

IPCC Sixth Assessment Report

Working Group II

Proposed Outline

Summary for Policymakers

Technical Summary

Chapter 1: Point of departure and key concepts

- Changing policy context (including Paris Agreement, SDGs etc.); AR5 and SR findings and critical messages, goals of this report
- The significance of sectoral and regional climate risks to natural and human systems in the context of culture, values, ethics, identity, behavior, and historical experience
- The climate risk framework used in this report encompassing hazard, exposure, and vulnerabilities
- The significance of adaptation (from incremental to transformational), in addressing climate change risks, including adaptation responses and outcomes
- Detection and attribution of both climate impacts and adaptation responses
- Understanding dynamic climate risks from scenarios that reflect multiple interacting drivers
- Enabling conditions for effective adaptation including governance and economic aspects
- Climate change responses and their interactions with sustainable development pathways
- Opportunities for enhancing climate resilient development pathways

THEME 1: Risks, adaptation and sustainability for systems impacted by climate change

Chapter 2: Terrestrial and freshwater ecosystems and their services

- Point of departure, key findings of other reports, organised by biomes including freshwater systems, taking into account ecological disequilibria
- Historical and paleontological aspects of climate change impacts and risks
- Trends in critical ecosystems including detection and attribution of observed impacts and responses
- Projected hazards and exposure (link to WGI), including extreme events and interactions of multiple climatic, non-climatic and anthropogenic stressors at relevant temporal and spatial scales
- Projected impacts: species, ecosystem structure and biodiversity, emergence of novel communities, process rates, functions, and the implication for their services, at relevant temporal and spatial scales
- Vulnerability and resilience, enablers and limits to natural and planned adaptation, and maladaptation
- Assessing risks, opportunities, costs, and trade-offs including consideration of scenarios and impacts of adaptation and mitigation responses
- Planned adaptation and mitigation for management of risk within the SDG and other relevant policy contexts, informed by cultural, ethical, identity, economic and behavioural dimensions
- Lessons from case studies

Chapter 3: Ocean and coastal ecosystems and their services

- Point of departure, key findings of other reports, organised by systems, taking into account ecological disequilibria
- Historical and paleontological aspects of climate change impacts and risks
- Trends in critical ecosystems including detection and attribution of observed impacts
- Projected hazards and exposure (link to WGI), including extreme events and interactions of multiple climatic, non-climatic and anthropogenic stressors at relevant temporal and spatial scales
- Projected impacts: species, ecosystem structure and biodiversity, emergence of novel communities, process rates, functions, and the implication for their services, at relevant temporal and spatial scales

- Vulnerability and resilience, enablers and limits to natural adaptation
- Assessing risk, opportunities, and trade-offs including consideration of scenarios and impacts of adaptation and mitigation responses
- Planned adaptation and mitigation for management of risk within the SDG and other relevant policy contexts, informed by cultural, ethical, identity, economic and behavioural dimensions
- Lessons from case studies

Chapter 4: Water

- Observed and projected hydrological changes on basin and watershed scales and water related hazards including floods, droughts and landslides.
- Key short, medium and long term risks to water security in the context of critical sectors (including food-energy-water-health nexus) and different users and systems under alternative scenarios.
- Adaptation responses including cooperation in different climatic zones to water security risks with co-benefits for sustainable development including consideration of impacts of adaptation and mitigation responses
- Attribution of transboundary and other international and intranational problems relating to shared water resources.
- Approaches to achieving resilience in water systems and assessments of outcomes, costs, benefits, and where maladaptations were evident.
- Lessons from case studies

Chapter 5: Food, fibre and other services from managed ecosystems

- Climate-driven historical changes in services provided by managed ecosystems, detection and attribution of impacts and responses, including impacts of adaptation and mitigation responses
- Current and projected risks for food and nutrition security, food systems on land and in the ocean, and the food-energy-water-health nexus
- Current and projected risks for wood, fibre and natural products, such as medicinal organisms, rubber, and dyes
- Adaptation options for different managed ecosystems across scales and regions including limits and barriers, knowledge systems and aspects of sustainable development
- Competition for the use of land and ocean, including conflicts with indigenous rights to land and water bodies, and other tradeoffs in the context of adaptation and mitigation responses
- Current and projected risks for provisioning and cultural ecosystem services with considerations of ethics and identity
- Lessons from case studies

Chapter 6: Cities, settlements and key infrastructure

- Changes in the international policy architecture for settlements since AR5.
- Interactions of climate risks with urban and rural change processes including food-energy-water-health nexus
- Risk-reducing infrastructure and services (including ecological and social), their deficits, and implications for vulnerability, exposure and adaptation.
- Detection and attribution of observed impacts and responses and projected risks from climate change under alternative scenarios including energy systems, transport and industry
- Adaptation options, adaptive capacity, responses and outcomes, including equity considerations.
- Institutional structures that enable governance for climate resilient and sustainable settlements, cities and key infrastructure.
- Lessons from case studies.

