

## Update on IPCC AR7

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# WG I chapters and relevant topics

## **Chapter 1: Framing, methods and knowledge sources**

## **Chapter 2: Large-scale changes in the climate system and their causes**

- Natural and anthropogenic radiative forcing and Earth energy imbalance
- Indicators of climate change and related methodologies
- Observed changes across the Earth system and their recent and longer-term context
- Assessment of model-simulated changes
- Attribution of large-scale changes

## **Chapter 3: Changes in regional climate and extremes, and their causes**

- Regions ... including ... typological areas such as mountains, low lying coastal areas, and polar, tropical, desert, and semi-arid regions
- Advances and limitations in the assessment of regional climate change and extremes including models and observations
- Emerging regional and local process understanding ...
- Rapid and slow changes in regional and local climate ...

# WG I chapters and relevant topics

## **Chapter 4: Advances in process understanding of Earth system changes**

- Biogeochemical cycle processes and budgets, effectiveness of sinks and sources of greenhouse gases
- Short-lived climate forcers ...
- Earth system energy budget and fluxes, heat storage and redistribution
- Water cycle processes and budgets
- Cryosphere processes including in high mountain and polar regions
- Ocean processes including sea level rise and ocean acidification
- Land-surface processes, including biosphere

## **Chapter 5: Scenarios and projected future global temperatures**

## **Chapter 6: Global projections of Earth system responses across time scales**

## **Chapter 7: Projections of regional climate and extremes**

## **Chapter 8: Abrupt changes, low-likelihood high impact events and critical thresholds, including tipping points, in the Earth system**

- Abrupt changes, low-likelihood high impact events and tipping points within the Earth system components and their ecosystems, their drivers and occurrence conditions
- Evidence from and limitations of observations, models ...
- Critical system-specific thresholds ... and early warning indicators

# WG I chapters and relevant topics

**Chapter 9: Earth system responses under pathways towards temperature stabilization, including overshoot pathways**

**Chapter 10: Climate information and services**

- Advances in climate information for climate services across timescales, including multi-hazard, early warning systems
- Information on climatic impact-drivers and their changes to support impact and risk assessment, losses and damages, adaptation and mitigation, for systems and sectors across regions
- Gaps and disparities in available and accessible climate data, monitoring infrastructure, information and indicators for climate services, and their implications across spatial and temporal scales, across regions
- Case studies across regions

