Sky Islands

Survey of Potential Participants
Identify most pressing regional threats

Workshop 1

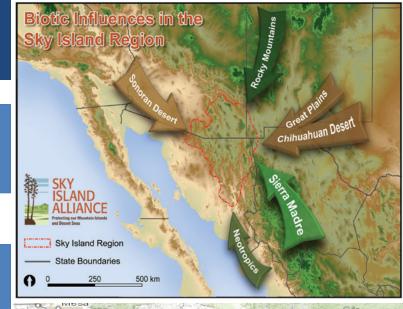
Consider regional climate vulnerabilities, explore potential adaptation strategies

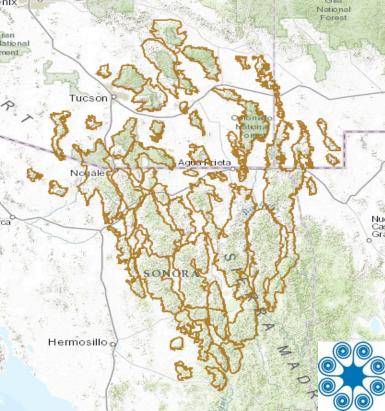
Workshop 2

Assess specific vulnerabilities and develop strategies by habitat (Madrean forest, semi-desert grassland, desert, riparian)

Workshop 3

Develop practical adaptation strategies, actions, and implementation plans for landscape-scale topics





Landscape-Scale Issues and Strategies

- Cross-cutting, landscape-scale issues: drying springs, fire, connectivity
- Springs: Maintain and improve (where possible) spring integrity to support hydrology and biodiversity in a changing climate
- Fire: Manage public lands for healthy ecosystems by restoring fire regimes
- Connectivity: Preserve and increase (where possible) connectivity to support ecosystem resilience in a changing climate



Landscape Connectivity Project

- Wildlife connectivity key for migration (i.e. travel between habitats, move in response to disturbance events)
- On-the-Ground Project Goal: Maintain and improve wildlife connectivity
- Pressures: Habitat fragmentation (i.e. roads, border wall infrastructure), human population growth...and climate change



Key Climate & Non-Climate Impacts/Vulnerabilities Climate:

Vulnerabilities Project Action 1: Identify and

Project Actions Addressing



↑ temps and precip. Community and range shifts

- Phenological shifts affecting breeding, migration
- Drying effects ($\sqrt{\text{snowpack}}$, river flow, water availability) increasing pressure on
- species Habitat fragmentation, loss, and degradation (development, recreational use, siting of energy
- facilities) Changes in disturbance regimes (fire, drought)
- Non-climate:
- Limited capacity for
- transborder engagement Border wall – interrupts ecological processes and human and species

connectivity

map existing corridors used by wildlife (e.g., wildlife tracking, camera trapping critters on public and private lands)

Vulnerabilities Addressed:

- Community and range shifts - species presence/absence
- Changes in disturbance regimes – movements correlated to disturbance events
- monitoring training **Vulnerabilities Addressed:**

Project Action 2: Citizen science

- Range and phenological shifts
- noting changes that may
- drive wildlife movement Habitat fragmentation – IDing location of new or unauthorized roads

Habitat fragmentation, loss, and degradation: Map high value areas (e.g.,

Additional Actions to

Consider

- overlay climate layers with current corridor locations) & use those to inform communication
- and mgt Outreach to private landowners to increase awareness, cobenefits, and incentives for participation in protecting corridors

Drying effects:

Education and outreach about role of riparian areas as climate refugia and wildlife corridors (e.g., location of important water sources)

Border wall – interrupts ecological processes and human and species connectivity Cat door! Feasibility likely low...

Compiling models, tools, programs, and approaches already in use

engagement and buy-in (e.g., Arizona Department of Transportation)

landowner/jurisdiction; increase outreach and identify incentives

Synthesize data, methodologies, and best available science related to climate change and connectivity in the

• Creating and implementing a communications strategy in order to foster stewardship around climate

Arizona Department of Transportation • Arizona Land and Water Trust • Borderlands Habitat Restoration

Desert Landscape Conservation Cooperative • Southwest Climate Science Center • State Wildlife Grants •

Spatial data (Center for Biological Diversity) • GIS expertise (Western Regional Partnership) • Stakeholder

Short-term • Sky Island Alliance staff will work to reinvigorate Arizona Wildlife Linkages Workgroup • Use

stakeholders (e.g., public, decision makers, energy developers, Department of Homeland Security) with the

management recommendations o Look at land ownership to develop specific recommendations for each

Increase education around the climate adaptation role of riparian areas for facilitating species movement

Long-term • Create a local networking event similar to Wildlinks • Work to increase engagement of

Map high value areas with climate data layers and use to inform community and land managers • Compile models that examine high value lands without considering land ownership first and provide

Advocate for integrating wildlife movement corridors and crossing structures into road projects

goal of changing behavior and perception of the importance of climate change and connectivity

Create working group and write grant proposal(s) that incorporates the following tasks:

Interpreting data and identifying, evaluating, and prioritizing important areas

Revising existing statewide connectivity maps to include climate connectivity modeling

Initiative • Center for Biological Diversity • Cuenca Los Ojos • Defenders of Wildlife • Naturalia

U.S. Fish and Wildlife Service Recovery funds • Department of Homeland Security mitigation funds

resilience in a changing climate

	implementation Plan
Overarching Adaptation Strategy	Preserve and increase (where possible) connectivity to support ecosystem

change and connectivity in the region

Sky Island Alliance • Arizona Game and Fish Department

Desert LCC as vehicle for getting partners on board

and ecosystem functions of riparian areas

Sky Island region

Adaptation Strategy

Adaptation Actions

Lead(s)

Hand

Activities

Partner(s)

Funding Source(s)

Resources Needed/Resources In

Additional Strategies & Actions

Schedule/Milestone for