

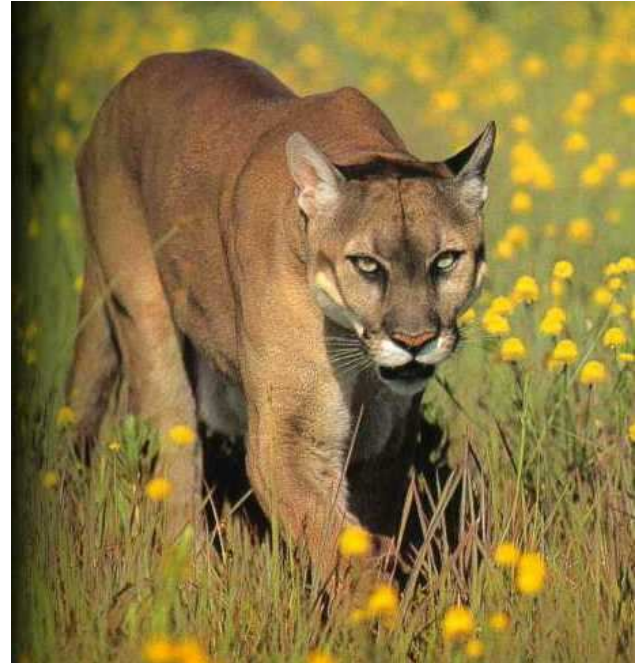


PROJECT BACKGROUND

This project is part of a distributed graduated seminar (DGS) that was proposed by the National Council for Science and the Environment's (NCSE) Wildlife Habitat Policy Research Program (WHRP) and the Gap Analysis Program (GAP). State Wildlife Action Plans (SWAPs) from 56 states and territories were analyzed and synthesized through the DGS by identifying national and regional conservation priorities, examining differences among states in plan development and implementation, and highlighting implementation opportunities and obstacles.

Overarching Question:

How do conservation science, social and institutional processes come together to set state and regional conservation priorities and the design and implementation of conservation solutions across the U.S.?



Mountain lion, photo courtesy of Conception Coast Wildlands Network Module

STATE WILDLIFE ACTION PLANS

SWAPs are a progeny of the State Wildlife Grants (SWG) program. The SWG program was created in 2000 and provides federal money to every state and territory for cost-effective conservation aimed at preventing wildlife from becoming endangered. In order to continue to receive SWG funding, each state was required to submit a SWAP by October 2005.

The SWAP process represents the first attempt to gain an assessment of conservation needs and priorities across the nation and to encourage the role of states in conservation planning. The SWAPs outline the steps needed to conserve wildlife and their habitats. While they shared a common framework, each state tailored its SWAP to their unique conservation needs.

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SWAP CHARACTERIZATION

In the spring of 2007, a pilot study was conducted at three universities. Students completed standard characterization forms designed by project advisors and seminar leaders for each SWAP. The goal of the characterization process was to compare states in order to understand the potential trends among identified conservation needs and priorities. Scientific information sources, ecological context, institutional settings, and social concerns were recorded from each SWAP. The subsequent construction of a SWAP characterization database revealed inconsistencies across the documents.

The anticipated goal of delineating national patterns as a result of completing characterization forms for each state could not be achieved in its entirety. Quality control of characterizations were completed independently by students via comparing paired forms, and revealed low consistency in answers



to a number of questions about the SWAPs. This is due in part to varying interpretations of the characterization forms by the students and in part to the ambiguity and complexity of the SWAPs themselves. Recommendations from the study include standardizing terminology across SWAPs and providing guidance for future planning cycles (SWAPs are to be updated at intervals not to exceed 10 years). This pilot study provided a foundation for the following DGS.

FROM PLANNING TO IMPLEMENTATION

Eight universities participated in the DGS in fall 2007. Contributing universities were Duke University, Indiana University, Northern Arizona University, Texas A&M University-Kingsville, University of Alaska at Fairbanks, University of California at Santa Barbara, University of Idaho, and University of Michigan.

