

# Introduction to WGII AR6 Fact Sheets

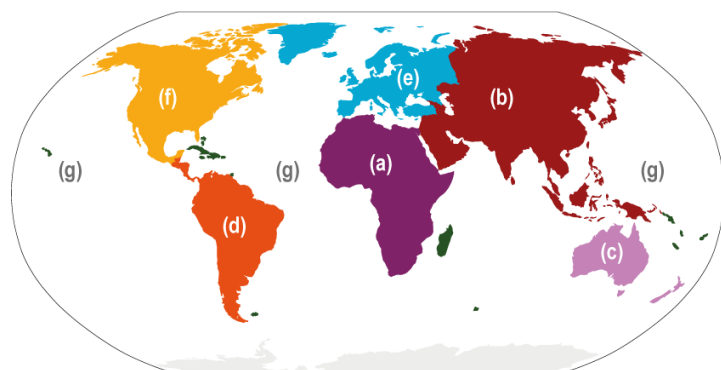
## General Information

- WGII AR6 fact sheets are an outreach product that is fully traceable to the IPCC Working Group II Sixth Assessment Report (WGII AR6) on Impacts, Adaptation and Vulnerability (see below).
- Regional and crosscutting fact sheets aim to provide easy access to the key findings, distilled from the relevant Chapters and Cross-Chapter Papers, the Technical Summary and the Global to Regional Atlas.
- The structure of fact sheets includes three segments, following the narrative of the WGII Summary for Policymakers:
  1. Climate change impacts and risks,
  2. Adaptation options and barriers and
  3. Climate resilient development.

## Regions

Regional fact sheets are based on the respective chapters of the WGII Sixth Assessment Report, covering the following regions:

Africa,  
Asia,  
Australasia,  
Central and South America,  
Europe,  
North America and  
Small Islands.



(a) Africa • (b) Asia • (c) Australasia • (d) Central and South America •  
(e) Europe • (f) North America • (g) Small Islands

## Traceability

- Each statement in the fact sheets is taken from the underlying IPCC Working Group II Sixth Assessment Report.
- References to the underlying report are provided at the end of each statement in curly brackets {}.
- References are provided to statements in the
  - [Summary for Policymakers](#) (SPM; e.g. SPM.B.3.4)
  - [Technical Summary](#) (TS; e.g. TS.C.6.2)
  - [Chapters' Executive Summaries](#) (ES-Ch; e.g. ES-Ch7)
  - [Chapters' Sections](#) (e.g. 16.5.2)
  - [Chapters' Supplementary Material](#) (SM; e.g. Table SM.3.2)
  - [Cross-Chapter Paper](#) (CCP)
  - [Cross-Chapter Paper Executive Summaries](#) (e.g. ES-CCP5)
  - [Cross-Chapter Paper Sections](#) (e.g. CCP1.3.4)
  - [Cross-Chapter Boxes](#) (CCBs) located in particular [Chapters](#) (e.g. CCB SLR-Ch3)



## Selected Terms and Definitions

The following selected terms and definitions from the AR6 Glossary ([Annex II of WGII AR6](#)) are used in the WGII fact sheets.

### Adaptation gap

The difference between actually implemented adaptation and a societally set goal, determined largely by preferences related to tolerated climate change impacts and reflecting resource limitations and competing priorities (UNEP, 2014; UNEP, 2018).

### Adaptation limits

The point at which an actor's objectives (or system needs) cannot be secured from intolerable risks through adaptive actions.

### Adaptation options

The array of strategies and measures that are available and appropriate for addressing adaptation. They include a wide range of actions that can be categorised as structural, institutional, ecological or behavioural.

### Biodiversity

The variability among living organisms from all sources including, among other things, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (UN, 1992).

### Climate resilient development (CRD)

In the WGII report, climate resilient development refers to the process of implementing greenhouse gas mitigation and adaptation measures to support sustainable development for all.

### Ecosystem

A functional unit consisting of living organisms, their non-living environment and the interactions within and between them. In the current era, most ecosystems either contain people as key organisms, or are influenced by the effects of human activities in their environment.

### Ecosystem-based adaptation

The use of ecosystem management activities to increase the resilience and reduce the vulnerability of people and ecosystems to climate change (Campbell et al., 2009).

### Extirpation

The disappearance of a species from an area, sometimes also referred to as local extinction. Its use implies that the species still occurs elsewhere.

### Human system

Any system in which human organisations and institutions play a major role. Often, but not always, the term is synonymous with society or social system. Systems such as agricultural systems, urban systems, political systems, technological systems and economic systems are all human systems in the sense applied in the WGII Report.

