



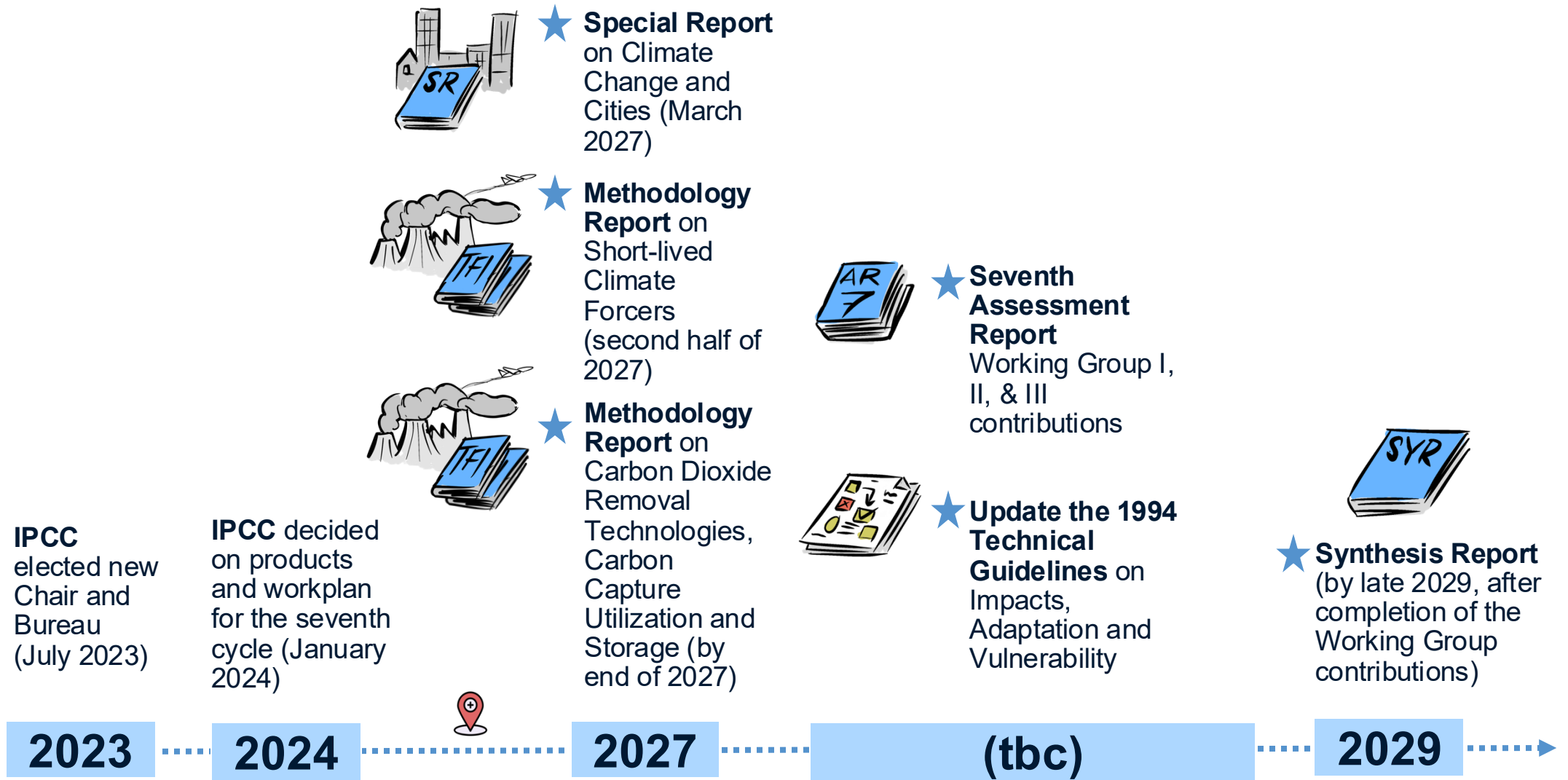
IPCC Seventh Assessment Report (AR7)

The outlines and related WGI challenges

Robert Vautard and Xiaoye Zhang

09 April, 2025

Introducing the 7th Assessment Cycle (AR7)






