SIXTH ASSESSMENT REPORT

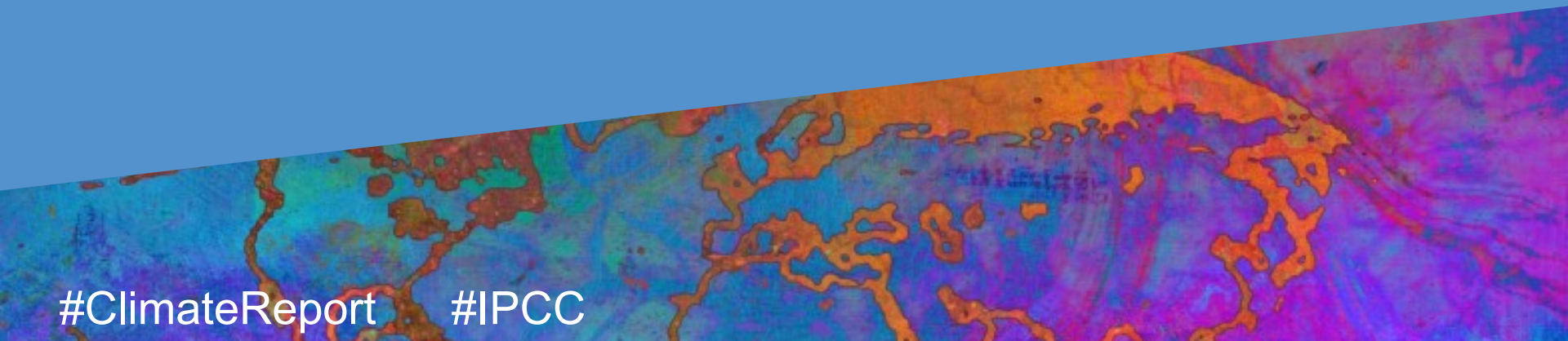
Working Group 1 - The Physical Science Basis

ipcc
INTERGOVERNMENTAL PANEL ON climate change

WMO UNEP

Presentation to Warsaw International Mechanism for Loss and Damage

September 2021



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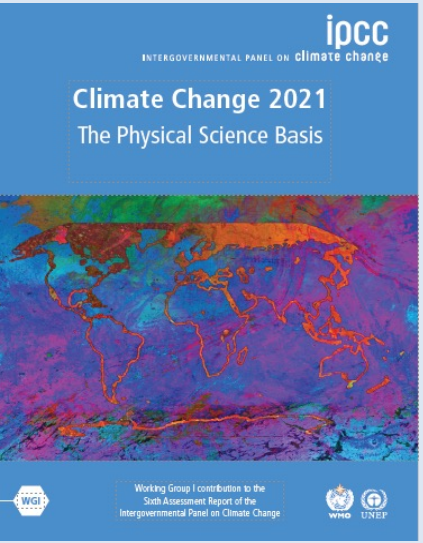


Summary for Policymakers

Technical Summary

TS.1 A changing climate

Key concepts / paleoclimate, / global surface temperature

TS.2 Large-scale climate change

Low-likelihood, high warming storylines / sea level, carbon cycle / water cycle / infographic on climate futures

TS.3 Understanding the climate system response and implication for limiting global

Climate and air quality responses to short-lived climate forcers / earth system response to solar radiation modification / irreversibility / tipping points and abrupt

TS.4 Regional climate change

Event attribution / climate services / monsoons / urban areas

Interactive Atlas

Underlying Chapters

1 Framing, context, methods

Large scale climate change

2 Changing state of the climate system
3 Human influence on the climate system
4 Future global climate

Climate processes

5 Global carbon and other biogeochemical cycles
6 Short-lived climate forcers
7 The Earth's energy budget
8 Water cycle changes
9 Oceans, cryosphere, sea change

Regional climate information

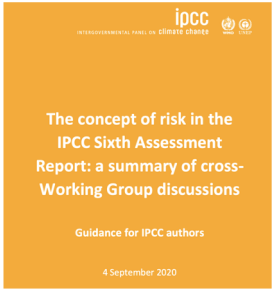
10 Linking global to regional climate
11 Weather and extreme events
12 Climate information for regional impact & risk assessment
13 Regional climate change Atlas

