WORLD CLIMATE RESEARCH PROGRAMME: EXTREMES

Ronald Stewart

WCRP STRATEGIC FRAMEWORK ...

To facilitate analysis and prediction of Earth system variability and change for use in an increasing range of practical applications of direct relevance, benefit and value to society

From JSC 28 ....

The WMO Secretary General has said that the questions he is asked most frequently by the media are about climate extremes

WCRP EXTREMES STATUS

- Issue: Important
- Status: Lots of activities (CLIVAR, GEWEX, CliC) but …
- Plans: Step-by-step forward

WCRP Extremes

- To **summarize, compare and assess definition(s) of climate extremes** and develop a common language amongst researchers and end users.
- To design an **intercomparison framework** through which observations, model representations and projections can be assessed and by which changes in climate extremes can be better evaluated.
- To **accelerate progress on the prediction of climate extremes** with a focus on developing capabilities and products which facilitate practical applications for stakeholders and regions around the world.
- To **assess and improve the observational and dataset framework** for extremes
- To determine how **extremes are changing and varying and why**

SPECIFICS

Recent/future activities:

1. October 2010: Extremes workshop, Paris

2. March 2011: drought workshop, Barcelona

3. November 2011: WCRP Open Conference

to (as examples) ...

1. White Paper on drought prediction, BAMS

2. Overall plan to move forward

Paris Workshop - Recommendations

- WCRP with its core projects has to put more power on the development of the improved high temporal resolution (sub-daily) datasets that can be used to assess changes in extreme rainfall, drought, heat waves, floods, and storms.
- WCRP together with WGCM has to include in the agenda of model evaluation the focus on the model’s ability to replicate extremes.

CONTINUED ...

- WCRP core projects (foremost GEWEX and CLIVAR) need to concentrate on determination of the main phenomena responsible for extremes and improved understanding of the relevant physical processes.
- Special action is required on the development of the robust statistical methods for assessing extremes and their uncertainties and making these tools available for wide-spread use.
- An activity on analysis of extremes utilizing data archived by the WCRP Coupled Model Intercomparison Project should be planned and launched in the near future

SUMMARY

WCRP is developing a research program on extremes

It is in its infancy but is already beginning to make an impact