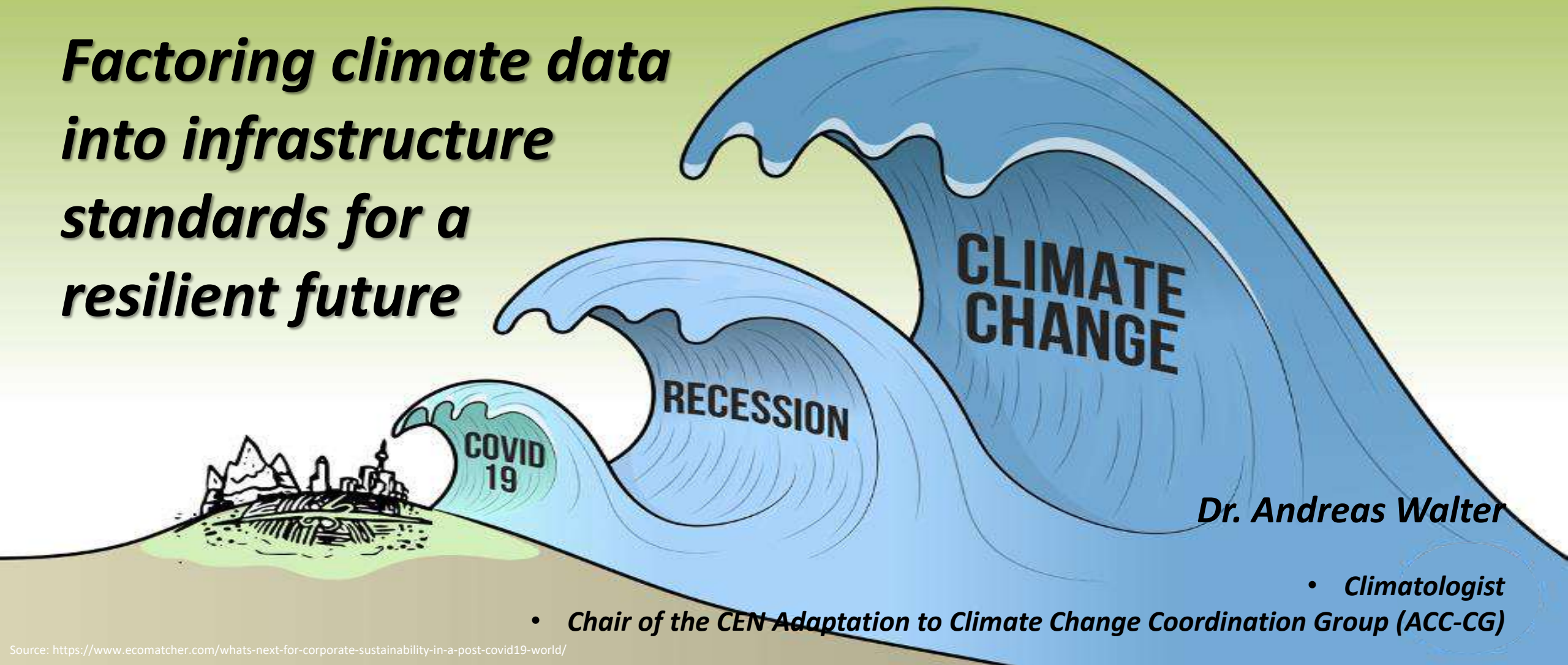


Factoring climate data into infrastructure standards for a resilient future



Dr. Andreas Walter

- ***Climatologist***
- ***Chair of the CEN Adaptation to Climate Change Coordination Group (ACC-CG)***

Source: <https://www.ecomatcher.com/whats-next-for-corporate-sustainability-in-a-post-covid19-world/>

The European Perspective

- EU Strategy on Adaptation to Climate Change acknowledges that Europe is facing a series of impacts that will affect livelihoods, ecosystems and economies
- despite various efforts on advancing adaptation at various levels, there is currently considerable *need for immediate action*
- requested standardisation activities:
 - to develop tools, i.e. guidance, that will ensure that adaptation to climate change can be taken into account in a systematic way in European standardization
 - to identify the existing European standards and European standardisation deliverables, including those under development, that are most relevant for adaptation to climate change
 - revise identified European standards and to draft new ones if deemed necessary, with a view to enhancing the resilience to climate change

