



# WG4: key questions

- How best to meet the needs of end users?
- Which indices should focus be given to?
- Which validation measures should be used?
- Other considerations?
- Future steps...?



# How best to serve end users?

- How useful is our inventory of indices end users?
  - Must consider that there are **different** types of end users, with different requirements.
  - e.g. difficult to communicate information as **percentiles**; it may be preferable to use **threshold exceedance**.
- We will work with **WG1** to identify which indices are most appropriate for end-users.



# Which indices to focus on?

- For initial validation, focus will be on a **representative** sample.
- For example:
  - 98<sup>th</sup> percentile of temperature and wet day precipitation events.
  - Events with 20yr return levels.
  - General indices, such as consecutive dry days, drought index etc.
- More specific indices to be considered later in the process.



# Which validation measures to use?

- **Different** validation measures for different indices of extremes.
- Useful to **categorise** indices...
  - Binary, continuous, sequential, combined etc.
- ...and then identify **appropriate** validation measures for each category.
- e.g. CRPS to probability forecast of wet day precipitation above 98<sup>th</sup> percentile.



# Other considerations

- Dealing with uncertainty:
  - Bootstrapping approach for verification scores.
  - Useful to do, but not essential.
- Assessing stationarity:
  - Making the most of available observed data:
    - e.g. Calibration on “cold years”; application to “warm years”.
  - Pseudo-realities.



# Plan of action

- WG1 suggestions for extreme indices most relevant to end-users
  - lead by Rasmus and Heike.
- Categorise statistical extremes
  - Binary, continuous, sequential, combined (etc.?)
  - Appropriate validation method for each category.
- Begin initial validation with a representative sample of indices.