World Meteorological Organization

Working together in weather, climate and water

WMO

TOKYO CONFERENCE ON INTERNATIONAL STUDY FOR DISASTER RISK REDUCTION AND RESILIENCE

Tokyo, Japan

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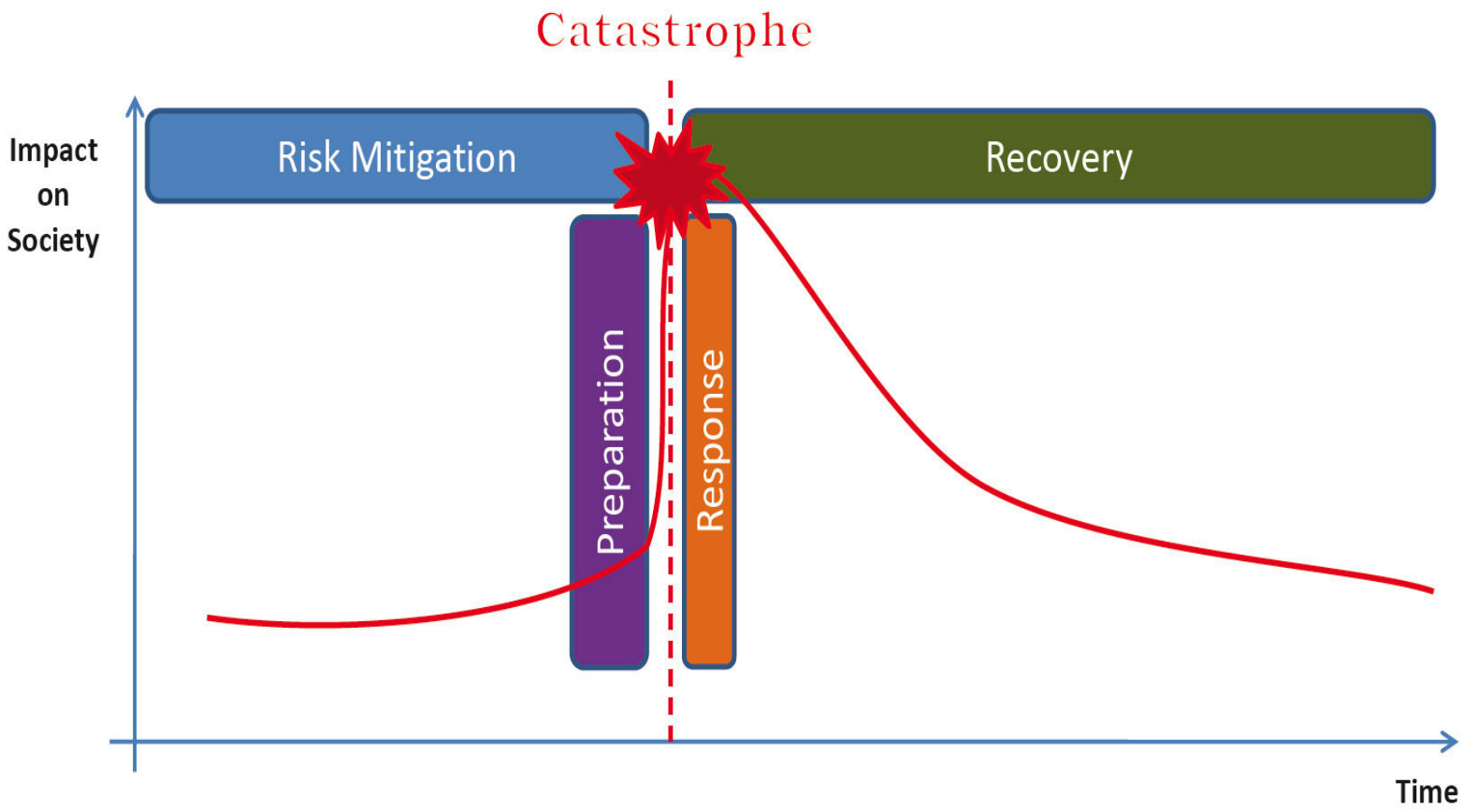
WMO Deputy Secretary General