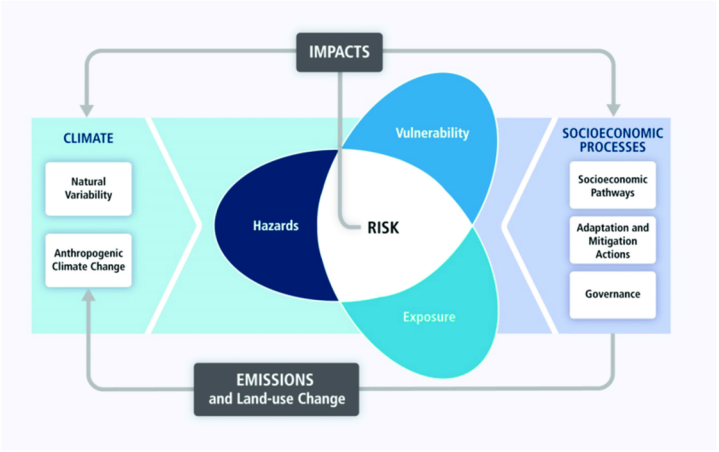
Risk framing in IPCC AR6

The three Working Groups have adopted a common risk framing (Cross-Chapter Box 1.3)

Def: ‘potential for adverse consequences for human or ecological systems, recognising the diversity of values and objectives associated with such systems. In the context of climate change, risks can arise not only from **impacts of climate change**, but also from potential human **responses to climate change**. Relevant adverse consequences include those on lives, livelihoods, health and wellbeing, economic, social and cultural assets and investments, infrastructure, services (including ecosystem services)

Climatic impact-drivers: CIDs are physical climate system conditions (e.g., means, extremes, events) that affect an element of society or ecosystems. Depending on system tolerance, CIDs and their changes can be detrimental, beneficial, neutral, or a mixture of each across interacting system elements and regions.





Attribution in the IPCC: the process of evaluating the contribution of one or more causal factors to observed changes or events.