IPCC Working Group I, 7th Assessment Cycle

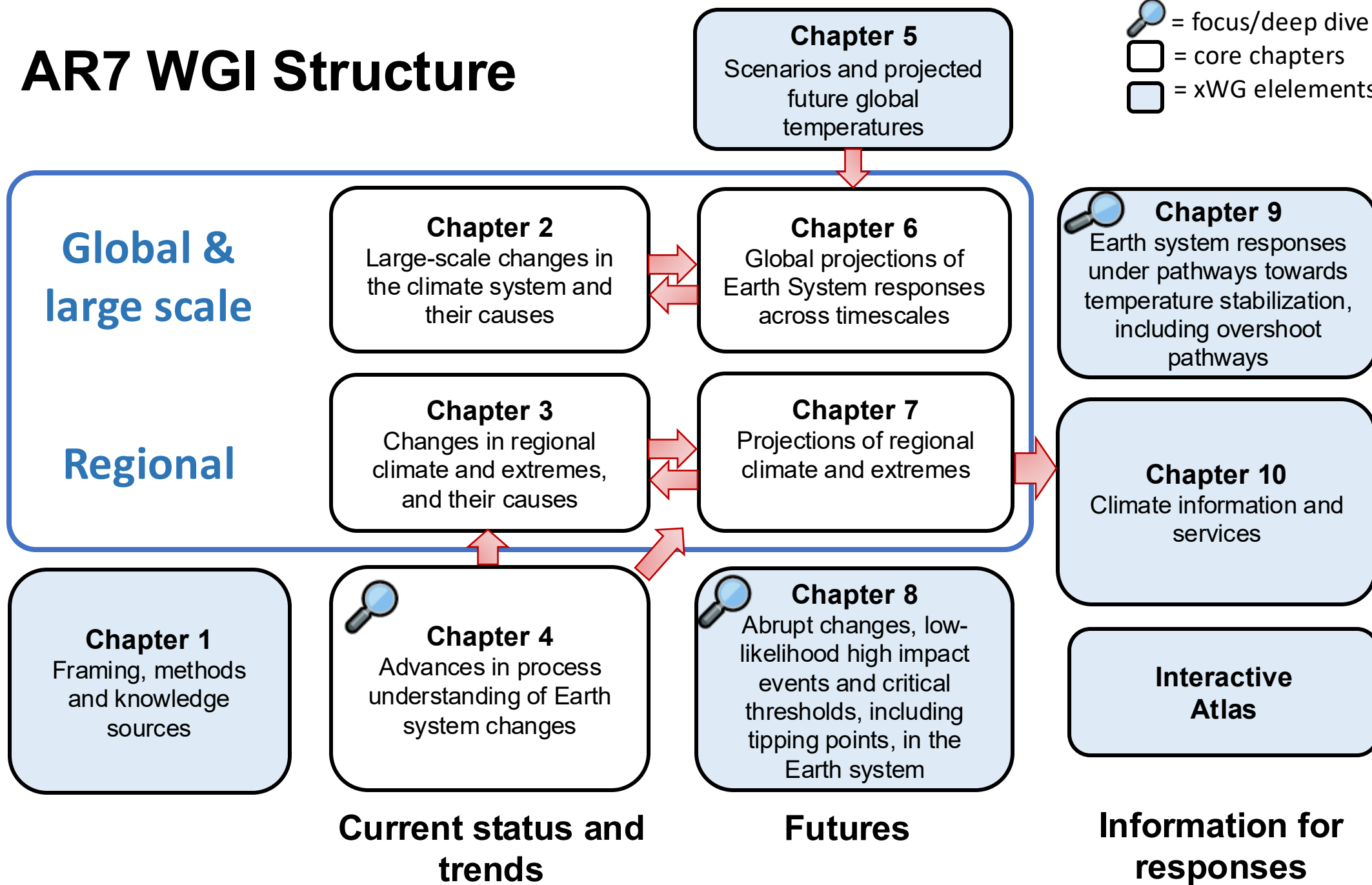
Working Group I contribution to the 7th IPCC Assessment Report

