Abbreviations and acronyms

Acronym or abbreviation	Name
AET	Actual evapotranspiration
C3S	Copernicus Climate Change Service
Climate-ADAPT	European Climate Adaptation Platform
CDS	Copernicus Climate Data Store
CID	Climatic impact driver
CMIP5 / CMIP6	Coupled Model Intercomparison Project Phase 5 / 6
ECDE	European Climate Data Explorer
EC	European Commission
EU	European Union
ECV	Essential Climate Variable
EEA	European Environment Agency
EEA38	The 32 member countries and 6 cooperating countries of the European Environment Agency
ERA5	ECMWF Reanalysis Dataset 5th Generation
ETC/CCA	European Topic Centre on Climate Change Impacts, Vulnerability and Adaptation
ETC/CCA Technical Paper	ETC/CCA Technical Paper 1/2020: Climate-related hazard indices for Europe
IPCC	Intergovernmental Panel on Climate Change
IPCC AR5 / AR6	IPCC Fifth / Sixth Assessment Report
MS	Member State (of the European Union)
NRA	National risk assessment (for disaster risk management)
NUTS	Nomenclature of Territorial Units for Statistics
RCP	Representative Concentration Pathway
SPI	Standardized Precipitation Index

Concepts and definitions

Box 1 below presents the main concepts and definitions adopted throughout the report.

Box 1. Concepts and definitions adopted in this report

Adaptation is the process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects (IPCC, 2014).

Bias adjustments are statistical techniques commonly used to post-process climate model outputs and reduce the systematic differences with respect to observations. These methods compute the differences between modelled values and observations for a particular statistic over a common baseline period and apply the adjustments to the model projections. Bias-adjusted data are particularly relevant when the absolute values of climate variables is used as input to impact models or for calculating indices based on absolute threshold values. Some bias-adjustment methods implicitly include a model downscaling, or they can be combined with specific statistical downscaling schemes projecting the original coarser climate model grids to a finer spatial scale.

Climate reanalysis provides a consistent description of the recent climate based on a combination of models with observations. Reanalysis datasets include estimates of atmospheric parameters such as air temperature, pressure and wind at different altitudes, and surface parameters such as rainfall, soil moisture content, ocean-wave height and sea surface temperature. Reanalysis provides continuous estimates over specific spatial domains (e.g., global, national or regional) and spans a past period that can extend back several decades or more.

Climate risk is defined as the result of the interaction of climate-related hazards (including hazardous events and trends) with the vulnerability and exposure of human and natural systems (IPCC, 2014).

Essential Climate Variables (ECVs) are physical, chemical or biological variables or a group of linked variables that critically contributes to the characterization of Earth's climate (WMO, 2020)

Exposure is the presence of people, livelihoods, species or ecosystems, environmental functions, services, resources, infrastructure, or economic, social or cultural assets in places and settings that could be adversely affected (IPCC, 2014).

Hazard is the potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, environmental resources, economic, social or cultural assets. (…) The term 'hazard' usually refers to climate-related physical events or trends or their physical impacts (IPCC, 2014).

Representative Concentration Pathways (RCPs) are scenarios that include time series of emissions and concentrations of the full suite of greenhouse gases, aerosols and chemically active gases, as well as land use/land cover. The term representative signifies that each RCP provides only one of many possible emission scenarios that would lead to the specific radiative forcing characteristics. The term pathway emphasises that not only the long-term concentration levels are of interest, but also the trajectory taken over time to reach that outcome. RCPs range from stringent mitigation scenarios (RCP1.9, RCP2.6) to a very high emissions scenario (RCP8.5). The Coupled Model Intercomparison Project Phase 5 (CMIP5) underlying the IPCC Fifth Assessment Report (IPCC, 2013) adopted RCP2.6, 4.5, 6.0 and 8.5. The latest Coupled Model Intercomparison Project Phase 6 (CMIP6) underlying the IPCC Sixth Assessment Report (IPCC, 2021) has integrated the RCPs and the underlying Shared Socio-economic Pathways (SSPs).

Vulnerability is 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 (IPCC, 2014).