

## **CLIVAR Data Policy**

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### **Introduction**

**CLIVAR, a global multidisciplinary climate research project, requires a wide range of data and needs data centres to ingest, quality control, archive and distribute these data. The CLIVAR data policy provides guidelines for how these data should be handled in a consistent manner so as to achieve the project's scientific objectives. The policy aims to strike a balance between the rights of investigators and the need for widespread access through the free and unrestricted sharing and exchange of CLIVAR data and metadata. CLIVAR data policy is intended to be fully compatible with IOC [1], WMO [2], GCOS [3] and GEOSS [4] data principles.**

**The multidisciplinary nature of CLIVAR and its subprogrammes means that the principles enshrined in the Data Policy must be applied to data in each subprogramme's implementation plan.**

### **Definitions used in the CLIVAR Data Policy**

#### **1. CLIVAR data**

**“CLIVAR Data” consists of directly observed data, derived data, gridded fields, and other data products generated and/or used within CLIVAR to further its scientific goals. CLIVAR data and related products can be categorized in terms of those that are specifically sponsored or endorsed by the international CLIVAR programme, those generated by other related bodies and programmes such as the World Weather Watch of the WMO, GCOS, JCOMM, and other projects of the WCRP and those generated by relevant national and institutional CLIVAR-related projects and programmes. CLIVAR should strive to ensure that all data relevant to CLIVAR are accessible freely and without restriction, including those collected by other projects and programmes.**

#### **2. Metadata**

**Metadata is defined as the descriptive information such as content, quality, condition that characterizes a set of measurements.**

### **CLIVAR Data Policy and Principles**

**For CLIVAR to succeed, high-quality data and metadata need to be collected, processed and exchanged without significant delay in a free and unrestricted manner. This was recognized in the CLIVAR Implementation Plan [5] in discussing ‘The Principles for CLIVAR Data’. CLIVAR data policy is enshrined in the CLIVAR data principles below:**

#### **1. Free and unrestricted exchange**

**All CLIVAR data should be made available freely and without restriction. “Freely” means at no more than the cost of reproduction and delivery, without charge for the data itself. “Without restriction” means without discrimination against, for example, individuals, research groups, or nationality. In exceptional circumstances involving highly specialized or experimental data, principal investigators may temporarily limit access until such time as the data can be adequately validated.**

## **2. Timely exchange**

**CLIVAR investigators should make data available voluntarily and with minimal delay, preferably also in real-time, to maximize their value to CLIVAR. In cases where extensive post-processing of delayed mode data is needed before a final research quality data set can be generated, early release of a preliminary version of the data is required.**

## **3. Quality control**

**CLIVAR investigators retain the primary responsibility for the quality of the data they produce and distribute. Data originators and those generating climate data products are required to ensure that their data meet international quality standards wherever possible.**

## **4. Metadata**

**Metadata are required to enable the use of data without ambiguity or uncertainty. Metadata for CLIVAR data sets will be developed and managed in accordance with international standards.**

## **5. Preservation of data**

**Long-term survival, integrity, and access to CLIVAR data must be preserved for future generations. Internationally agreed standards should be used for the acquisition, processing, and final archival of data and metadata. Data distributed in real and near-real time should, wherever possible, be replaced in a delayed mode after it has undergone quality control and full documentation.**

## **6. Plan for reuse in reanalysis**

**While datasets will be used individually and in combination for research purposes, the sum total of all CLIVAR and CLIVAR-relevant data will have great value in reanalysis activities. To aid this, uniformity of data format and quality should be a high priority.**

## **7. Easy access**

**CLIVAR encourages the use of the most recent advances in communication to ensure widespread access to data collected under auspices of the programme.**

## **8. Use of existing national and international mechanisms and centres**

**Where feasible, CLIVAR will use existing national and international mechanisms for the exchange and storage of oceanic and atmospheric data, and build on the data management structure of existing programmes. In this way, the effectiveness of the data system will be improved by reducing redundancy and duplication and identifying opportunities and system economies, with financial costs minimized.**

## **9. Reporting Requirements**

**Data and metadata should be submitted to recognized data assembly centers as well as to appropriate national and international archival institutions so that the collected information may be safeguarded for future analysis. Inventories of data and related information should be readily accessible and updated as needed on a routine basis.**

## **References**

**[1] IOC Data Policy (<http://ioc3.unesco.org/iode/contents.php?id=200>)**

**[2] WMO Resolution 40 (Cg-XII; see <http://www.nws.noaa.gov/im/wmor40.htm>)**

**[3] Implementation plan for the Global Observing System for Climate in support of the UNFCCC, 2004; GCOS – 92, WMO/TD No.1219.**

**[4] Global Earth Observation System of Systems GEOSS 10-Year Implementation Plan Reference Document (Final Draft) 2005. GEO 204. February 2005.**

**[5] CLIVAR Initial Implementation Plan, 1998; WCRP No. 103, WMO/TS No. 869, ICPO No. 14. June 1998.**