

# GAP and the Protected Areas Database of the United States (PAD-US) Partnership

**Lisa Duarte**

University of Idaho Gap Analysis Program, Moscow, Idaho

**P**rotected areas are an essential tool in the international effort to conserve biodiversity. These lands protect vital ecosystems and species; however, because they are owned and managed by a wide variety of federal, state and local agencies, non-profit organizations and even private individuals, it has been difficult to develop a clear picture of how much is actually being saved. Without good data about the location, size and management of lands set aside for biodiversity protection, meaningful conservation strategies cannot be effectively established and monitored. Accurate land stewardship information is fundamental to achieving the USGS Gap Analysis Program's (GAP) goal of keeping common species common by identifying those species and plant communities not adequately represented in existing conservation lands. Unfortunately, disjointed sources of boundary information and changing management directives make it difficult to compile and maintain a comprehensive stewardship database. Keeping a stewardship database current is an additional challenge; GAP is continually challenged to aggregate new information in a timely fashion.

## Goals

In April 2008, GAP and the Doris Duke Charitable Foundation (DDCF) joined forces to address this issue by facilitating the production of a coordinated and current Protected Areas Database of the United States (PAD-US). These two organizations provided matching funds to create a partnership among organizations that use protected lands information systems and to develop a more efficient means of inventorying these data. The PAD-US Partnership now includes: GAP, the Bureau of Land Management, the US Forest Service, Conservation Biology Institute (CBI), GreenInfo Network, The Nature Conservancy and The Land Trust Alliance. The partnership's long-term vision is to provide the guidance and resources necessary to maintain a protected lands inventory with greater accuracy and detail than previously possible. PAD-US defines protected areas as lands dedicated to the preservation of biological diversity and to other natural, cultural and cultural uses managed for these purposes through legal or other effective means. These include national parks and forests, public lands generally, wildlife preserves, state and local parks and reserves, wildlife management areas and preserves held by non-profit organizations. The PAD-US design report, "A map for the future," and other information is available at: [www.protectedlands.net](http://www.protectedlands.net).

## Accomplishments

The first version of PAD-US, a geodatabase published by GAP in April 2009, provides a wealth of attributes including the name, location, ownership, land management designation and measures of biodiversity protection for each of the more than 700,000 records in the dataset. The map pictured in Figure 1 is available to view or download at: <http://gapanalysis.nbii.gov/PADUS>.

1. To create the land stewardship layer, GAP aggregates public land ownership and internal management boundaries and categorizes each protected area as: Status 1—lands managed solely for biodiversity conservation in perpetuity; Status 2—lands managed primarily for biodiversity conservation but with some management, (e.g. suppression of wildfire or activities designed to mimic natural disturbances); Status 3—lands having permanent protection, but subject to extractive uses (e.g. logging or mining) or motorized recreation; Status 4—lands not managed for conservation or for which there is no information. In addition to providing a comprehensive picture of conservation lands in the U.S., GAP has worked with the United Nations Environmental Program's (UNEP) World Conservation Monitoring Centre (WCMC) to link PAD-US to the World Database on Protected Areas (WDPA). This linkage includes International Union for Conservation of Nature (IUCN) categories and will facilitate collaboration between conservation organizations by establishing a consistent understanding of protected lands status whether the focus is global or local.