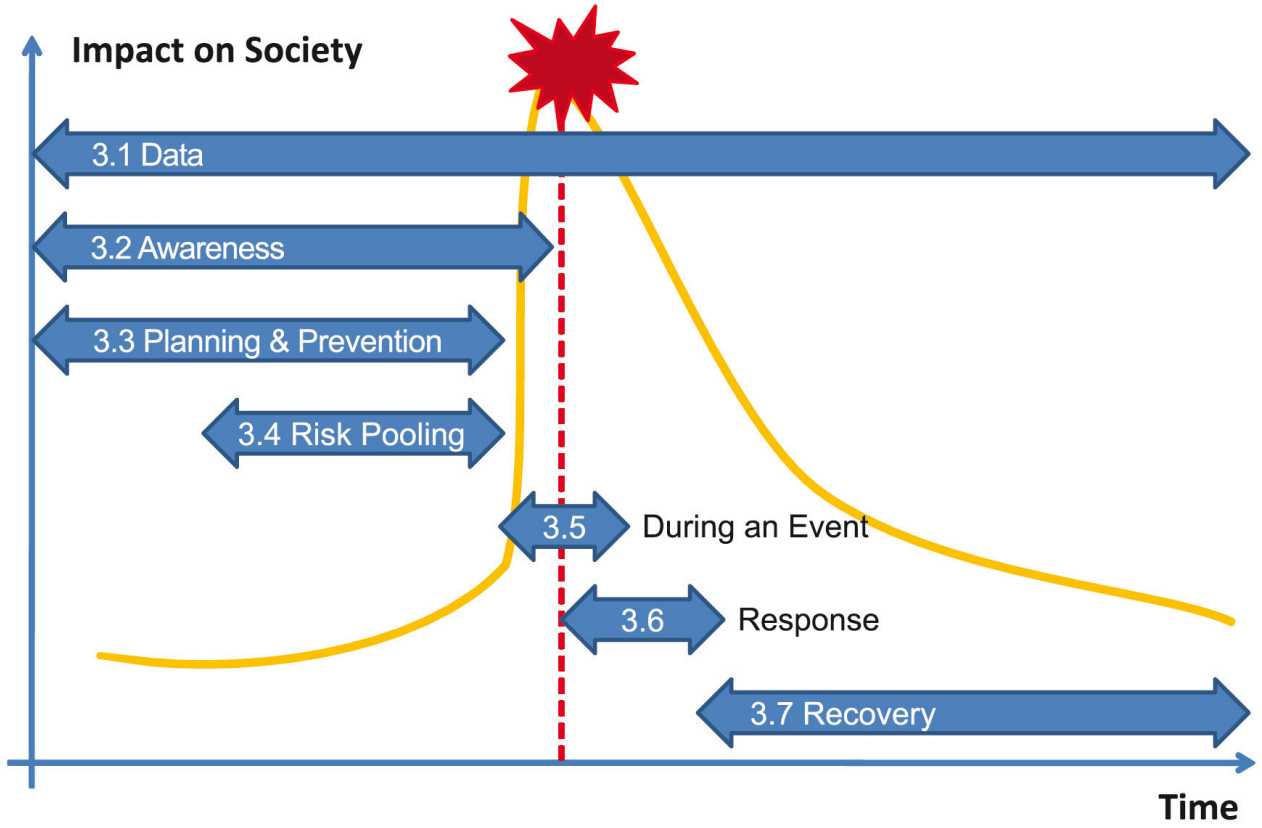
WMO

- National Meteorological and Hydrological services (191) are Members
- Normative, Research, Operations and Services
- Global, Regional and National
- Weather, water and Climate EWS and Risk Assessments
- The whole is greater than the sum of individual parts

