

# World Climate Research Programme's GEWEX Panels' review "Grand Challenge"

Reflections on the review & assessment process

## The SSG review

The SSG receives up-to-date progress reports

- Comprehensive
- Impressive
- Excellent

The Science evolves as reported in Panels' activity

The SSG review process can itself evolve as well?

- Start by defining activity paths (e.g. GCs output)

# A GC pathway to wide-spread benefit

- White-Paper
- Thematic Workshop(s)
- News-Item(s) (e.g. BAMS, Newsletters)
- Special-Issue(s) Journal-collection
- High impact publication(s)
- R2O-transfer & Service uptake
- O2R-transfer & Programmatic uptake (WCRP,...)

## GC measures of success

- A SMART review of GC actions/achievements
  - Specific (meetings, agendas, outcomes)
  - Measurables (incremental advances w.r.t. SSG<sup>-1</sup>)
  - Accepted (by SSGs and Panel Members)
  - Reasonable (achievable in a matter of months)
  - Time-bound (Q1 to Q4 in a given year)
- An incremental approach (annually reviewed)
  - small (manageable) actions to advance each topic
  - distributed (inclusive) across the community

## About SSG review preparation

- Rigorous, timely, written & orally reported
- Inspired by national/international standards
- Reports submitted by a due date
  - Structured in parts
  - Word-count limited?
  - Available weeks before SSG for review
- Reports covering achieved & ongoing activity

## About SSG review interactions

- Presentation to SSG structured in 3-blocks (e.g. 15-minutes per block) focusing
  - Novelty and Innovation
  - Impact of the Research
  - Research to Operation transfer
- With “in-camera evaluation” by SSG (1-2 hour) with parallel session among GEWEX Panels
- SSG Responses & Recommendation
  - in written-form by a due-date

# WCRP GC and a Sustainable future

- **How do GCs fit the SDGs?**
  - Linkages with the Sustainable Development Goals SDGs
  - The GC actions agenda
  - The GC/SDG matrix (eg. GCOS-200)



Table 5. The Sustainable Development Goals linked to the climate observations, as categorized in Table 2.

	Energy & Temperature	Other Physical Properties	Carbon Cycle and other GHGs	Hydrosphere	Snow & Ice	Biosphere	Human Resource Use
1: No poverty							
2: Zero hunger							
3: Good health and well-being							
4: Quality Education							
5: Gender equality							
6: Clean water and sanitation							
7: Affordable and clean energy							
8: Decent work and economic growth							
9: Resilient and sustainable industry and infrastructure							
10: Reduced inequalities							
11: Sustainable cities and communities							
12: Responsible consumption and production							
13: Climate action							
14: Life below water							
15: Life on land							
16: Peace, justice and strong institutions							
17: Partnerships for the goals							

See Table 5 of GCOS-200 page 52

[https://unfccc.int/files/science/workstreams/systematic\\_observation/application/pdf/gcos\\_ip\\_10oct2016.pdf](https://unfccc.int/files/science/workstreams/systematic_observation/application/pdf/gcos_ip_10oct2016.pdf)

# WCRP Grand Challenges fit a big-project





# WCRP Organization

**Joint Scientific Committee**

**Joint Planning Staff**

**Modeling Advisory Council**

**Data Advisory Council**

**Working Groups on: Couple Modeling (WGCM), Region Climate (WGRG),  
Seasonal to Interannual Prediction (WGSIP), Numerical Experimentation (WGNE)**