Cross-Working Group Box 1.1

Human influence

✓ main driver of …

✓ contributes to …

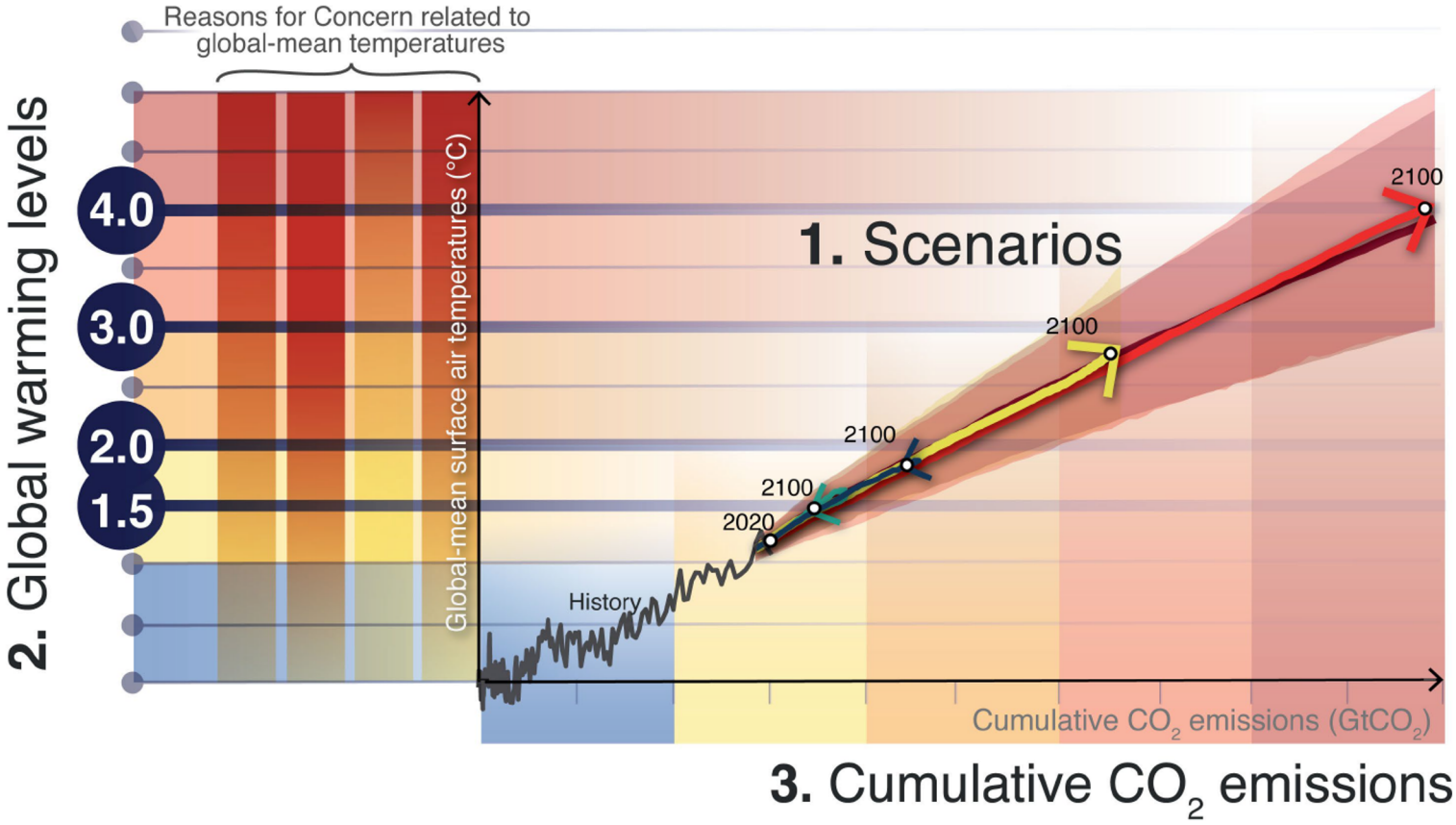
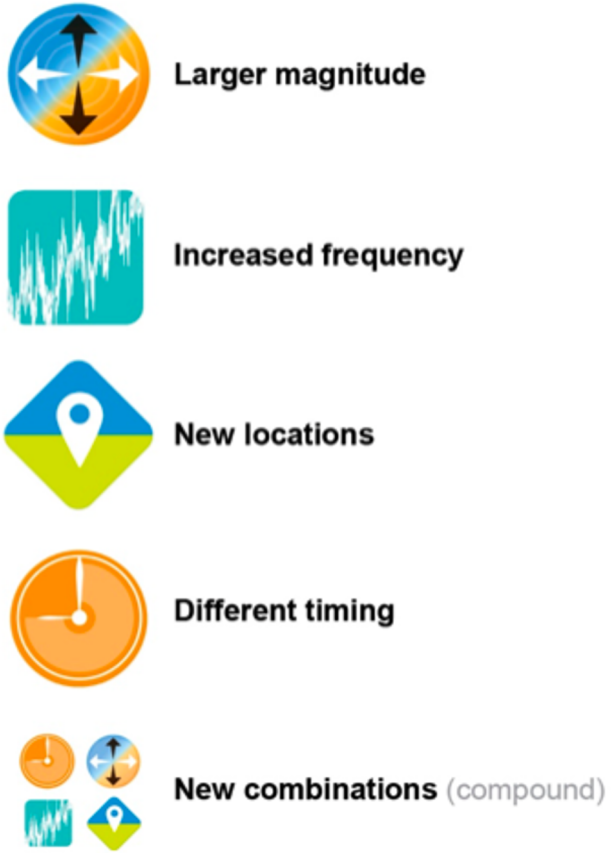

Reasons for Concern related to global-mean temperatures
2. Global warming levels
4.0
3.0
2.0
1.5
Global-mean surface air temperatures (°C)
1. Scenarios
2100
2100
2100
2100
2020
History
Cumulative CO_2 emissions ($GtCO_2$)
3. Cumulative CO_2 emissions

