

<b>Guidance notes:</b>				
1 Please select one of the options in column C (where applicable) and enter further information in column E.				
No.	Question	Options	Guidance notes	Response
<b>Description</b>				
1.1a	<b>1.1 Author</b> Intellectual Property Right holder	Provide name and address		
1.2a	<b>1.2 Dataset</b> Title	Provide a long (up to 120 characters) and short version (less than 32 characters) of the title.	Mauna Loa CO2 records	
1.2b	Description	Provide 200-500 word description, highlighting the key distinguishing features of the dataset. This text will be used in the DDC entry.	Since 1956 Mauna Loa Observatory (MLO) has been monitoring and collecting data relating to atmospheric change, and is known especially for the continuous monitoring of atmospheric carbon dioxide (CO <sub>2</sub> ), which is sometimes referred to as the Keeling Curve. The observatory is under the Earth System Research Laboratory which is part of the National Oceanic and Atmospheric Administration (NOAA). MLO has activities at five locations on the Big Island. The primary observing site is located at the 3397 m (11,141 ft) level on Mauna Loa's north slope. Mauna Loa was originally chosen as a monitoring site because, located far from any continent, the air sampled is a good average for the central pacific. Being high, it is above the inversion layer where most of the local effects are present. The contamination from local volcanic sources is sometimes detected at the observatory, and is then removed from the background data (from <a href="http://en.wikipedia.org/wiki/Mauna_Loa_Observatory">http://en.wikipedia.org/wiki/Mauna_Loa_Observatory</a> )	
<b>Authority</b>				
2.1a	<b>2.1 Use by the IPCC</b> Has the dataset been used in an IPCC Assessment or Special Report, e.g., in a figure or table or discussed in text? yes	List report name(s), table/figure/page number(s)	IPCC AR4, WG1, Chapter 2, Fig. 2.3	
2.1b	IPCC-related documents or materials?	Not known	List document name(s), table/figure/page number(s)	
2.2a	<b>2.2 Documentation</b> Is the dataset documented in detail in a peer-reviewed journal article or as a peer-reviewed dataset?	Yes	Provide full citation and list Thomson-Reuter impact factor (or other standard influence factors) for journal if available. Provide citation. List type of peer review if known; list type of book, report, or document, e.g., if part of a series; provide evidence of credibility of authors or publisher (e.g., UN organization)	K.W. Thoning, P.P. Tans, and W.D. Komhyr Atmospheric carbon dioxide at Mauna Loa Observatory 2. Analysis of the NOAA GMCC data, 1974-1985, J. Geophys. Research, vol. 94, 8549-8565, 1989.
2.2b	Is the dataset documented in detail in a peer-reviewed book chapter, report or technical document?	Not Known	Provide citation or links. Describe quality control or other review processes used (e.g., crowd sourcing); provide evidence of credibility of authors or publisher (e.g., UN organization)	
2.2c	Is the dataset documented in detail in a non-peer reviewed document, web site, or other resource?	Yes	Provide citations to criticisms and responses where relevant.	<a href="http://www.esrl.noaa.gov/gmd/ccgg/trends/co2_data_mlo.html">http://www.esrl.noaa.gov/gmd/ccgg/trends/co2_data_mlo.html</a>
2.2d	Has there been significant discussion of the dataset in the scientific literature? Not Known	uncertainties associated with the data documented.	Provide link(s) or reference(s) and indicate what sort of uncertainty information is provided?	<a href="http://www.esrl.noaa.gov/gmd/ccgg/trends/co2_data_mlo.html">http://www.esrl.noaa.gov/gmd/ccgg/trends/co2_data_mlo.html</a>
2.2e	Yes			Conglong Zhao and Pieter Tans, Estimating uncertainty of the WMO mole fraction scale for carbon dioxide in air, Journal of Geophysical Research, vol. 111, D08S09, doi: 10.1029/2005JD006003, 2006.
<b>2.3 Lineage</b>				
2.3a	Is the dataset produced by or under the direction of a national or international body or group?	Yes	List scientific body or group	U.S. Department of Commerce   National Oceanic and Atmospheric Administration Earth System Research Laboratory   Global Monitoring Division
<b>Significance Relative to the IPCC Community</b>				
3.1a	<b>3.1 Interest in the data</b> the TFI used or expressed an intention of using this data?	Not known	Indicate which group(s) and/or other body. Provide reference and quote relative passage.	
3.1b	Have DDC users expressed interest in these data?	Not known	Indicate numbers and/or types of users. Provide user metrics or examples of queries.	
3.1c	Are there strong reasons for considering the data relevant to the DDC user community?	Not Known	Give reasons, backed by references. References from gray literature should have accompanying justification, as for IPCC reports.	
3.2	<b>3.2 Uniqueness</b> Are other datasets available with the same or overlapping variables?	Yes	Indicate other datasets and degree of overlap; provide links.	The ESRL "annual average marine surface air CO <sub>2</sub> concentrations" is of shorter duration (starting in 1980 rather than 1958 for the Mauna Loa series), but gives an accurate estimate of the global mean CO <sub>2</sub> concentration.
