

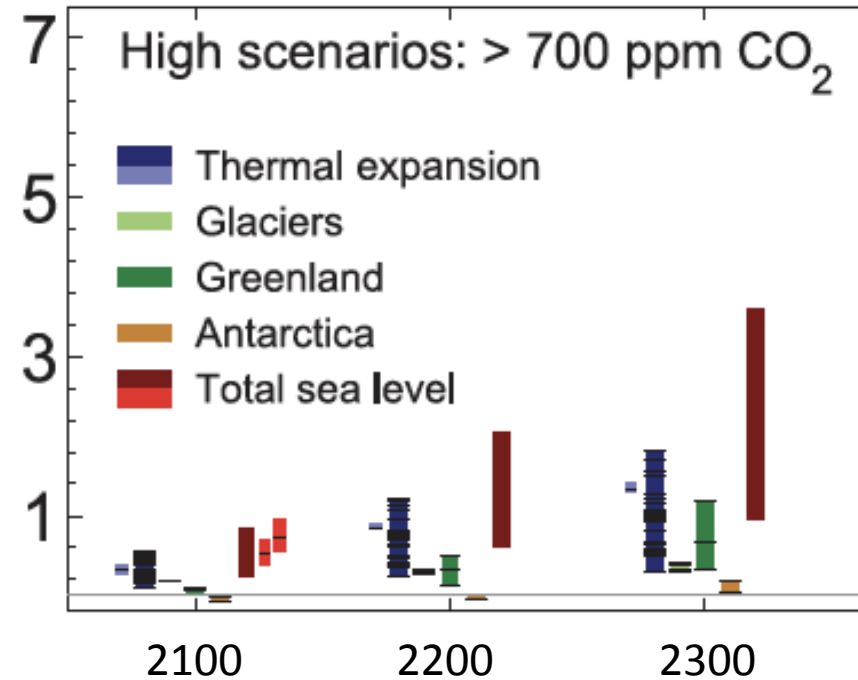
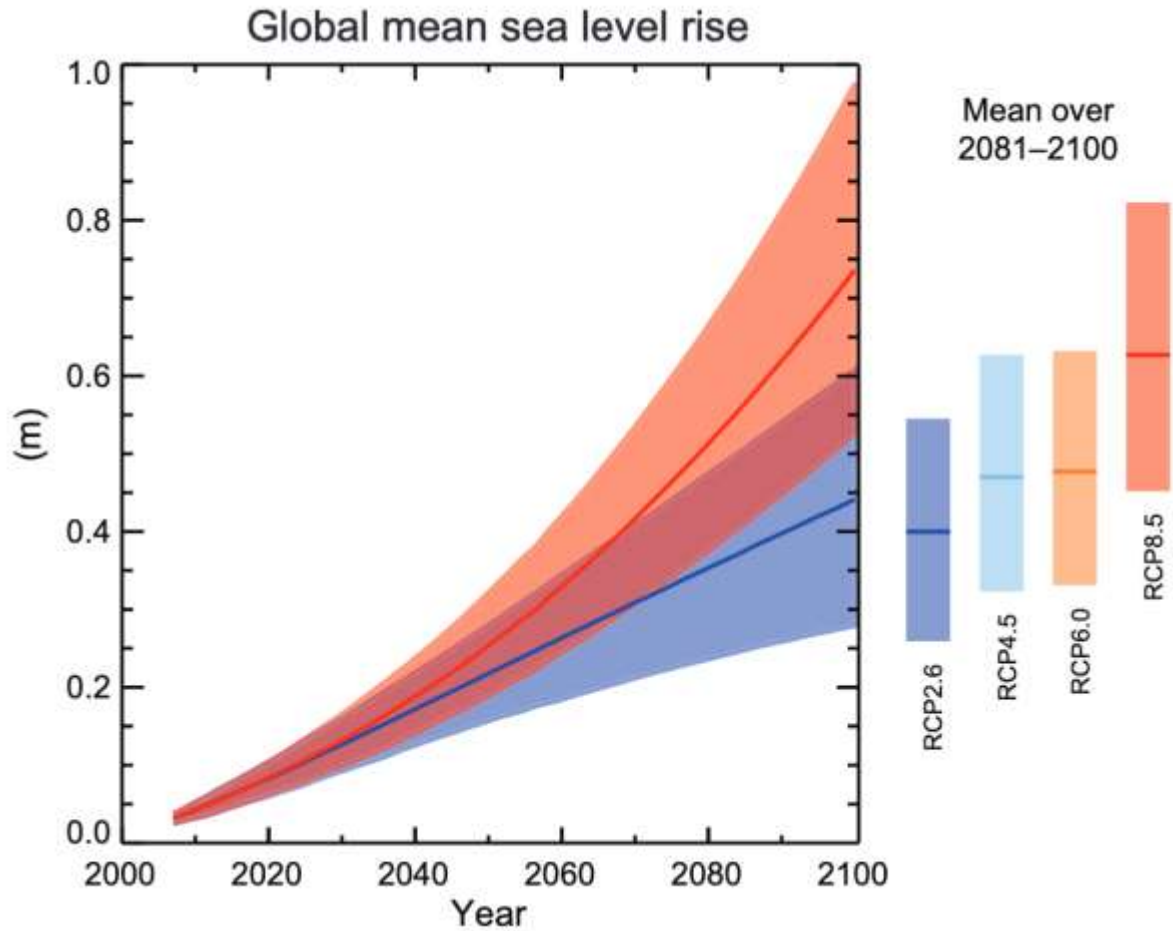
# IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC)

