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| **World Meteorological Organization** |  | **ICG-WIGOS/TT-WMD-4/Doc.2** | | |
| **INTER-COMMISSION COORDINATION GROUP ON WIGOS**  **Task Team on WIGOS Meta Data (TT-WMD)** |  | Submitted by: | | J. Klausen & K. Monnik |
| Date: | | 16.X.2015 |
| ***FOURTH SESSION***  ALANYA, TURKEY  20 – 23 OCTOBER 2015 | Original Language: | English | |
| Agenda Item: | 2 | |

**CHAIR’S REPORT**

*(Submitted by Jörg Klausen & Karl Monnik, Co-Chairs, TT-WMD)*

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| **Summary and purpose of document**  This document provides a brief report of the Co-Chairs, TT-WMD, on its activities since TT-WMD-3 (December 2014) and establishes objectives for TT-WMD-4. |

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| **ACTION PROPOSED**  The session is invited to take note of the report of the Co-Chairs of the Task Team |

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**REPORT OF THE CO-CHAIRS, TT-WMD**

**Introduction**

1. Since the establishment of the Task Team on WIGOS Metadata (TT-WMD) under the responsibility of ICG-WIGOS, a consultative approach across Technical Commissions was followed to develop the initial requirements for observations metadata. TT-WMD is composed of members who represent CBS, CAS, CIMO, JCOMM, CCl, CAeM, CHy, and GCOS. Various other representatives have been engaged from time-to-time.
2. TT-WMD has developed a semantic metadata standard for observational data which is generic across all components of WIGOS.

**Summary of activities of TT-WMD since TT-WMD-3 (December 2014)**

1. The TT-WMD has met through several more WebEx meetings to finalize the WIGOS Metadata Standard (WMDS) and later submitted the final draft to ICG-WIGOS-4 (17-20 February 2015, Geneva, Switzerland), who endorsed it. World Meteorological Congress Seventeen (Cg-17) in May-June 2015 approved the WIGOS Regulatory Material, which includes the WIGOS Metadata Standard as an Attachment to the Manual on WIGOS (cf. <http://www.wmo.int/pages/prog/www/wigos/documents/Cg-17/Cg-17-d04-2-2(3)-add1-MANUAL-ON-WIGOS-approved_en.docx>).
2. A meeting of the Inter-Programme Expert Team on Metadata and Data Representation (IPET-MDRD) was held in Melbourne, 22-25 June 2015, where the co-chairs of TT-WMD participated. The purpose of this meeting was to begin developing a generic data model for the WMDS, which is the first step before designing an application schema. A draft model has been developed and this is currently being evaluated by the team.
3. With the release of the OSCAR/Surface for beta-testing (<http://oscar.wmo.int/surface>), a number of Volume A users as well as numerous other experts were engaged to access the application and add/edit metadata for a range of station types. Feedback from these tests has been provided to the OSCAR/Surface development team.
4. ICG-WIGOS-4 (17-20 February 2015, Geneva, Switzerland) supported the continuation of the current TT-WMD to carry out its tasks and to have a team responsible for the governance of the WMDS. The ToR remain unchanged (cf. <http://www.wmo.int/pages/prog/www/wigos/icg-wigos-task-teams.html>)
5. One of the co-chairs of TT-WMD (jkl) contributed to the first session of the IPET-WIFI SG-OD (sub-group on OSCAR development) in Offenbach, 6-8 July 2015.
6. One of the co-chairs of TT-WMD (jkl) contributed to an ad-hoc workshop on GAW data management in Zurich, 10-11 Aug 2015, at which the scope of GAWSIS, as the main contributor of metadata on observations of the chemical composition of the atmosphere, was discussed. The agreed new scope of GAWSIS includes observations in regimes of higher emissions, and once implemented, GAWSIS is likely to contribute many more metadata to OSCAR than at present.
7. One of the co-chairs of TT-WMD (km) contributed to the third session of the IPET-WIFI (CBS OPAG-IOS, Inter-Programme Expert Team on WIGOS Framework Implementation) in Exeter, UK, 1-4 Sep 2015
8. The co-chairs of TT-WMD contributed to the meeting, both in person and remotely, to an ad-hoc Workshop on WIGOS Metadata for Space-based observations in Geneva, 29 Sep – 1 Oct 2015, to review the requirements of the satellite community.
9. One of the co-chairs of TT-WMD (km) contributed to the joint meeting of the CIMO ET on operational remote sensing technologies (ET-ORST) (First Session) and the CBS ET on surface-based observations (ET-SBO) (Second Session) in Tokyo, 5-8 Oct 2015.

**Objectives of TT-WMD-4**

1. Consider the guidance from Cg-17 and EC-67, as well as recommendations of various ICG-WIGOS sub-groups and task teams.
2. Review the current version of OSCAR/Surface, an implementation of the WMDS and archive of WIGOS metadata.
3. Review and/or complete a number of code tables that have been developed for the WMDS to improve the rigour in which the metadata are held.
4. Review proposed mechanisms for the governance of code tables.
5. Develop a plan for the preparation of guidance material to assist Members in the application of the WMDS.
6. Consider the current version of the generic data model and formal WMDS, with a view to facilitating machine-to-machine transfer of metadata.
7. Guidance material to assist Members in the use of the web interface of OSCAR/Surface as well as the use of machine-to-machine interfaces to ingest and retrieve their metadata is needed and the meeting shall develop a plan for this.
8. Discuss the development of competencies for the use of WMDS by WMO Members
9. Update the existing work plan to reflect present status and develop a work plan for the pre-operation period of WIGOS 2016-2019 (Appendix 1).