The goal of the DGS was to gain a synoptic view of implementation of the SWAPs by interviewing state agency plan coordinators and conservation partners. The interviews focused on conservation efforts across the states since the development of the SWAPs. Questions related to conservation opportunities, impediments, new tools and approaches, and examples of especially noteworthy conservation approaches and projects. Interview information was compiled and written in the form of a synthesis report for each state.

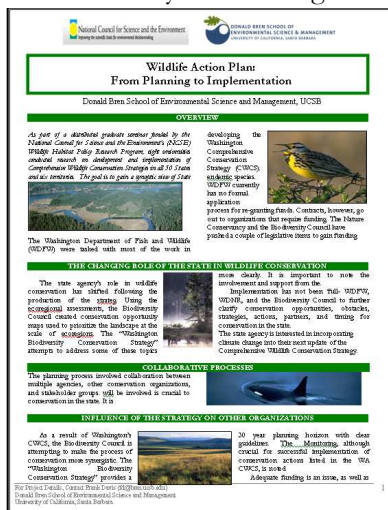
A synthesis meeting was held in January 2008 following the conclusion of the DGS. The meeting identified impacts, challenges, and enabling mechanisms found by the DGS and allowed students and faculty to discuss methods of communicating their research findings.

SWAPs impacted wildlife agencies and other organizations, leading to changes in approaches to biodiversity and threat assessment, prioritization, policies, funding, evaluation, education and outreach. For example, the Northeastern states have developed a Regional Conservation Needs Program, while a wildlife movement study in Oregon is well underway. Tennessee has been working on growth management via workshops with local government. Landowner incentive programs have surfaced in a number of states as one method to help secure conservation funding. Additionally, a wide variety of stakeholder participation and engagement was identified, with partners including: The Nature Conservancy (TNC), The Audubon Society, the Bureau of Land Management (BLM) and the Department of Transportation (DOT). Groups that were less active in the process included private landowners and local planning groups.

Challenges to implementation include the following: limited funding and staffing; limited outreach and stakeholder engagement in planning and implementation; political differences between agencies and organizations; absence of habitat or species prioritization; lack of direct connection between conservation actions and mechanisms for implementation.

Various enabling mechanisms to overcome conservation challenges were devised and include prioritizing habitats and species, shifting conservation approaches to appropriate management scales, building agency capacity via training wildlife coordinators in grant writing, monitoring and participatory planning, enhancing evaluation and outreach, and linking conservation actions to funding.

Deliverables resulting from the DGS are expected to include a website, an overall synthesis for a scientific journal, recommendations to the Doris Duke Charitable Foundation and SWAP advisors, white papers, peer-



Example of synthesis report completed for each state as a result of the DGS.



San Joaquin kit fox, photo courtesy of CA DFG



reviewed publications for a variety of traditional and non-traditional audiences, and a final report for NCSE/WHPRP.

DIGGING DEEPER: WILDLIFE MOVEMENT CORRIDORS

As a subsection of the DGS, UCSB analyzed SWAPs on national and regional scales with the goals of gaining insight on the degree to which wildlife movement corridors were emphasized and to see if these documents influenced their conservation. UCSB decided to pursue this topic due to the level of pervasiveness that habitat loss and fragmentation threaten the conservation of biological diversity (Rosenberg et al 1997). Habitat loss was noted as a major threat throughout many SWAPs, and corridor conservation could help mitigate possible impacts of future development and climate change on biodiversity (White et al 1997, Williams et al 2005).

Research Questions:

1: To what degree do State Wildlife Action Plans address wildlife movement corridors throughout the U.S.?

2: Have State Wildlife Action Plans influenced conservation efforts addressing wildlife movement corridors in the Western U.S. (CA, OR, WA, ID, NV)?

Wildlife movement corridors are defined in our study as geographic areas that may vary in scale within or between states and allow for the natural movement of wide-ranging terrestrial mammals, including game and non-game species.



Riparian habitat in Yosemite National Park, *photo courtesy of Steven Choy*

PLANNING AND IMPLEMENTATION OF CORRIDORS: SWAPS

The analysis of each SWAP involved a word search in combination with a qualitative assessment of the emphasis placed on wildlife movement corridors. As a result, states were classified into high, medium, and low categories of corridor emphasis. Of the 50

states analyzed in this study, 13 were classified as high, 21 as medium, and 16 as low (Figure 1).