## Sea-level rise and Extreme Sea Level Events

**Erwin Lambert**

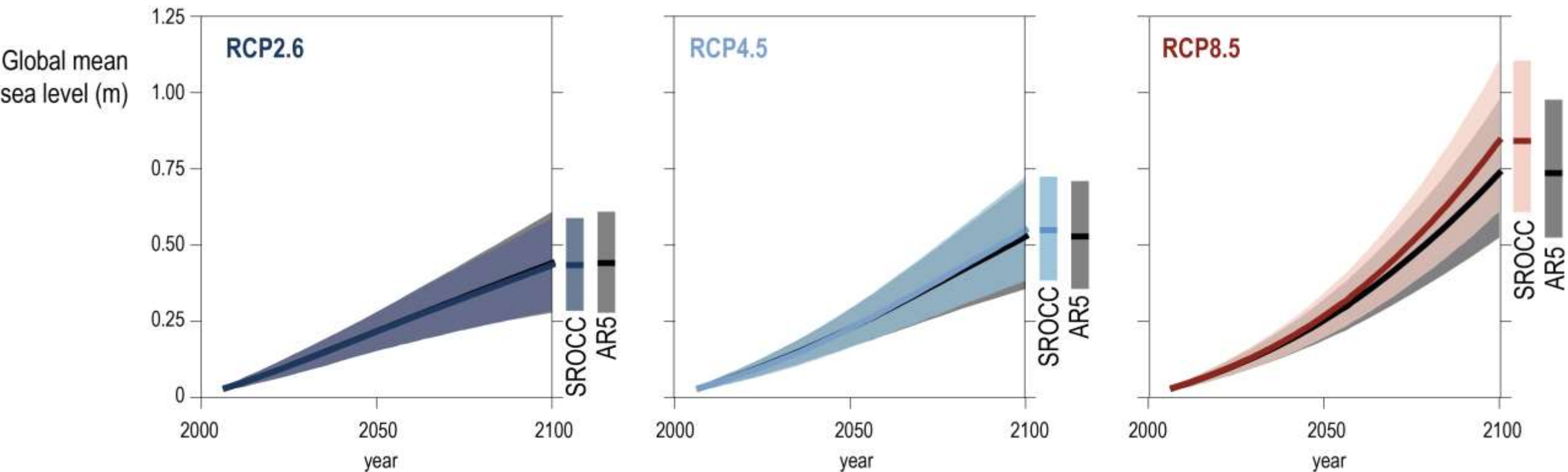
Utrecht University, NL

# Sea-level projections in the **AR5** report (2013)



- Antarctic contribution small
- Nuance: instability of West-Antarctica