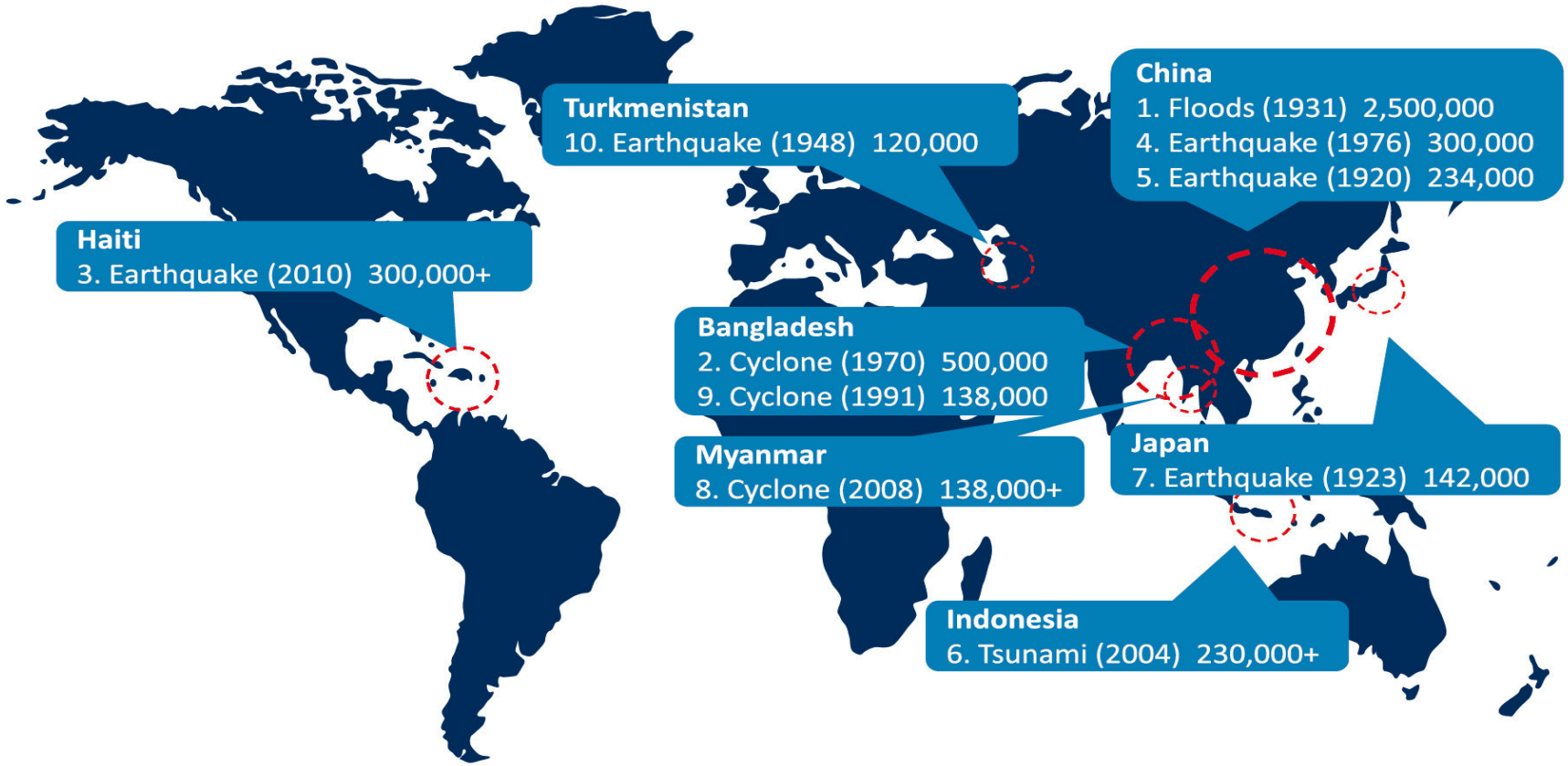
DISASTER RISK MANAGEMENT



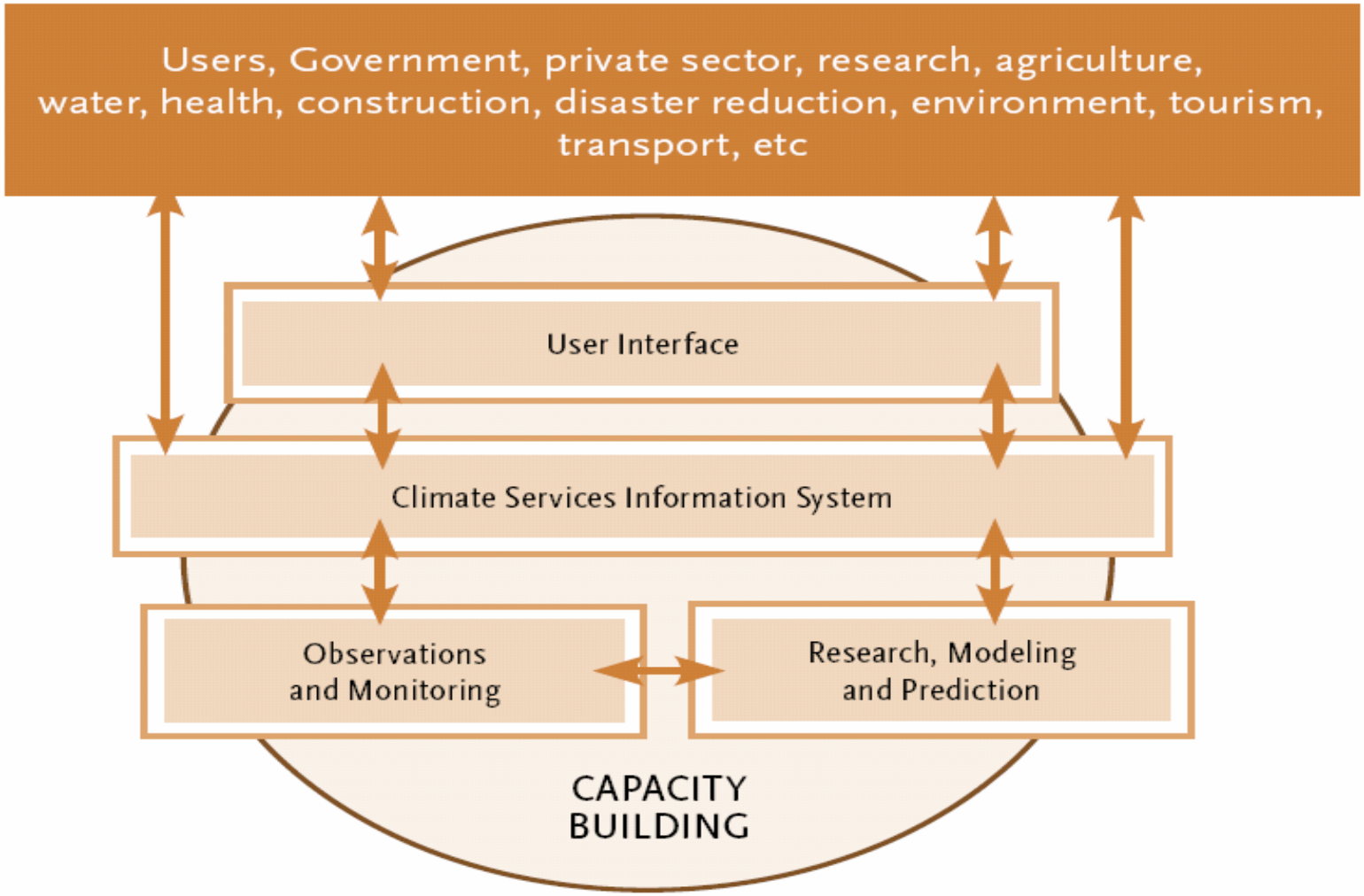
Building resilience



- WEF, 2011


Turkmenistan
10. Earthquake (1948) 120,000
China
1. Floods (1931) 2,500,000
4. Earthquake (1976) 300,000
5. Earthquake (1920) 234,000
Haiti
3. Earthquake (2010) 300,000+
Bangladesh
2. Cyclone (1970) 500,000
9. Cyclone (1991) 138,000
Myanmar
8. Cyclone (2008) 138,000+
Japan
7. Earthquake (1923) 142,000
Indonesia
6. Tsunami (2004) 230,000+