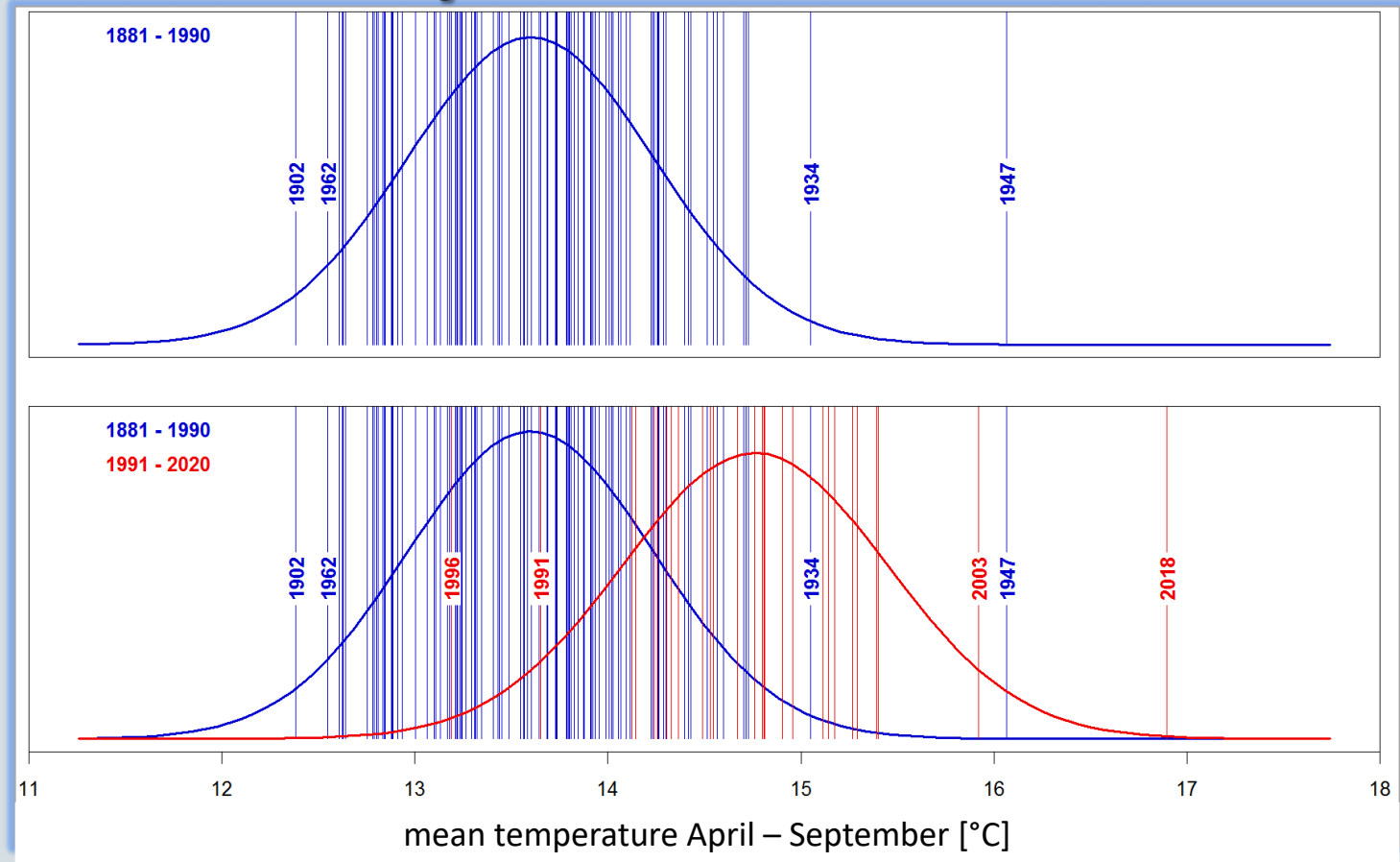
Activities carried out by the ACC-CG

- Linking standards for infrastructures to future climatic conditions
- Scaling adaptation measures to the European level
- Adoption of CCA in other standards for infrastructures
- ACC-CG will focus on the *three priority sectors* identified in the EU Strategy on Adaptation to Climate Change:
 - transport infrastructure
 - energy infrastructure
 - buildings/construction

