WORLD Climate Research Programme



# **Project Report**

# **Report of the 13th Session of the VAMOS Panel**

Buenos Aires, Argentina 29-31 July 2010

May 2011

ICPO Publication Series No. 156

WCRP Informal Report No: 12/2011

*ICPO Publication Series No.* CLIVAR is a component of the World Climate Research Programme (WCRP). WCRP is sponsored by the World Meterorological Organisation, the International Council for Science and the Intergovernmental Oceanographic Commission of UNESCO. The scientific planning and development of CLIVAR is under the guidance of the JSC Scientific Steering Group for CLIVAR assisted by the CLIVAR International Project Office. The Joint Scientific Committee (JSC) is the main body of WMO-ICSU-IOC formulating overall WCRP scientific concepts.

Bibliographic Citation INTERNATIONAL CLIVAR PROJECT OFFICE, 2007: Asian Australian Monsoon Panel. International CLIVAR Publication Series No. (not peer reviewed).

# Table of contents

| 1 | Executive Summary              | 1 |
|---|--------------------------------|---|
| 2 | List of Actions and Statements | 1 |
|   | Annex A – List of participants | 4 |
|   | Annex B – Meeting agenda       | 7 |

# 1 Executive Summary

The 13th Session of the CLIVAR VAMOS Panel (VPM13) was held on 29-31 July 2010, in Buenos Aires, Argentina, and hosted by the Comisión Nacional de Actividades Espaciales (CONAE), the Servicio Meteorológico Nacional (SMN), and the Instituto Tecnológico Buenos Aires (ITBA). VPM13 was held jointly with the 13th session of the Working Group on Seasonal to Interannual Prediction (WGSIP), which included a one day joint session of the two groups. The presentations given by the meeting participants are available at the meeting webpage

(http://www.clivar.org/organization/vamos/Meetings/VPM13\_meet.php)

The meeting focused on the progress and plans of the VAMOS projects, particularly the North American Monsoon Experiment (NAME), the Monsoon Experiment South America (MESA), La Plata Basin, the VAMOS Ocean-Cloud-Atmosphere-Land Study (VOCALS), and the Intra-American Seas study of Climate Processes (IASCLIP). The panel also discussed the VAMOS contributions to the WCRP cross-cutting themes, as those coming up from the VAMOS Extremes WG, the ACC along the Americas, and activities related to Capacity Building. The implementation of the VAMOS modeling plan was also discussed during the joint VAMOS-WGSIP session. Discussions were held on future VAMOS priorities and how they will fit in the new structure of WCRP. Particular emphasis was put on the linkage between regionally oriented activities in VAMOS and the more global approach that WCRP is emphasizing.

# 2 List of Actions and Statements from VPM13

#### VAMOS Extremes WG

- 1. Expand the analysis of extremes including more information of the North American region and time scales (I. Cavalcanti and S. Schubert)
- 2. Develop an ATLAS of extremes over the Americas (I. Cavalcanti and S. Schubert to lead and VAMOS WG on Extremes)
- 3. Interact with ETCCDI to apply softwares and indices prepared in that project as well as with CLARIS-LPB which has been developing studies on extremes over La Plata Basin, in South America (I. Cavalcanti and S. Schubert to lead and VAMOS WG on Extremes)
- 4. Evaluate the existing and planned simulations, including the new results from CMIP5 IPCC/AR5, regional model results from CLARIS-LPB, seasonal hindcasts, ultra-high resolution (10-20km) global climate model simulations (I. Cavalcanti and S. Schubert to lead and VAMOS WG on Extremes)
- 5. Obtain support for the activities of Siegfried Schubert throug the VAMOS Project Office (J. Meitin)

#### VAMOS ACC Working Group

- 6. Reshape and enhance the working group, rebuilding the group and structure, and including other experts on climate change in the Americas (T. Cavazos and VAMOS co-chairs)
- 7. Rewrite the VAMOS Anthropogenic Climate Change (ACC) in the Americas white paper, updating information to serve as a synthesis report for IPCC AR5 (T. Cavazos and VAMOS extreme WG)

#### VOCALS/AIP Tropical Atlantic Biases Workshop

8. Review the future activities for VOCALS, including the analysis of VOCALS datasets and monitoring of the region to obtain longer time series (Mechoso, R. Wood, and VOCALS WG).