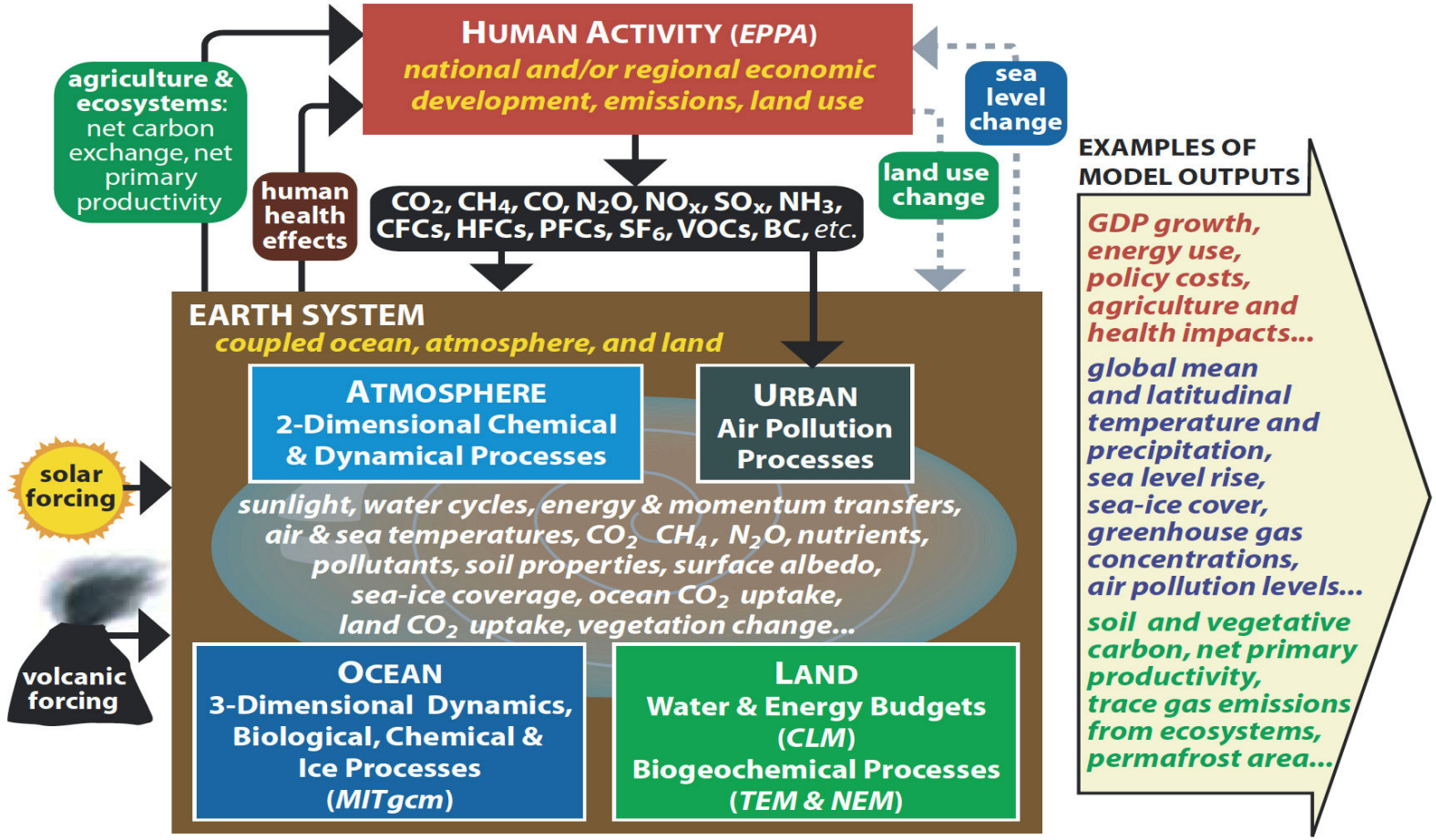
The vision of the GFCS



The goals of the GFCS

- Provide climate services for the most vulnerable aiding in the adaptation to seasonally, yearly and multi-yearly reoccurring events
- Close the gaps between climate data providers and users both in the availability and handling
- Serve as a platform to bring together all involved stakeholders ranging from globally acting agencies to the farmers on the ground

