



CLARIS | LPB

CLARIS LPB | NEWSLETTER

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The La Plata Basin Regional Hydroclimate Project (LPB)

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The La Plata Basin Regional Hydroclimate Project (LPB) is an internationally coordinated activity endorsed by two scientific panels (CLIVAR and GEWEX) of the World Climate Research Programme (WCRP). The project aims at answering three fundamental scientific questions: **a)** What climatological and hydrological factors determine the frequency of occurrence and spatial extent of floods and droughts? **b)** How predictable is the regional weather and hydroclimate variability? **c)** Are there impacts of global climate change and land use change on the regional weather, climate, hydrology and agriculture, and can they be predicted?

To achieve its objectives, LPB seeks to coordinate existing research and promote new collaborative initiatives, of which CLARIS-LPB is a prime example. At present, around fifteen individual projects are endorsed by LPB because of their contributions to LPB's main goals. These projects receive funding from diverse number of national and international agencies. LPB has also developed strong ties with regional and international organizations in order to transfer the acquired knowledge to societal needs. A collaboration agreement has been signed with the International Research Institute for Climate and Society (IRI). The concept of partnerships extends to regional operational centers like Brazil's Center for Weather Prediction and Climate Studies (Centro de Previsão de Tempo e Estudos Climáticos, CPTEC/INPE), and the Argentine National Weather Service. Other Centers, like the Climate Prediction Center (CPC/NCEP) of the United States are also collaborating by continuously monitoring the conditions of the La Plata Basin and its subbasins.

The Hydroclimate of the La Plata basin is subject to important anthropogenic actions with unknown consequences for the environment. Extensive farming activities in the region are producing side-effects that may alter the climate of the region. First, the practice of biomass burning may interfere with the radiation balance, cloud microphysics and precipitation processes. These effects may be of relevance for the development of Mesoscale Convective Systems that are responsible for much of the region's precipitation. Second, vast areas have experienced land cover changes (e.g., deforestation, forestation, changes in crop types) with consequent changes in albedo, evapotranspiration, infiltration, and water storage. To better understand these effects, the LPB Implementation Plan foresees complementary observational and modeling activities. The monitoring of hydroclimate variables and a field experiment are expected develop a set of unique data that will, first, help understand the land surface-atmosphere processes that could favor persistent events, and second, help calibrate and improve parameterizations in regional and global models employed for forecasting and prediction up to seasons.

For an extensive discussion of the science issues motivating LPB please refer to its web site <http://www.eol.ucar.edu/projects/lpb/>. There, the reader will find the LPB implementation plan, and many other documents including presentations and reports of previous LPB meetings.

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CLARIS LPB Kick-off Meeting

The CLARIS LPB Project, a Europe-South America Network for Climate Change Assessment and Impact Studies funded by the EC 7th Framework Programme, was officially launched during a Kick-off Meeting held in Buenos Aires, Argentina, on November 10-13, 2008. About 70 researchers of the project were present, including members of the Executive Board, representatives from Partner Institutions, Work Package leaders, and senior and young scientists.



The Kick-off Meeting was an opportunity for the interaction of scientists within and among the work packages. They held scientific discussions around the Work Package objectives to clarify the role of each partner, the methods, the data, the interactions with other work packages, the implementation of common strategies, and the partners' needs in terms of expertise, knowledge and transference of tools.

There was also a session on Climate Change and Society dedicated to the interaction with stakeholders. There were two round tables with representatives from the Secretaría de Ambiente y Desarrollo Sustentable de Argentina (Dr. Nazareno Castillo and Lic. Lucas Di Pietro); the Instituto Nacional de Tecnología Agropecuaria-INTA (Dr. Ana Cipolla); the Asociación de Cooperativas Argentinas-ACA (Ing. Agr. Pedro Carricart); the Asociación Argentina de Consorcios Regionales de Experimentación Agrícola-AACREA (Ing. Agr. Fernando Toranzo); the Entidad Binacional Yacyretá -Argentina/Paraguay- (Ing. Lucas Chamorro); and the Grupo Asegurador La Segunda (Gabriel Espinosa and Agustín Busso).