9. Endorse and develop a proposal for a two-day AIP/VOCALS workshop on "Tropical Atlantic Coupled Ocean-Atmosphere-Land Processes", as appended to the VOCALS meeting in March 2011 (P. Zuidema with R. Mechoso, and AIP co-chairs L. Terray and P. Brand)

#### Next VAMOS panel meeting

10. VAMOS to have next panel meeting immediately after the VOCALS/AIP Workshop in Miami, and encourage the AIP to have their panel meeting simultaneously (Co-chairs and C. Ereno to negotiate and arrange details)

#### NAME

- 11. Prepare a comprehensive review article to provide a thorough overview of progress in NAM research that has been achieved over the last 10 years, and identifying 4-5 main research threads that have led to significant improvements in understanding the structure and function of the NAM system. (Gochis and NAM community).
- 12. Prepare a white paper outlining the new research priorities that have emerged from the NAME review article, seek to move NAM research forward, towards the ultimate goals of improved process understanding and improved prediction of the NAM on intra-seasonal to inter-annual timescales (D. Gochis and others in the NAM community)

#### MESA

- 13. Review the objectives, structure and future of MESA, in terms of the research objectives and interest of WCRP, consider the need to enlarge the community of scientists involved in SAMS research, not just for field work and modeling communities, but also the community working on applications, and climate change impacts and adaptation (J.Marengo and MESA SWG)
- 14. Consider the possibility of preparing a white paper outlining the research priorities that have emerged from the MESA (J.Marengo and MESA SWG)

#### VAMOS-LPB

- 15. Provide I. Cavalcanti and P. Salio with information on previous drafts for an LPB field campaign to they take the initiative and explore whether LPB would have a field campaign (H. Berbery)
- 16. Provide Paola Salio with information from on the use of Brazilian radars, considering Luiz Augusto Experiment (I. Cavalcanti)

#### Outreach, Capacity Building and Education in VAMOS

17. Develop initial ideas on some plan on the capacity building efforts in VAMOS, which endorse ongoing activities, and circulate to the panel (L. Goddard and C. Ereno, H. Berbery will contribute with some results/experiences from the IAI/LPB Summer School)

#### WCRP and ICPO plans

- 18. Initiate an email discussion the total WCRP effort on monsoons and continued need for overall coordination (co-chairs & panel members)
- 19. Circulate ideas on how the panel might contribute to the WCRP Open Science Conference (C. Ereno to gather inputs)

#### YOTC MJO Task Force

20. Develop interactions with YOTC MJO Task Force to get synergy with VAMOS on applications of MJO TF forecast products, targeted assessment of forecast skill of MJO impact, and IASCLIP forecast forum plus the MJO Task Force forecast (C. Ereno and H. Berbery will contact Duan Waliser to identify a person to serve as link VAMOS-YOTC MJO TF)

#### Next issue of the VAMOS newsletter

21. Propose the Future Activities in VAMOS as main theme for the next VAMOS! Newsletter, with the following suggested articles: New priorities in NAM research, Model Biases in the Atlantic, Capacity building / Transfer of science to users, and Ecosystem Functional Types in Regional Modeling (C. Ereno coordinate with co-chairs)

## Actions and Recommendations from the Joint VAMOS/WGSIP 2010

23. Make a survey within the VAMOS community to identify science and research activities that are being carried out according to the modeling plan, and use this information to modify the modeling plan if needed. (C. Saulo and B. Kirtman)

#### Annex A – VPM13 List of Participants

#### Laura S. Aldeco

Servicio Meteorológico Nacional 25 de Mayo 658, 1002 Buenos Aires. Argentina Phone: +54 11 5167-6767 x 18223 E-mail: <u>aldeco@smn.gov.ar</u>

#### Tercio Ambrizzi

Unveristy of Sao Paulo Rua do Matao, 1226 SP/SP Brazil 05508-050 Phone: +55 11 3091 4762 E-mail: ambrizzi@model.iag.usp.br

#### **Marcelo Barreiro**

Facultad de Ciencias Universidad de la República, Uruguay Iqua 4225, Montevideo, Uruguay Phone: +59 8 2 525 8624 E-mail: <u>barreiro@fisica.edu.uy</u>

