

ANTARCTIC PERMAFROST AND PERIGLACIAL ENVIRONMENTS

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The primary aim of the SCAR Expert Group on Permafrost and Periglacial Environments and the SCAR-supported Antarctic Permafrost and Soils (ANTPAS) group is to collect and integrate existing and new data on the distribution, thickness, age, history and physical and geochemical properties of permafrost, soils, and the active-layer on the Antarctic continent and in the sub-Antarctic islands. The group includes 45 scientists from 15 countries with active links to the International Permafrost Association (IPA), the International Union of Soil Scientists, and other organizations. A key goal is to integrate existing datasets and create a repository for new data in a common, web-accessible database system. We have divided ice-free areas in Antarctica into 8 subregions, including Queen Maud Land, Enderby Land, the Vestfold Hills, Wilkes Land, the Transantarctic Mountains, the Ellsworth Mountains, Marie Byrd Land, and the Antarctic Peninsula and the offshore islands. We are in the process of preparing electronic and hardcopy maps of permafrost and ground-ice features and soils of these subregions. An international monitoring network of boreholes, active-layer grids, and periglacial processes has been proposed along regional environmental gradients in cooperation with other projects and the International Polar Year. Protocols/manuals for data collection are being developed. The research program is accompanied by outreach and education, including web-based public information outputs and IPA Ph.D. courses with Antarctic input. Our activities are described on the website: <http://erth.waikato.ac.nz/antpas>.