

Landscape Conservation Cooperatives



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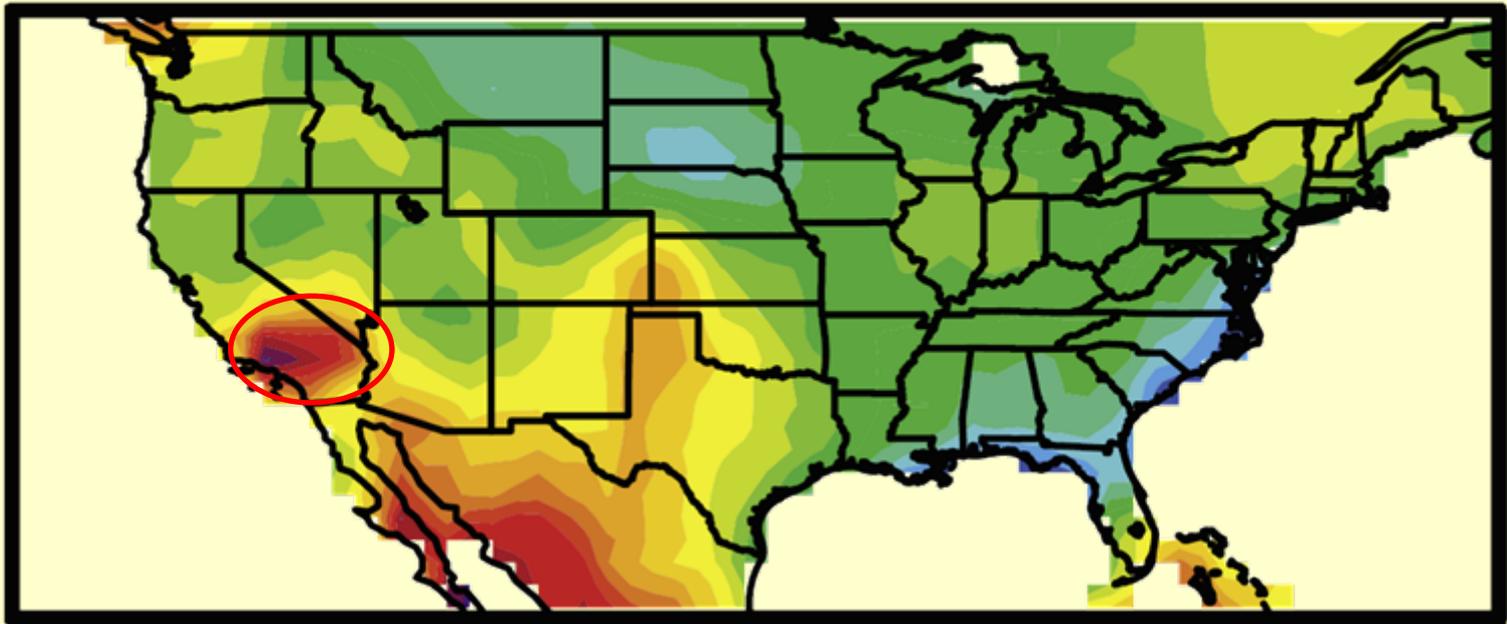


Challenge of Rapid Climate Change

- The Earth's climate is dynamic – it has always changed and it always will
- The rate of change in recent years is greater than any other time in history
- Climate change affects both natural and human systems



Results of 15 GCMs from the IPCC Fourth Assessment Report 2071-2099



Diffenbaugh, N. S., F. Giorgi, and J. S. Pal (2008), Climate change hotspots in the United States, *Geophys. Res. Lett.*, 35, L16709, doi:10.1029/2008GL035075



DOI Secretarial Order 3289

Creates Energy and Climate Change Council
for Oversight and Coordination of:

- Department-wide Response to Climate Change
- Climate Science Centers
- Landscape Conservation Cooperatives
- Data Integration and Management
- Carbon Storage Activities
 - Geological Sequestration
 - Biological Sequestration
- Carbon Footprint Project