## Goals for the Upcoming Year

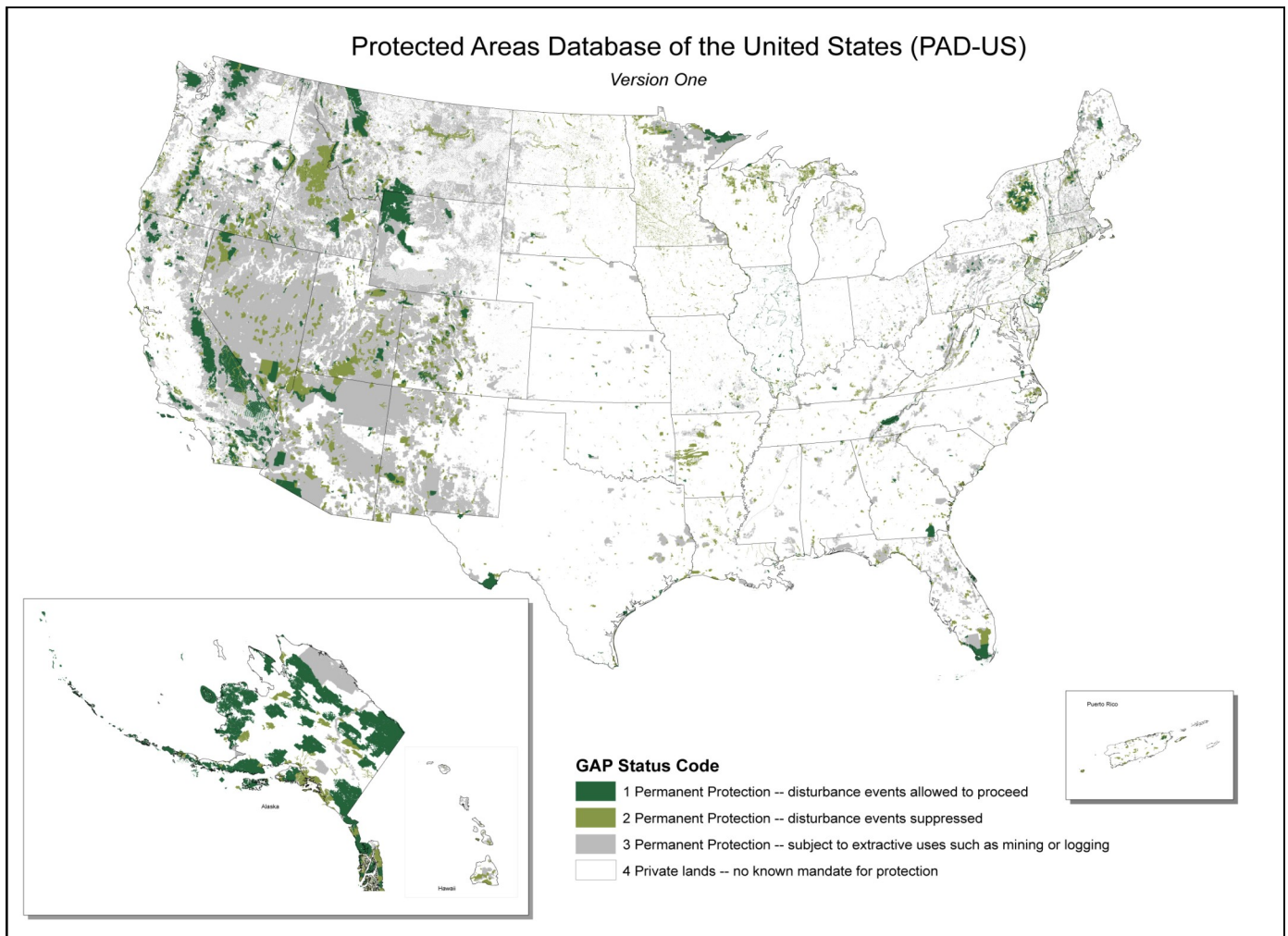
In March 2010, PAD-US Version 1.1 will be published as a joint project between GAP and CBI, implementing multi-user, replicated geodatabase technology and standard methods. The recently updated Northwest GAP Stewardship Map, currently in state-by-state review (WA, OR, ID, WY and MT), will be available in PAD-USv1.1 as well as additional local government and private conservation easement data from CBI. The PAD-US Partners are assembling a business and work plan for the 2010-2012 implementation of a re-designed PAD-US that relies heavily on state data stewards and automation. GAP is hosting and managing the partner staging, QA/QC and final production geodatabases on behalf of the PAD-US Partnership.

**Outreach**

The PAD-US database is accessible via a variety of media. The database can be explored online at <<http://www.gap.uidaho.edu/padus/protectedareas.html>>. The interactive map at this site allows users to search for a protected area by name, and to query for protected areas by state, county, or congressional district. The entire database can be downloaded from the map viewer page, or directly from the GAP ftp page. Lisa Duarte has presented information from GAP’s Stewardship Program to the Inter-Americas Biological Information Network (IABIN), the Commission for Environmental Cooperation (CEC), the Society of Conservation Geographic Information Systems (SCGIS) and the Organization of Fish and Wildlife Information Managers (OFWIM) this year.

**Conclusion**

GAP’s leadership is reflected in the efforts of the year-old PAD-US Partnership to increase collaboration and leverage resources. PAD-US data is an essential tool for developing an understanding of how the combined efforts of public and private landowners have contributed to the conservation of wildlife and habitats across the country. We have at least 80% of the United States’ protected lands in PAD-US and have gained considerable momentum. Our continuing challenge is the lack of legislation and consistent funding to efficiently aggregate these data and maintain a complete inventory.



**Figure 1. Protected Areas Database of the United States**