

Report of the Joint Meeting of the Working Groups on Geology and Solid-Earth Geophysics

- [Meeting Report](#)
- [Draft Agenda](#)
- [Working Group Reports](#)
- [Recommendations](#)
- [Acronyms](#)

1. ANTOSTRAT Subcommittee on Late Phanerozoic Glacial History

P J Barrett presented a report by the Convenor A K Cooper on ANTOSTRAT activities for 1999 and 2000, and proposed activities for 2001 and 2002. It was noted that the emphasis in ANTOSTRAT work changed significantly in 1998 from the analysis of seismic surveys for siting drill holes for gathering records of past climate to the integration of drilling results and new climate modelling results. The meeting supported these initiatives (Recommendation XXVI-G&SEG 2000-1).

P J Barrett reported on the successful completion in December 1999 of 3 seasons of Cape Roberts drilling. In recognition of the wide interest in drilling for geological research in Antarctica, and considering the technical, logistic and management expertise accumulated during the Cape Roberts project, participants were formulating proposals for the establishment of a drilling consortium and technical evaluation service (ANDRILL), and for the hand-over of the CRP drilling system to the community (Recommendation XXVI-G&SEG 2000-1).

P. O'Brien reported on the recent success of the ODP Leg 188 in drilling in Prydz Bay, with three holes on the continental rise, slope and shelf, sampling all three time periods targeted by ANTOSTRAT. He also advised the meeting of proposals currently being considered by the Scientific Committee of the ODP in the first week of August for scheduling in early 2002, and stressed the importance of SCAR support. The meeting recommended (Recommendation XXVI-G & SEG 2) that SCAR writes to ODP supporting the further drilling legs proposed around Antarctica.

2. Group of Specialists on Antarctic Neotectonics (ANTEC)

T J Wilson, Convenor, reported on planned activities, future projects and workshops (Siena 2001, Penrose Conference 2002, ISAES Potsdam 2003). She reiterated the aims of ANTEC and urged members to participate.

3. Permitting of Marine Science

D. Fuetterer (Germany) drew members attention to a requirement by the Federal Environmental Agency (UBA) of the German Ministry of the Environment for a higher level of environmental impact assessment (CEE rather than IEE) for acoustic, benthic, and bottom-sampling activities than that required by other nations. The UBA considers that the operation of such equipment may cause more than minor or transitory harm to warm-blooded animals and fish. The time needed for the CEE approval process has already led to the cancellation of important German scientific ship-based activities to collect data directed toward the understanding of past climate and environmental change

in the Antarctic.

Members discussed the issue in detail, pointing out that the acoustic activities in question use only of standard marine seismic and acoustic devices, such as air-gun arrays, swath sounding systems (Hydrosweep) and echo-location devices. Trawls, dredges, corers and grabs have been subjected to similar permitting restrictions, even though the effects of these on benthic faunas is trivial compared to damage caused by iceberg scouring.

The Working Groups on Solid-Earth Geophysics and Biology had agreed two recommendations (XXVI-Biol 12, and XXVI-Biol 13) that were strongly supported by the meeting.

4. Formation of a single Working Group on Geosciences

The Joint Meeting agreed that it was timely for the Working Groups to combine as a single Working Group on Geosciences (Recommendation SEG 2000-3)

RECOMMENDATIONS

G & SEG 2000-1 Concerning ANTOSTRAT initiatives

Noting the achievements of ANTOSTRAT over the last two years, and the need to build on these achievements, the Joint Working Groups recommend strong support for:

- initiatives for facilitating drilling and coring, both ship-based and ice/land-based, for obtaining records of Cenozoic history, and
- initiatives for integrating geophysical and geological data with climate modelling research.

G & SEG 2000-2 Concerning SCAR support for further drilling around Antarctica

Recognising the importance of achieving further drilling of the Antarctic margin for climate history before the end of the current phase of ODP (Ocean Drilling Program) in 2003, the Joint Working Groups of Geology and Solid Earth Geophysics ask SCAR to record their support for Antarctic drilling with the ODP Scientific Committee in a letter along the following lines

"The Scientific Committee on Antarctic Research is the ICSU body responsible for co-ordinating and promoting the entire range of Antarctic science. ANTOSTRAT is one of its formal components, reporting to the working Groups on Geology and Solid Earth Geophysics .

SCAR hears reports of ANTOSTRAT's progress, in collaboration with the Ocean Drilling Program, towards determining Antarctic glacial history by sampling the record in continental margin sediments. SCAR appreciates that this effort is now at a crucial stage, with two proposals drilled and the need in the near future, to complete the study by drilling two other sectors of the margin. SCAR considers that a history of the Antarctic Ice Sheet is the most important contribution Antarctic geoscience can make to the present understanding of global palaeo-climate and sea-level change, and urges the Ocean Drilling Program to make every effort to help complete the study."

SEG 2000-3 Concerning the formation of a single Working Group on Geosciences

Recognising the increasing common interests of the Working Groups of Geology and Solid Earth Geophysics over the last decade, and

Recognising that many major decisions on science initiatives have frequently been made jointly by the two Working Groups,

the Working Groups of Geology and Solid-Earth Geophysics recommend the formation of a new, single Working Group of Geosciences, with a sub-committee structure designed to ensure the representation of the wide range of expertise needed to deal with the full range of scientific problems in geosciences. The Working Group should consist of one representative of each SCAR nation and an alternative.

ACRONYMS

ANDRILL Antarctic Geological Drilling Consortium
ANTEC Antarctic Neotectonics (GoS)
ANTOSTRAT Antarctic Offshore Acoustic Stratigraphy
CEE Comprehensive Environmental Evaluation
GoS Group of Specialists
ICSU International Council for Science
IEE Initial Environmental Evaluation
ISAES International Symposium on Antarctic Earth Sciences
ODP Ocean Drilling Program
SCAR Scientific Committee on Antarctic Research
UBA Umweltbundesamt
WG Working Group