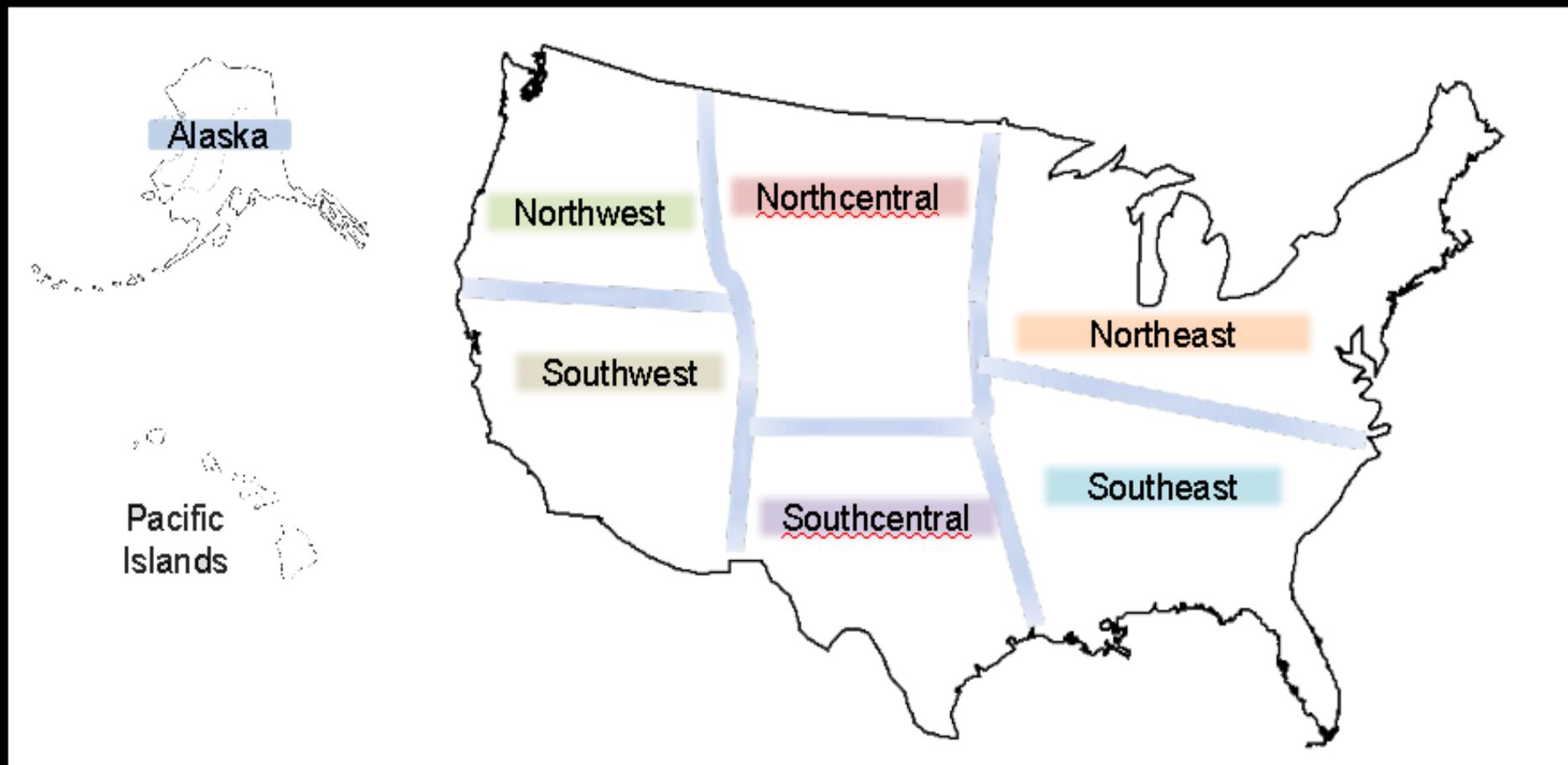


DOI Climate Science Centers: Delivering Fundamental Climate- Impact Science to Resource Managers on a Regional Basis

