

Intergovernmental Panel on Climate Change (IPCC) Data Distribution Centre (DDC)

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The IPCC Data Distribution Centre (DDC) was established in 1998 to facilitate the timely distribution of a consistent set of up-to-date scenarios of changes in climate and related environmental and socio-economic factors for use in climate impact and adaptation assessments. The DDC is operated cooperatively by 3 organizations: the Centre for Environmental Data Analysis (CEDA) in the UK, the World Data Center Climate (WDCC) at Deutsches Klimarechenzentrum (DKRZ) in Germany, and the NASA Socioeconomic Data and Applications Center (SEDAC) operated by the Center for International Earth Science Information Network (CIESIN) at Columbia University in the U.S. All three organizations are now part of the ICSU World Data System. The IPCC Task Group on Data and Scenario Support for Impact and Climate Analysis (TGICA) coordinates and oversees the development and operation of the DDC.

In light of the prominent role of the IPCC in international decision making regarding climate change, it is vital that the key data and information resources developed in the IPCC assessments remain accessible for use and comparison in subsequent assessments and by the international community more generally. The DDC has played this key data stewardship and access role for more than 15 years.

<http://www.ipcc-data.org/index.html>

Recent IPCC DDC Challenges and Successes

Reference Data Archive for the Climate Model Output from the Fifth IPCC Assessment (AR5)

Meeting the Challenge

The sophistication of the climate models that take part in the IPCC assessment process increases with each assessment cycle, as do the experiments that are performed with them. The challenge for the DDC is to offer the complex climate information that is used to inform the IPCC assessments in a concise way to all of our users, regardless of their bandwidth limitations. The IPCC AR5 Report from Working Group I (WGI) is based on CMIP5 (Coupled Model Intercomparison Project Phase 5) data, which is of high volume (1.6 petabytes) and collected from many sources. Additional information was provided by separate repositories. The high volume, multiple sources, and diversity of information created a challenge for the Reference Data Archive. A thorough 3-level quality assurance procedure was applied to ensure overall data and metadata consistency. DataCite DOIs were registered to facilitate AR5 data citations in literature.

Accomplishments

Worked with CMIP5 infrastructure partners to replicate data and related information.
Worked with modeling centers/data creators on data quality and citation.
Provided table views of the AR5 reference snapshot of climate model data by grouping the 101 AR5 experiments by characteristics such as model configuration and the time period of the simulations.
Worked with WGI Technical Support Unit (TSU) to store IPCC WGIs data repository.
Working to provide improved CMIP6 data services for the authors of the Sixth Assessment.

Observed Impacts Data from IPCC AR5

Meeting the Challenge

The IPCC Assessment Reports present a variety of figures and tables based on data assembled by WG authors and carefully reviewed through the IPCC review process. However, providing access to the actual data and tools used to generate these figures and tables is a challenge due to the intense process of reviewing and finalizing all figures and tables by dispersed author teams and the difficulties of ensuring the traceability of data and associated analysis and visualization software.

Accomplishments

Worked with WGII authors and TSU to retrieve data and files from observed impact chapter and made figure, tables, and references available online.
Working with WGIII authors to retrieve data and files from WGIII report.
Working to develop procedures to improve data management for Sixth Assessment.

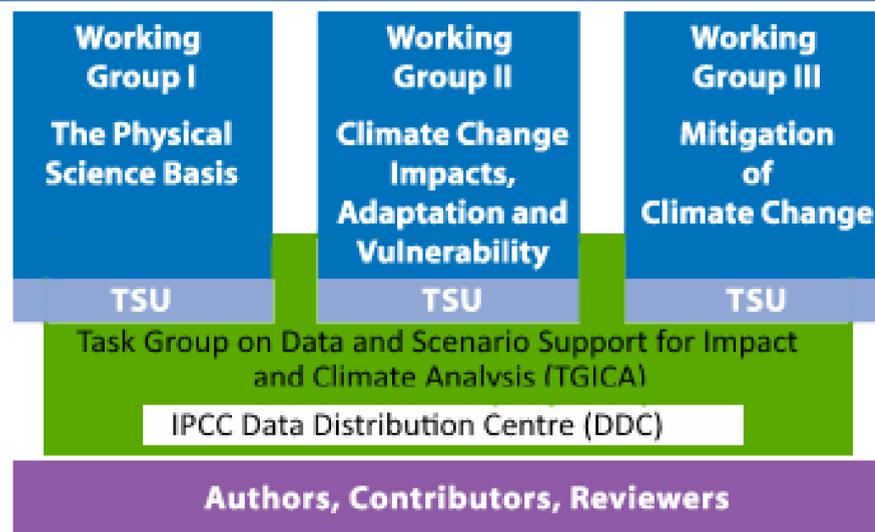
IPCC DDC Collection Spotlight: Socioeconomic and Climate Model Scenarios from the First-Fifth IPCC Assessments (1990-2013)

