

## Summary of the French contribution to CLIVAR activities

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- **Pacific**

- Organization of the 10th International Conference on Southern Hemisphere Meteorology and Oceanography (10ICSHMO)
- SPICE : special session at 10ICSHMO
- SPICE : 40-day cruise (PANDORA; Solomon Sea); two Coral Sea cruises
- SPICE : HR-XBT line Noumea-Honiara
- SPICE : summary publication in CLIVAR Exchanges
- SSS VOS network maintenance (Noumea-Brest)
- Organization of the 7<sup>th</sup> Pacific Panel (Noumea)
- Contribution to new activities to improve our understanding of the South Pacific Convergence Zone (SPCZ) including a Nature paper (Cai et al. 2012)
- Southeast Pacific: two International joint laboratories: DISCOH (Humbolt Current System Dynamics) et PALEOTRACES (Tropical Paleoclimatology) ([www.ird.fr](http://www.ird.fr))

- **Atlantic**

- Organization of the International Workshop on Seasonal to Decadal Prediction, Toulouse, 13-16 May, 2013 (under WCRP/WGSIP/WGCM, L. Terray Chair of the organization committee)
- Strong participation of French teams to the submitted EU-FP7 PREFACE project on Tropical Atlantic Biases (Coordination N. Keenlyside, U. Bergen)
- Strong involvement of French teams to the SPECS European project on seasonal to decadal prediction (Current focus on resolution increase in coupled models relying on the use of PRACE HPC machines).
- Projects (RISK, MORDICUS) submitted to the French National Research Agency linked to improved understanding of respective contribution of forced and internal variability to Atlantic and global past and future changes
- Joint cruise (Spain-France) CATARINA 2012 in the framework of the FP7 Carbochange project. This cruise continues the OVIDE project (section between Greenland and Portugal carried out every 2 years to monitor meridional transports and carbon fluxes). Ref: Perez et al, 2013
- Start of the French-Brazilian contribution to SAMOC (monitoring of the South Atlantic meridional overturning circulation), with the support of an international ANR project.

- **GEWEX-Africa**

- AMMA-CATCH: hydrometeorological observatory of western Africa ([www.lthe.fr/catch](http://www.lthe.fr/catch))

- **IOC/GOOD Indian**

- Organization of a summer school in India in 2014 on Indian Ocean physical and biogeochemical variability as part of the Indian Ocean Expedition 50th anniversary and of IIOE2.

- Development of a strong Indo-French collaboration on "Ocean-Continent-Atmosphere continuum in the Indian region", including in particular a capacity building in bio-physical Indian Ocean modeling
- Two Indo-French satellites allowing to study Tropical Rainfall (Megha-Tropiques) and coastal sea level variability (AltiKa)
- **Southern Ocean**
  - Joint cruise (South Africa-France) on the GoodHope line with the new South African RV Agulhas II. This ship will continue the GoodHope repeat transects.
  - Two cruises near Kerguelen: KEOPS-2 (S. Blain) / TRACK (Y.H. Park)
  - Drake passage transports: moorings/cruises (C. Provots)
  - Organization of two International Workshop on submesoscale processes with focus on the subantarctic ocean south of Africa. A first workshop was organized in Cape Town , June 3-10, 2012, in collaboration with the ACCESS (<http://www.access.ac.za/>) South African institution. A second one, entitled "Diagnosis of vertical exchanges at submesoscales - and their impacts on ecosystems - from satellite and in-situ observations" was organized in Brest, 28 and 29 November 2012. It was funded by the LABEX Mer (<http://www.labexmer.eu/>) , EUROCEANS, Ifremer, UBO and IRD. S. Speich and P. Klein were the chairs of these two workshops.
  - Tide Gauge network and Tsunami monitoring (ROSAME/SONEL)/ L. Testut
- **Asian-Australian Monsoon**
  - Meeting with IMBER representative at IMBER IMBIZO III workshop to address the identify the main topics related to CLIVAR-IMBER collaboration
- **Global Synthesis and Observations Panel (GSOP)**
  - Contribution to the organization of the ocean synthesis and air-sea flux evaluation workshop, Woods Hoole, USA, 27-30/11/2012 and the the associated report.
  - Contribution to the organization of the 6th GSOP meeting, Woods Hoole, USA, 30/11-1/12/2012.
  - French participation to the international ARGO Project and EuroARGO is strengthened by the start of NAOS (Novel Argo Observing System), a 9-year project led by Ifremer. NAOS will support, for example, the development of deep profilers for a better monitoring of the ocean heat content.
- **WGCM/CLIVAR Working Group on Ocean Model Development (WGOMD)**
  - participation in the second phase of the Coordinated Ocean Reference Experiments (meeting in january 2012 in Venice): French contribution to the joint papers by two ocean simulations based on the NEMO platform, using two different ice models.
  - Contributions to model development and the definition of best practices in ocean modelling, through the French coordination of the NEMO European modelling platform as well as through the DRAKKAR European consortium (focussed on high resolution global ocean simulations).
- **Variability of the American Monsoon Systems (VAMOS)**
- **References**

Cai, W., M. Lengaigne, S. Borlace, M. Collins, T. Cowan, M. J. McPhaden, A. Timmermann, S. Power, J. Brown, C. Menkes, A. Ngari, E. M. Vincent, and M. J. Widlansky (2012) More extreme swings of the South Pacific Convergence Zone due to greenhouse warming. *Nature*, 488, 365-369. doi:10.1038/nature11358.

Pérez, F. H Mercier, Marcos Vázquez-Rodríguez, P Lherminier, A. Velo, P. C. Pardo, G. Rosón., Aida F. Ríos, 2013: Atlantic Ocean CO<sub>2</sub> uptake reduced by weakening of the meridional overturning circulation. *Nature Geoscience*, 6, 146-152, doi:10.1038/ngeo1680