

IPCC Data Distribution Centre (DDC) Data and Information Attribution Policy

Purpose: The purpose of this Data and Information Attribution Policy is to ensure that, for data and information resources distributed via the IPCC Data Distribution Centre (DDC), clear and unambiguous attribution is given to *a)* the authors of the resource; *b)* the distributor of the resource; and *c)* the organization or institution responsible for reviewing or ensuring the quality of the resource (e.g., the IPCC).

Rationale: The reproducibility and transparency of science depend greatly on open access to the data and information underlying scientific research and assessment. Article 27 of the Universal Declaration of Human Rights emphasizes that “Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits” (United Nations General Assembly, 1948). The Principle of Universality of Science, adopted by all members of the International Council for Science (ICSU), notes in Statute 5 that “This principle embodies freedom of movement, association, expression and communication for scientists, as well as equitable access to data, information and research materials” (ICSU, 2008). For publicly funded science, the Organization for Economic Cooperation and Development (OECD) has adopted clear principles and guidelines for access to research data from public funding: Principle A defines “Openness” as “...access on equal terms for the international research community at the lowest possible cost, preferably at no more than the marginal cost of dissemination. Open access to research data from public funding should be easy, timely, user-friendly and preferably Internet-based.” (OECD, 2007).

The InterAcademy Council Review of the IPCC noted that:

“Data are the bedrock on which the progress of science rests. The extraordinary development of new measuring techniques and new digital technologies has enabled climate scientists to assemble vast quantities of data. However, the large size and complex nature of these databases can make them difficult to access and use. Moreover, for various reasons many of these scientific databases as well as significant unpublished and non-peer-reviewed literature are not in the public domain. An unwillingness to share data with critics and enquirers and poor procedures to respond to freedom-of-information requests were the main problems uncovered in some of the controversies surrounding the IPCC (Muir Russell et al., 2010; PBL, 2010). Poor access to data inhibits users’ ability to check the quality of the data used and to verify the conclusions drawn. Consequently, it is important for the IPCC to aspire toward ensuring that the main conclusions in its assessment reports are underpinned by appropriately referenced peer-reviewed sources or, to the greatest extent practical, by openly

accessible databases. The Technical Support Units could play a key role in helping the IPCC work toward this goal.” (IAC, 2010:68).

To encourage open access and sharing of data and information used in IPCC assessments and reports, it is essential that sources of data and information—including scientists, government agencies, private organizations, and members of the general public—be given appropriate credit for their contributions. Data centers and other organizations that support sharing and use of data and information, and ensure their long-term integrity and access, also need recognition in order to help justify the financial support they need to continue these roles. In light of the critical need for users to understand the provenance and quality of data and information resources, clear attribution is also needed of the peer review and/or quality control processes applied to the resources.

Objectives: The specific objectives of this Attribution Policy are to:

- 1) Ensure that all data and associated information distributed through the DDC include clear and accurate metadata about the data authors, sources, and relevant sponsors and dissemination organizations;
- 2) Ensure that relevant scientific community standards for attribution are met, and that the attribution metadata are appropriately reviewed for accuracy and completeness;
- 3) Improve the traceability of data and information developed in the course of an IPCC assessment or report with respect to the specific versions of data held by the DDC and to key community data resources identified by the DDC;
- 4) Improve documentation and attribution of quality control and peer review processes applied to DDC data and information, including the type and level of review undertaken; and
- 5) Encourage appropriate and consistent use of attribution information by all users and stakeholders.

Policies:

- 1) All data and associated information distributed through the DDC should include clear and accurate metadata about the data authors, sources, and relevant sponsors and dissemination organizations.
- 2) The DDC should employ current scientific community standards for attribution, including recommended citations and digital object identifiers as appropriate, and ensure that the attribution metadata are appropriately reviewed for accuracy and completeness.

- 3) The DDC should facilitate the traceability of data and information developed in the course of an IPCC assessment or report with respect to the specific versions of data held by the DDC and to key community data resources identified by the DDC.
- 4) The DDC should work with the IPCC community to improve documentation and attribution of quality control and peer review processes applied to DDC data and information, including the type and level of review undertaken.
- 5) The DDC should work with the IPCC community and the broader user and stakeholder communities to encourage appropriate and consistent use of attribution information in publications, derived products, services, and other outputs.

Responsibilities: A number of organizations and stakeholders have designated responsibilities for managing and implementing this Attribution Policy:

- 1) The IPCC Task Group on Data and Scenario Support for Impact and Climate Analysis (TGICA) is responsible for formulating and modifying this Attribution Policy and monitoring its implementation. The TGICA also advises the IPCC DDC Managers on appropriate attribution standards and approaches to improving traceability and documentation.
- 2) The IPCC DDC Managers are responsible for ensuring that all data disseminated through the DDC meet policies 1 and 2 above, and for implementing processes leading to the improvements called for in policies 3, 4, and 5.
- 3) Data sources, organizations, and individuals that provide data to the DDC are responsible for providing the necessary background information to enable clear and accurate attribution and for engaging in suitable review and quality control of attribution metadata.
- 4) The TGICA, working with the IPCC Technical Support Units, is responsible for promoting awareness of the Attribution Policy across the relevant communities, for facilitating review of attribution metadata by IPCC authors and other interested parties, and for supporting and coordinating implementation and monitoring efforts by the DDC.

Review and Monitoring: This Attribution Policy has been approved by the TGICA. The TGICA will conduct a regular review of its implementation and effectiveness.

References

InterAcademy Council (IAC). 2010. *Climate change assessments: Review of the processes and procedures of the IPCC*. Amsterdam: IAC. Available online at: <http://reviewipcc.interacademycouncil.net/report/Climate%20Change%20Assessments,%20Review%20of%20the%20Processes%20&%20Procedures%20of%20the%20IPCC.pdf> (last accessed 25 February 2014).

International Council for Science (ICSU). 2008. *Freedom, Responsibility and Universality of Science*. Paris: ICSU. Available online at: <http://www.icsu.org/publications/cfrs/freedom-responsibility-booklet/ICSU-CFRS-booklet.pdf> (last accessed 25 February 2014).

Organisation for Economic Co-Operation and Development (OECD). 2007. *OECD Principles and Guidelines for Access to Research Data from Public Funding*. Paris: OECD. Available online at: <http://www.oecd.org/science/sci-tech/38500813.pdf> (last accessed 25 February 2014).

United Nations General Assembly. 1948. *The Universal Declaration of Human Rights*. Available online at: <http://www.un.org/en/documents/udhr/index.shtml#a27> (last accessed 25 February 2014).