Fig 1.24

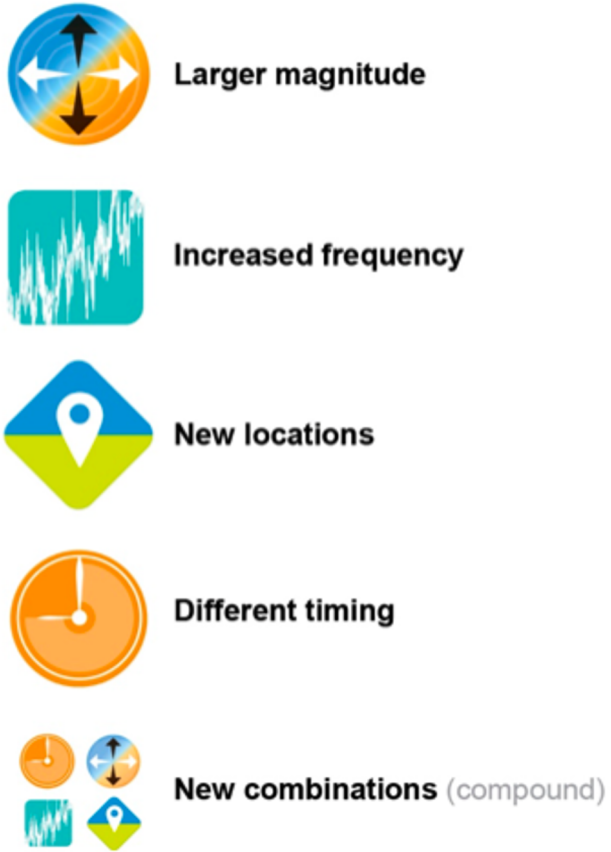
Will climate change cause unprecedented extremes?



FAQ 11.2

Will climate change cause unprecedented extremes?

Yes, in a changing climate, extreme events may be unprecedented when they occur



FAQ 11.2

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Thank you.

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IPCC: www.ipcc.ch

IPCC Secretariat: ipcc-sec@wmo.int

IPCC Press Office: ipcc-media@wmo.int

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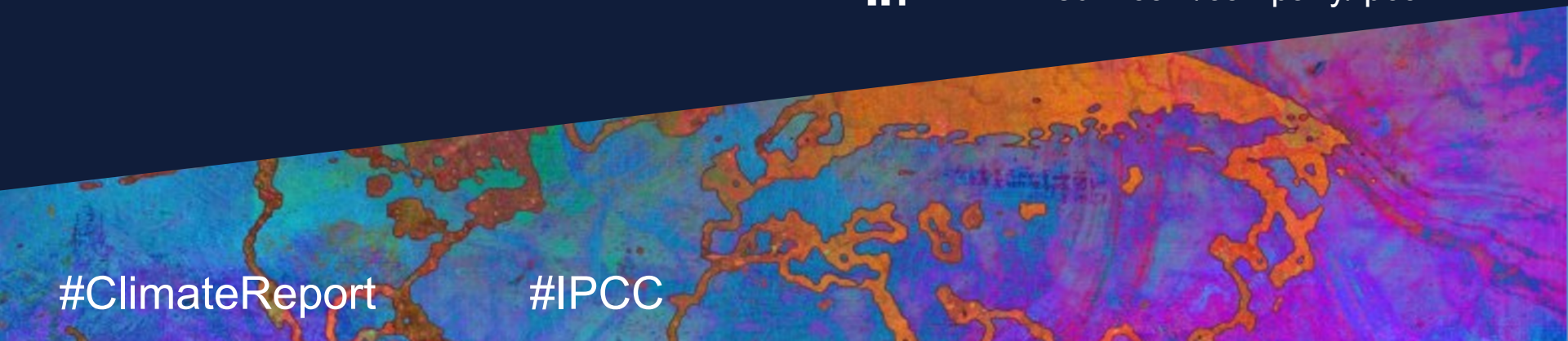

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