Selecting scenarios [Retired]

IPCC Data Distribution Centre: Retired Pages

When pages on the DDC become obsolete or misleading, the content is moved into archived documents in order to preserve a record of past content while maintaining current information on the DDC pages.

The “Selecting Scenarios” page describes, in general terms, the criteria for selecting scenarios. The precise date at which the advise was developed is not known, but probably some point during the 3rd assessment cycle of the IPCC.

The IPCC Glossary for the Fifth Assessment Report provides an updated definition of a “scenario”: [http://www.ipcc-data.org/guidelines/pages/glossary/glossary\_s.html#scenario](http://www.ipcc-data.org/guidelines/pages/glossary/glossary_s.html" \l "scenario)

The terminology decided on for the sixth assessment report is not yet finalised.

Date of publication of this document: XX Jan, 2020

Citing this document: Selecting scenarios [Retired], 2020: *IPCC Data Distribution Centre: Retired Pages. DOI: [To be completed]*

-------------------------------------------------------------------------------------

STEPS NEEDED TO COMPLETE THIS DOCUMENT:

* Review by sub-group; revise as needed;
* Discuss whether alternative information is needed on the DDC. There is more recent information on the AR5 Scenario pages, but that is also now obsolete. This may be something for the “history of the DDC” section: a reference to the fact that the DDC did, in the past, provide advice on scenario selection.
* Reserve DOI;
* Add DOI in recommended citation and publication date, remove “Steps needed ….”; convert to PDF and upload to DOI.

Selecting scenarios

Criteria for Selecting Climate Scenarios

Five criteria that should be met by climate scenarios if they are to be useful for impact researchers and policy makers are suggested:

* **Criterion 1**: Consistency with global projections. They should be consistent with a broad range of global warming projections based on increased concentrations of greenhouse gases. This range is variously cited as 1.4℃ to 5.8℃ by 2100, or 1.5℃ to 4.5℃ for a doubling of atmospheric CO2 concentration (otherwise known as the "equilibrium climate sensitivity").
* **Criterion 2:** Physical plausibility. They should be physically plausible; that is, they should not violate the basic laws of physics. Hence, changes in one region should be physically consistent with those in another region and globally. In addition, the combination of changes in different variables (which are often correlated with each other) should be physically consistent.
* **Criterion 3:** Applicability in impact assessments. They should describe changes in a sufficient number of variables on a spatial and temporal scale that allows for impact assessment. For example, impact models may require input data on variables such as precipitation, solar radiation, temperature, humidity and windspeed at spatial scales ranging from global to site and at temporal scales ranging from annual means to daily or hourly values.
* **Criterion 4:** Representative. They should be representative of the potential range of future regional climate change. Only in this way can a realistic range of possible impacts be estimated.
* **Criterion 5:** Accessibility. They should be straightforward to obtain, interpret and apply for impact assessment. Many impact assessment projects include a separate scenario development component which specifically aims to address this last point. The DDC and this guidance document are also designed to help meet this need.