#### Julian Baez Benitez

Centro de Tecnología Apropiada Universidad Católica Ntra. Sra. de Asunción Tte. Cantaluppi y G. Malinas Paraguay Phone: +59 5 21-311820 E-mail: Julian-baez@uca.edu.py

#### E. Hugo Berbery

University of Maryland Department of Atmospheric & Oceanic Sci. 3427 CSS Bld #224 College Park, MD 20742 USA Phone: (1) 301-405-5351 E-mail: <u>berbery@atmos.umd.edu</u>

#### Inés Camilloni

CIMA University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires, Argentina Phone: +54-11 4576 3398 E-mail:

**Claudia Campetella** CIMA Dep. Atmospheric & Oceanic Sciences University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires, Argentina Phone: +54-114576 3364 E-mail: <u>claudiac@cima.fcen.uba.ar</u> **Iracema Cavalcanti** 

CPTEC/INPE Rod. Presidente Dutra Km 40 Cachoeira Paulista, S.P. Brazil Phone: +55 12 3816-8476 E-mail: iracema@cptec.inpe.br

#### Tereza Cavazos

Dept. Oceanografía Física, CICESE Ensenada, B.C. Mexico Phone: +52 646-178-2684 E-mail: <u>tcavazos@cicese.mx</u>

### **Ping Chang**

Texas A&M University Dept. of Oceanography, College Station TX, 77843 USA Phone: (1) 919 845-8196 E-mail: ping@tamu.edu

#### **David Enfield**

University of Miami Rosenstiel -CIMAS 4301 Rickenbacker Causeway, Miami, FL 33149 USA Phone: (1) 305-361-4351 E-mail: <u>david.enfield@noaa.gov</u>

#### **Carlos Ereño**

International CLIVAR Project Office Dep. Atmospheric & Oceanic Sciences University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires, Argentina Phone: +54-114576 3364 x 21 Fax: +54-11-4732-2098 E-mail: carlos ereno@yahoo.com

#### **David Gochis**

NCAR 3450 Mitchell Lane, Boulder, Colorado 80301, USA Phone: (1) 303-544-2040

#### E-mail: gochis@ucar.edu

#### Lisa Goddard

International Research Institute for Climate & Society (IRI) 61 Route 9W, 228 Monell Palisades, NY 10964, USA Phone: (1) 845-680-4430 Fax: (1) 845- 680-4865 E-mail: goddard@iri.columbia.edu

#### Jin Huang

NOAA Climate Program Office Silver Spring, MD 20910 USA Phone: (1) 301-734-1226 e-mail: jin.huang@noaa.gov

#### Ben Kirtman

University of Miami – RSMAS 4600 Rickenbacker Causeway, Miami, FL 33149 USA Phone: (1) 305-595-7000 E-mail: <u>bkirtman@rsmas.miami.edu</u>

#### **Carlos R. Mechoso**

University of California Los Angeles Depart. Atmospheric & Oceanic Sciences USA Phone: +1 310-825-3057 E-mail: mechoso@atmos.ucla.edu

#### José Meitín

NCAR/EOL P.O. Box 3000 Boulder, CO 80307 USA Phone: (1) 303-497-8168 E-mail: meitin@ucar.edu

#### Claudio Menéndez

CIMA Dep. Atmospheric & Oceanic Sciences University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires Argentina Phone: +54-114576 3364 E-mail: menendez@cima.fcen.uba.ar

#### **Aldo Montecinos**

Departmento de Geofisica

University of Concepcion Chile E-mail: <u>amonteci@dgeo.udec.cl</u>

#### **Matilde Nicolini**

CIMA University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires Argentina E-mail: <u>nicolini@cima.fcen.uba.ar</u>

#### Olga C. Penalba

Dep. Atmospheric & Oceanic Sciences University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires Argentina Phone: +54-114576 3213 E-mail: penalba@at.fcen.uba.ar

#### Mónica Rabolli

CONAE Paseo Colón 751, 5° piso 1063 Buenos Aires Argentina Phone: +54-11-4331-0074 ext. 212 E-mail: mrabolli@conae.gov.ar

#### Federico Robledo

Dep. Atmospheric & Oceanic Sciences University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires Argentina Phone: +54-114576 3356 E-mail: <u>frobledo@at.fcen.uba.ar</u>