### Maladaptation

Actions that may lead to increased risk of adverse climate-related outcomes, including via increased greenhouse gas emissions, increased or shifted vulnerability to climate change, more inequitable outcomes, or diminished welfare, now or in the future. Most often, maladaptation is an unintended consequence.

### Mitigation (of climate change)

A human intervention to reduce emissions or enhance the sinks of greenhouse gases.

### Residual risk

The risk related to climate change impacts that remains following adaptation and mitigation efforts. Adaptation actions can redistribute risk and impacts, with increased risk and impacts in some areas or populations, and decreased risk and impacts in others.

### Vulnerability

The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.

## Time Periods and Scenarios

The following time periods and climate change projections are mentioned in the WGII fact sheets.

### Time periods

Pre-industrial period is the multi-century period prior to the onset of large-scale industrial activity around 1750. The reference period 1850–1900 is used to approximate pre-industrial global mean surface temperature (GMST). The ‘modern’ period is defined as 1995 to 2014 in AR6, while three future reference periods are used for presenting climate change projections, namely near-term (2021–2040), mid-term (2041–2060) and long-term (2081–2100), in both the AR6 WGI and WGII reports. {Box SPM.1; CCB CLIMATE-Ch1; AR6 Glossary}

### Scenarios

To explore and investigate climate futures, climate change projections are developed using sets of different input projections. These consist of sets of projections of greenhouse gas emissions, aerosols or aerosol precursor emissions, land use change, and concentrations designed to facilitate evaluation of a large climate space and enable climate modelling experiments. For AR5, the input projections were referred to as representative concentration pathways (RCPs). For AR6, new sets of inputs are used and referred to as SSP scenarios, where SSP refers to socioeconomic assumptions called the shared socioeconomic pathways (SSPs). {CCB CLIMATE-Ch1}

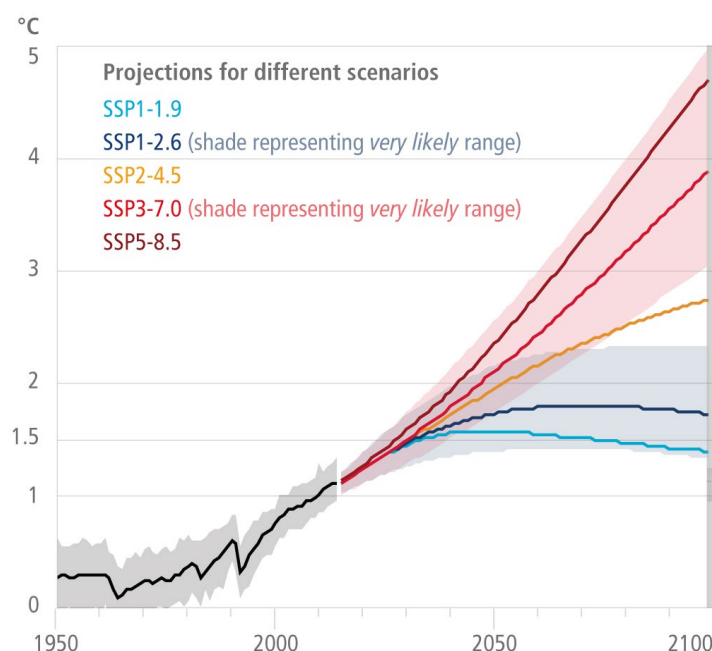
### Representative Concentration Pathways (RCPs)

Four RCPs produced from integrated assessment models are used in the Fifth and the Sixth IPCC Assessments for comparison, spanning the range from approximately below 2°C warming to high (>4°C) warming best-estimates by the end of the 21st century: RCP2.6, RCP4.5, RCP6.0 and RCP8.5. {AR6 Glossary}

### Shared Socio-economic Pathways (SSPs)

A core set of five SSP scenarios, namely SSP1–1.9, SSP1–2.6, SSP2–4.5, SSP3–7.0 and SSP5–8.5, was selected in the AR6 WGI report to fill certain gaps identified in the RCPs. The first number in the label is the particular set of socioeconomic assumptions driving the emissions and other climate forcing inputs taken up by climate models and the second number is the radiative forcing level reached in 2100. {CCB CLIMATE-Ch1}

#### Global surface temperature change Increase relative to the period 1850–1900



**Figure 1:** Global surface temperature changes in °C relative to 1850–1900. {Figure SPM.3a}

Regional fact sheets based on the AR6 Working Group I Report on the physical science basis of climate change are available [here](#).