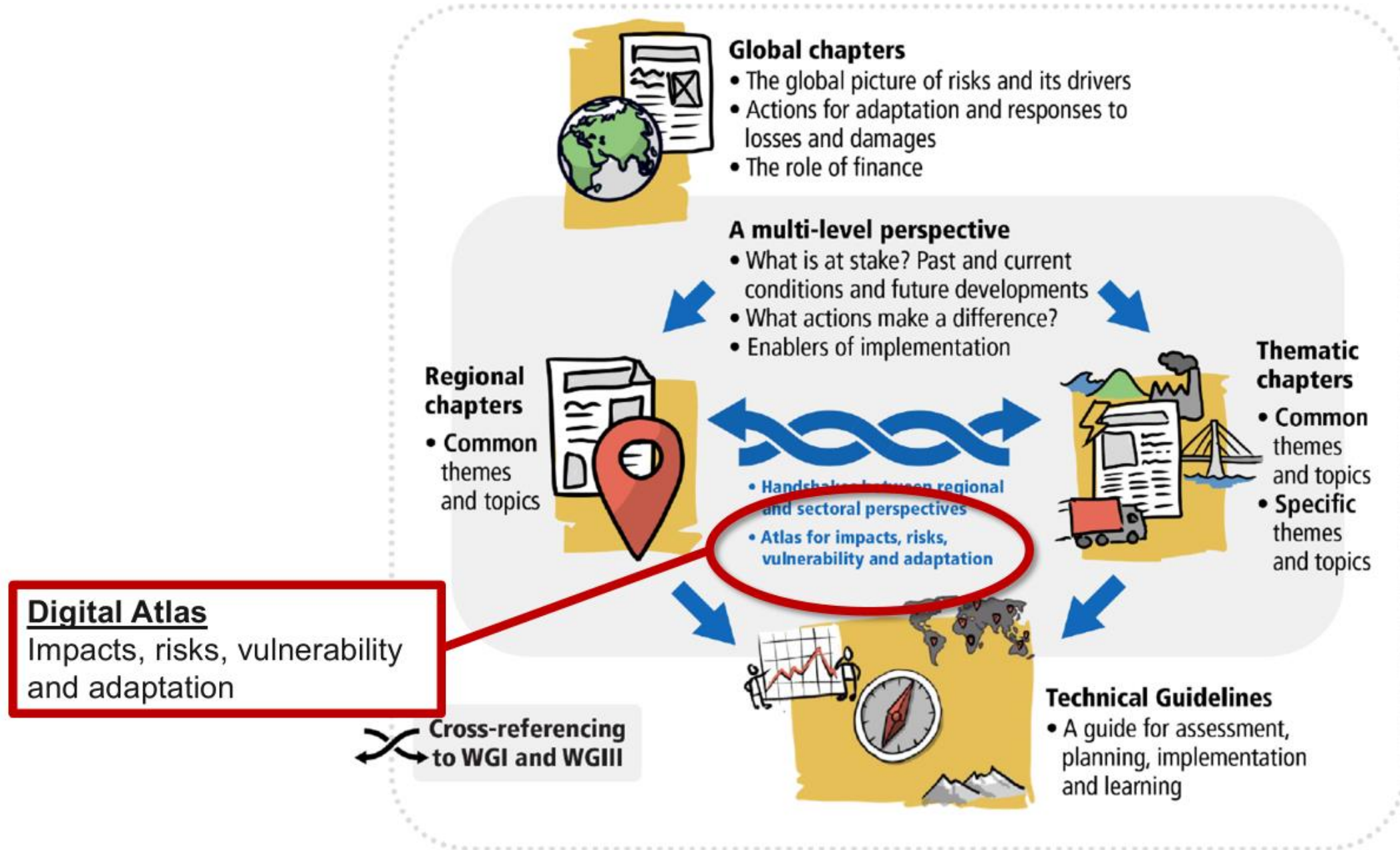
**Annexes**

WGI Interactive Atlas

# WG I current draft timelines (not IPCC plenary approved)

2025	
Sept-Nov	On-line welcome and training activities
Dec	Joint First Lead Author Meeting <b>1 – 5 December</b> , Paris, France
2026	
January	Internal Draft due to TSU <b>30 January</b>
Feb-April	Joint Informal Review of the Internal Draft <b>16 February – 3 April</b>
April	Second Lead Author Meeting <b>20 – 24 April</b> , Santiago, Chile
July	First Order Draft (FOD) due to TSU <b>19 July</b>
Oct	FOD Expert Review <b>10 August – 2 October</b>
Nov	Third Lead Author Meeting <b>2 – 6 November</b> [Location TBD]
2027	
March	<b>cut-off for "submitted" papers 15 March</b>
March	Second Order Draft (SOD) due to TSU <b>19 March</b>
May-Jun	SOD Government and Expert Review <b>3 May – 25 June</b>
July	Fourth Lead Author Meeting <b>26 – 31 July</b> [Location TBD] [includes an additional day for an SPM Drafting Authors Meeting]
Oct	<b>cut-off for "accepted" papers 15 October</b>
Oct	Final Draft due to TSU <b>22 October</b>
Dec-Feb	Final Government Distribution of Final Draft & Government Review of the SPM <b>20 December – 25 February</b>
2028	
May	SPM Approval / Report Acceptance <b>1 – 5 May</b> [Location TBD]

# Approved outline of the WGII AR7 report



# WG II Global chapters, Atlas and Technical Guidelines

**Chapter 1: Point of departure, framing and key concepts**

**Chapter 2: Vulnerabilities, impacts and risks**

- Multiple dimensions of vulnerability across temporal and spatial scales
- Synthesis of observed and projected reversible and irreversible impacts, building on both slow to rapid onset events and climate extremes, including quantification, detection and attribution as appropriate