- National Climate Change and Wildlife Center at USGS HQ.
- Eight regional Climate Science Centers (CSCs)
- University-based regional science providers that:
 - provide scientific information, tools and techniques for land, water, wildlife, and cultural resource managers to adapt to climate and ecologically-driven responses at regional-to-local scales.
 - deliver basic climate-change-impact science to Landscape Conservation Cooperatives (LCCs)
 - prioritize fundamental science, data and decision-support activities to meet the needs of the LCCs.
 - work with the LCCs to develop adaptive management and other decision-support tools for managers.



Climate Science Center Locations





Landscape Conservation Cooperatives: The On-the-Ground Applied Science and Adaptive Management Arm

Landscape Conservation Cooperatives focus on-the-ground strategic conservation and adaptive management efforts at the landscape level.

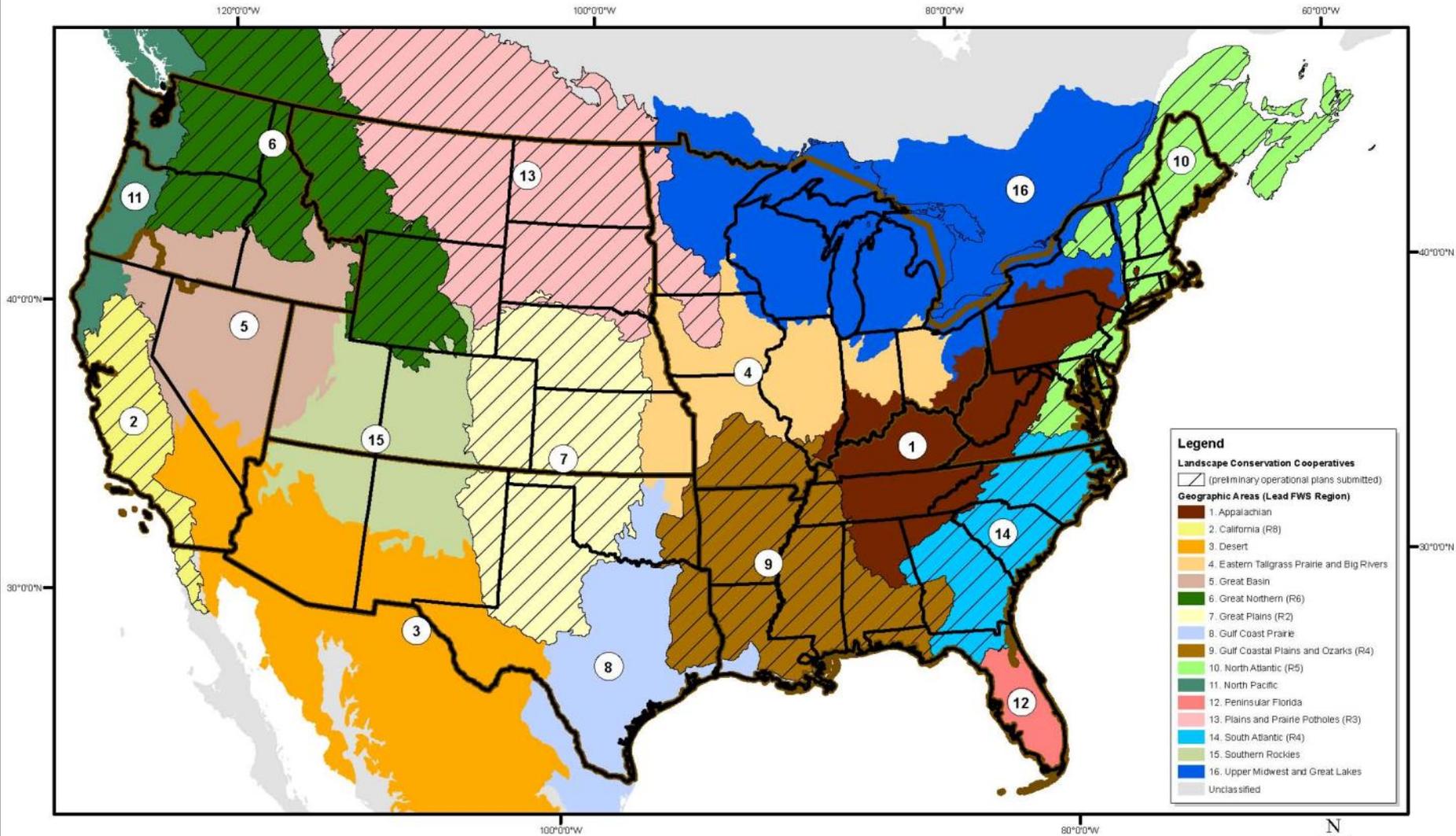
- Management-science partnerships that inform integrated resource-management.
- Link science and conservation delivery.
- LCCs are cooperatives, formed and directed by land, water, wildlife, and cultural resource managers and other stakeholders.
- Steering committees will include representatives from governmental entities (federal, state, tribal, and local), as well as non-governmental organizations.
- Each LCC functions within a specific landscape, but is also part of a national, and international network.