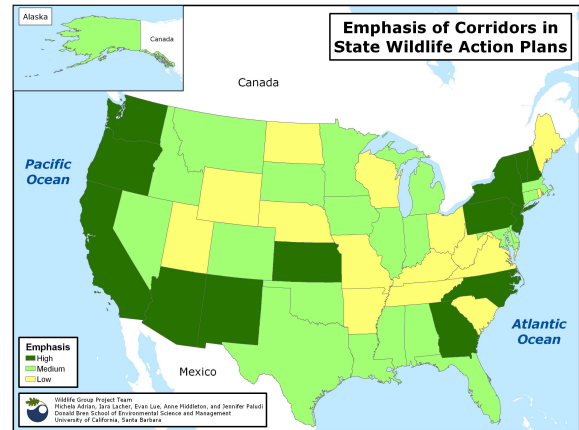


Figure 1. The results of the qualitative characterization represented on a map of the United States.

Nationally, emphasis on corridor conservation within SWAPs varies tremendously. Based solely on the SWAPs, an accurate interpretation of the reasoning behind the degree to which SWAPs address wildlife movement corridors is difficult and beyond the scope of this study. An interview process helped provide reasoning behind such variability.

Interviews with conservation professionals were conducted in five western states. This analysis revealed that SWAP influence on implementation of wildlife movement corridors varied significantly state-to-state. In the western states, only Oregon’s SWAP has directly influenced conservation efforts addressing wildlife movement corridors thus far, as shown in the development of the “Wildlife Movement Strategy.” Throughout the region, planning and implementation is in the beginning stages and much still needs to be done to address identification and protection of wildlife movement corridors. Interviewees in all five states agreed however, that planning for wildlife movement corridors is important but not always feasible due to political issues and limited agency capacity.

Steps to Address Wildlife Movement and Road Crossings in Oregon

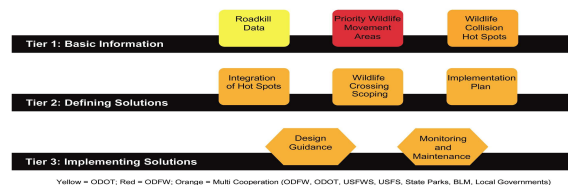


Figure courtesy of the Oregon Wildlife Movement Strategy



Recommendations for effective corridor conservation include increasing collaboration between agencies, effective prioritization of conservation actions, and reliable organizational resources.

CONCLUSIONS

This study was intended to contribute to increasing awareness and understanding of the SWAPs, to describe national and regional conservation trends, and to help educate state agencies and policy makers about the status of wildlife conservation in the U.S.



Grey wolf, photo courtesy of USFWS

While many SWAPs have not yet been implemented, there is ample evidence that the documents are helping inform conservation decisions and partnerships within and across local to national scales. Future in-depth regional and state studies can help reveal the emerging role of state agencies and the SWAPs in wildlife conservation, as well as suggest recommendations for the next planning cycle.

A common theme that emerged across a number of states was the important role of collaboration in the development and implementation of state wildlife conservation strategies. This is not unexpected given limited resources available to the states and their reliance on partners for matching funding and project implementation. Other issues include limited

organizational capacity, insufficient biological survey and monitoring data, and limited engagement with local governments and private landowners. In some states implementation has benefited from regional coordination and collaboration and the refinement of conservation priorities.

Production of SWAPs has certainly elevated the role of the states in non-game wildlife conservation. Federal resource agencies, notably the Fish and Wildlife Service and Bureau of Land Management, are now reviewing their management and restoration priorities to align with the SWAPs. Several congressional bills are under consideration that would significantly increase funding for implementing the action plans as a means of mitigating climate change impacts. Overall, the wildlife action planning process is having a tangible and positive influence on conservation planning for native biodiversity in the U.S.

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Oregon Grassland, photo courtesy of TNC