**CLIC**

**CLIVAR**

**Grand Challenges**

**GEWEX**

**SPARC**

Cryosphere-Climate Interactions

Ocean-Atmosphere Interactions

Sea-Level Rise

Cryosphere in a Changing Climate

Changes in Water Availability

Climate sensitivity and Clouds

Climate Extremes

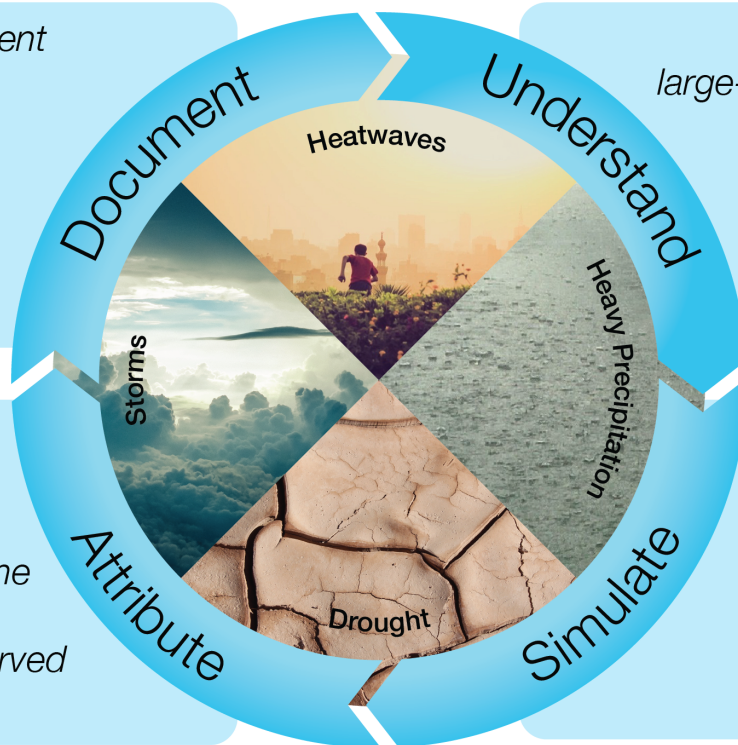
Land-Atmosphere Interactions

Troposphere-Stratosphere Interactions

# 4 main extremes, 4 over arching themes

*Are existing observations sufficient to underpin the assessment of extremes?*

*What are the relative roles of large-scale and regional or local-scale processes, as well as their interactions, for the formation of extremes?*



*How can we determine the contributors to observed extreme events and to changes in the frequency and intensity of observed extremes?*

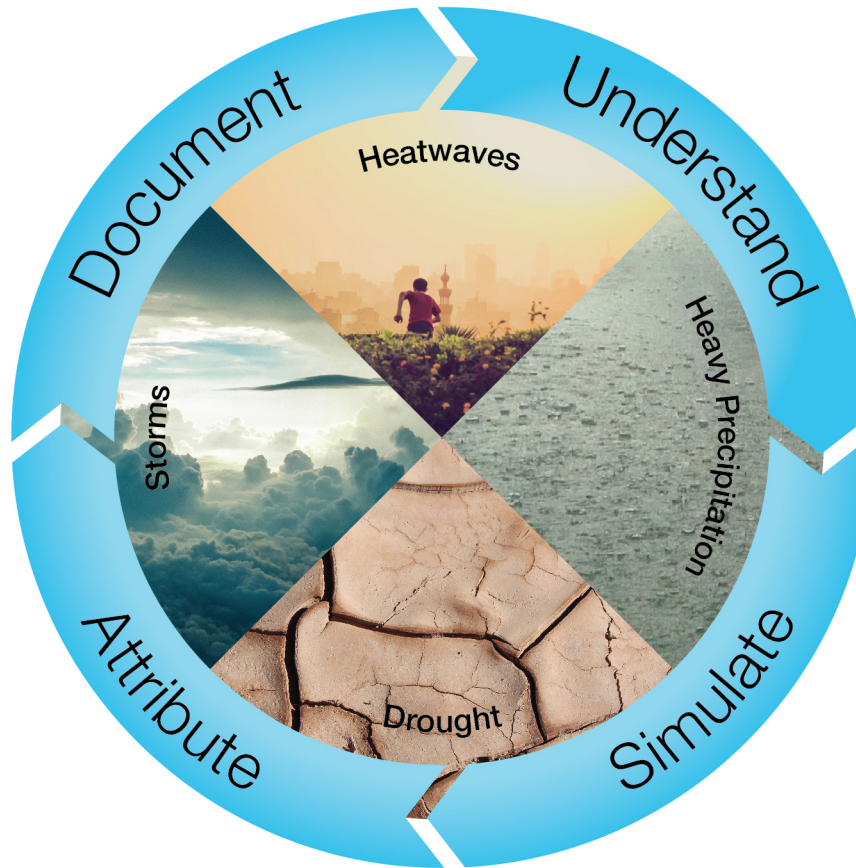
*Are models able to reliably simulate extremes and their changes, and how can this be evaluated and improved?*

# Leads



**Lisa Alexander**

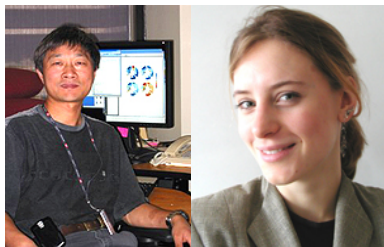
**Ali Behrangi**



**Sonia Seneviratne**

**Olivia Martius**

**Robert Vautard**



**Xuebin Zhang**

**Fredi Otto**



**Gabi Hegerl**

**Jana Sillmann**

**Erich Fischer**