**Chapter 3: Current adaptation progress, effectiveness and adequacy**

**Chapter 4: Adaptation options and conditions for accelerating action**

**Chapter 5: Responses to losses and damages**

**Chapter 6: Finance**

**Annex I: Atlas**

**IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptation Including Indicators, Metrics and Methodologies:**

# Regional and Thematic chapters

**Chapters 7-13: Africa, Asia, Australasia, Central and South America, Europe, North America, Small Islands**

**Chapter 14: Terrestrial, freshwater and cryospheric biodiversity, ecosystems and their services**

**Chapter 15: Ocean, coastal and cryospheric biodiversity, ecosystems and their services**

**Chapter 16: Water**

**Chapter 17: Agriculture, food, forestry, fibre and fisheries**

**Chapter 18: Adaptation of human settlements, infrastructure and industry systems**

**Chapter 19: Health and well-being**

**Chapter 20: Poverty, livelihoods, mobility and fragility**

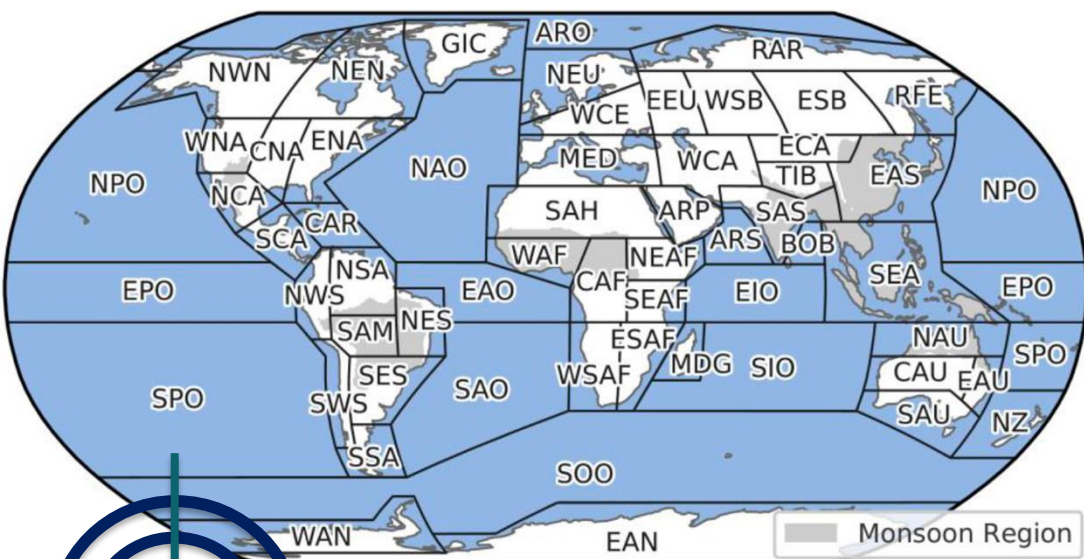
## **Common themes for all chapter to consider**

- Observed and projected impacts, including economic and non-economic losses and damages, building on both slow onset and extreme Climatic-Impact Drivers
- Multiple dimensions of vulnerability and adaptive capacity across temporal and spatial scales
- Barriers and enablers to climate action, including finance, capacity building, education, technology development and transfer

