

**Brief information on  
FAPESP/FACEPE's call for proposals "Mudança Climática Global"**

Regional climate models with high resolution are now being used to generate scenarios of climate change for South America. The availability of increasingly precise projections of the future regional climate will certainly trigger a rapid development in studies on impacts, vulnerability and adaptation, areas where Brazil needs to strengthen its scientific development.

In 2008, the FAPESP, which is the research funding agency of the Brazilian State of São Paulo, has launched a comprehensive program to foster the articulation and coordination of the Brazilian research on Global Climate Change. The "Programa FAPESP de Pesquisa em Mudança Climática Global – PPFMCG" aims to significantly increase the knowledge about the impacts of climate change in Brazil and South America.

The first call for proposals launched by FAPESP under the PPFMCG in 2008 was dedicated to supporting the development of a numerical model of the global climate system capable of improving the reliability of the regional projections of climate change, in a time scale of a few decades to a century, particularly in South America. FAPESP's first initiative must now be supplemented by a second, dedicated to strengthening the observational component, in order to increase production and availability of climatic and environmental data of high quality needed for the validation of models. The scarcity of such high quality data has proved to be an obstacle to the scientific advance of the subject in Brazil. This goal will be pursued in association with other funding mechanisms both internal and external to the State of São Paulo.

The FACEPE, which is the research funding agency of the State of Pernambuco, in Northeastern Brazil, has joined FAPESP's initiative, and the two agencies have agreed to launch a joint call for proposals to finance cooperative research projects led by scientific teams from the states of São Paulo and Pernambuco.

For their first joint call for proposals, FAPESP and FACEPE wish to concentrate efforts on filling research gaps related to the modeling, validation and coupling of the atmospheric, oceanic and vegetation components of the Earth System which are most relevant to improve the projections on the regional scale and to promote the design of policies for mitigation and adaptation. While recognizing the need for a systemic approach of the issues raised by the GCC, the two agencies consider that the early examination of the impacts on particularly vulnerable areas and sectors is essential. In Brazil, the impacts on water availability in the Northeastern semi-arid region, the vulnerability of coastal areas to sea level rise and the increased frequency of extreme events are worthy of attention.

FAPESP, FACEPE and ANR have agreed to establish a scheme for joint funding of Brazilian-French collaborative research and innovation projects in Climate Change. The aim of the funding cooperation is to strengthen the collaboration between Brazilian and French scientists to achieve world-class scientific and technical results, leading towards new innovative technologies.

The three agencies welcome and encourage submissions of joint proposals involving scientific teams from research organisations in France and the Brazilian states of São Paulo and Pernambuco. The French/Brazilian joint proposals will be received within the ANR's call for proposals "Changements Environnementaux Planétaires" and within the FAPESP/FACEPE's call for proposals "Mudança Climática Global". The joint proposal shall be submitted to all three agencies simultaneously, in order to be valid.

The full text of the FAPESP/FACEPE's joint call for proposals "Mudança Climática Global" will be available at [www.fapesp.br](http://www.fapesp.br) and [www.facepe.br](http://www.facepe.br).

The FAPESP/FACEPE call for proposals will consider research projects which fall within the following areas:

### **1) Enhancement of the observation in the South Atlantic ocean**

Research involving the monitoring of physical and biogeochemical data in the South Atlantic ocean relevant to the modeling of global and regional climate change, including detection of changes in ocean carbon cycle and its impact on marine life.

### **2) Enhancement of information and data accessibility on land cover and land use change**

Research aimed at improving the mapping of land cover and land use changes in the semi-arid region of Pernambuco and in São Paulo State, including the use of remote sensing and mathematical modeling, as well as the measurement of the carbon cycle dynamics, in order to evaluate scenarios of land use changes, its retroaction on climate change, its socio-economic impact and the identification of key vulnerabilities and adaptation strategies.

### **3) Impacts of GCC on the long term water availability in critical areas**

Research on impacts of climate change on water resources in the semi-arid region of Northeastern Brazil as well as in the state of São Paulo, especially on the agriculture, hydroelectric generation and water supply, in order to identify key vulnerabilities and adaptation strategies.

### **4) Impacts of the GCC on the occupation and land use in coastal areas of Pernambuco and São Paulo states**

Research on the impacts of the projected climate changes and sea level rise in coastal areas of Pernambuco, especially the metropolitan area of Recife, and in coastal areas of São Paulo state, in order to identify vulnerabilities and adaptation strategies.

Research proposals in other areas related to the theme of Climate Change may be submitted, provided they are genuinely justified in their connection to the objectives of the FAPESP/FACEPE's program, as well as to relevant issues for the States of Pernambuco and São Paulo.