Robert Vautard and Xiaoye Zhang, Co-Chairs WGI



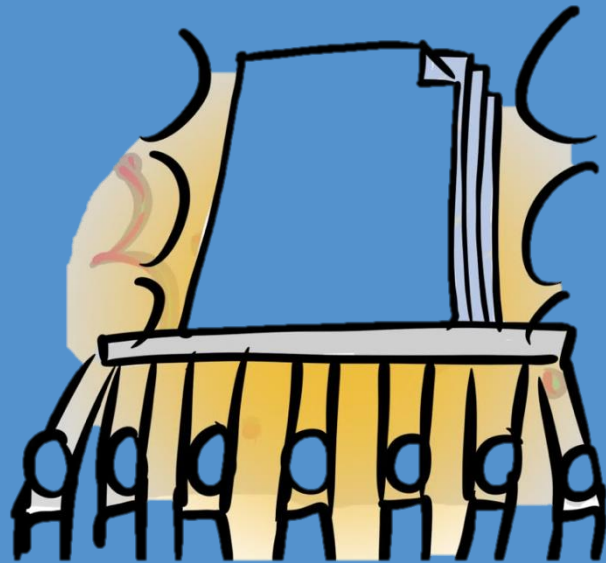
AR7 WGI Structure

 = focus/deep dive
 = core chapters
 = xWG elements



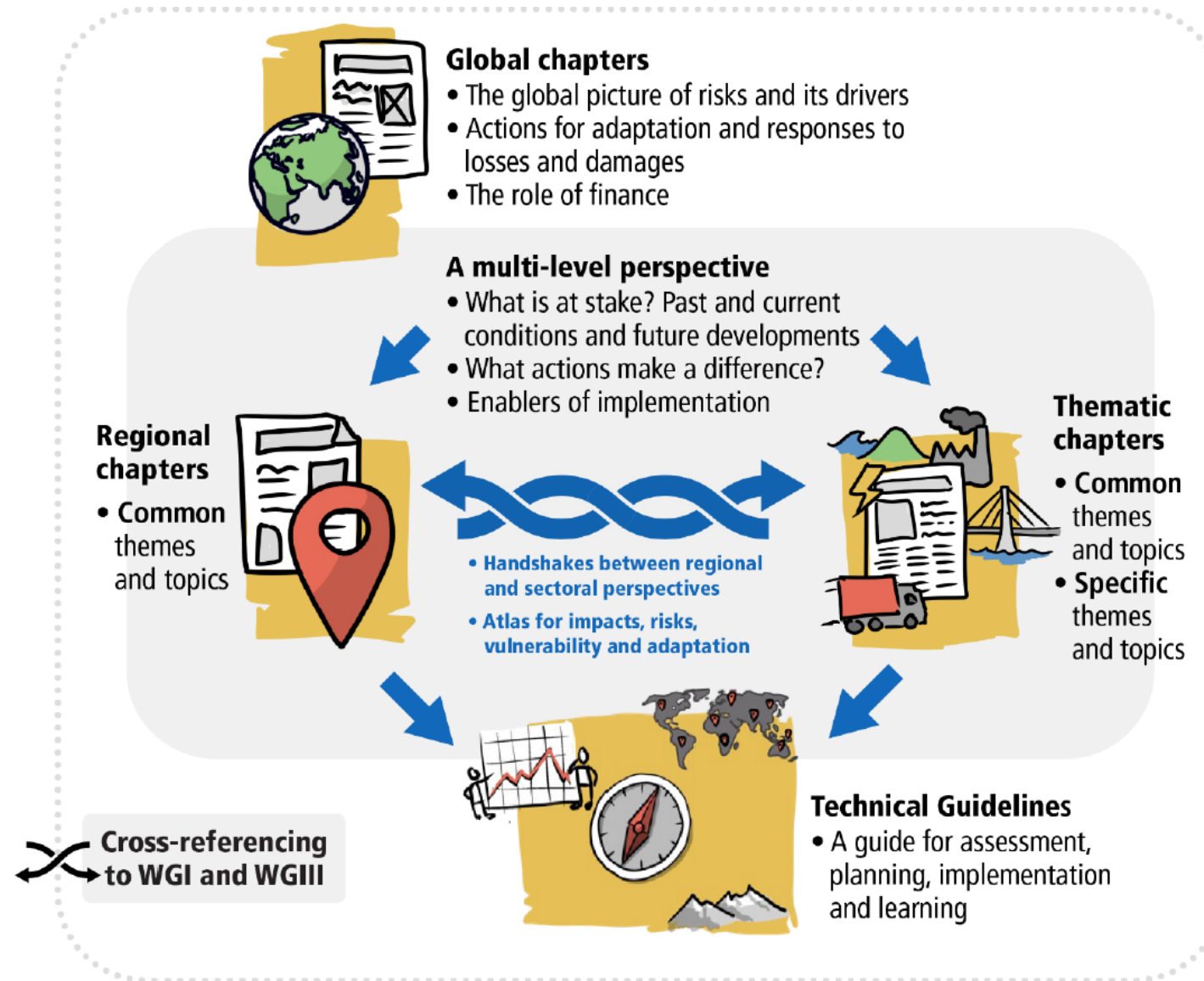
Highlighting key advances in science

- **Chapters 2&3:**
Improved understanding of **recent anomalies** (outstanding regional or global extremes and values in global indices)
- **Chapter 4:**
Integration of advances on main processes and feedbacks **at the interface of Earth system components**, and cycles (e.g., water-energy-carbon, ocean/land)
- **Chapters 5-7:**
Global and regional **projections** based on new model developments (km scale resolution, AI, emulators), incl. extreme events
- **Chapter 8:**
Fast increasing literature on potential **abrupt changes and events** not covered by regional projections
- **Chapters 9&10:**
Very dynamic areas of **policy-relevant** research (climate services, stabilization and overshoot)