Modelling science-policy interface

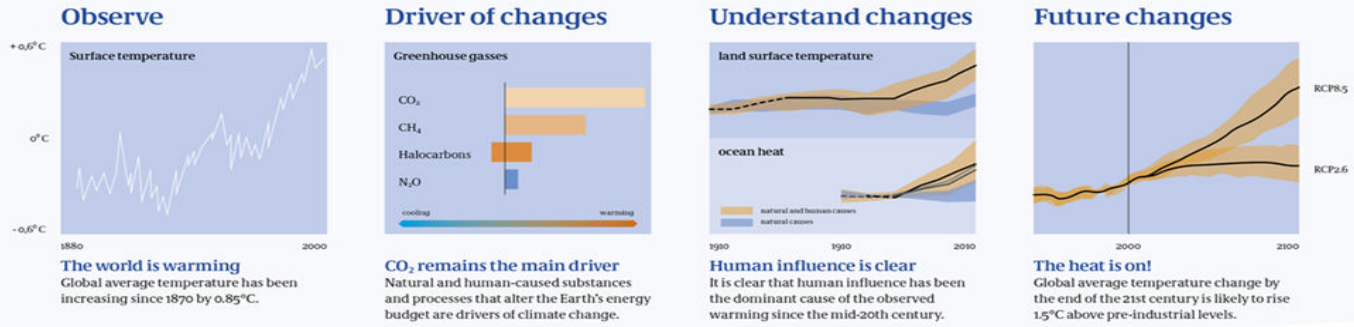


- MIT,

Science underpins policy | The vision, progress and strategy

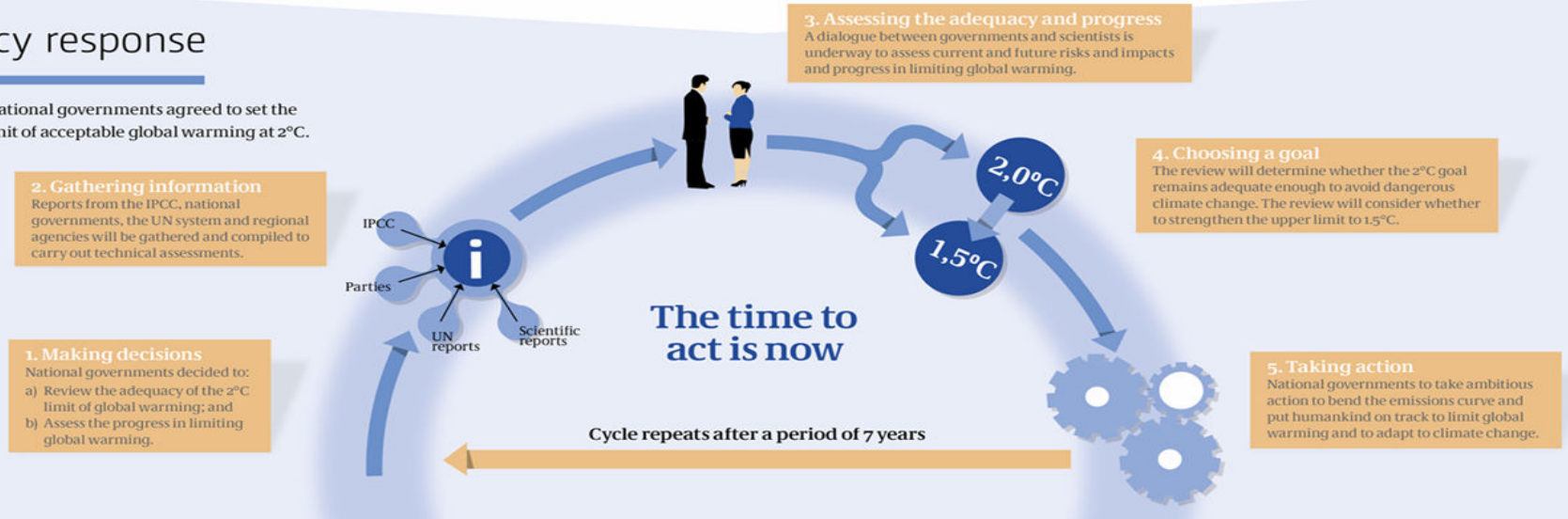
What we know

The UNFCCC calls on national governments to promote and cooperate in research and systematic observation of the global climate system – a key prerequisite for advancing scientific knowledge on climate change.



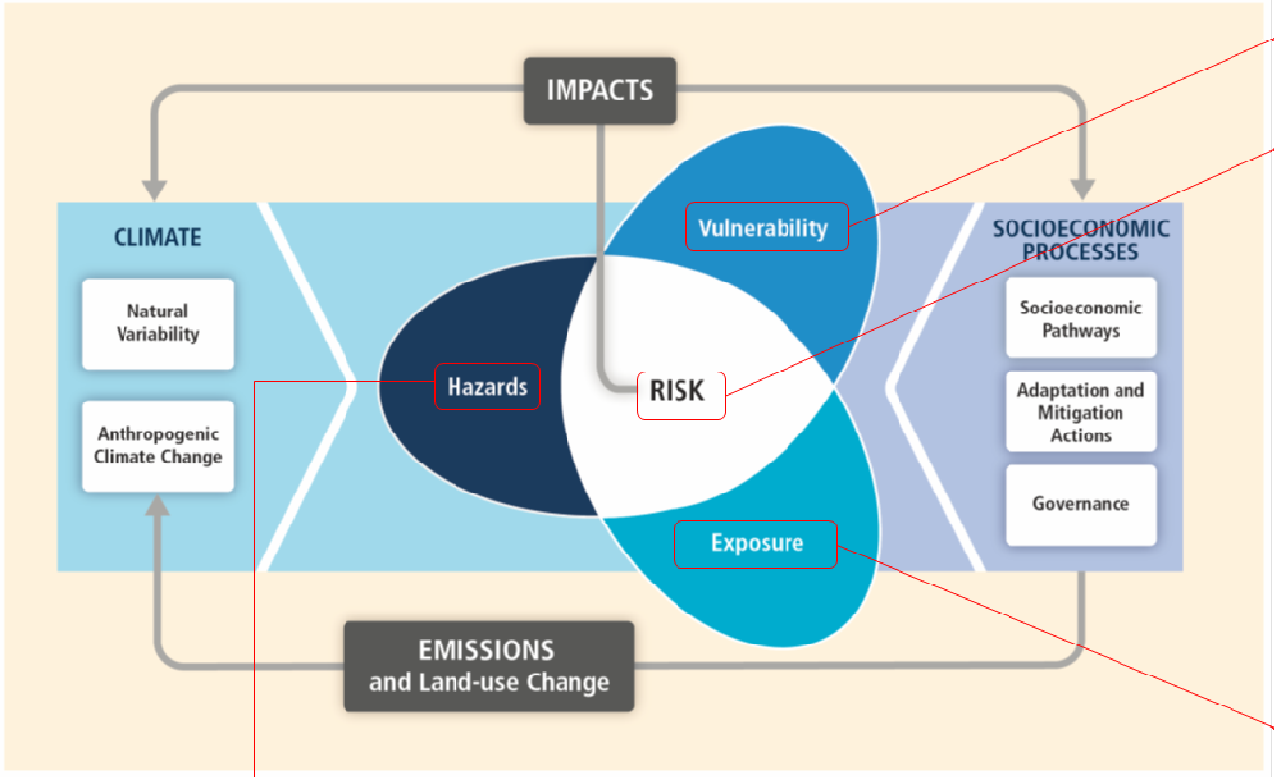
Policy response

In 2010 national governments agreed to set the upper limit of acceptable global warming at 2°C.



