

ANNUAL REPORT ON GEOTRACES ACTIVITIES IN BRAZIL

June 1st, 2015 to April 30th, 2016

- Three activities related to GEOTRACES are organized for the Brazilian Conference on Oceanography (www.CBO2016.org), which will be held in Salvador November 5-9, 2016. Those activities are:
 - Oral/poster GEOTRACES session;
 - II GEOTRACES BRAZIL meeting. This meeting follows the actions initiated in 2015 with the aim to bring Brazilian scientists together to plan activities and promote collaborations to increase participation in the scope of the GEOTRACES program.
 - Ocean Data View (ODV) hands-on workshop. This 8 hours workshop will to teach basic ODV methods for the analysis of environmental data. The GEOTRACES Intermediate Data Product 2014 (IDP2014) and the Surface Ocean CO₂ Atlas (SOCAT) will be used as example datasets.
- Submission of a proposal for a GEOTRACES invited speaker talk for the 46th World Chemistry Congress (IUPAC-2017) to be held in São Paulo, Brazil between July 9th to July 14th.
- The Scientific Committee on Oceanic Research (SCOR) awarded US\$2500 towards sponsoring a three weeks visit by W. Burnett to Salvador, Brazil in order to teach a course for 25 students on uses of radioisotopes in environmental sciences. The use of Rn and the Ra quartet for studies concerning submarine groundwater discharge (SGD) was emphasized during the course. Rn measurements and Radium sampling throughout the Paraguaçu Estuary and throughout the Todos os Santos Bay were performed during the 3rd week of the visit to initiate a collaborative research project.
- Federal University of Rio Grande (FURG) - acquired a container, which has been remodeled to be a clean room for the *Atlantic Sul R/V*.
- Presentation on the GEOTRACES project during the High Level Meeting EU-Brazil Atlantic Research Cooperation held in Rio de Janeiro, November 2015. A Joint Declaration of Intent between the EU and the Ministry of Science, Technology and Innovation of Brazil was signed, creating a working group on Marine Research Cooperation to develop common expertise and scientific knowledge on Atlantic Ocean and its dynamic ecosystems. It was defined seven research priority topics for future studies including the land-ocean interactions and fluxes.

Projects/grants

- Since 2015 there has been very few funding opportunities announced by CNPq, FINEP and State agencies. The current opportunities are very specific in terms of research areas or activities that can be funded. As a result the purchase of the new clean sampling system for the *R/V Vital de Oliveira* is on hold. Besides, all research funding for exchanging students and researchers in international programs has been suspended.

Cruises

- One expedition was performed along the South coast of Brazil which included three transects parallel to shore. Fifteen profiles were performed up to 600 m depths. Key variables for this cruise were dissolved trace elements, C, N, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ in sediments and suspended particulate material. INCT-MarCOI (CNPq 565062/2010-7).
- Two expeditions were postponed due to lack of funding. Many of the research grants awarded between the end of 2014 and 2016 have not yet been paid by CNPq and FINEP.
- A proposal for in-kind logistical support for fieldwork along the Brazilian PIRATA program annual expedition from 20° S to 15°N has been submitted for the project “Vertical and horizontal processes on REE composition of seawater”

GEOTRACES-related articles

- Hatje, V. Chemistry of Our Oceans. (2015). Journal of the Brazilian Chemical Society, v. 26, p. 2170-2171.
- Hatje, V., Bruland, K.W.; Flegal, A.R. (2016). Increases in anthropogenic gadolinium anomalies and rare earth element concentrations in San Francisco Bay over a twenty-year record. Environmental Science & Technology. DOI: 10.1021/acs.est.5b04322, 2016.

Contributions to conferences

- GEOTRACES presentations and co-authorships by Brazilian Scientists at the following meetings: AGU Fall Meeting (San Francisco, USA, Dec 2015), OSM 2016 (New Orleans, USA, Feb 2016)

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