### Paola Salio

CIMA/ Dep. Atmospheric & Oceanic Sciences University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires Argentina Phone: +54-114576 3356 x 31 E-mail: salió@cima.fcen.uba.ar

#### **Celeste Saulo**

E-mail: jls@smn.gov.ar

CIMA / University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires, Argentina Phone: +54-11-4787-2693 E-mail: saulo@cima.fcen.uba.ar

#### **Ramiro Saurral**

CIMA / University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires Argentina Phone: +54-11-4576-3398 E-mail: saurral@cima.fcen.uba.ar

#### **Siegfried Schubert**

NASA/GSFC Global Modeling & Assimilation Office NASA/GSFC, Code 610.1, MD 20771 USA Phone: (1) 301 614-6145 E-mail: <u>Siegfried.d.schubert@nasa.gov</u>

# Anna Sorensson

CIMA University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires Argentina E-mail: <u>sorensson@cima.fcen.uba.ar</u>

#### José Luís Stella

Servicio Meteorológico Nacional 25 de Mayo 658, 1002 Buenos Aires. Argentina Phone: +54 11 5167-6767 x 18273

#### Ana Graciela Ulke

Dep. Atmospheric & Oceanic Sciences University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires Argentina Phone: +54-114576 3364 x 17 E-mail: <u>ulke@at.fcen.uba.ar</u>

## **Carolina Vera**

CIMA/DCAO University of Buenos Aires Pab II – 2nd floor - Ciudad Universitaria 1428 Buenos Aires Argentina E-mail: <u>carolina@cima.fcen.uba.ar</u>

# Annex B – VPM13 Agenda

#### Thirteenth Annual Meeting of the WCRP/CLIVAR/VAMOS Panel (VPM13) Buenos Aires, Argentina, 29-31 July 2010

Hosted by Comisión Nacional de Actividades Espaciales (CONAE) Servicio Meteorológico Nacional (SMN) Instituto Tecnológico Buenos Aires (ITBA)

#### Thursday, July 29, 2010 - Morning Session, Plenary - Reports Chair: Hugo Berbery

9:00 am Welcome

- Local welcome

- VAMOS Co-Chairs H. Berbery

| 9:10 am      | Local                              | Carolina Vera                    |
|--------------|------------------------------------|----------------------------------|
| 9:20 am      | VAMOS Chairs' Report               | H. Berbery/J. Marengo            |
| 9:35 am      | <u>US CLIVAR</u>                   | D. Legler presented by H.Berbery |
| 9:45 amCLIVA | <u>R SSG issues &amp; outcomes</u> | C. Ereño                         |
| 10:00 am     | Update on NOAA Climate Program     | J. Huang                         |
| 10:20 am     | Morning break                      |                                  |

Chair: Tereza Cavazos

| WCRP (Reestructuration)                | Carolina Vera   |
|--|---|
| NAME's New Science Priorities          | Dave Gochis   |
| Tropical bias in the tropical Atlantic | Ping Chang  |
| YOTC Task Force on MJO                 | Chidong Zhang   |
| Lunch                                  |   |
|  | NAME's New Science Priorities<br>Tropical bias in the tropical Atlantic<br>YOTC Task Force on MJO |

#### **Afternoon Session, Plenary – Reports**

Chair: Iracema Cavalcanti

| 2:00 pm | An Update on VAMOS Extremes Working Group Activities and Plans  |                              |
|---------|---|------------------------------|
|         | •   | S. Schubert/I. Cavalcanti    |
| 2:20 pm | <b>VOCALS Progress and Plans</b>                                | Roberto Mechoso              |
| 2:40 pm | MESA's Achievements   | Jose Marengo/Tercio Ambrizzi |
| 3:00 pm | IASCLIP Progress  | Dave Enfield                 |
| 3:20 pm | IASCLIP observations  | Paquita Zuidema              |
| 3:40 pm | Afternoon break   | -                            |
| 4:00 pm | VAMOS and THORPEX   | C. Saulo                     |
| 4:20 pm | Capacity Building   | L. Goddard                   |
| 4:40 pm | General Discussion on VAMOS and the Climate across the Americas |                              |
| 6:00 pm | Adjourn   |                              |

