BUSINESS AREA: SPATIAL SERVICES

Case Study

Collaborative Australian Protected Areas Database

Updated every two years, the Collaborative Australian Protected Area Database (CAPAD) is a textual and spatial information product which provides a national perspective of biodiversity conservation.

The Department of the Environment uses CAPAD to regularly report on the status of protected areas. CAPAD is used as an indicator or measure of the extent to which Australia is meeting international conservation obligations, such as those in the Convention on Biological Diversity.

Since 2009, Australia's federal, state and territory governments have all agreed to adopt international standards for the definition of protected areas, as established by the International Union for the Conservation of Nature (IUCN). The IUCN categories are used as inputs to generate reports which monitor the growth of the protected areas estate and support the Department in making informed decisions relating to protected areas management.

"Spatial Vision's programming solution for compiling CAPAD 2014 facilitated the rapid and systematic processing of large amounts of data. This saved time and resources resulting in the early publication of the data and spreadsheets, just in time for the World Parks Congress"

Carolyn Armstrong
Australian Government, Department of Environment

Customer Profile
www.environment.gov.au

Company
Department of the Environment: Environmental Resources Information Network (ERIN)

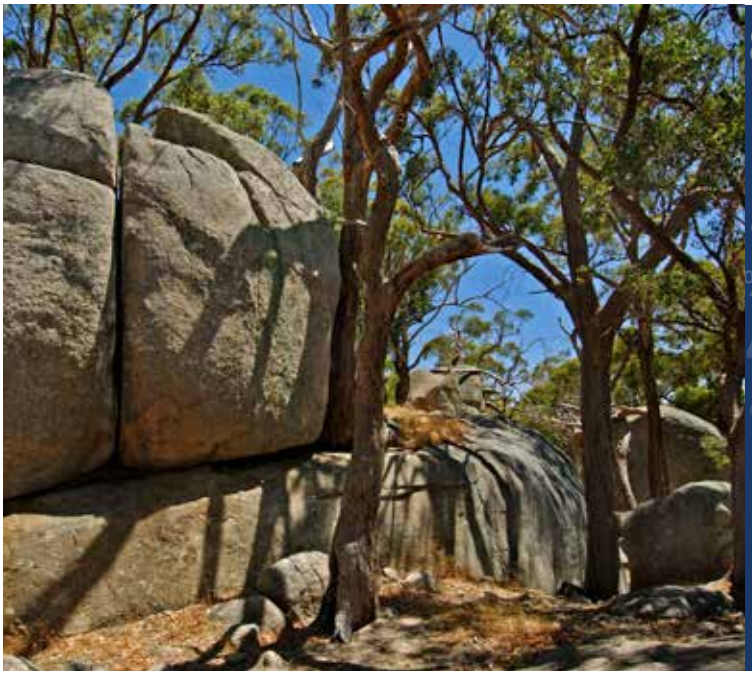
Location
Canberra

Industry
Government

Product
CAPAD Automation Scripts

Solution
A streamlined process of compiling the biennial updates to CAPAD which not only enabled ERIN to have the database ready in time to present at 2014's Worlds Parks Congress but also reduces the resources required to perform the update.

Benefits
- Streamlined processes reduced the time it takes to update the database and the resources required
- The scripts automatically combine information pertaining to protected areas, which can fall under multiple jurisdictions which may not format data in the same way



The Issue

The CAPAD contains an incredible volume of data concerning a wide variety of protected areas and bioregions, both terrestrial and marine. This data is gathered by Australia's states and territories, who submit the updated information every two years, in a variety of formats. This data is then painstakingly compiled into a single format and a single database by the Department of the Environment's Environmental Resources Information Network (ERIN).

In 2014, the once-per-decade IUCN World Parks Congress was held in Sydney on November 12. By using existing methods for updating the CAPAD, ERIN may not have had the database and associated reporting completed in time to present at the Congress.

The Solution

The solution to the Department's problem was to develop a methodology which could efficiently consolidate the various states' data into a single database under a common format. The approach had to be developed quickly, as the World Parks Congress was less than a year away. Spatial Vision successfully tendered for the project, proposing a series of Python scripts which could be built in just three months.

These scripts analyse and prepare area statements on each protected area type, calculating the amount and percentage of each state designated as each type. The data is then aggregated nationally, assisting the Department to provide a national perspective of the conservation of biodiversity in protected areas.

Utilising topological data provided by ERIN, the scripts also intersect the CAPAD with data which details Australia's various terrestrial and marine bioregions (Interim Biogeographic Regionalisation for Australia (IBRA) and Integrated Marine and Coastal Regionalisation of Australia (IMCRA)) and clips the data using official state borders. Additionally, where one or more states have assigned a different level of protection to the same protected area, the scripts resolve this spatial overlap.

The Benefits

- Spatial Vision's rapid development of the CAPAD scripts was achieved through the company's technical expertise with spatial data and by working closely with ERIN throughout the entire process, ensuring that the scripts were ready for the states' biennial data submission. This assisted the Department of the Environment to compile the data quickly enough to present at the World Parks Congress a few months later.
- The completed scripts will provide long term speed and cost benefits to ERIN, ensuring the CAPAD is not only able to be assembled faster, but with significantly less manual work required than before.

A streamlined process reduced the time and resources required to update the database.

Get in touch to learn more.

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Spatial Vision