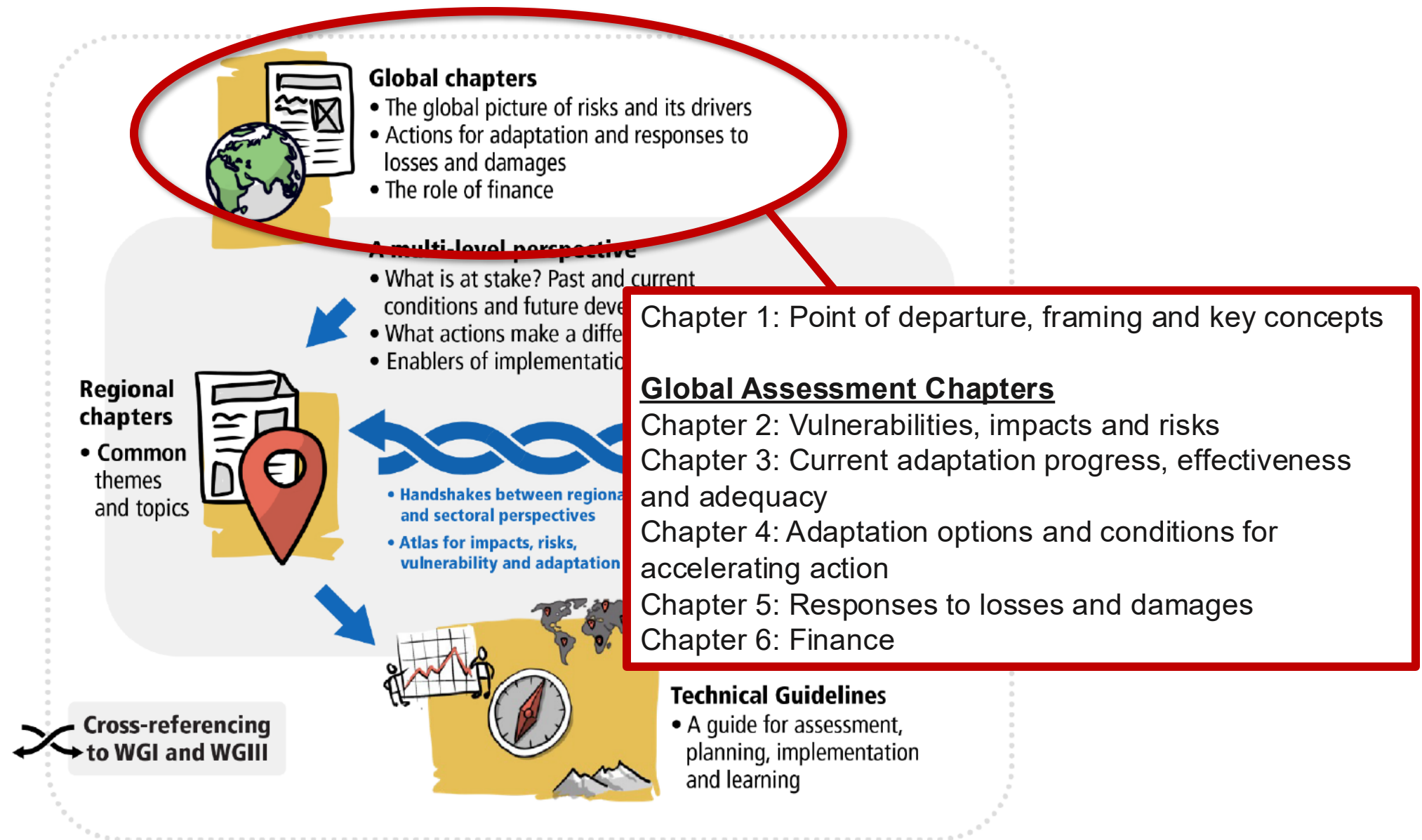


Outline of the Working Group II contribution to the 7th Assessment Report

Outline of WG II AR7



Starting with global chapters



Progressing to regional chapters

Cross-chapter Papers

Polar regions
Mountain regions
Drylands and Deserts
Least Developed Countries
Mediterranean



Global chapters

- The global picture of risk
- Actions for adaptation and losses and damages
- The role of finance

A multi-level perspective

- What is at stake? Past and future conditions and future development
- What actions make a difference?
- Enablers of implementation

Regional Assessment Chapters

Chapter 7: Africa
Chapter 8: Asia
Chapter 9: Australasia
Chapter 10: Central and South America
Chapter 11: Europe
Chapter 12: North America
Chapter 13: Small Islands

Regional chapters

- Common themes and topics



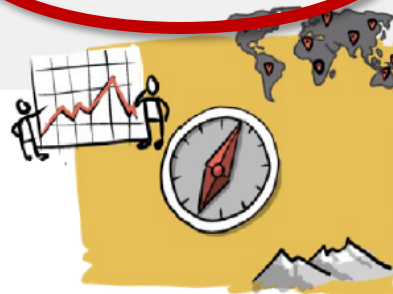
- Handshakes between regional and sectoral perspectives
- Atlas for impacts, risks, vulnerability and adaptation



