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| **World Meteorological Organization****COMMISSION FOR BASIC SYSTEMS****WIGOS/Task Team on WIGOS Metadata** **Sixth Session**Zurich, Switzerland, 27-29 November 2017 | **TT-WMD-6/Doc.5.1** |
| Submitted by:Secretariat 23.Nov.2017 |

# 5. REVIEW OF THE WIGOS METADATA STANDARD

# 5.1 Relation between WIGOS and WIS Metadata

(Submitted by the Secretariat)

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| **Summary and purpose of document**This document reviews the relations between WIGOS and WIS metadata. |

**Action proposed**

The session is requested to consider this information when reviewing the WIGOS Metadata Standard.

**References:**

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**5.1 Relation between WIGOS and WIS Metadata**

5.1.1 WIGOS metadata is intended to describe the conditions under which observations are made. The specification of WIGOS metadata is in the WIGOS technical regulations (Manual on WIGOS, WMO-No. 1160 and the Guide to WIGOS (WMO-No. 1165). Slowly varying elements of the WIGOS metadata are exchanged using OSCAR/surface (<http://oscar.wmo.int/surface>), whereas rapidly varying components are often exchanged with the observed information (such as the location of a ship in a BUFR report). WIGOS metadata are linked to the observations through the “WIGOS station identifier” for the observing facility making the observations.

5.1.2 WIS metadata is used to provide information about data collections (datasets) that such as traditional datasets, websites or a sequence of bulletins transferred over the Global Telecommunications System. WIS metadata is defined in the Manual on WIS (WMO‑No. 1060) with additional information in the Guide to WIS (WMO-No. 1061). WIS metadata records a title for the “dataset”, an abstract describing the contents, its owner, usage constraints, information on how to access that data, the format(s) available and (where relevant) the spatial and temporal extents of the dataset. A WIS metadata record is identified by its fileIdentifer.

5.1.3 The WIGOS metadata standard includes entries for data format and telecommunications method. Within the WIGOS metadata record, these entries are intended to record the methods used to pass the observation through the processing system that results in the observation that is made available for external use. This allows any constraints on the observation imposed by the “internal” processing to be identified. The data format and exchange protocols for distribution of the data is recorded in the WIS metadata record.

5.1.4 Users will want to know where they can obtain observations from the station. OSCAR/surface allows station operators to record how users may obtain data by specifying the WIS metadata record(s) that describe the relevant datasets. Station operators should refer to a permanent source of information, not to the transient real time data stream (that is, OSCAR/surface should not point to GTS bulletins).

5.1.5 WIS metadata describes datasets, and many of these datasets contain observations. Guidance on producing WIS metadata encourages that the observations contained in a dataset are listed in the abstract (for human readability) and also as WIS metadata keywords.

5.1.6 One of the challenges facing users of observations is knowing which observations are (or should) be available, and in particular the observing schedule.

5.1.6.1 The WIGOS metadata standard allows the observing schedule to be recorded. The intention is that this records the planned schedule at which observations are made, regardless of whether they are provided outside the originating organization or retained for internal use only. **WIGOS metadata records should describe the observations that are available to the “owners” of the observations.**

5.1.6.2 WIS metadata records describe information that is data owners (including managers of observing facilities) wish to make known to data users. Some metadata records describe datasets of observations that are exchanged without restriction on a regular schedule (such as six-hourly surface observations from stations in the Regional Basic Synoptic Networks), while others may describe datasets that are only available by special arrangement (such as access to fragile original hand-written climate records). **WIS metadata records should describe (datasets containing) observations that data owners are willing to share with others.**

5.1.6.3 With the current definitions of the WIGOS and WIS metadata records, creating a catalogue of observations that are exchanged internationally would be complex. The starting point would need to be the WIS metadata, but the structure of WIS metadata records is based on the unit of exchange (dataset – which for World Weather Watch observations is a bulletin), rather than observing facility.

* + - * 1. There is best practice guidance on the contents of WIS metadata records that describing datasets of routinely exchanged observations. This includes recommendations to record as “keywords” the time(s) of observation included in the dataset and the WIGOS identifier of the observing facilities making those observations. Recording these is not always possible – some datasets contain observations that are event driven (and therefore could be made at any time), and others contain observations from different of observing facilities each time they are issued (such as collections of ship reports). It is possible to identify which WIS metadata records correspond to datasets that are exchanged routinely either globally or regionally. Therefore, provided data owners follow the best practice guidance, the basic information to create a catalogue should be present in the WIS catalogue.
				2. Creating a catalogue of reporting schedules would not be straightforward because the WIS metadata was not designed to do this. The biggest challenges are that the information needed to create the catalogue is not labelled with its meaning, and that observing facilities are likely to have different reporting schedules for different types of observation. The consequences of these are that “false positives” are likely when selecting the information to be included in the catalogue, and that observed quantities are likely to be listed as being reported more frequently than in reality.
				3. Only by attempting to create a catalogue of reporting schedules from the WIS metadata catalogue will it be possible to identify the feasibility of the method.

5.1.7. Referring to a WIGOS station identifier using a permanent URL (such as from a WIS metadata record): [http://data.wmo.int/wigosid=*wigosid*](http://data.wmo.int/wigosid%3Dwigosid).

 [http://data.wmo.int/wigosid=0-20000-0-06909](http://data.wmo.int/wigosid%3D0-20000-0-06909).

5.1.8. Referring to a WIS metadata record using a permanent URL (such as from a WIGOS metadata record): [http://data.wmo.int/wisid=*wisid*](http://data.wmo.int/wisid%3Dwisid).

[http://data.wmo.int/wisid= urn:x-wmo:md:jp.go.jma.wis.dcpc-wdcgg::p.ABP312S00.C18O2.NOAA](http://data.wmo.int/wisid%3D%09urn%3Ax-wmo%3Amd%3Ajp.go.jma.wis.dcpc-wdcgg%3A%3Ap.ABP312S00.C18O2.NOAA)