

Appendix V – Proposed Recommendations on Southern Ocean Bathymetry

MULTI-BEAM BATHYMETRIC DATA IN SUPPORT OF 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. Following from that, they provide essential underpinning to many, if not all, SCOR research programs. Bearing this in mind, this SCOR Project Summit makes 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). We regard these recommendations as universally applicable to all SCOR-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. SCOR should write to funding agencies worldwide to urge that they:
 - (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 data are subsequently submitted together with track data to the World Data Center for Marine Geology and Geophysics .
2. 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.
3. 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) to 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).

These recommendations should be taken as SCOR policy on multi-beam bathymetric data collection and exchange, should be conveyed to POGO for the attention of laboratory directors, and should be published in *EOS* along with the other major recommendations of the SCOR Project Summit.