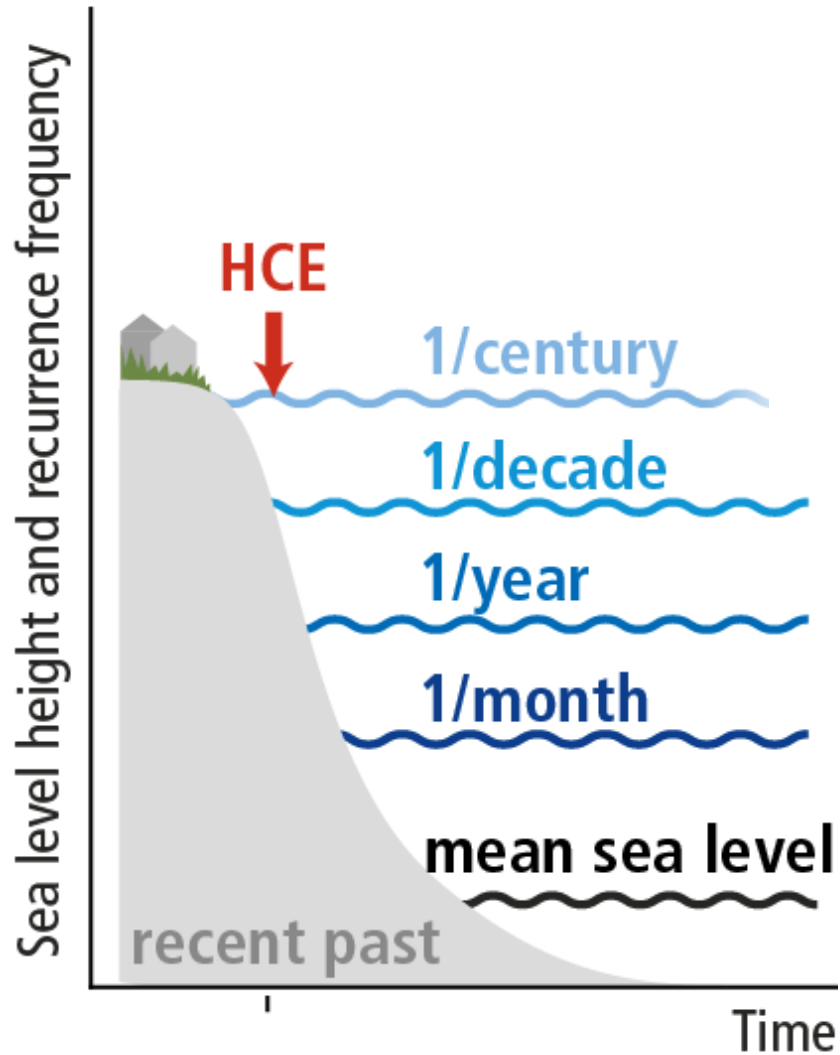


- Antarctic contribution revised upwards by **10 cm** under high emissions
- Contribution based on multiple ice sheet modelling studies
- Comparable uncertainty, but increased confidence