# WG II current draft timelines (not IPCC plenary approved)

<b>2025</b>	
Dec	First Lead Author Meeting <b>1–5 December 2025</b> , Paris, France
<b>2026</b>	
Feb	Zero Order Draft (ZOD) due to TSU <b>9 February 2026</b>
Feb-Apr	Informal Review of the ZOD <b>23 February – 6 April 2026</b>
May	Second Lead Author Meeting <b>18–22 May 2026</b> , location TBC
Sep	First Order Draft (FOD) due to TSU <b>25 September 2026</b>
Oct-Dec	Expert Review of the FOD <b>9 October – 4 December 2026</b>
<b>2027</b>	
Jan	Third Lead Author Meeting <b>18–22 January 2027</b> , location TBC
May	<b>cut-off for “submitted” papers 1 May 2027</b>
May	Second Order Draft (SOD) due to TSU <b>14 May 2027</b>
Jun-Aug	Government and Expert Review of the SOD <b>25 June – 20 August 2027</b>
Sep	Fourth Lead Author Meeting <b>20–25 September 2027</b> , location TBC [includes an additional day for an SPM Drafting Authors Meeting]
Nov	Pre-Final Draft due to TSU <b>22 November 2027</b>
Nov	SPM Writeshop <b>30 November – 2 December 2027</b> , location TBC
<b>2028</b>	
Jan	<b>cut-off for “accepted” papers 7 January 2028</b>
Jan	Final Draft due to TSU <b>14 January 2028</b>
Feb-Apr	Final Government Distribution of Final Draft & Government Review of the SPM <b>25 February – 21 April 2028</b>
Jul	SPM Drafting Authors Preparatory Meeting, <b>7–8 July 2028</b> and Fourteenth Session of Working Group II (WGII-14) to approve the SPM and accept the underlying report and TGIA <b>10–14 July 2028</b> , location TBD

## Interactive atlas



<https://interactive-atlas.ipcc.ch/>

## User-driven Exploration of the Climate Report → Variables/indices from multiple datasets

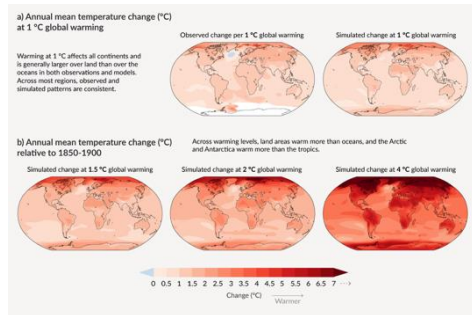
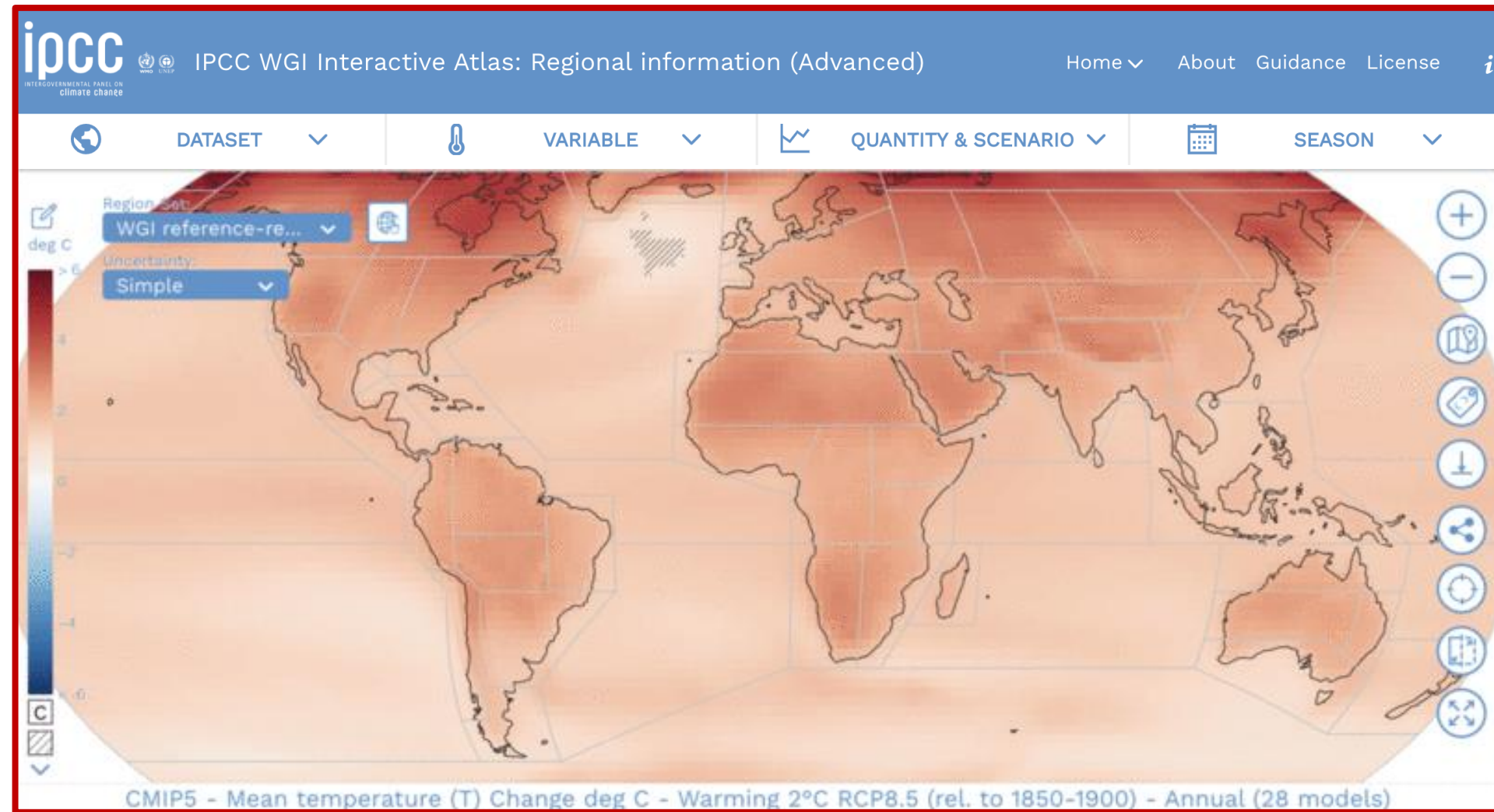


