



## Scientific Committee on Antarctic Research

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Dear SCAR Representatives

This letter was originally sent to SCAR and SCOR representatives on 8 June 2007 attached to a memorandum from the SCAR and SCOR Secretariats. It asks you to act in relation to the need to increase both the gathering of Southern Ocean bathymetric data, and its submission to a recognized database, not least as a contribution to the International Polar Year. We hope you will contact the appropriate authorities in your country to help us achieve the recommendations spelled out below. The importance of bathymetric data around Antarctica will be highlighted at a seminar organized by the International Hydrographic Office in conjunction with the next Antarctic Treaty Consultative Meeting (Kiev, 2008).

The Scientific Committee on Oceanic Research (SCOR) convened a summit of the major international ocean research projects in December 2006. Several other organizations participated in the meeting, including the Scientific Committee on Antarctic Research (SCAR). SCAR and SCOR co-sponsor an Expert Group on Oceanography, which is responsible for the full range of ocean research issues in the Southern Ocean. The Expert Group referred to the project summit the issue of multi-beam bathymetric data in support of Southern Ocean oceanography.

Bathymetric data are important for geological, geochemical and geophysical analysis, the identification of habitats, and as a critical controlling parameter on the output of advanced ocean circulation and tidal models. Consequently, these data provide essential underpinning to many, if not all, SCOR and SCAR-sponsored research projects. Bearing this in mind, we wish to bring to your attention to the following recommendations, which are informed by the deliberations of SCOR Working Group 107 (see <http://www.scor-int.org/Publications/WG107Report.pdf>), and reinforced by recent recommendations of the SCAR/SCOR Oceanography Expert Group (see [http://www.clivar.org/organization/southern/expertgroup/Expt\\_group\\_2.pdf](http://www.clivar.org/organization/southern/expertgroup/Expt_group_2.pdf)). We regard these recommendations as universally applicable to all SCOR- and SCAR-related research, but of particular importance at this time, in the context of the International Polar Year, for the most poorly surveyed seafloors of the Arctic and Southern oceans.

Recommendations:

1. Funding agencies worldwide should

- (i) encourage project scientists to incorporate in their proposals requests to collect and process multi-beam bathymetric data;
- (ii) fund multi-beam bathymetry data acquisition and processing on all research vessels equipped with multi-beam echo-sounders, whether on transit or on location; and
- (iii) work with PIs to ensure that their data are submitted together with track data to the World Data Center for Marine Geology and Geophysics .

Project scientists should be urged by their project Scientific Steering Committees to ensure that multi-beam bathymetric data are collected and processed throughout all stages of their research cruises, regardless of the lead priorities of their scientific mission, and made available to the World Data Center for Marine Geology and Geophysics.

2. Recognising that the World Data Center for Marine Geology and Geophysics makes available through the Internet searchable maps showing the distribution of already collected multi-beam data (<http://www.ngdc.noaa.gov/mgg/bathymetry/multibeam.html>), to assist in future cruise planning and to avoid duplication, project scientists should be encouraged to

- (i) use such maps in planning cruise tracks so as to further contribute to the building of the bathymetric database, by filling gaps, and
- (ii) allocate sufficient time on transit for gaps to be filled, for example by steaming a path parallel to but separate from any previously occupied survey line.

The resulting data will be extremely useful to groups compiling bathymetric maps, such as the International Bathymetric Chart of the Southern Ocean (IBCSO), which will contribute to the General Bathymetric Chart of the Oceans (GEBCO).

Given the high cost of collecting data in the polar oceans and the small incremental cost of collecting bathymetric data while conducting other polar oceanography and transiting to and from Antarctic bases, we believe that collecting and submitting new bathymetric data is a very cost-effective activity. These data are especially important now, given the importance of the polar oceans in understanding global climate change.

We hope that you are able to forward these recommendations to national funding agencies in your country that are responsible for polar operations. Please do not hesitate to contact us if you desire additional information about this request.

Sincerely,



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