The screenshot shows the IPCC Data Distribution Centre website. The main heading is "Data Distribution Centre" with the IPCC logo and "INTERGOVERNMENTAL PANEL ON climate change" and "WMO UNEP". Below the heading, there is a search bar and navigation links. The "AR5 GCM data" section is highlighted in green. It contains text about the CMIP5 archive and the IPCC WGI snapshot, along with bullet points:

- (i) the IPCC Working Group I snapshot, and
- (ii) the DDC Reference snapshot.

 There are also links for "Data: Observations", "Data: Simulations", "SRES Emissions scenarios", "IS92 Emissions scenarios", "Projected CO2 emissions and concentrations", "Climate model output", "AR5 (2013)", "AR4 (2007): SRES scenarios", "TAR (2001): SRES scenarios", "SAR (1995): IS92 scenarios", "FAR (1990): 1st Assessment report", "Climate model: period-averages", "Climate model: global-means (AR4)", "Data: Synthesis", and "Visualisation". A "Quick links" section includes "IPCC Reports" and "Video tour of the DDC".

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ipcc
INTERGOVERNMENTAL PANEL ON climate change
Task Group on Data and Scenario Support for Impact and Climate Analysis (TGICA)

WDS Catalogue of Criteria Spotlight: Relevant External Experts to Provide Advice and Guidance

IPCC TGICA

The mandate of the TGICA is to facilitate wide availability of climate change related data and scenarios to enable research and sharing of information across the three IPCC working groups. The TGICA coordinates the DDC, which disseminates data sets, climate and other scenarios, and other materials. The TGICA has approximately 20 members with backgrounds in climatology; climate modeling (both global and regional); physical, social, and economic impacts; adaptation; emissions modeling; and integrated assessment. The mandate and structure of the TGICA are currently under review by the IPCC.

TGICA Practices

Meets at least annually to review progress and suggest improvements.
Sets strategic priorities and directions.
Interfaces with the IPCC Bureau, WGs, TSUs, and the broader assessment community.
Prepares guidance materials, documentation, and other information to support users.

TGICA Contributions

Provides quality control and prioritization for data products and services.
Ensures feedback from key user communities and helps identify evolving user needs.
Provides coordination mechanism between IPCC WGs.
Serves as source of expertise on science, data management, and outreach.

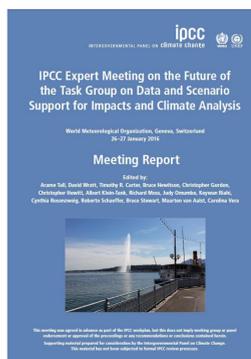
Advice for Other Data Centers and Extent that Practices are Transferrable

Important to ensure active contributions from all members.

Role of DDC and TGICA under Discussion

An expert meeting on the TGICA was held in January 2016 to assess and prioritize user needs. See: http://www.ipcc.ch/pdf/supporting-material/EMR_TGICA_Future.pdf.

The IPCC Bureau has recommended the formation of a Task Force (still to be approved by the IPCC Plenary) comprising selected members of the Bureau and Working Group TSUs, government representatives, TGICA Co-chairs, and the IPCC Secretary, which should plan and implement a strategy to transform the organization of IPCC data and information to serve the needs of the IPCC during and beyond the Sixth Assessment cycle.



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