Figure SPM.5

{TS.1.3.2, Figure TS.3, Figure TS.5, Figure 1.14, 4.6.1, Cross-Chapter Box 11.1, Cross-Chapter Box Atlas.1}



# Regional information on floods, droughts, cyclones... (climatic impact-drivers)

**ipcc** INTERGOVERNMENTAL PANEL ON climate change

IPCC WGI Interactive Atlas: Regional synthesis

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SELECT VISUALIZATION

MAP REGIONS COMBINATIONS

**WET AND DRY**

- Mean precipitation
- River flood
- Heavy precipitation and pluvial flood
- Landslide
- Aridity
- Hydrological drought
- Agricultural and ecological drought
- Fire weather

**WIND**

- Mean wind speed
- Severe wind storm
- Tropical cyclone
- Sand and dust storm

**SNOW AND ICE**

- Snow, glacier and ice sheet
- Permafrost
- Lake, river and sea ice

**And now let's add:**

- Exposure data (population, assets, ...)
- Vulnerability data (GDP, income distribution, demography, ...)
- Adaptation data (policies, priority scenarios, ...)
- ...

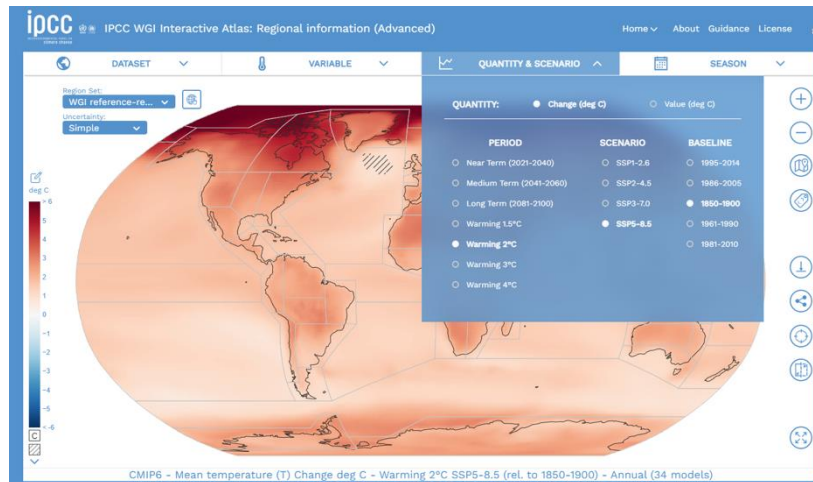
Future projections ...with confidence Observed trend ...with attribution