Chapter 7: Health, wellbeing and the changing structure of communities

- Health and wellbeing impacts, including detection and attribution
- Projected risks to health and wellbeing under alternative scenarios, including food-energy-water-health nexus
- Vulnerable populations and communities
- Adaptation options and their social, environmental and economic implications
- Observed impacts and projected changes in migration, displacement, and trapped populations, and linkages to adaptation
- Psychological, social, and cultural dimensions
- Lessons from case studies

Chapter 8: Poverty, livelihoods and economic development

- Detection and attribution of observed impacts and responses
- Projected climate change risks under alternative development scenarios as differentiated by economic opportunity and shifting livelihoods
- Observed and projected risks and losses and the challenges for equity and sustainability
- Adaptation options, adaptive capacity and actions, and their outcomes for resilience and transformation, focusing on low-income households and communities
- Opportunities for development including tradeoffs between adaptation and mitigation, economic diversification, equity, and sustainability
- Lessons from case studies

THEME 2: Regions

Common elements across all *regional* chapters (guidance points not an outline)

- Information on selected regional and sub-regional climate characteristics and zones
- Summary Table and/or figures with WGI and WGII information, combined with risk assessment (e.g., SREX SPM.1)
- Detection and attribution of observed impacts and responses in natural and human systems on diverse time scales
- Current sectoral climate risks, including specific regional and sub-regional considerations
- Impacts of climate change on culture, values, attitudes, ethics, identity, behaviour
- Observed impacts and projected risks including identifying key risks and residual risks depending on rate and level of climate change including extremes, and development pathways
- Adaptation options, from incremental to transformational, including opportunities, enablers, limits, barriers, and adaptive capacity
- Governance and economic aspects including legal, institutional, financing, price responses, trade, and the social cost of carbon
- Cross sectoral, intra-regional, and inter-regional issues including consideration of temporal scale
- Interaction of risks and responses to climate change with sustainable development pathways
- Lessons from case studies

Chapter 9: Africa

Chapter 10: Europe

Chapter 11: Asia

Chapter 12: Australasia

Chapter 13: North America

Chapter 14: Central and South America

Chapter 15: Small Islands

THEME 3: Overview of sustainable development pathways: integrating adaptation and mitigation

Chapter 16: Key risks across sectors and regions

- Synthesis of observed impacts and responses, including detection and attribution
- Key risks and avoided impacts under a range of climate and development pathways, across temporal and spatial scales
- Limits to adaptation and residual risks in natural and human systems
- Reasons for Concern across scales
- Lessons from case studies at different scales, including trans-boundary risks

Chapter 17: Decision-making options for managing risk

- Decision-making and governance for managing risk across multiple scales, institutions, and systems
- Drivers of decision-making: values, perceptions, differential power and influence, behaviour, and incentives
- Costs and non-monetized loss, benefits, synergies, and trade-offs, including distributional aspects and the social cost of carbon
- Lessons from case studies at different scales, including issues of governance and finance

Chapter 18: Climate resilient development pathways and transformation*

- Synergies and trade-offs of sustainable development (including SDGs), adaptation, and mitigation
- Strategies that strengthen resilience and reduce inequalities
- Assessing progress, including adaptation, in the context of the Global Stocktake
- Lessons from case studies at different scales

**connection to WG III*

CROSS-CHAPTER BOXES

- Deserts and semi-arid areas
- Tropical forests
- Antarctica
- Arctic
- Mountains
- Biodiversity hotspots (land, coasts and oceans)
- Cities by the sea

ANNEX I: Regional Atlas

ANNEX II: Glossary

ANNEX III: List of Acronyms

ANNEX IV: List of Contributors

ANNEX V: List of Expert Reviewers

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