CORE-CLIMAX Data Set Description

(***General Note:*** *This data set description shall not become longer than 5 pages per data set described. Please stay to the most important facts and use tables and bullet lists to provide information where appropriate.***)**

(Type Data Set Name and if available digital identifier here):

1. Intent of the Document

(*Provide information on what data set is described and for what application(s) it was created. Keep in mind that the information is targeted at users of any level who wish to use the dataset for climate applications. Users may not be expected to be experts for in situ, remote sensing or reanalysis techniques.*)

2. Point of Contact

(*Please provide a point of contact: Organisation and Contact details (at least a contact name, organisation and e-mail address)*).

3. Data Field Description

(*Provide a link to an existing technical product specification or provide the information in a form of a table in this document. The specification shall at least include variable names and units (eventually including uncertainty estimates that come with the product), length of record, spatial coverage, spatial and temporal sampling.*)

4. Data Origin

(*Provide a basic description of the methodology used to derive the product including the input data used and the source (provenance) of the data. Also provide a description of data processing methods such as (inter-satellite) calibration, algorithms employed, homogenization applied, mapping and averaging, etc. If the product makes heavily use of NWP and/or climate model data, e.g., as background fields this should be described as well.*

In case of reanalysis data records please indicate what reanalysis system (coupled or single) has been used and name and version of the model(s).)

5. Validation and Uncertainty Estimate

(*Provide a summary of validation activities performed for the product and provide a summary of systematic and random uncertainty of the product and how these vary with space, time and state (tabulated form appreciated). In particular information on temporal stability of the data which is an indication of whether the data can be used for longer term variability and trend analysis is appreciated.*)

6. Considerations for climate applications

(*Provide information on the applicability of the product for the planned application (stated in section 1) including limitations. In particular observational products applicable for model evaluation should state the different character when compared to model data. For instance for satellite-derived products it is important to describe limitations such as validity in specific areas (e.g., ocean or land only), unresolved diurnal cycles or diurnal cycle aliasing due to orbit drifts for polar orbiting satellites, sampling issues such as in the presence of clouds, sensitivity of the instrument, etc and their respective impacts on the application. For in situ measurements or gridded data sets derived from station data limitations due to the representativeness of the data, etc. and their effect for an application shall be provided.*)

7. Instrument Overview

(*Provide information on the type of instruments (in situ/remote sensing) used to measure the variable provided including the measurement principle (e.g., infrared emission measured with a spectrometer) and give a description of the instrument science objective, capability, measurement principle, satellite and orbit characteristics or observation location and practice for in situ. Provide the strengths and weaknesses of the instrument measurement. If an instrument simulator is available, provide a short description and references later for details.*

In the case of a re-analysis data set only indicate what instrument data relevant to the parameters considered have been assimilated. This can simply be a link to the information.)

8. References

(*Provide a complete list of references used in this document and may provide additional reading references on measurement principles, retrievals, modelling, validation, uncertainty characterisation, product, and applications.*)

9. Revision History

(*Indicate the version number of this document, the date of writing and who has edited the document.*)