ALCUE NET

Latin America, Caribbean and European Union Network on Research and Innovation

ALCUE NET/CORDEX workshop on biodiversity and climate change

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WCRP Mission & Objectives

World Climate Research Programme supports **climate-related decision making** and **adaptation planning to climate change** by coordinating research required to improve

(1) climate predictions and

(2) our understanding of human influence on climate

"for use in an increasing range of practical applications of direct relevance, benefit and value to society"

(WCRP Strategic Framework 2005-2015).

Background on CORDEX

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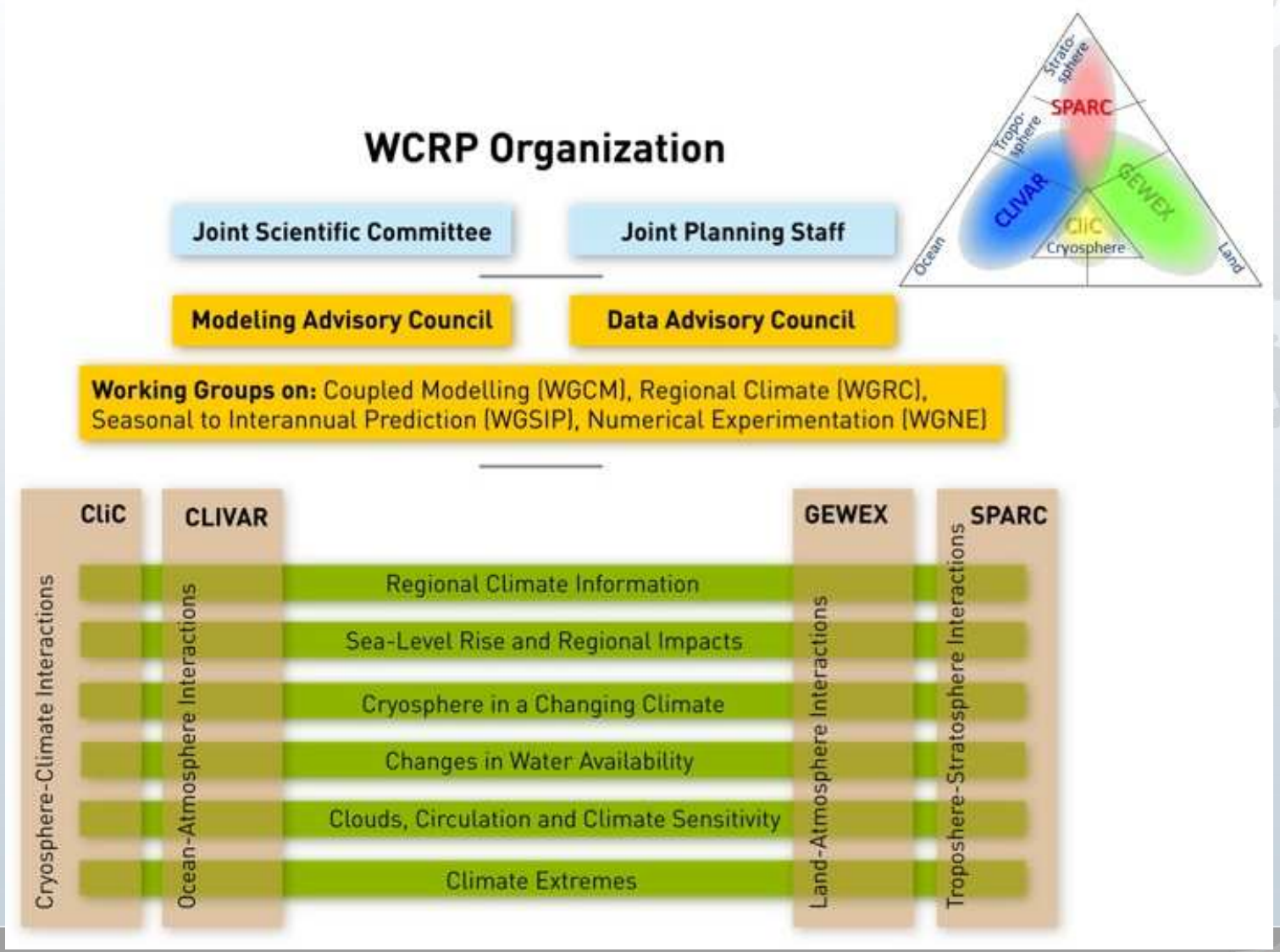

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WCRP Working Group on Regional Climate

The WGRC's mission is to coordinate regional climate research and science-based knowledge development for decision makers.