Additionally, during the Meeting, the three best posters that had a student (post-doc, Phd and pre-Phd) as first author received special prizes. The posters were evaluated by the Work Package Leaders according to the following criteria: Scientific Quality; Contribution to CLARIS LPB Objectives; Clarity of communication; and Multi-Disciplinary/Multi-institute work.

The winners were: Anna Sorensson (CONICET), Ariel D'Onofrio (UBA-IRD) and Alexis Hannart (CNRS-IRD). Just for this first occasion, Ramiro Saurrel (CONICET) was also awarded a fourth prize.

They received CLARIS LPB WP2 grants of 1000 euros each for supporting:
- cost of publication of the submitted work, with the student as first author, in any European journal,
- travel expenses to participate at a meeting where he/she will present the prized work (poster or oral presentation),
- or travel expenses to participate at the next CLARIS LPB meeting.



CLARIS | LPB

A EUROPE-SOUTH AMERICA NETWORK FOR CLIMATE ASSESSMENT AND IMPACT STUDIES IN LA PLATA BASIN

The CLARIS LPB Project aims at predicting the regional climate change impacts on La Plata Basin (LPB) in South America, and at designing adaptation strategies for land-use, agriculture, rural development, hydropower production, river transportation, water resources and ecological systems in wetlands.

The CLARIS LPB Project has been divided in 4 inter-related and fully complementary Subprojects:



IRD - Institute for Development Research
CNRS - Centre National de la Recherche Scientifique
[France](#)

UEA - University of East Anglia
[England](#)

ZALF - Leibniz-Zentrum für Agrarlandschaftsforschung
MPG - Max-Planck Gesellschaft Institut
[Germany](#)

CCMC - Euro Mediterranean Center on Climate Research
CESI RICERCA SpA
UNIBO - Universidad de Bologna
[Italy](#)

UCLM - Universidad de Castilla - La Mancha
[Spain](#)

SMHI - Swedish Meteorological and Hydrological Institute
[Sweden](#)

INPE - Instituto Nacional de Pesquisas Espaciais
USP - Universidade de São Paulo
UFSC - Universidade Federal de Santa Catarina
UFPR - Universidade Federal de Parana
[Brasil](#)

CONICET - Consejo Nacional de Investigaciones Científicas y Técnicas
UBA - Universidad de Buenos Aires
INTA - Instituto Nacional de Tecnología Agropecuaria
INA - Instituto Nacional del Agua
[Argentina](#)

UR - Universidad de la República
[Uruguay](#)

UNIGE - University of Geneva
[Switzerland](#)

SUBPROJECT 1

Management, dissemination and coordination activities

Jean-Philippe Boulanger
Valeria Hernández

WP1

Project management
(Leader: Jean-Philippe Boulanger)

WP2

Project dissemination and coordination activities
(Leaders: Valeria Hernández
Jean-Philippe Boulanger)

SUBPROJECT 2

Past and future hydroclimate

Mario Núñez

WP3

Improving our description of recent past climate variability in La Plata Basin
(Leaders: Matilde Rusticucci - Phil Jones)

WP4

Hydroclimate past and future low-frequency variability, trends and shifts
(Leaders: Leila de Carvalho - Myriam Khodri)

WP5

Regional Climate Change assessments for La Plata Basin
(Leaders: Hugo Berbery - Hervé Le Treut)

WP6

Processes and future evolution of extreme climate events in La Plata Basin
(Leaders: Iracema Cavalcanti - Andrea Carril)

COORDINATION

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SUBPROJECT 3

Project interface

Clare Goodess

WP7

An interface for improving prediction capability of climate change societal impacts
(Leaders: Caio Coelho - Jean-Philippe Boulanger)

SUBPROJECT 4

Socio-economic scenarios and adaptation / prevention strategies

Karen Tscherning

WP8

Land use change, agriculture and socio-economic implications
(Leaders: Sandro Schlindwein - Karen Tscherning)

WP9

Water resources in La Plata Basin in the context of climate change
(Leaders: Vicente Barros - Massimo Guerrero)

COMMUNICATIONS UNIT

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TECHNICAL SUPPORT

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