U.S. Department of the Interior

Landscape Conservation Cooperatives - Interim Geographic Framework



Produced by FWS, IRTM, Denver, CO
Map Date: 01222010

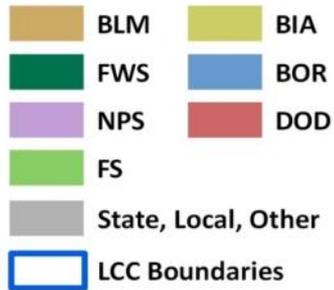
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0 400 800 1,600 2,400 3,200 Kilometers

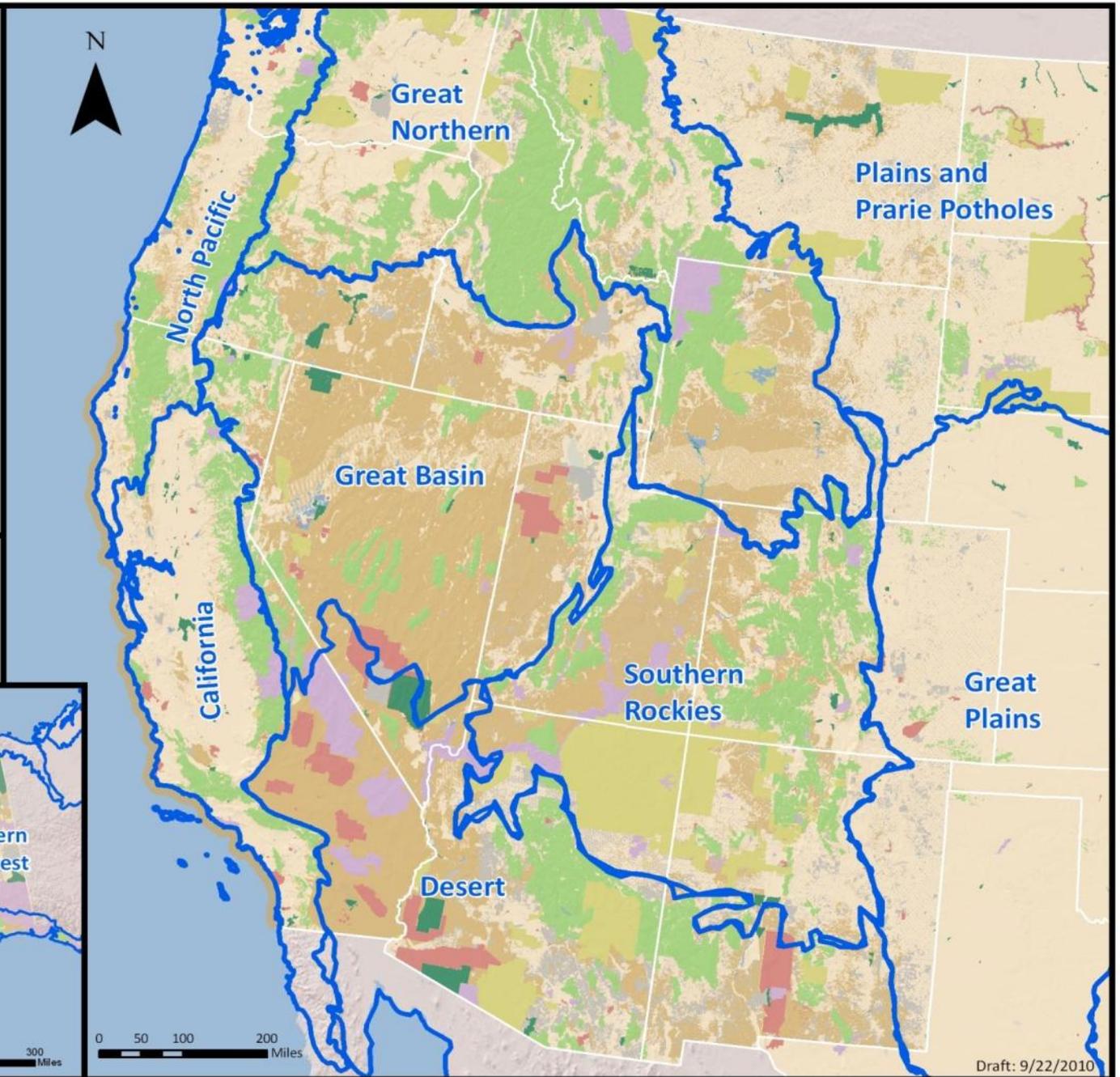


Albers Equal Area Conic
NAD83

Western Landscape Conservation Cooperatives



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Desert LCC



- Portions of 15 states (5 U.S. / 10 Mexico)
- Three deserts - Mojave, Sonora, Chihuahua
- Diverse topography and varied resources
- Large river systems



LCC and CSC Science

Fundamental Science

Applied Science



CSCs



LCCs

Downscaling
general circulation
models to project
future climate

Options for
managing Mohave
ground squirrel in a
warmer, drier climate



What Benefits does an LCC Provide?

- Develop, access, and share applied science
- Leverage funding, information, and technical expertise for applied science projects
- Translation of science to resource managers
- Collaborate and communicate on matters of common interest



What products can LCCs deliver?

- Science-based decision support tools
- Species and habitat vulnerability assessments
- Landscape-scale conservation plans
- Biological and geospatial databases
- Others as determined by LCC partners



Update on Desert LCC

- FWS and BOR are co-convening the Desert LCC
- FWS in Albuquerque has hired a science coordinator who is stationed in Flagstaff
Dr. Christina Vojta
- There seems to be consensus that the Desert LCC should be broken into ecoregional subunits.
- A series of outreach workshops were hosted throughout the region over the summer



Next Steps for Desert LCC



- Development of a draft operational plan and governance by early CY11
- Assembly of an interim steering committee
- Identification of initial science priorities

Draft DLCC Mission Statement

A landscape photograph of a desert. In the foreground, there are several cholla cacti with their characteristic spiky, segmented arms. To the left, there are some green and yellow shrubs. The middle ground shows a wide, flat valley or plain. In the background, there are blue-toned mountains under a clear sky. The overall scene is bright and sunny.

Provide scientific and technical support, coordination, and communication to resource managers to address landscape-scale stressors, with a focus on climate change.

Draft DLCC Goals

- **Science Development**

Identify existing science and facilitate the development, integration and application of scientific information (including decision support tools) needed to inform resource management decisions.

- **Monitoring and Evaluation**

Monitor landscape scale indicators, test scientific assumptions, and evaluate effectiveness of conservation actions to inform adaptive management decision making.