- Common themes and topics
- Specific themes and topics

Digital Atlas

Impacts, risks, vulnerability and adaptation



Technical Guidelines

- A guide for assessment, planning, implementation and learning

Cross-referencing to WGI and WGIII

Moving to thematic chapters

Thematic Assessment Chapters

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

Global chapters

of risks and its drivers
on and responses to

Objective

st and current
e developments
a difference?
mentation

regional
ives

- Atlas for impacts, risks, vulnerability and adaptation

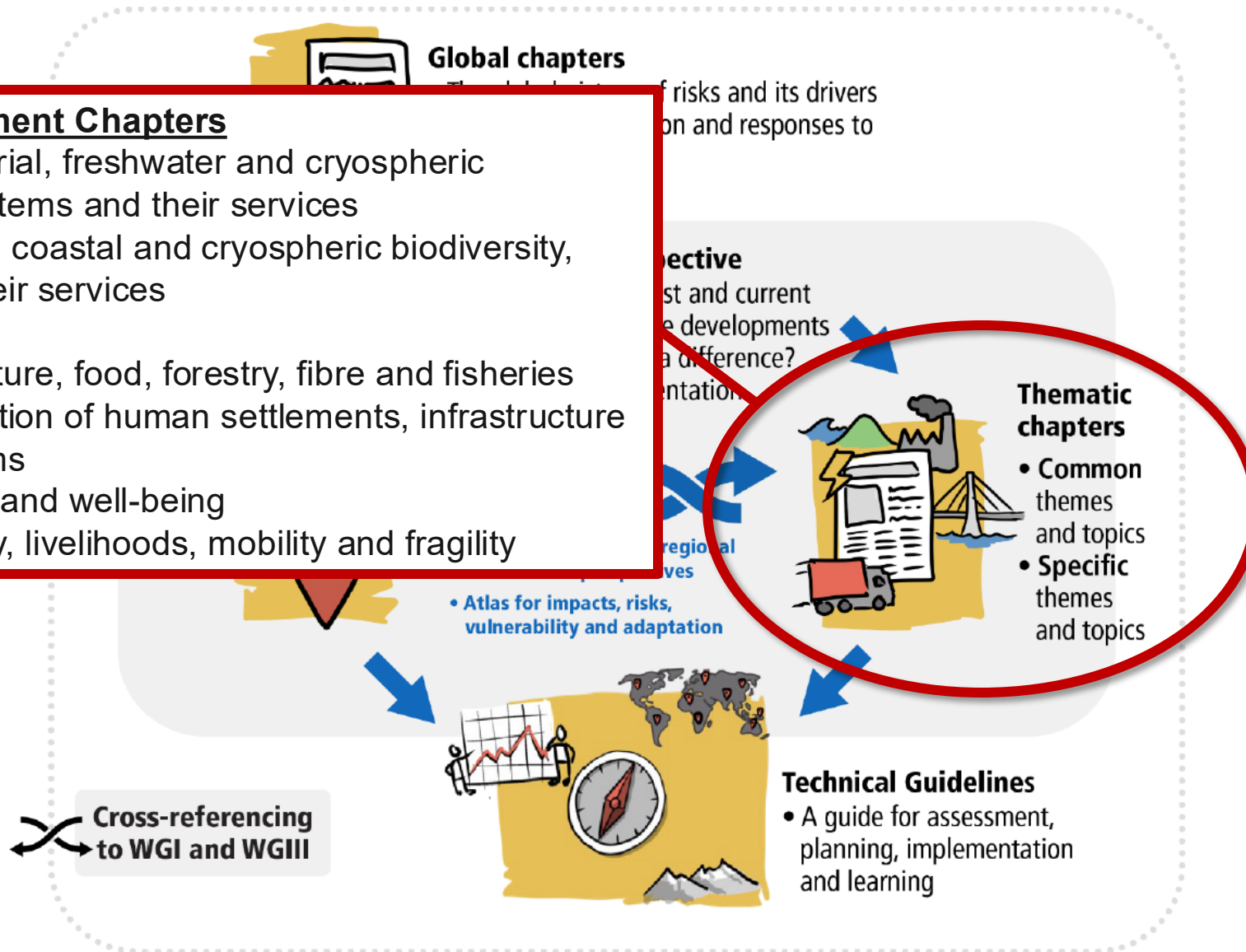
Thematic chapters

- Common themes and topics
- Specific themes and topics

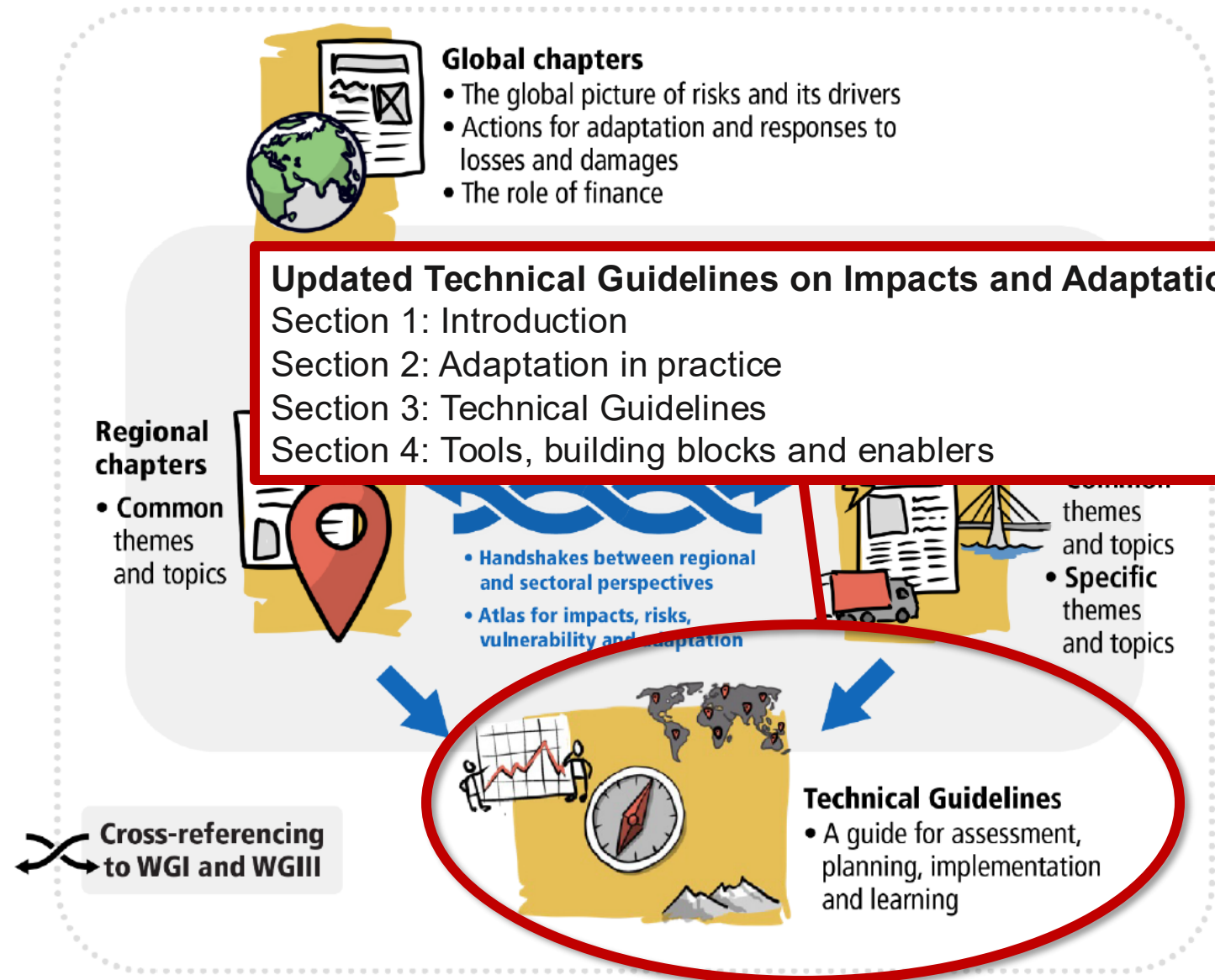
Technical Guidelines

- A guide for assessment, planning, implementation and learning

**Cross-referencing
to WGI and WGIII**



The updated Technical Guidelines



IPCC Working Group III, 7th Assessment Cycle

Working Group III contribution to the 7th IPCC Assessment Report

Kate Calvin and Joy Pereira, Co-chairs WGIII



Working Group III Contribution to the IPCC Seventh Assessment Report