**Use of climate data
in standards is vital**

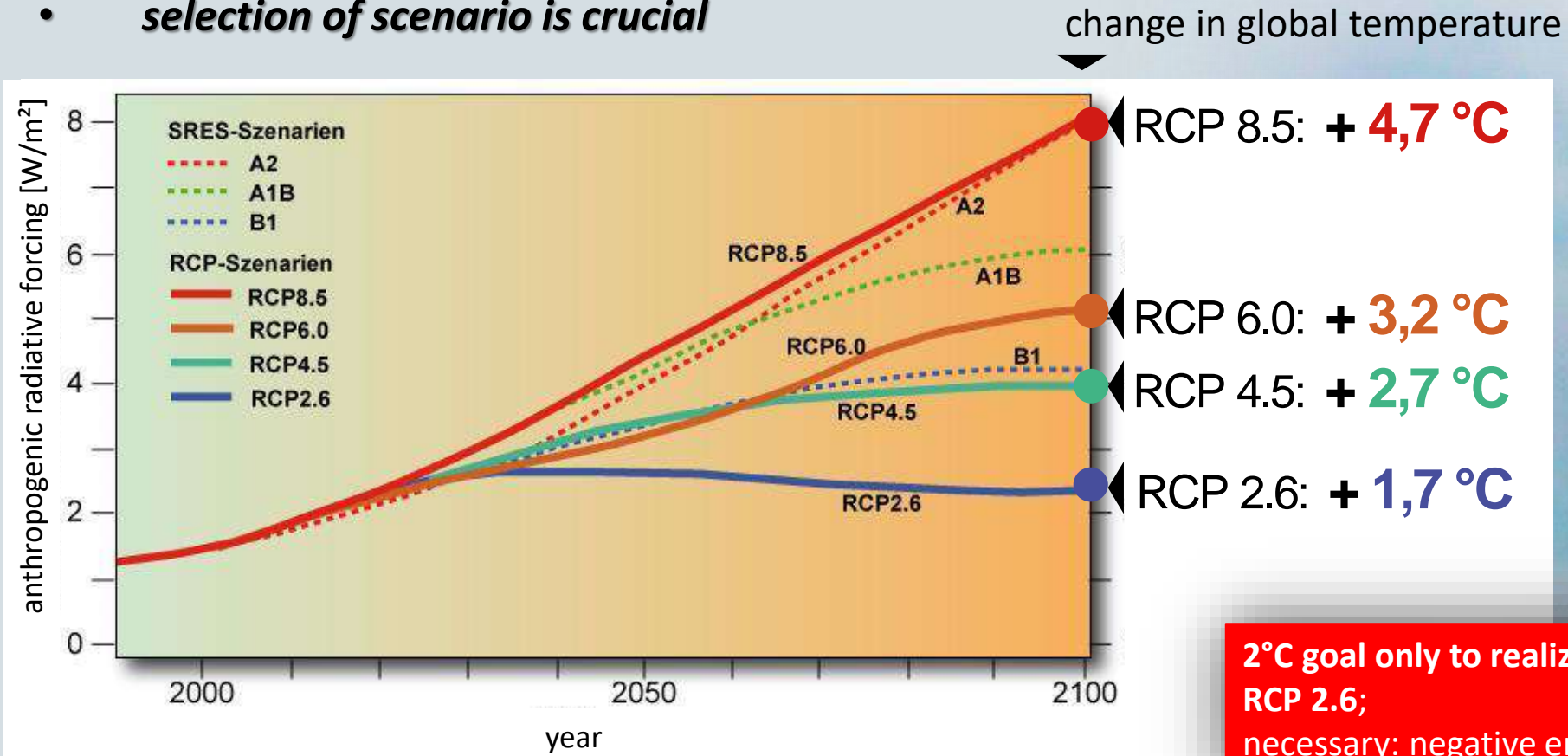
Climate Observations – Temperature

- mean AND variability ARE ALREADY changing



Future GHG Emissions are essential!

