hydrologic and ecological responses under varying climate conditions
- Assist decision makers in future binational negotiations





Projections of Coral Bleaching and Ocean Acidification

- Model future projections of climate change on all coral reefs globally
- Allow coral managers throughout the world to visualize which areas will experience impacts sooner (2030s) and later (2050s) in coming decades







Projections for timing of severe impacts to corals across the globe from bleaching and ocean acidification. *Image courtesy of R. van Hooidonk and J. Maynard* (2013)

Pacific Islands

Shorebird Demographics & Climate Change Supporting the Artic Shorebird Demographic Network



- Evaluating how climate in the arctic ecosystem is affecting shorebird distribution, ecology, and demography
- Monitoring (e.g. nest success, adult survival, water & prey availability) of widely distributed shorebirds, to develop effective conservation strategies





Restoring Rio Grande Valley Migration Corridors

• The riparian corridor and surrounding forests of the Rio Grande and other major rivers in Texas and Mexico provide for one of the largest migratory bird stopovers in North America



Photo courtesy Rich Kostecke of The Nature Conservancy

• Climate change will drive many species northward





GCPLCC is working with partners to develop best management practices for future corridor re-vegetation/restoration efforts

Gulf Coast Prairie



Determining level of shrub encroachment in desert grasslands in Janos Grassland Priority Conservation Area

- Current remote sensing products lose accuracy when predicting shrub and grassland components when shrub drops below 2-30%
- Improving accuracy allows for better estimates of viable habitat & regional density of species
- Provides better habitat and
 species management planning
 and landscape capacity
 estimates for grassland
 dependent species (like
 Baird's Sparrows)

Trans-boundary Data: Supporting landscape conservation design

Foundational Mapping: Extension of Northeast Terrestrial Habitat Map to Canada

- Consistent and accurate landscape datasets are important foundational products for ecological analyses and for understanding and anticipating effects of climate change
- Extends terrestrial habitat map of north Atlantic U.S. to Atlantic Canada and southern Quebec
- Provides a foundation for species vulnerability analyses, consistent identification of terrestrial habitats across borders, and analysis of regional connectivity
- Increases capacity for cross-boundary conservation planning and design
- Interest in cross-border aquatic mapping as well





North Atlantic

Building the Foundation for International Conservation Planning for Plains Prairie Pothole Ecosystems

- Geographic Information System (GIS) database of wetland abundance, land cover, primary productivity and wetness that that spans the U.S.-Canada border
- Used to develop predictive models of the distribution and abundance of waterfowl

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• Models will be linked to down-scaled climate change models so natural resource managers and restoration efforts can incorporate climate into conservation planning and design



Seamless land use and land cover layer developed for the PPPLCC

Plains & Prairie Potholes

Transboundary Training & Translation: Supporting people who implement landscape conservation

Climate-Smart Conservation Training

- Binational discussion on conservation of the Tijuana River Watershed along the US-Mexico border, with a focus on climate change
- Collaboratively developed by the Tijuana River National Estuarine Research Reserve (TRNERR) and the San Diego Climate Science Alliance (California LCC and California Department of Fish and Wildlife)
- Website in English & Spanish

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http://www.climatealliancesd.com/#!building-partnerships-in-mexico/cjri http://www.climatealliancesd.com/#!building-partnerships-in-bajaespanol/c881

California



March 10th Climate-Smart training in San Diego, CA in Spanish

https://www.youtube.com/watch?v=0AXbY ymKbdc **Cross Cultural Capacity Building: Landscape Conservation and Climate Change Adaptation with the Blackfeet Nation**

- Increase the "cross cultural capacity" of indigenous and nonindigenous groups to collaborate on climate adaptation in the Crown of the Continent
- Identify the necessary protocols for collaboration between the Blackfeet Nation and government and non-government agencies
- Identify the priorities of the Blackfeet Nation in climate change adaptation.
- Support the decision tools available to indigenous and nonindigenous actors to work together for large landscape conservation, and with a specific focus on climate change.







Great Northern

Trans-boundary Landscape Conservation Design

Landscape Conservation Design To Maintain Ecological Connectivity



- Climate-change Hotspots
- Anthropogenic Footprint Map
- Conservation Planning Atlas





Northwest Boreal

Landscape Conservation Design for dry tropical forests throughout the Caribbean with emphasis on endemic iguanas

- Rock iguanas as surrogate/indicator species for dry tropical forests
- GIS layers/models describe current and future conditions and conservation \bullet targets
- Map Priority Areas for land protection and restoration
 - Geographic and temporal corridors suitable to maintain viable populations
 - Identify areas for translocations and other management activities
 - Use to allocate resources at regional level

Collaboration with Turks and Caicos Islands (TCI) recently approved!

> 0 Puerto Rico





Identifying specific wildlife linkage locations for multiple wildlife species

• Grizzly Bear, Wolverine

Focusing on specific sub-regions & ecosystems

• Landscape Conservation Design in the Columbia Plateau Ecoregion: Prioritizing, Classifying, and Assessing Resiliency of Riverine Systems in the Columbia Plateau

Working with tribes to address cultural resources

Confederated Salish and Kootenai Tribes climate change strategic planning







Great Northern



Steering Committees & Working Groups

- Regular meetings to discuss LCC priorities/goals and strategies to communicate and integrate science into decision-making
 - Desert LCC Mexico Working Group

Landscape Conservation Planning & Design

- Determine conservation goals and objectives for focal resources in LCC sub-regions
 - Desert LCC workshops in Arizona (Aug) & Aguascalientes (Oct)

Regional Workshops & Meetings

Southwest Climate Science Center Climate Summit (Nov)

Existing Forums

• Trilateral

Contact a coordinator in your region

Request: Trilateral Committee endorsement to continue the coordination and implementation of trans-boundary LCCs in the U.S., Canada, and Mexico

- & What are opportunities for tri-national collaboration?
- & What constraints exist and what are possible solutions?

Discussion





Thank you!

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