Draft DLCC Goals

- **Cooperation and Coordination**

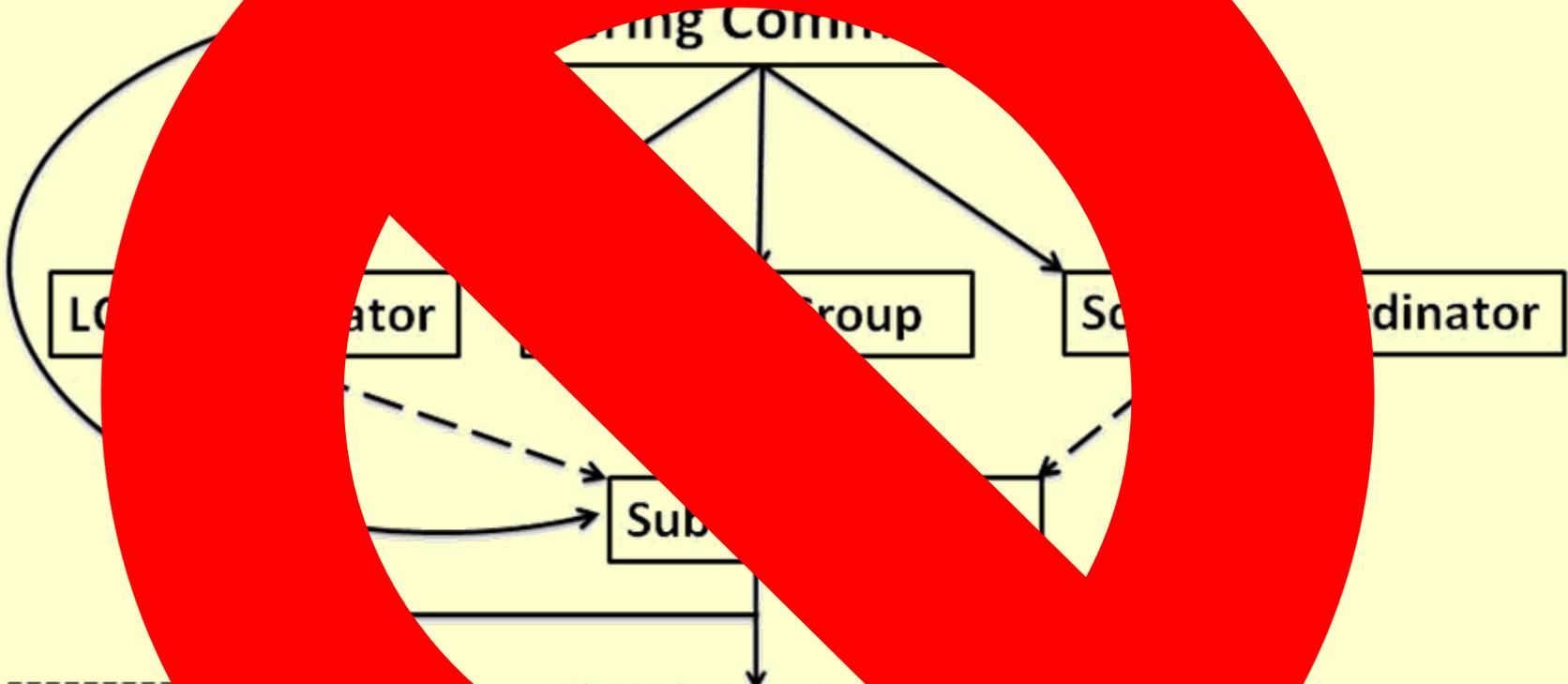
Identify and support ongoing cooperative partnerships. Support coordination and integration of applied science and actions at a landscape scale, leveraging the capabilities of respective agencies/organizations/partnerships.

- **Communicate and Educate**

Communicate relevant science information and DLCC activities and opportunities to partners and users. Advocate for collaborative strategies and seek to leverage capabilities and support.