1. Introduction and framing
2. Past and current anthropogenic emissions and their drivers
3. Projected futures in the context of sustainable development and climate change
4. Sustainable development and mitigation
5. Enablers and barriers
6. Policies and governance and international cooperation
7. Finance
8. Services and demand
9. Energy systems
10. Industry
11. Transport and mobility services and systems
12. Buildings and human settlements
13. Agriculture, Forestry and Other Land Use
14. Integration and interactions across sectors and systems
15. Potentials, limits, and risks of Carbon Dioxide Removal

1. Introduction and framing
2. Past and current anthropogenic emissions and their drivers
3. Projected futures in the context of sustainable development and climate change
4. Sustainable development and mitigation

Past and current trends
and futures, sustainable
development and
mitigation

Inclusive approach, a diverse range of
methodologies, models, databases, and development
tools for scenarios and emissions pathways

- 5. Enablers and barriers
- 6. Policies, governance and international cooperation
- 7. Finance

Factors that enable
or constrain mitigation

Enablers, opportunities, barriers, and constraints for mitigation,
including cost, capacity, environment and natural resources, finance,
social aspects, technology, and trade

- 8. Services and demand
- 9. Energy systems
- 10. Industry
- 11. Transport and mobility services and systems
- 12. Buildings and human settlements
- 13. Agriculture, Forestry and Other Land Use
- 14. Integration and interactions across sectors and systems

Sectors, systems
and
their integration

Mitigation options for services and demand, energy systems, industry, transport and mobility services and systems, buildings and human settlements, and AFOLU with a focus on sectors, systems, and their integration

15. Potentials, limits, and risks of Carbon Dioxide Removal

Carbon dioxide
removal

Potentials, limits, and risks of different CDR approaches, including their effectiveness at different warming levels and time scales, feasibility assessment, and permanence

THANK YOU

FOR YOUR ATTENTION

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