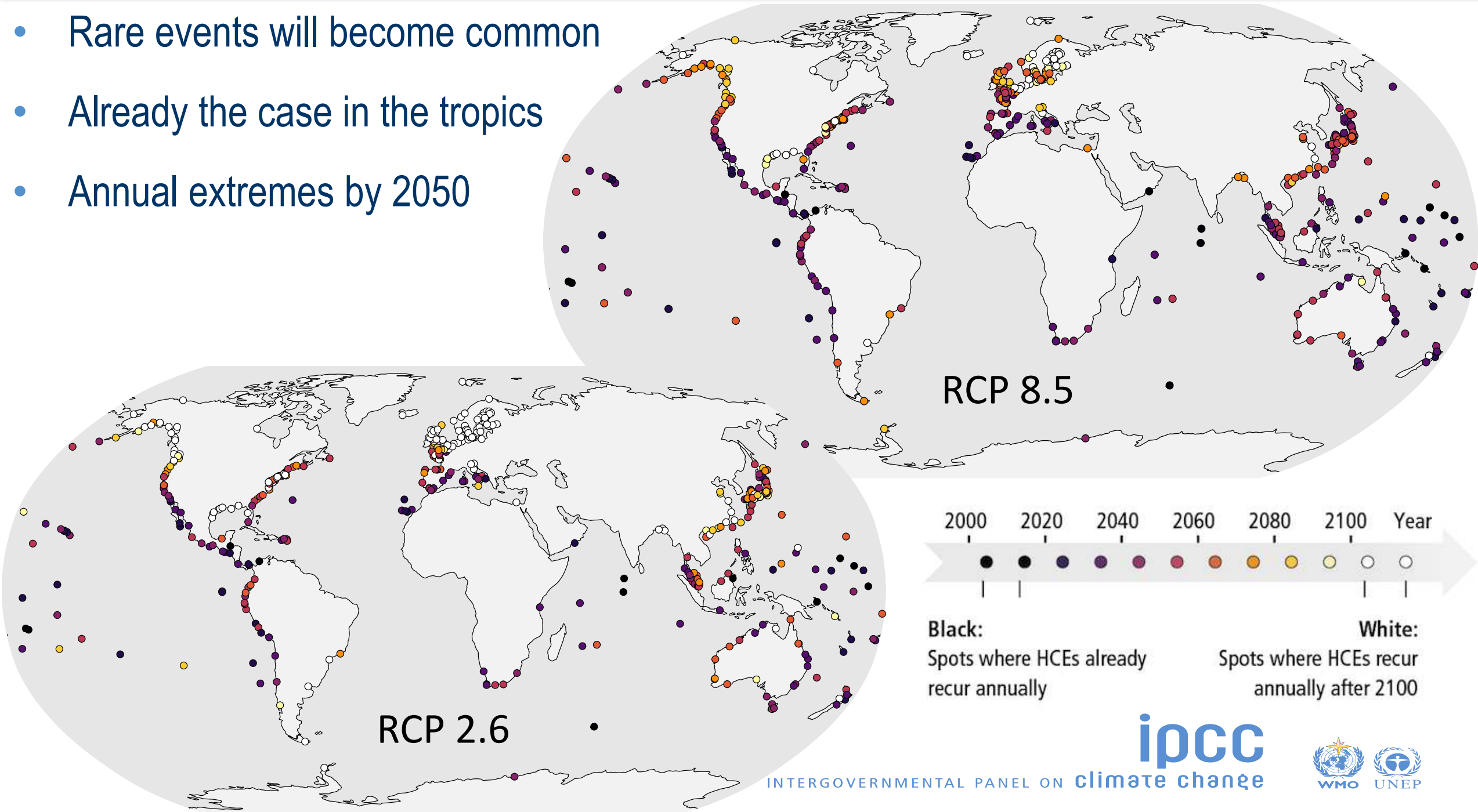




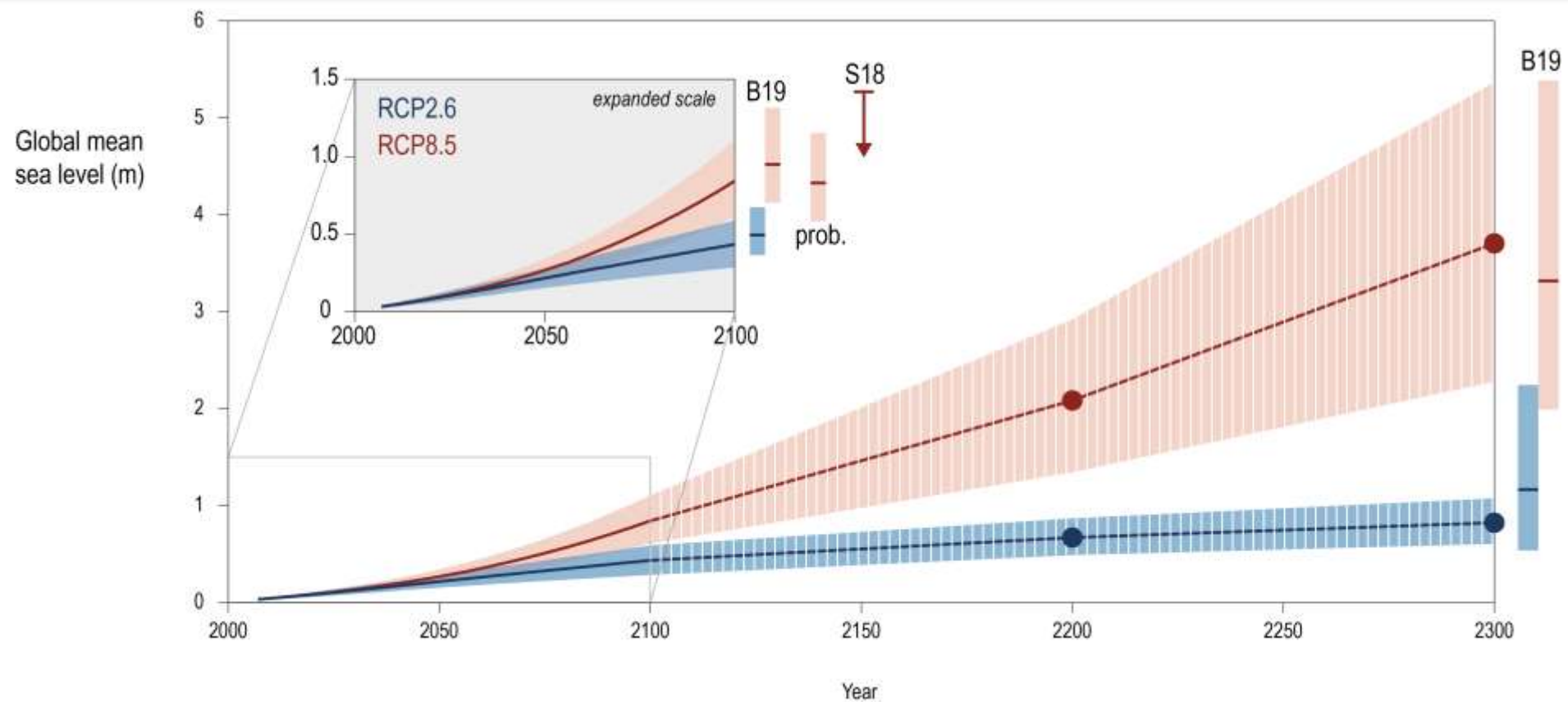


- Measure for the rate at which flood hazards will magnify
- Indication when adaptation measures need to be taken

- Rare events will become common
- Already the case in the tropics
- Annual extremes by 2050







- Antarctica can cause **up to 3 meters** of sea-level rise by 2300
- Effective mitigation greatly **reduces** the possibility of multi-meter sea-level rise

- Sea-level rise may exceed **1 meter** by 2100 if emissions are not sharply reduced
- Extreme sea level events will become at least **100 times** more frequent at most coastal locations before 2100
- Most tropical islands and many low-lying megacities will be exposed to **annual** flood risk by 2050 under any scenario, in absence of strong adaptation
- Without emission cuts, sea level may rise up to **5 meters** by 2300

Manage the unavoidable, but  
**avoid the unmanageable**

- *Jean-Pierre Gattuso*

