

GEOTRACES PLANNING GROUP
ANNUAL REPORT TO SCOR 2005/2006
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SCOR planning group for GEOTRACES

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Development of science plan for GEOTRACES

The primary goal of GEOTRACES SCOR planning group activity over the last year has been to complete our Science Plan. A draft of the Science Plan was sent out for review by SCOR in July, 2005. Substantial reviews were received from nine anonymous referees. The planning group drafted a comprehensive response to these reviews. That response was presented to SCOR and, following approval from SCOR it was used as a basis for revising the Science Plan. The revised Science Plan was approved by SCOR in January, 2006.

Members of the planning group made further revisions to the text and figures in February and March, after which the document was forwarded to the printers (Clyvedon Press, UK). During the two months leading up to the writing of this report, members of the planning group, with tremendous help from Ed Urban, have reviewed and revised three drafts of the galley proofs. We anticipate that the final changes will be implemented in early August, and that printed copies will soon be available for distribution.

SCOR meetings

- The full SCOR Planning Group did not meet during the past year. Business has been handled via e-mail.

- Two subcommittees established by the planning group met during the past year, with travel support provided by SCOR:
 - i) *Standardisation and Intercalibration*: During the meeting of the full planning group held in Vienna, Austria (May, 2005), Greg Cutter (Old Dominion University, USA) was asked to lead a subcommittee on Standards and Intercalibration. That committee met at the IAEA laboratory in Monaco (24-25 October, 2005) and produced a set of recommendations that have been embodied in a report that was circulated among planning group members for comments. The report was revised based on those comments, and is now posted on the GEOTRACES web site (www.geotraces.org) for review by the broader community.

Building on the recommendations from that report, Cutter and colleagues are preparing a proposal to the US NSF to be submitted 15 August, 2006, to secure ship time and major infrastructure (e.g., trace metal clean rosette systems) to host an international intercalibration cruise. The format of the cruise is planned to follow that used during the intercalibration for iron that was conducted as part of the SAFE program.

- ii) *Data Management*: During the meeting of the full planning group held in Vienna, Austria (May, 2005), Raymond Pollard (National Oceanography Centre, UK) and Chris Measures (University of Hawaii, USA) were asked to lead a subcommittee on Data Management. That committee met at the British Oceanographic Data Centre, Liverpool, UK (30 Nov. – 2 Dec., 2005) and produced a set of recommendations that have been embodied in a report that was circulated among planning group members for comments. The report was revised based on those comments, and is now posted on the GEOTRACES web site (www.geotraces.org) for review by the broader community.

Future issues

The GEOTRACES Planning Group has nearly completed its mission of creating a Science Plan. GEOTRACES is in the process of replacing the planning group with a Scientific Steering Committee. At the time of the writing of this report, 17 of the 19 individuals who were invited to serve on the SSC have either agreed, or have recommended an alternate. As soon as we have a decision from the last 2 people, a list of names will be forwarded to SCOR for review and comment.

Links with other programmes

Throughout the planning of GEOTRACES we have maintained close linkages to other programmes in order to maintain synergies and to avoid replication. Major links have been established with:

- *SOLAS*, was represented on the GEOTRACES planning group by Tim Jickells (University of East Anglia, UK). Jickells has chosen not to serve on the

GEOTRACES SSC, but rather to continue serving in a non-SSC capacity as a liaison between GEOTRACES and SOLAS.

- *IMBER*. Raymond Pollard is a member of both the GEOTRACES Planning Group and the IMBER SSC. The IMBER SSC and the GEOTRACES planning group have agreed that, in the future, Jay Cullen (University of Victoria, Canada) will serve as the liaison between IMBER and GEOTRACES. Continuing with the tradition started in 2004, Gideon Henderson (co-chair of the GEOTRACES Planning Group) attended the 2006 IMBER SSC Meeting (Brest, France, May 2006).

Developments at national and international levels

During the transition between the planning group and the SSC, we do not have a complete report of national and regional activities. Following is a partial list:

- A combined GEOTRACES planning meeting for China and for the western Pacific region was held in Xiamen, China during the last week of August, 2005 (Minhan Dai, host and contact). More than 40 scientists participated, primarily from China, but with representatives as well from Taiwan, Hong Kong, South Korea and Japan.
- Several national proposals have been submitted for cruises in both the Arctic and Southern Oceans during the International Polar Year (IPY). Hein de Baar (The Netherlands) is coordinating GEOTRACES IPY activities.
- The first GEOTRACES cruise occurred in November, 2005, while the Polarstern was en route from Germany to the Southern Ocean. This cruise initiated the process of developing analytical protocols and the intercalibration of methods that will be essential to the generation of internally-consistent data throughout the GEOTRACES program (contact person Michiel Rutgers van der Loeff, AWI, Germany).
- A major proposal was submitted to NERC (UK) on 1 July, 2006 for a Consortium Award to repeat the Atlantic Meridional Transect as a GEOTRACES cruise (contact Gideon Henderson, The University of Oxford).
- A proposal to the US NSF to establish a US GEOTRACES project office has been recommended for funding. To the extent permitted by available resources, the US project office will assist with matters pertaining to international GEOTRACES until an international project office can be established (Contact Bob Anderson, Lamont-Doherty Earth Observatory).

GEOTRACES: Spreading the word

We have strived to engage the wider research community through publications, special sessions, and open meetings at international research conferences.

Publications:

- Anderson, R.F., and G.M. Henderson. 2005. GEOTRACES: A global study of the marine biogeochemical cycles of trace elements and their isotopes. *Oceanography* 18(3):76-79.

Conferences:

- An open “town meeting” will be held during the Fall meeting of the American Geophysical Union (11 December, 2006, San Francisco). The general purpose of the meeting will be to inform members of the oceanographic community about the objectives and status of the GEOTRACES program, and to encourage interested scientists to participate in the planning and implementation of the GEOTRACES program. A specific mission for this meeting will be to encourage people to participate in the intercalibration effort that is being launched at this time. We believe that the intercalibration of sampling and analytical methods used to measure trace elements and their isotopes in seawater will be of great value to the oceanographic community, regardless of the level to which participants in the intercalibration are involved later in GEOTRACES cruises.
- A special session entitled “Marine Biogeochemical Cycles of Trace Elements and Isotopes: from Regional to International Networks” was held at the Western Pacific Geophysical Meeting, Beijing, China, 24-27 July, 2006. The session was well attended, and the strong showing has reportedly helped convince NSF-China to begin supporting GEOTRACES planning activities.
- A special session entitled “Evolution of ocean chemistry: past, present and future” will be held at the 2006 Goldschmidt Conference, Melbourne, Australia, 27 August - 1 September, 2006.

Acknowledgements

We offer our special thanks to Ed Urban, who has made a heroic effort to help finalize the GEOTRACES science plan while also providing excellent organization and logistics support for the GEOTRACES committee meetings.