

GEOTRACES PLANNING GROUP
ANNUAL REPORT TO SCOR 2004/2005
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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 set the priorities for the programme and to incorporate these into a cogent and comprehensive Science Plan. A draft of the Science Plan was completed in February 2005 and posted for public comment on the web (at <http://www.ldeo.columbia.edu/res/pi/geotraces/index.html>). Comments from more than 40 people were received. These were uniformly positive, and suggested a number of areas where the plan could be further strengthened. Suggestions have now been discussed and incorporated (see below) and a complete version of the Science Plan is now ready for review.

SCOR meetings

- Oxford, UK (June 2004): This first full SCOR Planning Group meeting outlined the structure of the science plan and commenced the work of writing it. Individual members of the Planning Group were tasked with writing subsections of the plan following this meeting.
- Boston, USA (December 2004): A subgroup of the SCOR Planning Group (10 people) met to discuss the first complete draft of the Science Plan and comments on this plan from members of the Planning Group. Changes to structure and content were initiated at Boston and completed following this meeting.

- Vienna, Austria (May 2005): The second full SCOR Planning Group meeting responded to comments from the wider ocean-geochemical community with a thorough revision of the Science Plan. This meeting also set up Standardisation and Data Management Sub-Committees, discussed other enabling activities, and planned overall implementation of the programme.

Establishment of sub-committees

In the first instance, two subcommittees are considered essential to the realisation of GEOTRACES goals:

- Standardisation and Intercalibration:* Just as WOCE and JGOFS found that standards were essential to measurement of carbon-system parameters, well-constrained standards are essential to accurate measurement of trace elements and isotopes. This will ensure that data can readily be compared between different laboratories, and between different oceanographic regions.
- Data Management:* Robust storage of all GEOTRACES data and its rapid retrieval will clearly be important to achieve full use of new data, and to maximize rewards from the programme.

The reasons for establishment of these sub-committees are discussed fully in the GEOTRACES Science Plan. Both issues are of major importance and require significant work, so that a subcommittee is required for each task.

Future issues

The GEOTRACES Planning Group is looking forward to the SCOR review of the Science Plan and to addressing the comments received from reviewers.

We are aware that we will need to move to an SSC and establish a IPO in the near future. These issues are of higher priority now that the science plan is ready for review.

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*, is represented on the GEOTRACES planning group by Tim Jickells. SOLAS have also been asked for and provided input on a draft of the Science Plan.
- *IMBER*. Raymond Pollard is a member of both the GEOTRACES Planning Group and the IMBER SSC. Gideon Henderson is co-chair of the GEOTRACES Planning Group and attended the 2004 IMBER Meeting (Plymouth August 2004). IMBER have also been asked for and provided input on a draft of the Science Plan.
- *Two SCOR working groups* (PACE, #123; LINKS, #124) are represented on the GEOTRACES Planning Group (Jess Adkins, Roger Francois, respectively).

All members of the Planning Group named above attended the Vienna meeting and contributed to revision of the Science Plan.

We also have established less formal links with other programmes including IMAGES, CLIVAR, and INTERIDGE.

Developments at national and international levels

National Planning activities/workshops:

	date	activity	Info:
Canada:	7-9 June 2005	just after SOLAS workshop, forum to discuss: <ul style="list-style-type: none"> - Canadian contribution to GEOTRACES - mesh with Canadian-SOLAS/IMBER - GEOTRACES-related Canadian contributions to IPY - setting up a "C-GEOTRACES Network" in 2006 	Roger Francois UBC
China	28-30 June 2005	Regional workshop on GEOTRACES Xiamen	Minhan Dai Xiamen university
Western Pacific		proposal to the US NSF requesting funds to expand the national GEOTRACES planning workshop in China to become a western Pacific regional planning workshop. Contacts in Korea, Hong Kong, Taiwan, Japan and Australia who have expressed interest in participating.	Yan Zheng and Bob Anderson, LDEO
India		discussions about developing an Institute or a national plan for GEOTRACES related research	S. Krishnaswami, PRL
Germany	Jan, Mai, Oct 2004	submission of a priority program to the German Funding agency DFG	Michiel Rutgers van der Loeff, AWI
Japan	Mai 2005	GEOTRACES Subcommittee set up under the National Committee for SCOR Members: Y. Sano, H. Ogawa, H. Amakawa, H. Obata, S. Takeda, Y. Kumamoto, Y. Sohrin, M. Yamada, M. Minagawa, Y. Yamanaka, H. Kawahata, Y. Kato, J. Zhang, T. Gamo	Toshi Gamo ORI - Tokyo
Spain		Proposal for pilot project in Atlantic / Drake Passage	Pere Masqué UAB
France		Informal workshops to discuss on the "margin" topic. proposed (pre-) GEOTRACES cruises: BONUS (IPY, G Sarthou) and PRIMO (Peru Chile Margin and OMZ, Y. Dupenhoat)	Catherine Jeandel LEGOS

The International Polar Year (IPY):

IPY 2007-2008 provides an opportunity for a major joint effort in polar research. Out of 901 Expressions of Intent (EOI) submitted to the IPY Planning committee (www.ipy.org), seven were related to GEOTRACES. These tracer studies will be performed in coordination with a wide range of interdisciplinary studies. Related oceanographic programs are iAOOS for the Arctic and CASO for the Antarctic. The coordination structure is presently under discussion.

acronym	title	PI	Country
	<i>Bipolar</i>		
GEOTRACES Umbrella	GEOTRACES: An international study of the biogeochemical cycles of trace elements in the Arctic and Southern Oceans	Anderson	USA
	<i>Antarctic</i>		
U.S. GEOTRACES	U.S. GEOTRACES: Biogeochemical cycles of trace elements in the SW Pacific Sector of the Southern Ocean	Anderson	USA
MACS 07-08	Micronutrients in Antarctic coastal seawaters — determinants of primary production	Butler	Australia

BONUS	Biogeochemistry of the southern Ocean: interactions between NUTrients, dynamics, and ecosystem Structure	Sarthou	France
ZERO&DRAKE	ZERO&DRAKE: Synoptic transects of trace elements and their isotopes in the AntArctic Ocean. A contribution to the international GEOTRACES program	De Baar	The Netherlands
	<i>Arctic</i>		
Arctic GEOTRACES	Synoptic transects of trace elements and their isotopes in the Arctic Ocean. A contribution to the international GEOTRACES program	Rutgers van der Loeff	Germany
Canadian GEOTRACES	Canadian GEOTRACES in the Arctic	François	Canada

GEOTRACES: Spreading the word

We have strived to engage the wider research community through special sessions at a number of conferences, and by publication of two articles in relevant newsletters.

Conferences:

- Special session at European Geosciences Union, Vienna (April 2005), “*Cycling of trace elements and their isotopes in the oceans*”. Convened by M. Rutgers van der Loeff, C. Jeandel, G. Henderson, M. Frank.
- Special plenary session at the International Ocean Research Conference, sponsored by The Oceanography Society and UNESCO's Intergovernmental Oceanographic Commission, Paris (June 6-10, 2005), “*Biogeochemical Cycles of Trace Elements and Implications for Marine Ecosystems*”. Convened by R.F. Anderson (GEOTRACES) and T.D. Jickells (SOLAS).

Publications:

- “GEOTRACES gathers speed”, R.F. Anderson, G.M. Henderson, Global Change Newsletter IGBP, No. 60 December 2004
- “New International Study To Focus On Trace Elements And Isotopes In The Ocean”, R.F. Anderson, G.M. Henderson, US JFOGS Newsletter, November 2004.

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