



Enhancing the environmental legacy of the IPY in Antarctica

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The International Geophysical Year (IGY) left a legacy of peace and international cooperation in the form of the 1959 Antarctic Treaty. Since the IGY, the 1991 Protocol of Environmental Protection to the Antarctic Treaty was signed and entered into force. The Protocol establishes that the protection of the environment and the wilderness values of Antarctica "shall be fundamental considerations in the planning and conduct of all activities in the Antarctic Treaty area". Fifty years on, the IPY 2007-08 can, in turn, leave behind a positive environmental legacy - where the sharing of facilities and logistics are encouraged, the human footprint in Antarctica is minimized and a future generation of environmentally aware scientists, logisticians and visitors is fostered.

The IPY is ambitious in scope and scale. Based on an analysis of all the projects that have been endorsed, at least 350 research activities with Antarctic or bipolar focus will take place during the IPY period of March 2007-March 2008. 82% (or 287) of them are planning to conduct fieldwork in Antarctica. 104 activities are planning to leave behind physical infrastructure, ranging from extensive arrays of instrumentation to new facilities. The Environmental Protocol requires that environmental impact assessments are conducted before the start of an activity. To date, only 2 of these activities have completed any environmental impact assessments.

During the IPY, research and its corresponding logistical support activity will intensify around existing centers of research, such as the Antarctic Peninsula, the Southern Ocean, and around existing field stations, and will also take place in parts of the Antarctic wilderness which have been hitherto difficult to access, including the Amundsen Sea embayment in West Antarctica and the Gamburtsev Mountains in East Antarctica. The cumulative impacts arising from 350 research activities and their corresponding logistical support over a concentrated period of two Antarctic summer

seasons will not be negligible, and need to be considered fully before activities begin.

The environmental legacy of science projects in Antarctica can be enhanced in various ways both during planning and execution. The decision to use renewable energy, non-invasive and remote sensing techniques and to remove all instrumentation and infrastructure at the end of the project's lifetime can be made during the planning stage. In the field, minimizing disturbance to flora and fauna, optimizing fuel consumption and minimizing the release of unretrievable equipment into the environment will further reduce the environmental impacts of the project.