## Appendix I

**TT-WMD ACTION PLAN FOR THE PERIOD XI.2012 TO VI.2015**

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| **Version** | **Date** | **Comments** |
| **1** | **23/11/2012** | **Action plan developed at TT-WMD-01** |
| **2** | **15/3/2013** | **TT-WMD-1** |
| **2a** | **31/01/2014** | **Intermediate update for ICG-WIGOS** |
| **3** | **15/05/2014** | **TT-WMD-2** |
| **4** | **04/12/2014** | **TT-WMD-3** |

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| **No.** | **Task** | **Deliverable/Activity** | **Deadline (if not stated end of month)** | **Responsible** | **Status\*** | **Comment** |
| 0 | Produce proposed definition of contents of WIGOS metadata | Initial version of WIGOS metadata | 15 March 2013 | Howe | Complete  15/3/2013 | TT-WMD-1 achieved this |
| 1 | Define Initial Observation Types to be described | All WIGOS observational data types have been listed (the purpose of the list is to design a robust model for observation metadata, so although it may not be possible to include every observation type, those in the list should ensure that the range of requirements for metadata is covered), and each assigned to a relevant TC for specification of metadata requirements (TT-WMD) | May 2013 | Klausen | Task completed with sufficient coverage in the presentations for TT-WMD-1  15/3/2013 | Adequate information was provided through the presentations for the meeting. No direct further list required; review of metadata will identify further issues. |
| 2 | Define essential requirements of application areas beyond the Standard | TCs review the needs of application programmes against the specification of metadata, and propose additional elements that they consider essential for that application area.  In doing this, TCs may recommend modifications to the metadata. | November 2013 | TT member for Commissi*o*ns  CAgM, EC-PORS contacts needed |  | Completed |
| 3 | Define essential metadata for observing systems beyond the Standard | TCs review the needs of observing programmes against the specification of Standard, and propose additional elements that they consider essential for that observing programme.  In doing this, TCs may recommend modifications to the Standard. | November 2013 | TT member for Commissions  CAgM, EC-PORS contacts needed |  | Completed |
| 4 | Confirm Metadata Elements | WIGOS Metadata reviewed following feedback from Commissions and first formal definition agreed. Mandatory, Conditional and Optional elements defined. | March 2014 (EC deadline for documents) | TT-WMD by correspondence |  | Completed with editorial changes needed |
| 5 | Formal definition of Metadata | Define, using a standard methodology, the detailed specification of WIGOS metadata, in a form that allows extension to other elements (eg using UML). Precursor to item 5 of WIP 8.1.1 (that may result in item 5 being redefined). | Sep 2014 (needs feedback from EC before completion) | Secretariat liaise with IPET-MDRD |  | A joint Task team under IPET-MDRD, has been proposed for this task - November 2015 |
| 6 | Recommend to ICG-WIGOS on how they should go about deciding on approaches for gathering, storing and exchanging WIGOS metadata | Within the principle that all data must be provided along with the relevant metadata, identify how WIGOS metadata may be gathered, stored and exchanged. (Precursor for item 5 in the WIP 8.1.1 work plan that may define that item) | March 2014 (EC document deadline) | ICG-WIGOS or TT-WMD? |  | This should be led by another group other than TT-WMD. |
| 7 | Decide on subsets of summary metadata and how they will be presented as catalogues | Identify a subset of the metadata that has to be recorded in globally available catalogues to meet requirements for an overview of the observations available through WIGOS and for exchanging critical metadata that changes infrequently. (Precursor to item 5 in the WIP 8.1.1 work plan that may define that item 5). This may include a complete station list similar to Volume A. | November 2014 | Representative of each Commission  In liaison with IPET-WIFI subgroup on WIGOS Information Resource |  | Completed after identification of the phases approach. |
| 8 | Monitor progress of plan | Quarterly teleconferencing meetings. | 1st Week May 2013  September, December, March | Chair |  | Now monthly or bi-monthly |
| 9 | Create contents of code tables etc | Defined contents of code tables, classifications etc that are needed to operate the standard | Dec 2014, but can begin during first half of 2013 | TT-WMD members to take responsibility for individual tables  Chair to allocate responsibilities |  | Almost completed |
| 10 | Development of guidance material, with examples, to assist Members with the practical implementation of the Standard | Document with proposed guidance material | May-Sep. 2015 (based on feedback from Congress) | TT-WMD |  | This should be developed by a successor of the TT-WMD |
| 11 | Define the requirements and configuration of metadata exchange | Document with requirements and architecture of metadata exchange | May 2015 | TT-WMD and Secretariat |  | Relates to task 6 and partly started by the OSCAR project team |
| 12 | Develop competencies | Identify competencies required for those responsible for providing WIGOS metadata | May 2015 | TT-WMD with Secretariat |  | Postponed for the implementation |
| 13 | Complete the final draft of the WMDS | Draft version 0.2 to be submitted to ICG-WIGOS-4 | January 2015 | TT-WMD and Secretariat |  |  |

\* STATUS column entries will be one of the following descriptors, as determined by the Chair TT-WMD based on consultation with the responsible party (in each case, elaborative comments can be added after the standard descriptor or in the "Comment" column):

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| On-Track | Under-Stress | Overdue |