#### Friday, July 30, 2010 - Morning Session, Plenary – Climate Science in the Region Chair: Chidong Zhang

| 9:00 am        | VAMOS Project Office            | J. Meitin/S. Williams            |
|----------------|---------------------------------|----------------------------------|
| 9:20 am        | Climate predictability in South | heastern South America           |
|                |                                 | Marcelo Barreiro                 |
| 9:40 amEl Nino | events in different PDO phas    | es Tercio Ambrizzi               |
| 10:00 am       | Climate Variability at Interan  | nual and interdecadal timescales |
|                |                                 | Aldo Montecinos                  |
| 10:20 am       | Morning break                   |                                  |
|                |                                 |                                  |
|                | (                               | Chair: Dave Gochis               |
|                |                                 |                                  |

| 10:50 am | Regional datasets                       | Olga Penalba   |
|----------|---|----------------|
| 11:10 am | Mesoscale Convective Systems            | Paola Salio    |
| 11:30 am | Biomass burning and transports          | Graciela Ulke  |
| 11:50 am | Land surface forcing in climate modelin | Anna Sőrensson |
| 12.10 pm | ACC in VAMOS                            | Tereza Cavazos |
| 12:30 pm | Lunch                                   |                |

#### Friday, July 30, 2010 - Afternoon Session, Plenary – Climate across the Americas Chair: Hugo Berbery

| 2:00 pm | Aquarius/SAC-D Mission Overview                         | Monica Rabolli (CONAE) |
|---------|---|------------------------|
| 2:20 pm | - General discussion on interactions with other Panels: |                        |
|         | Model biases workshop, AIP/VOCALS/IASC                  | CLIP                   |
|         | - VAMOS Future Plans and Paths                          |                        |

### 3:40 – 4:00 pm Afternoon break

#### 4:00 pm Executive session

- VAMOS Future and Priorities
- VAMOS ICPO plans
- WG on Extremes
- WG on ACC
- VAMOS Modeling and interactions with WGSIP and WGCM
- Initiative in Outreach, Capacity Building, and Education (should VAMOS have one?)
- Next issue of VAMOS newsletter, funding and themes
- VAMOS panel membership
- Issues/actions for VAMOS Panel Adjourn

## Saturday, July 31, 2010 - Morning Session, Joint $\ensuremath{\mathsf{VAMOS/WGSIP}}$

Chair: Adam Scaife

| 9:00 am <i>Overview of S. American Projects</i><br>- <u>CLIVAR/GEWEX Project for La Plata Basin (LPB)/CLARIS-LPB</u>  |                  |  |  |
|---|------------------|--|--|
| <b>`</b>  | H. Berbery       |  |  |
| - CORDEX plans for S. America   | S. Solman        |  |  |
| Model biases  | R. Mechoso       |  |  |
| Overview of SIP in S. America   | Pedro Leite      |  |  |
| VAMOS-WGSIP Modeling Collaboration  |                  |  |  |
| Forecast metrics for VAMOS applications   | C. Saulo         |  |  |
| Update of CHFP project & VAMOS Modeling Plan  | B. Kirtman       |  |  |
| Develop Plans for Implementation and Future Experir   | nents B. Kirtman |  |  |
| 12:30 pm <i>Lunch</i>   |                  |  |  |
| Saturday, July 31, 2010 - Afternoon Session, Joint VAMOS/WGSIP<br>Chair: Celeste Saulo  |                  |  |  |
| 2:00 pm <u>Subseasonal Prediction</u>   | A. Kumar         |  |  |
| Invited talks on S. American research   Downscaling applications to hydrological models Ramiro Saurral   Land-atmosphere coupling Anna Sorensson   Climate variability and extremes Federico Robledo   Seasonal Forecast at National Meteorological Service of Argentina L. Aldeco/J.M. |                  |  |  |
| 5:30 pm VDM13 & WCSID13 ands  |                  |  |  |

5:30 pm **VPM13 & WGSIP13 ends** 

National Oceanography Centre, Southampton University of Southampton Waterfront Campus European Way, Southampton SO14 3ZH United Kingdom Tel: +44 (0) 23 8059 6777 Tel: +44 (0) 23 8059 6204 Email: icpo@noc.soton.ac.uk