<b>Stability of Data and Data Provider</b>				
4.1a	<b>4.1 Curation</b> Does the provider have a published data policy?	Yes	Provide link or citation. List organization(s) with long-term responsibility for the dataset (e.g., government agency, library, archive); provide a link to the plan or other documentation of the agreement.	<a href="http://www.esrl.noaa.gov/gmd/about/disclaimer.html">http://www.esrl.noaa.gov/gmd/about/disclaimer.html</a>
4.1b	Does the provider have a succession plan for this dataset?	Not Known		
4.1c	funding model for the dataset or data provider?	No	subscription-based, government-supported, submitter fees) and give link.	
<b>Quality Control</b>				
5.1	<b>5.1 Meta-data and quality control</b>			

5.1a	accordance with relevant national or international meta-data standards	No	Indicate relevant standards (e.g. NASA's Directory Interchange Format) and provide a link to the metadata.	
5.1b	Is there a stated quality assurance process or procedure for the data?	No	Indicate if relevant quality assurance standards are met (e.g., ISO9000) and give links.	
5.1c	Is there a regular validation or calibration process or procedure for the data?	Yes	Indicate frequency and/or most recent date and give links	<b>Repeat period 1 to 2 years; most recent: not given:</b> <a href="http://www.esrl.noaa.gov/gmd/ccl/co2_scale.html">http://www.esrl.noaa.gov/gmd/ccl/co2_scale.html</a>
5.1d	Is technical/usage guidance available?	Yes	Give links	<a href="http://www.esrl.noaa.gov/gmd/ccgg/about/global_means.html">http://www.esrl.noaa.gov/gmd/ccgg/about/global_means.html</a>
<b>5.2 Data updates and version control</b>				
5.2a	Is the data subject to updates? Are previous versions of the dataset accessible?	Yes	List frequency	<b>Monthly</b>
5.2b	version control process and tracking of data provenance?	No	Describe version control and data provenance procedures	
5.2c	Are previous versions of the dataset accessible?	Not Known	List previous versions	
<b>Accessibility</b>				
<b>6.1 Access requirements</b>				
6.1a	available on-line for download?	All	Give links	<a href="http://www.esrl.noaa.gov/gmd/ccgg/trends/co2_data_mlo.html">http://www.esrl.noaa.gov/gmd/ccgg/trends/co2_data_mlo.html</a> <a href="ftp://ftp.cmdl.noaa.gov/ccg/trends/co2_data_mlo.html">ftp://ftp.cmdl.noaa.gov/ccg/trends/co2_data_mlo.html</a>
6.1b	available in one or more standard (preferably open) formats?	Yes	List the formats available (at least one standard format is required);	<b>ASCII</b>
6.1c	Are there restrictions (beyond user registration and acceptance of terms of use) on data use, re-dissemination, or reuse?	yes	If applicable, specify the type of restrictions and give relevant links	<i>The information on government servers are in the public domain, unless specifically annotated otherwise, and may be used freely by the public so long as you do not 1) claim it is your own (e.g., by claiming copyright for NOAA information - see next paragraph), 2) use it in a manner that implies an endorsement or affiliation with NOAA, or 3) modify it in content and then present it as official government material. You also cannot present information of your own in a way that makes it appear to be official government information.</i> <a href="http://www.esrl.noaa.gov/gmd/about/disclaimer.html">http://www.esrl.noaa.gov/gmd/about/disclaimer.html</a>
6.1d	Is the data available for free or for a charge?	Free	if applicable, give link to price structure	
<b>6.2 Additional information</b>				
6.2a	required or requested?	Neither	Give relevant links;	
6.2b	required or requested? through open interfaces (e.g., OGC Web Services, REST, SOAP)?	Requested	Give relevant links;	<a href="http://www.esrl.noaa.gov/gmd/about/disclaimer.html">http://www.esrl.noaa.gov/gmd/about/disclaimer.html</a>
6.2c	Are levels of service (e.g., bandwidth, up time) adequate?	Not Known	List interfaces and give links for specifications	
6.2d	Is user support available (e.g., help desk frequently asked questions)?	Not Known	Give links, e.g., to up time metrics	
6.2e	Is documentation available in English? Is documentation available in other languages?	No	List user support services and links	
6.2f	Is documentation available in English? Yes		Give links	<a href="http://www.esrl.noaa.gov/gmd/ccgg/trends/co2_data_mlo.html">http://www.esrl.noaa.gov/gmd/ccgg/trends/co2_data_mlo.html</a>
6.2g	Is documentation available in other languages? The spatial domain of the dataset	No	List languages (with links)	
6.2h			Specify bounding latitudes and longitudes	
Number	Section/row	Suggested improvements to this questionnaire		
1	Many	Replace option list with selection box, where applicable.		