



Gap Analysis Program Enhances State Wildlife Action Plans

The Gap Analysis Program (GAP) has made an important contribution to conservation efforts in the United States by providing data instrumental to the development of comprehensive state wildlife action plans (SWAP). States were mandated to submit SWAPs to the federal government by October 2005. Each plan included information on species of greatest conservation need (SGCN), SGCN habitats, threats to species and habitat, research needs, necessary plan actions, and conservation priorities.

Plan Elements Addressed Using GAP Data

Twenty-seven states used GAP data to identify and assess their SGCN. States also used GAP to assess the status of particular species in their state, to map species richness, determine habitat associations, and describe habitat. Less common uses of the data included: using them to place the state in a regional context; and to stress the importance of private land conservation.

GAP Data Used to Update and Revise SWAPs

Eighty-three percent of respondents are planning to address at least one aspect of plan update or review with GAP data. Forty-one percent of coordinators said they would rely heavily or exclusively on GAP to improve the wildlife habitat mapping done for the SWAP. Coordinators also expect to use GAP data to identify knowledge gaps and threatened landscapes, and to help designate critical habitat.

The Survey

The survey, conducted by the University of Idaho, asked SWAP coordinators how much they used GAP data in developing their plan; which specific plan components they addressed with GAP data; whether they plan to use the data in the future; and what kinds of enhancements to GAP data they would like to see. Responses were received from 44 states, 34 (77 percent) of whom had used GAP data in developing their SWAPs.

Results

GAP land cover, species and habitat distribution models, and maps were most important to plan coordinators. Twenty-two states (50 percent) said they used GAP land cover data a lot (extensively or exclusively). The vegetation classifications were used a lot by 33 percent of respondents, while the predicted vertebrate distribution maps were used a lot by 25 percent of respondents. At least 33 percent of respondents used aquatic, stewardship, ownership and species richness data, species lists, and habitat descriptions.

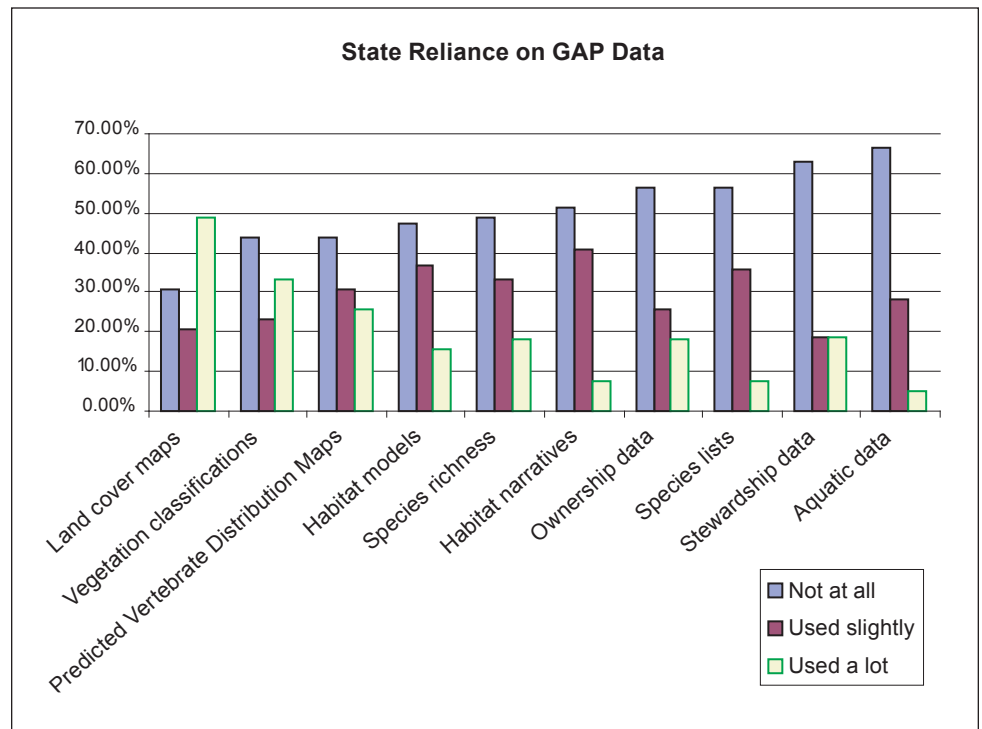


Figure 1. Respondents relied on GAP land cover data more than they relied on other elements of GAP data. Twenty-two states used land cover data a lot (either extensively or exclusively), The vegetation classifications were used a lot by 33 percent of respondents, while the predicted vertebrate distribution maps were used a lot by 25 percent of respondents. At least 33 percent of respondents reported using aquatic, stewardship, ownership and species richness data, species lists, and habitat descriptions.