Program Structure

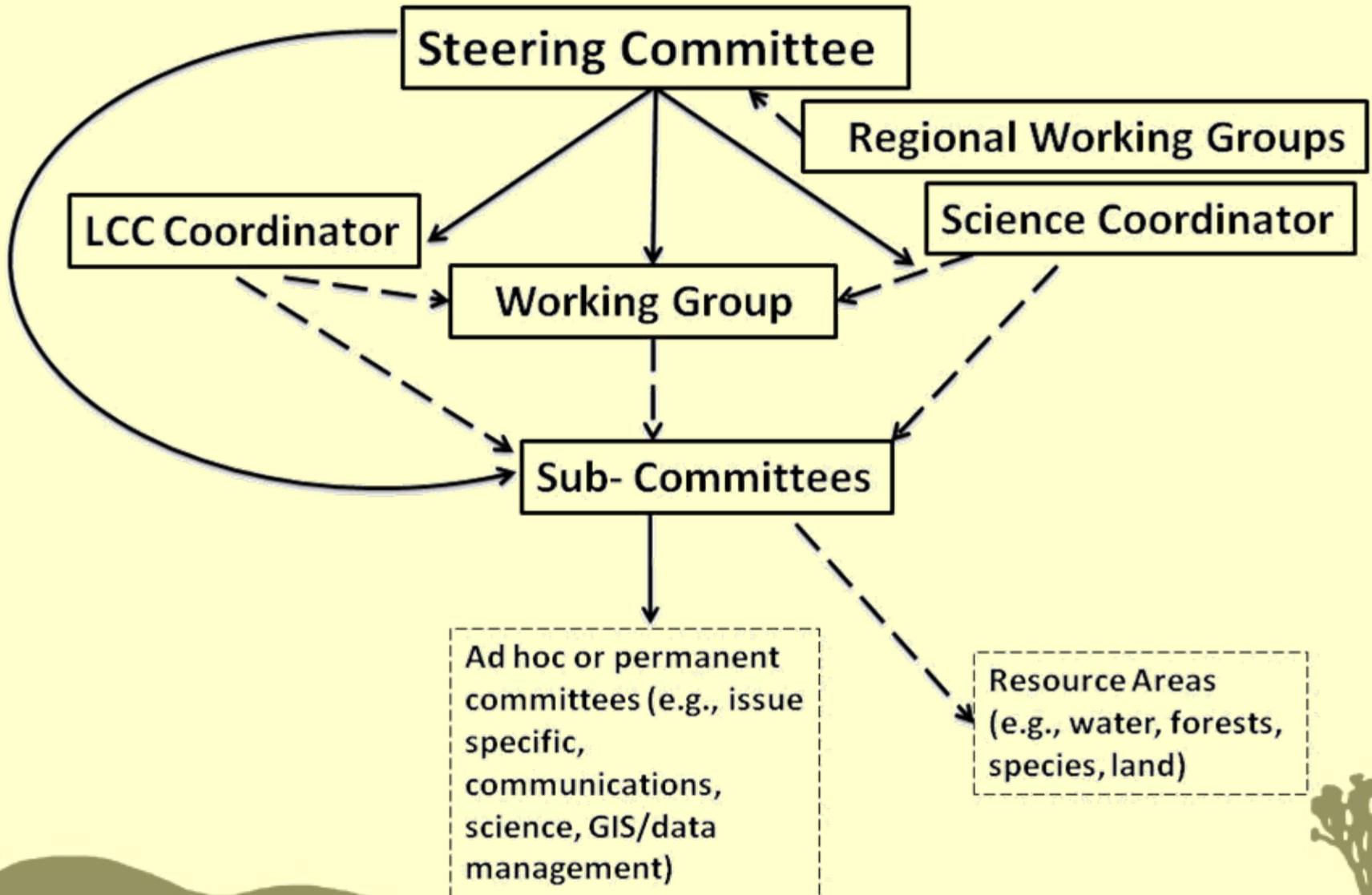


Ad hoc or committees, specific, communications, science, partnerships,

Geography (e.g., Sonoran Desert, water, forests, species, land)



Proposed DLCC Structure



<http://www.dmg.gov>

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