

ANNUAL REPORT ON GEOTRACES ACTIVITIES IN BRAZIL
MAY 2014 – JUNE 2015

- Brazilian cruise (INCT Mar-COI) on January 2015 to test the new clean sampling system installed on the *R/V Atlântico Sul*. Transects were performed perpendicular to the South Coast of Brazil, collecting samples up to 1500 m for metal analysis.
- Planning activities of an expedition (INCT Mar-COI) to be lead by Brazil in collaboration with French scientists in the South Atlantic onboard of *R/V Atlântico Sul* in January 2016.
- Submission of a join proposal with French scientists in the scope of the Horizon 2020, project entitled MARBREU, coordinated by Marina Rabineau for the Centre National de la Recherche Scientifique (CNRS). A GEOTRACES section (GA09) along the South American shelf is planned and will be proposed as two collaborative Brazilian-French cruises on board *R/V Vital de Oliveira/Atlântico Sul* and Marion Dufresne/ Pourquoi Pas?.
- Organization of the GEOTRACES Brazil workshop. This meeting was held in Santos, São Paulo in March 2015 to foster the involvement of Brazilian Scientists in the GEOTRACES programme. The specific objectives of this meeting were: i. Promote a broad discussion on the infrastructure demands, training and tools to implement the study of trace elements in ocean waters by the Brazilian research community; ii. Promote and improve the quality of scientific production in chemical oceanography, especially focused on the study of TEIs in the oceans; iii. Initiate a GEOTRACES BRAZIL collaboration network; iv. Identify opportunities for technology transfer, training and international collaborations to increase the capacity of Brazilian scientists to undertake GEOTRACES-related research.
- Scientific planning missions USA-Brazil. Project entitled Facilitating Collaborative Research on the Southern Brazilian Continental Shelf. Program: Catalyzing New International Collaborating (CNIC - NSF)
- Meeting with the Brazilian Agency Coordination of Improvement of Higher Education Personnel (CAPES) to discuss mechanisms for providing scholarships for graduate students, post-doctoral fellowships, and support for scientific missions related to GEOTRACES.
- Meeting with the Secretary of the Brazilian Ministry of Science and Technology, Navy and the Coordinator for Ocean Science and Antarctica to discuss funding possibilities to support the clean sampling and clean container facilities for the new Brazilian *R/V Vital de Oliveira*.

GEOTRACES-related projects/grants

- PROJECT TITLE: Rare earth elements in the waters of Todos os Santos Bay and adjacent sea. IP: Vanessa Hatje. Funded by CNPq. 441828/2014-7.
- PROJECT TITLE: Method development for the analysis of rare earth elements in environmental matrices. IP: Vanessa Hatje. Funded by FAPESB. PAM0020/2014.
- PROJECT TITLE: A Geotraces trial study within the Brazil –Malvinas convergence. IPs: Leonardo Contreira, Helene Planquete. Funded by Europole Mer - International Cooperation with Brazil and WHOI – 2015.
- PROJECT TITLE: Submarine Groundwater Discharge (SGD) Influence and Atmospheric Contribution in Marine Biogeochemical Cycles. Comparative Study Between Cabo Frio Upwelling (Brazil) And Chubut River Estuary (Patagonia, Argentina). IPs: Emmanoel V Filho, Luis F H Niencheski, José Luis Esteves. Funded by CAPES/MINCYT (Brazil-Argentina).

GEOTRACES-related articles

- Niencheski, L.F., Moore, W.S. & Windom, H.L. History of Human Activity in Coastal Southern Brazil from Sediment. *Marine Pollution Bulletin* 78 (2014), pp. 209-212.
- Niencheski, L.F. & Windom, H. L. Chemistry of a Surficial Aquifer of a Large Coastal Lagoon Barrier and its Relation to Adjacent Surface Waters of Brazil. *Journal of Coastal Research* In-Press.
- Niencheski, L.F.; Windom, H.L. & Moore, W.S. Controls on water column chemistry of the southern Brazilian continental shelf. *Continental Shelf Research*, v. 88, p. 126-139, 2014.

Contributions to conferences

- Vanessa Hatje, Kenneth W. Bruland and A. Russell Flegal. Temporal and spatial gradients of anthropogenic Gd in San Francisco Bay. 3rd International Symposium: Effects of Climate Change on the World's Oceans. March 21-27, Santos.
- Leonardo Contreira-Pereira, Carlos F.F. de Andrade, Karina Attisano, Kayla Lima, Mariele Paiva, Gabriel Karagiannis, Cátia Von-Ahn, Daniel Costa and Luis Felipe Hax Niencheski. Study of the sources of iron to the southern Brazilian coast and adjacent ocean. 3rd International Symposium: Effects of Climate Change on the World's Oceans. March 21-27, Santos.
- Karina Kammer Attisano, Isaac Rodrigues Santos, Carlos F.F. de Andrade, Mariele Lopes de Paiva, Idel Cristina Bigliardi Milani and Luis Felipe Hax Niencheski. Submarine Groundwater Discharge revealed by radium isotopes (Ra-223 and Ra-224) near a paleochannel on the Southern Brazilian continental shelf. 3rd International Symposium: Effects of Climate Change on the World's Oceans. March 21-27, Santos.
- Mônica Wallner-Kersanach, Luis Felipe Hax Niencheski, Carlos FF de Andrade, Karina Attisano, Kayla Lima, Camila Sukekava, Leonardo Contreira, Daniel Costa, Joselene de Oliveira, Eunice Machado, Alice Costa, Rodrigo Kerr, Luiza Dy F Costa and Iarema FP de Carvalho. The submarine groundwater process, the biological pump and the CO₂ fluxes on the Brazilian southeastern and southern shelf. 3rd International Symposium: Effects of Climate Change on the World's Oceans. March 21-27, Santos.
- Kayla Lima, Luiza Dy F Costa, Mônica Wallner-Kersanach, Carlos FF de Andrade, Karina Attisano, Camila Sukekava, Leonardo Contreira, Mariele Paiva, Iarema Ferreira Pinto de Carvalho and Luis Felipe Hax Niencheski. Nutrient concentrations along the coast of southern Brazil. 3rd International Symposium: Effects of Climate Change on the World's Oceans. March 21-27, Santos.

Submitted by Vanessa Hatje (vanessahatje@gmail.com).