

WCRP-UNESCO (GEWEX/CLIVAR/IHP) Workshop on metrics and methodologies of estimation of extreme climate and weather events

27-29 September 2010, Paris, France, UNESCO headquarters

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Background documents and activities:

The IPCC WGI and WG-II Special Report on “Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation” (Scoping meeting in Oslo, 23-26 March 2009).

US-CIVAR USGCRP report on extremes “Weather and Climate Extremes in a Changing Climate” (Regions of Focus: North America, Hawaii, Caribbean, and U.S. Pacific Islands)

“Guidelines on Analysis of extremes in a changing climate in support of informed decisions for adaptation” by the joint CCI/CLIVAR/JCOMM Expert Team on Climate Change Detection and Indices (ETCCDI)

International Hydrological Programme (IHP) of UNESCO activities overlooking and aiming at water resource management and capacity building

Why we need this Workshop?

Despite the progress, gaps in the problem areas still exist:

- Insufficient quality and sampling of observational data
- Inadequate resolution of model simulations
- The same methods applied to the data of different resolutions require different approaches

Advanced statistical methodologies for estimation of extremes themselves have not yet been exploited to the full extent

- Spatial aspects of extremes and existing trouble in overcoming "scaling" problems
- "Compound events": unclear what kinds of pre-conditions lead to extreme outcomes

We will not be able to fully understand what metrics and methodologies we should develop unless we understand the physical processes of the extremes

The Workshop focus and aim

Workshop focus:

phenomenology and methodological aspects of the quantitative estimation of different weather and climate extremes under observed and future climate conditions using observational and model data.

Workshop aim:

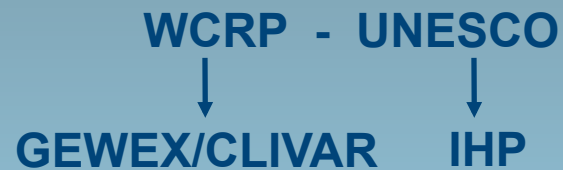
to facilitate an open dialogue of climatologists from different areas, data producers, statisticians and users (e.g. insurance companies) on the future strategy for the development of robust and reliable characteristics of extremes and optimal methodologies for their estimation.

Workshop time and venue, leading agencies and format

Time and venue

27 Sep – 01 Oct (3 days of this week) 2010
Paris, UNESCO Headquarters

Leading agencies



Comment: Since the joint CCI/CLIVAR/JCOMM Expert Team on Climate Change Detection and Indices (ETCCDI) is involved, consider CCI/JCOMM/WMO to be the leading agency too.

Format

80-150 people, open or limited
keynote speakers with posters subordinated by
short presentations

Workshop planning history and status

August 2009: (Melbourne, GEWEX Conference) – first idea
November 2009: email exchange – preparing The Concept & Planning Paper
December 20, 2009: The Concept & Planning Paper is finalised
January 2010: dates are tentatively set
web launched (www.extremeworkshop.org)
provisional agenda draft

WE ARE HERE

February 2010: agenda finalised
keynote speakers approached and their list is finalised
web page
approaching co-sponsors (letters to be sent to the agencies)

Comment: who should sign/co-sign? (WCRP or WCRP with UNESCO)

February 2010: application to Volkswagen Stiftung (Olga Zolina & Siegfried Demuth)
applications to NOAA OGP and NSF (Anna Pirani & Olga Zolina)

March-April 2010: deadline for abstracts

April-May 2010: final agenda adjustments

The Workshop structure

Sessions:

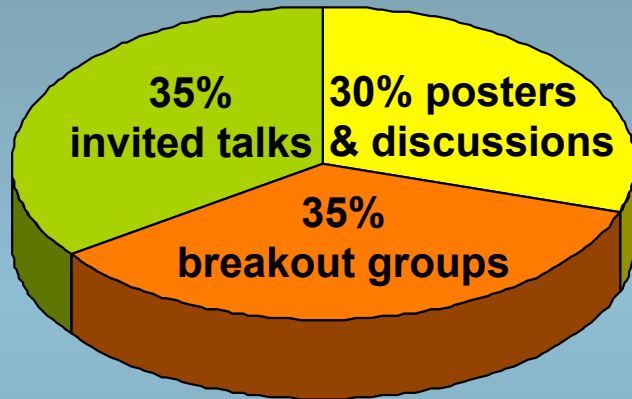
- **Hydrological extremes (precipitation, droughts, flooding and river discharge) including compound hydroclimate extremes**
- **Extremes in temperature conditions**
- **Extreme tropical and extratropical cyclones and associated wind waves and storm surges**
- **Methodologies for estimation of extremes**
- **Risk assessment**

Breakout groups:

- **Data requirements and availability, including data policy**
- **Representation of extreme events in climate and operational models, including consideration of scaling and spatial scales of extremes**
- **Methodologies for estimation of extremes across areas and disciplines**

The Workshop structure

Time frame 3 full days



Provisional scientific organizing committee

Siegfried Demuth (UNESCO/IHP)
Valery Detemmerman (WCRP)
Sergey Gulev (IORAS, Moscow)
William Gutowski (Iowa State University)
Albert Klein Tank (KNMI)
Rick Lawford (University of Manitoba)
Anna Pirani (CLIVAR IPO)
Ron Stewart (University of Manitoba)
Olga Zolina (University of Bonn)
Francis Zwiers (Environment Canada)

Projected funding

<u>Costs:</u>	Rent of facilities (will be zero in case UNESCO offers rooms for free)	0 – 3000 \$
	Logistics: coffee (6 times x 100 people x 3 USD)	~1800 \$
	Conference packages (100 people x 20 USD)	~2000 \$
	Travel (ideally ~20-30 people x1500 USD, or partial travel)	~30000 – 45000 \$

Sponsors

Basic: *WCRP, IHP* **????**

External major (applications): *US agencies (NOAA OGP, NSF),
Volkswagen Stiftung (Germany)*

External minor (to be approached): DLR
DWD
Eumetsat
ESA
CNES
CNRS
Insurance companies (Munich RE , others)
Russian Academy of Science
Russian foundation for basic research

Projected lump sum on external: **0 – 40000 \$**

Organization fee: preferably to avoid, but in case of short of funds 100x100 USD **~10000 \$**