Co-Chairs:
Clare Goodess, Univ. East Anglia, United Kingdom
Bruce Hewitson, Univ. Cape Town, South Africa

2nd Session of WGRC, 14-15 March 2014
Montevideo URUGUAY

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COordinated Regional Downscaling EXPeriment
CORDEX (http://wcrp-cordex.ipsl.jussieu.fr)

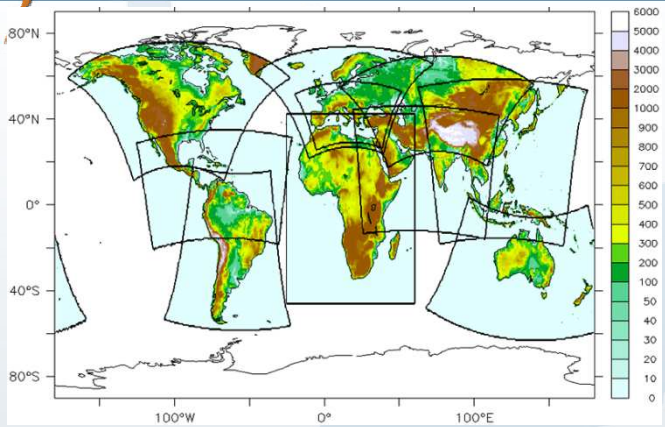
- CORDEX is a WCRP research project to provide global coordination of regional climate downscaling for improved regional climate change adaptation and impact assessment.

- Modelling framework designed to:

  - Evaluate and improve RCD models and techniques,
  - Provide a coordinated set of RCD-based projections/predictions for regions worldwide, and
  - Facilitate the communication with the IAV community and the involvement of the research community from developing countries

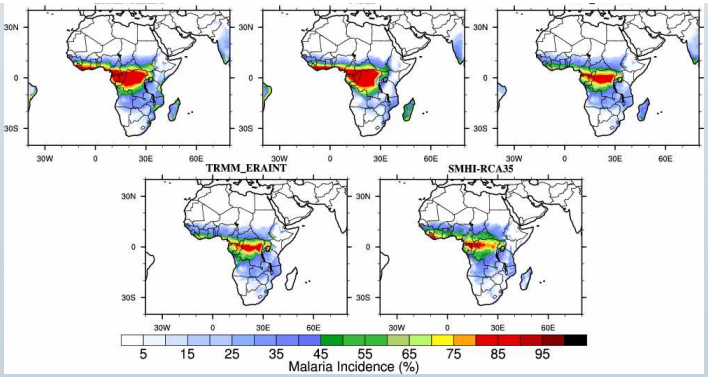
Background on CORDEX

Coordinated Regional Climate Downscaling (CORDEX)



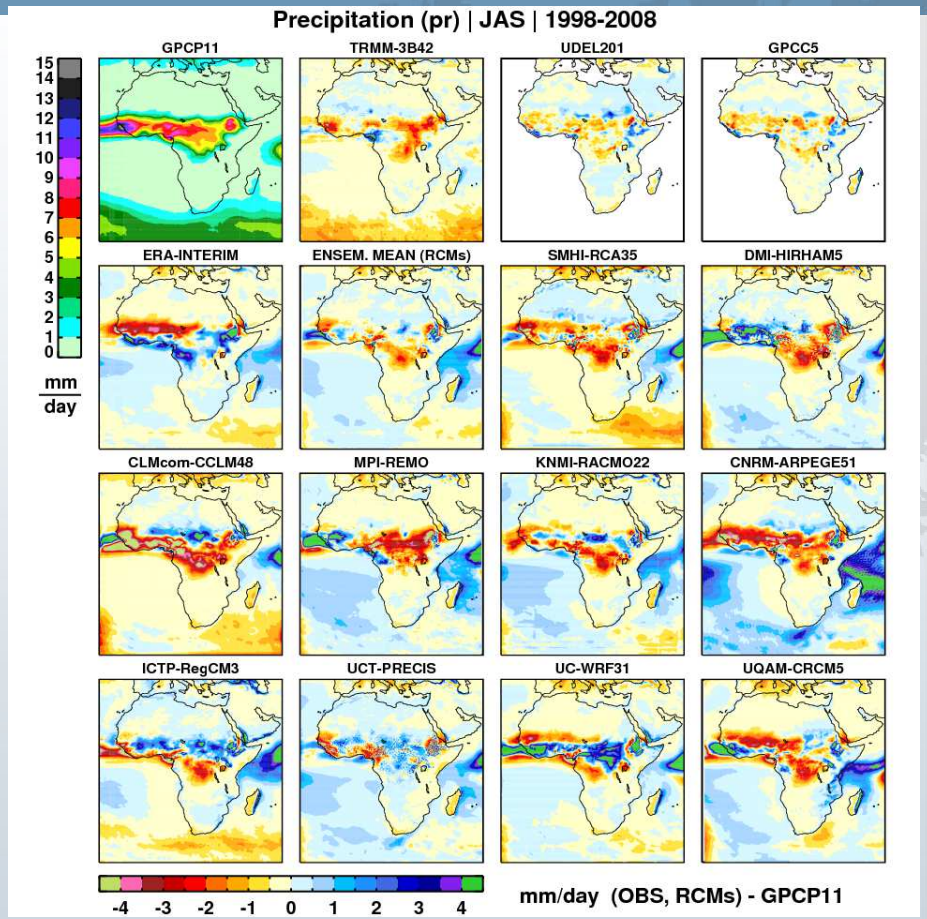
•14 domains with a resolution of 0.44° (approx. 50x50km²), initial focus on Africa
•Also higher res for some domains (by some institutions)

