



What is a Climate Impact Indicator?

A Climate Impact Indicator (CII) is a measure/index of quantitative climate model and/or observation data that illustrate aspects of the historical state of the climate and/or of future climate change.

CIIs:

- Provide information on past and projected climate change, and observed and projected impacts of climate change on nature and society;
- Condense climate information for climate impact assessment so users do not have to run the whole production chain;
- Are based on quantitative data derived from Essential Climate Variables (ECVs); gridded climate model data, reanalysis and/or observations;
- Are often already based on defined criteria by Expert Teams: [ETCCDI](#), [ET-SCI](#), and ECA&D.

The CIIs can describe global climate change, trace climate hazards, assess sensitivity of ecosystems and society, and can be used in raising awareness and informing climate change adaptation policies and actions.

Different societal sectors have different adaptation challenges, and the CIIs provided (see [climate impacts](#)) reflect the needs of the users in these sectors (see [showcases](#)). Around 20 climate and water impact indicators will be provided.

What data was used?

Four ECVs were used to calculate the CIIs: daily mean, minimum, and maximum near-surface air temperature, and daily precipitation (2 different datasets). The CIIs were calculated for 3 datasets:

- Raw Global Climate Model output (GCMs) of [19 CMIP5 models](#) at 2 degree spatial resolution,
- Bias adjusted GCMs using HydroGFD2.0 as reference data at 0.5 degree spatial resolution,
- Raw Regional Climate Model output (RCMs) of European CORDEX (EUR-44, 0.5 degree spatial resolution).

Ensembles of model results are provided to indicate confidence in the estimates.

The CIIs are provided for different time ranges:

- absolute values for reference period 1971-2000
- expected future changes for 30-year periods for two Representative Concentration Pathways (RCP 4.5 and 8.5):
 - early century (2011-2040)
 - mid-century (2041-2070)
 - end-century (2071-2100)