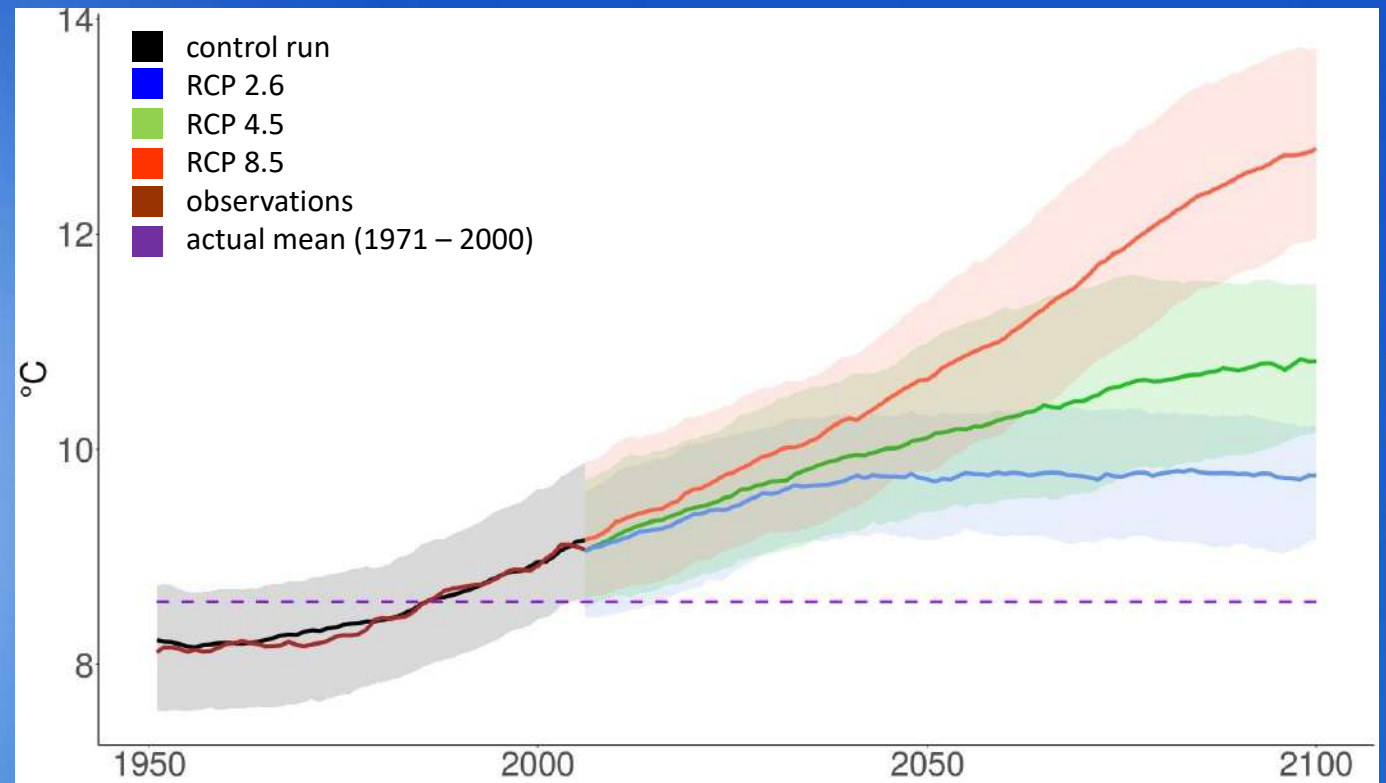
- selection of scenario is crucial



2°C goal only to realize with
RCP 2.6;
necessary: negative emissions



→ Climate Projections – Mean Temperature

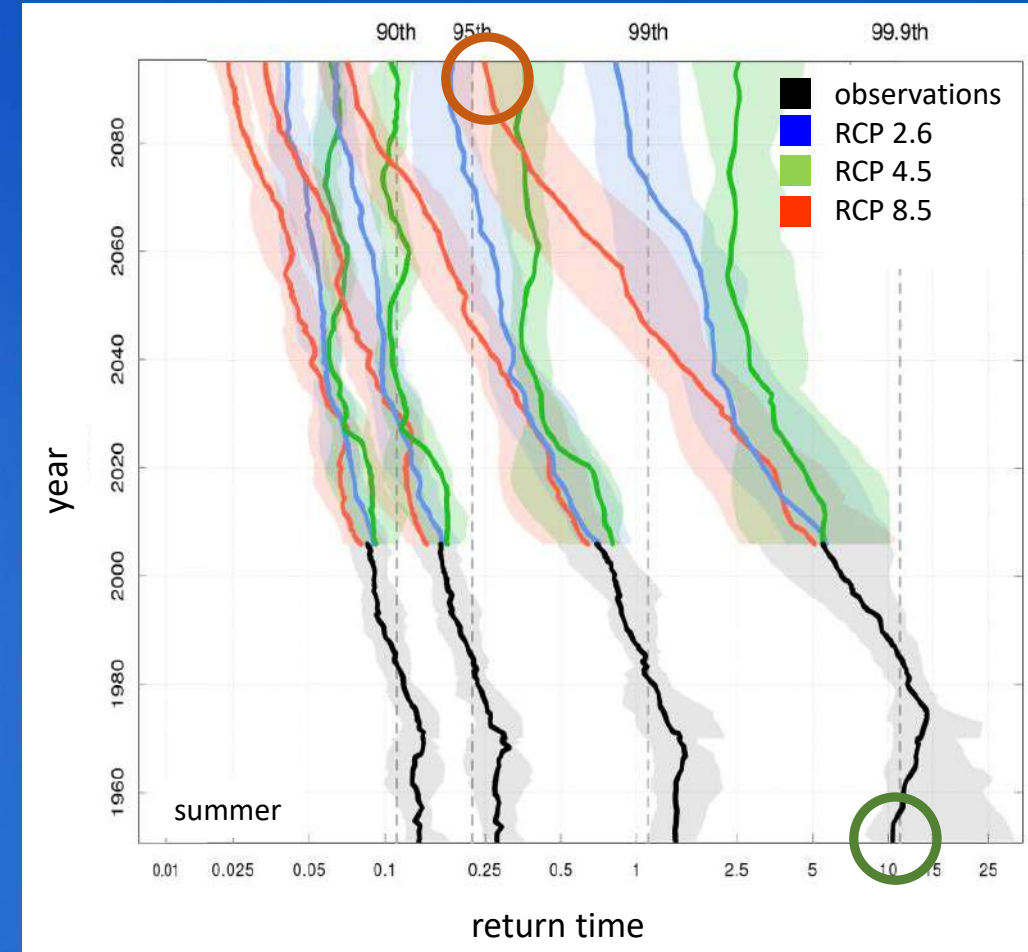


- There is - and will be - no single best model
- Use of model ensembles for each scenario
- Uncertainties are unavoidable
- Adaptation measures and standard writers have to deal with this

Climate Projections – Extreme Events

e.g. Maximum Temperature

- It is likely that an event which was observed once every ten years in 1950 becomes an event which will be observed 4 times per year in 2100
- frequency of extreme extreme events increases overproportional





Conclusions

- there is a lot of – historical, recent and future - climatic data and indices available
- climate model outcome is unavoidable uncertain (emission scenarios, ensemble, parametrisations, ...)
- adaptation measures must be implemented even under conditions of uncertainty
- uncertainties can be quantified using statistical methods → percentiles
- percentiles give a likely range of change / climatic stress

→ use this range for scaling of adaptation measures
there will be no single ,precise' model in the near future

→ Data available from NHM-Services or C3S data store

ACT NOW



***Welcome,
have a fruitful workshop &
Thank you!***

