

Post doctoral position at CCST/INPE
Earth System Science Center - CCST
National Institute for Space Research (INPE, Brazil)

**Project: Salinization and pollutant sources tracing in the
Recife Metropolitan Region (RMR) Aquifers**

Within the framework of a **French-Brazilian scientific collaboration** supported by the **National Research Agency** (ANR), the **FACEPE** and **FAPESP** in Brazil, the **COQUEIRAL** project aims at identifying the salinization sources and processes in the Recife Metropolitan Region (RMR) aquifer systems and to identify inorganic pollution sources, both under global environmental change and societal constraints. Results will be gathered in a 3D numerical hydrogeological model that will also be used as a predicting tool running with future climatic scenarios and societal evolution scenarios.

Coastal regions such as the RMR are susceptible to various impacts of climate change, although sea level rise is arguably the greatest concern for these low coastal regions. Long-term global sea-level measurements have indicated sea-levels are rising at increasing rates. Outputs from GCMs (General Circulation Models) and RCMs (Regional Circulation Models) regarding possible change in rainfall and sea level rise will be used to run future scenario for groundwater in the study area. Projections of changes of rainfall generated by regional model at higher resolution (15, 40 km) by 2010-2100 relative to the present 1961-90 are being generated for various GHG emission scenarios for the RMR.

The candidate will be in charge of the construction of the Future climate scenarios of the RMR in collaboration with all partners, and will manage data processing and interpretation. The candidate should have a P.D. in Meteorology, Oceanography, Hydrology, and must have skills in programming, visualization and experience in climate modeling and statistical analyses working with large datasets and numerical models. Fluency in English is required.

This is a 12 month post-doctoral position at FAPESP (São Paulo Research Foundation), with activities to be developed at the Earth System Science Center CCST at the National Institute for Space Research INPE in **Cachoeira Paulista – São Paulo**. Inscriptions open until March 2014 and work is expected to start as soon as the position is filled.

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