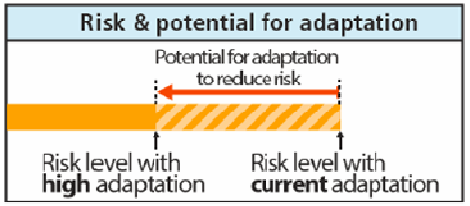
Science | Mapping the problem and the 'solution space'

Core framing in terms of risks



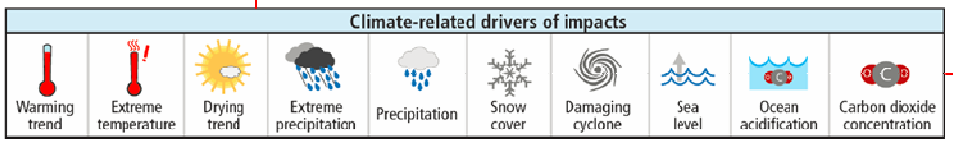
The propensity or predisposition to be adversely affected

Risk: an interaction of hazards, vulnerability and exposure

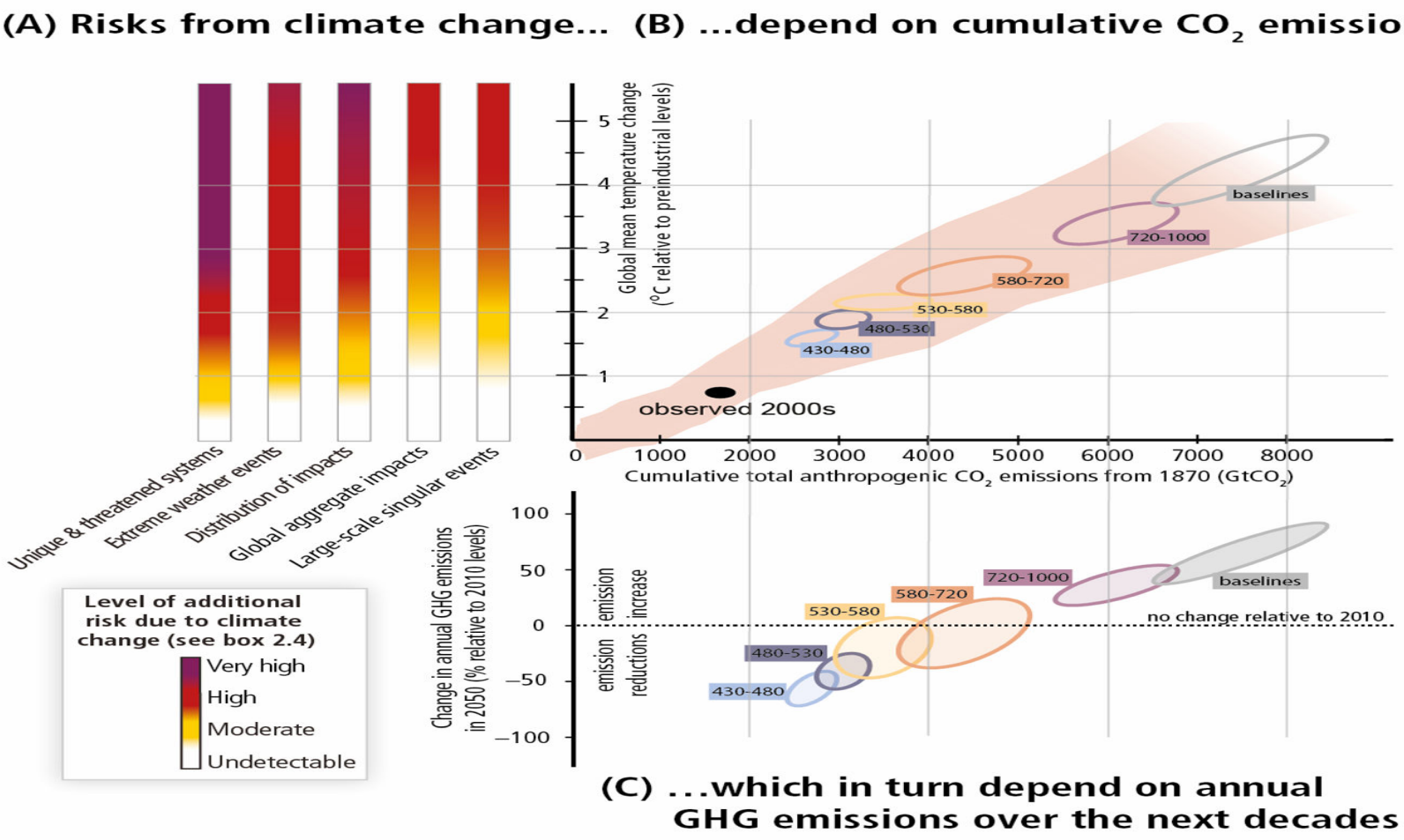


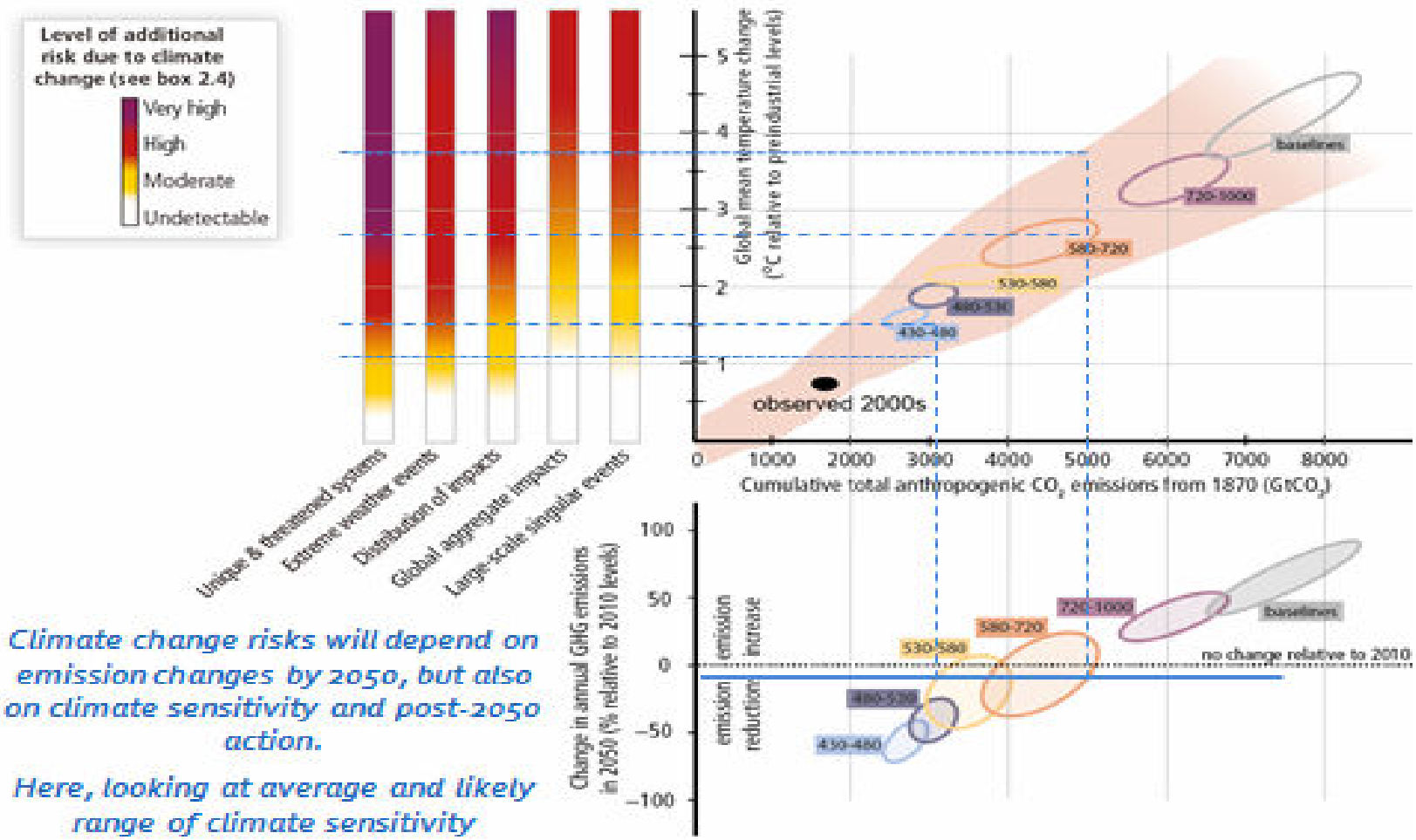
People and societies may perceive or rank risks and potential benefits differently, given diverse values and goals

The presence of people and livelihoods in places that could be adversely affected



The potential occurrence of a physical event or trend that may cause loss of life, injury, and damage


(A) Risks from climate change...
(B) ...depend on cumulative CO_2 emissions...
Unique & threatened systems
Extreme weather events
Distribution of impacts
Global aggregate impacts
Large-scale singular events
Level of additional risk due to climate change (see box 2.4)
Very high
High
Moderate
Undetectable
Global mean temperature change (°C relative to preindustrial levels)
observed 2000s
baselines
720-1000
580-720
530-580
480-530
430-480
Cumulative total anthropogenic CO_2 emissions from 1870 ($GtCO_2$)
Change in annual GHG emissions in 2050 (% relative to 2010 levels)
emission increase
emission reductions
no change relative to 2010
(C) ...which in turn depend on annual GHG emissions over the next decades



Climate change risks will depend on emission changes by 2050, but also on climate sensitivity and post-2050 action.

Here, looking at average and likely range of climate sensitivity

Some decisions needing science support

- Disaster Risk Reduction – post Hyogo
- Sustainable Development – post 2015
- Climate Change agreement – post 2015
- Habitat III – 2016

Thank you