Increasing High Upward High Low

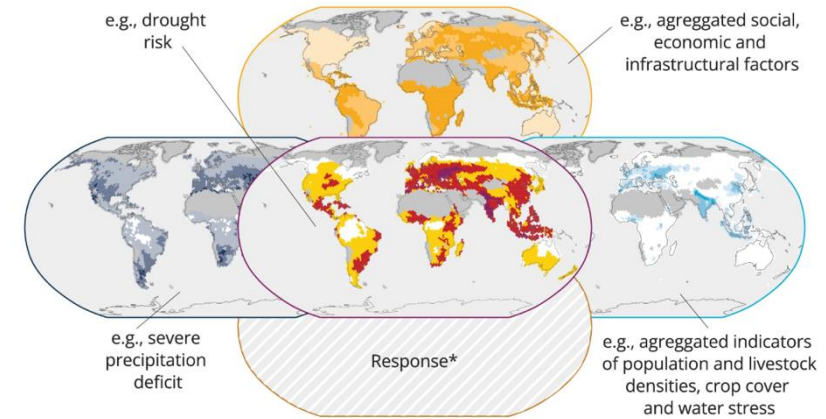
Decreasing Medium Downward High Low

# Points of attention

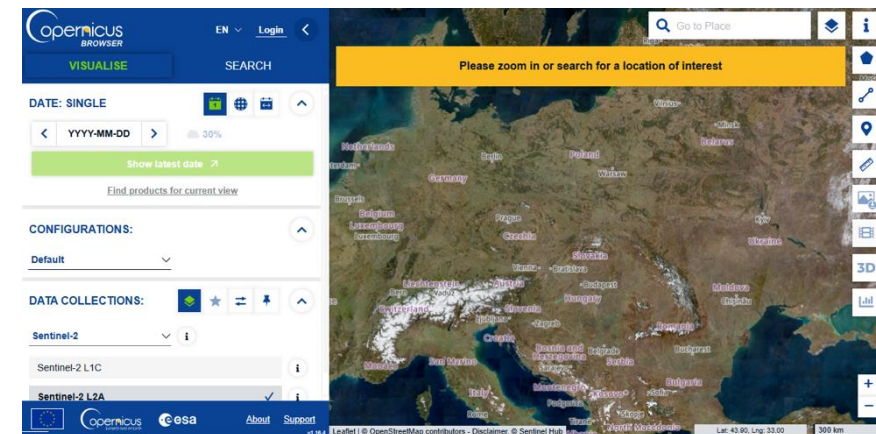
## Interface between WGI and WGII atlas sections



## Data selection



## Development portal & hosting



# Atlas Expert Meeting, April 27-28 Santiago, Chile

**Goal:** support the transition from conceptual design (developed in March/April) to technical implementation of the AR7 WGI and WGII Interactive Atlases

## **Expected outcomes**

- (1) Presentation and discussion of the WGI and WGII conceptual designs and data screening processes with a technological proof-of-concept prototype (for WG I);
  - (2) Learning from other digital atlas platforms: from conceptual design to data selection, technical implementation and user interaction;
  - (3) Working sessions to transfer conceptual design into technical specifications, with attention to harmonization and interoperability between the two Atlases;
  - (4) Drafting an initial outline coordinated implementation plan.
- Attendees: 20 WGI and 20 WGII authors; 5 from similar digital atlases; 5 technical developmental experts; 10 from TG-Data and Data Distribution Centres – with some (additional) online