Dynamic Malaria Model driven by climate observations & CORDEX simulations (mean annual prevalence (%)



SMHI (50km²) reproduces well the mean annual malaria incidence pattern with respect to TRMM-ERAINT & GPCP-ERAINT control experiment

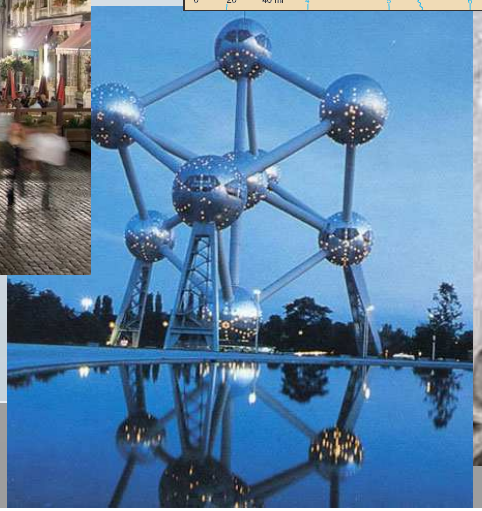
Nikulin, G., et al, J. Clim, 2012

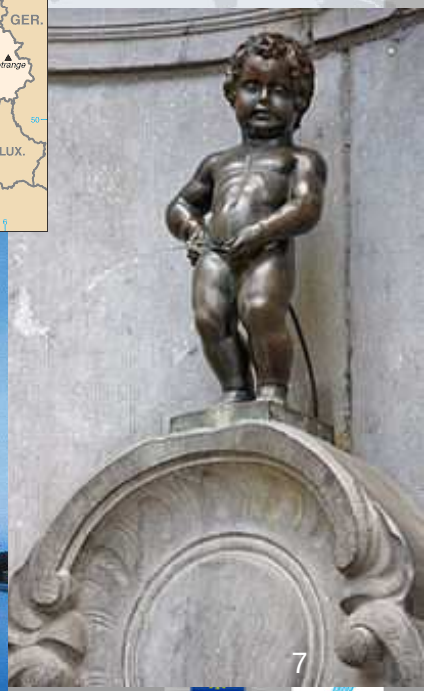


Example of CORDEX multi-model data available for Africa. From Top to bottom and left to right: GPCP mean July-August-September precipitation for 1998-2008 and differences compared to GPCP in the other gridded observations, and the individual RCMs with their ensemble average.

International Conference on Regional Climate - CORDEX 2013

- 4-7 November 2013, Brussels, Belgium
- Partnership between WCRP, IPCC and EC
- Timed between IPCC WGI and WGII releases
- 1st day: High Level Session, Stakeholder dialogue
- 2-4th days: Scientific Conference
- http://cordex2013.wcrp-climate.org/
- 500+ participants, 97 countries





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CORDEX 2013

- Recommendations
  - Enhance two-way dialogue with end-users
  - Increase attention on assessing added value
  - Revisit CORDEX domains and their physical basis
  - Develop metrics to assess added value
  - Support the development and dissemination of high resolution observational data sets
  - Develop high resolution pilot studies
  - Communicate uncertainties for VIA and decision making
  - Promote training and capacity building efforts in key regions
- Implementation to be discussed at CORDEX SAT meeting in Trieste, Italy, 16-17 May 2014

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First session of the CORDEX Science Advisory Team (SAT)

16-7 May 2014 at the International Centre for Theoretical Physics (ICTP), Trieste, Italy

- Next steps for CORDEX
  - Future strategy of CORDEX will require input from the larger community
  - SAT has identified two broad directions:
    - moving to a **baseline resolution of 25 km**
    - development of fine-resolution "**pilot regions**".

Planning for the Flagship Pilot Studies (FPS), would entail high resolution (few km) regional climate simulations in selected regions that also have good observational records at high resolution.