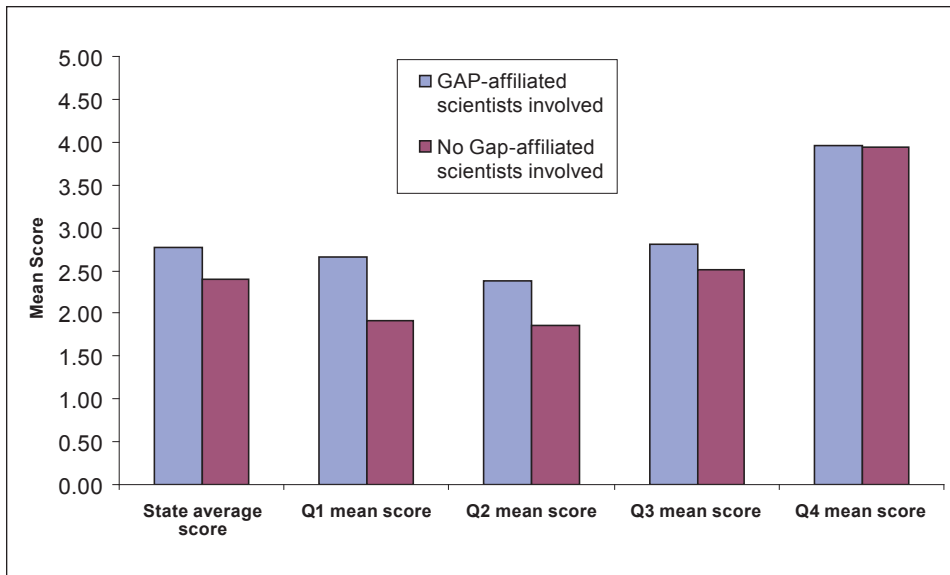


Figure 2. States that developed their wildlife action plan with input from GAP-affiliated scientists placed higher value on GAP data (Q1), addressed more plan components with GAP data (Q2), and were more likely to use it in the future (Q3) than other states. However, having GAP-affiliated scientists involved did not influence the perceived importance of enhancements to GAP data (Q4).

This adoption of GAP data may partially be due to ongoing contacts between scientists familiar with GAP and other decision makers. Through a content analysis of the acknowledgement and committee member lists in the SWAP reports, it was discovered that GAP-affiliated scientists were involved in the development of 16 of the survey respondents' plans. These scientists were principal investigators, co-principal investigators, researchers, or authors for either ongoing or past GAP projects. Their SWAP roles ranged from contributor to technical team member, steering committee member, or contributing author. States with GAP-affiliated scientists involved in SWAP development were more likely to use GAP data (Figure 2). These states also placed a higher value on GAP data (as measured by overall mean scores) than did other states. For example, 73 percent of the respondents who completed their plan with the involvement of GAP affiliated

scientists used GAP land cover data extensively, while only 36 percent of the remaining states did so.

GAP Data Modifications

State coordinators felt the most important potential modifications to the data were: more information on habitat change, finer scale mapping for specific species such as invasive or endangered species, and more information on habitat condition. Other desired modifications included: improved delineation of grassland types, successional habitats, and wetlands; better resolution to help delineate vegetation cover types; and more assessments of future threats, progress, and restoration potential.

Some of the issues identified are being addressed and some continue to pose challenges. Not all GAP projects have modeled invasive vertebrate species nor provided assessments of habitat quality. This is why SWAP

coordinators could not find data about invasive species. Similarly, GAP land cover maps are a representation of what was on the ground in a specific year, thus there is little information on habitat change. However, as aquatic and regional mapping projects are completed, at least one more land cover map and more aquatic data will be available. Other modifications, such as the need for a shorter timeline, finer scale mapping for select species, and more information on species abundance are more intractable because they depend on data availability, data quality, funding, and available technology. GAP will continue to focus on these issues.

Conclusion

GAP has played an important role in the development of SWAPs. The program's ongoing regional mapping projects will contribute more to these efforts by creating unified land cover maps for large portions of the United States. The GAPServe data portal <<http://gapanalysis.nbio.gov>> will make it easier for natural resources planners and other decision makers to access and use GAP data.

GAP projects have always been conducted with a collaborative approach. Continued close collaboration between GAP and state and federal natural resource professionals will lead to increased general awareness and use of GAP data. In return, GAP will gain insights regarding future research and mapping efforts.

For More Information

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