

## GEOGRAPHIC DATA – SUPPORTING AUSTRALIA’S ANTARCTIC PROGRAM

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**ABSTRACT:** Geographic data are data with a spatial component, relating to the Earth’s topography. They include topographic data such as coastlines, contours, cliffs, lakes, watercourses, and sea-floor soundings. These topographic data form a base for other geographic data such as areas of benthic habitat, areas occupied by bird colonies, foraging tracks of animals, surface rock types, sea-ice extent, and protected areas. They are also a source from which other geographic data such as slope, aspect, and drainage basins can be derived.

Geographic data can be integrated and managed within a Geographic Information System for visualization, querying, modeling, and analysis. Maps are just one of the products derived from geographic data. A scientist may use geographic data (environmental variables) in the development of a predictive model of species distribution. Geographic data are important to operations personnel for planning field trips, navigation, and search and rescue. Managers rely on geographic data for making informed decisions such as designating protected areas for conservation. The results of modeling such as flow paths from terrestrial oil spill locations and the upslope catchment areas of these locations may be of relevance to scientists, operations personnel, and managers. Geographic data are also a useful resource for education.

Australia’s Antarctic Program utilizes geographic data in these many and varied ways.