This might coincide with areas that have had intense field study by biologists

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The WCRP Conference for Latin America and the Caribbean,
Developing, Linking, and Applying Climate Knowledge

Montevideo, Uruguay on 17-21 March, 2014.

Outcomes

1) *The need to organize activities to foster communication and discussion among the different components of the decision-making process*
2) *The need to involve social scientists to fill the existent gap between the scientific community and the users*
3) *The need to better communicate uncertainties and the limitation of the climate information as well as to help managing the risks*
4) *The need to conduct integrated, interdisciplinary* ***climate-related ecosystems and biodiversity vulnerability assessments*** *on a local scale*

WCRP VAMOS/CORDEX Workshop on Latin-America and Caribbean (CORDEX LAC): Phase I - South America

Lima, Peru on 11 – 13 September 2013

This training workshop was organized by the WCRP in partnership with ICSU-ROLAC, the IAI and the Caribbean Community Climate Change Centre (5Cs). 70 participants from 19 countries attended the workshop, of which around 50% were early-career scientists.

WCRP VAMOS/CORDEX Workshop on Latin-America and Caribbean (CORDEX LAC): Phase Ii – The Caribbean

Santo Domingo, Dominican Republic on 7 – 9 April 2014

38 participants from 16 countries within North America, Latin America and the Caribbean plus invited speakers from South Africa and Russia attended the Workshop. Most of them were early career scientists.

Training activity, guided by Dr. Chris Lennard, was developed along three training sessions with the main aim of training the participants to gain a deeper understanding of approaches for developing useful climate-relevant messages for policy development.

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ALCUE NET – Latin America, Caribbean and European Union Thematic Workshop on Biodiversity and Climate Change Co-organized by Colciencias, Colombia and IRD, France on Santa Marta, Colombia, 4 – 6 March 2014

- **Objectives of the workshop**:
  - Identification of key topics for bi-regional research and innovation cooperation
  - Promotion of networking to foster and define future joint activities

- **Participants:**
  - The workshop was attended by 53 participants from 20 countries, mostly researchers and national authorities
  - LAC: 12 countries / 34 participants
  - EU: 8 countries / 19 participants

Formulation of three topics of common interest to be recommended to the ERA NET-LAC

The topics have emerged from the discussions held during the Santa Marta workshop. They have been developed in the thematic report on biodiversity and climate change submitted in late March to MINCyT (ALCUE NET coordinator) and DLR (ERA NET-LAC coordinator)

a) **Topic 1: Biodiversity assessment and monitoring**
b) **Topic 2: Observatories network**
c) **Topic 3: Ecosystem-based adaptation and resilience**

ALCUE NET /CORDEX LAC III workshop on Biodiversity and Climate Change

Proposed venue: Bogota, Colombia

Duration of the meeting: 2.5 days

Proposed dates: Ending May or beginning June 2015

Proposed attendees: 20-25 experts on biodiversity and climate downscaling from Latin America / Europe countries involved in ALCUE NET plus around 5 special guests.

Efforts will be made to get a good number of the invitees which already have been involved in either the CORDEX LAC workshops or the ALCUE NET workshop on biodiversity and climate change

Rationale, motivation and justification:

(1) To take advantage of the first two CORDEX-LAC workshops and the ALCUENET Thematic Workshop on Biodiversity and Climate Change to organize a joint ALCUENET / CORDEX workshop on biodiversity and climate change.

(2) Bring together key people from the communities of biodiversity and climate downscaling to identify user knowledge needs as well as on-going climate modelling activities within the CORDEX framework within the region.

Specific objectives and key agenda items:

- To develop a capacity building effort to evaluate regional climate downscaled model projections, and applications to biodiversity
- To provide targeted downscaled information for impact assessment analysis, and
- To plan strategies for adaptation/mitigation options.

Anticipated outcomes (deliverables):

(1) Identification of climate information needs for biodiversity applications and the available regional downscaling efforts that can be used for improve their studies
(2) Improved interactions between the climate science and biodiversity communities, in Latin America, Caribbean and the European Union
(3) Better synergy between biodiversity and climate science regional activities

Format: Targeted presentations and discussion sessions. A training activity is proposed with the main aim of training the participants to gain a deeper understanding of approaches for developing useful climate-relevant messages for policy development.

Science Organising Committee: A group of 4/5 scientists with preferable experience in organizing previous CORDEX/ALCUENET workshops

Local Organising Committee: Members proposed by COLCIENCIAS

Proposed funding sources: ALCUENET around **€ 40K**, and WCRP around **USD 10K**. Other possible sources of support such as National and/or Regional funding agencies will be contacted.

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THANK YOU!

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