|  |  |  |
| --- | --- | --- |
| WORLD METEOROLOGICAL ORGANIZATION  COMMISSION FOR BASIC SYSTEMS  -----------------------------  THIRD MEETING OF  INTER-PROGRAMME EXPERT TEAM ON DATA REPRESENTATION MAINTENANCE AND MONITORING  BEIJING, CHINA, 20 - 24 JULY 2015 |  | IPET-DRMM-III / Doc. 11.1  (06. 7. 2015)  -------------------------  ITEM 11.1  ENGLISH ONLY |

COLLABORATION WITH OTHER ORGANIZATIONS AND TECHNICAL BODIES

TT-DSM and the future involvement in the WIGOS Monitoring

*Submitted by the Secretariat*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Summary and Purpose of Document**

This document is to provide a brief summary on development of the WIGOS Data Quality Monitoring System and recent initiatives to correct errors in BUFR messages.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ACTION PROPOSED**

The meeting will note the information on development of the WIGOS Data Quality Monitoring System and recent initiatives by NWP centres to correct erroneous BUFR messages with a view to pursuing the possibility of TT-DSM to be involved in the WIGOS Monitoring System as a primary consultative body on BUFR encoding.

**DISCUSSION**

**Development of the WIGOS Data Quality Monitoring System**

1. The WIGOS Workshop on Data Quality Monitoring and Incident Management was held in Geneva, Switzerland over 10-12 December 2014.[[1]](#footnote-1) The primary aims of this workshop were to:

1) Revise and update the requirements of NWP centres for monitoring and reporting of data quality of surface-based observing systems of the GOS.

For land, surface-based systems of the GOS:

2) Revise and update the structure and the procedural and regulatory framework for monitoring and reporting of data availability and quality.

3) Revise and update the structure and procedural framework for incident identification, documentation and rectification.

4) Identification of a lead centre (or centres) for data availability, quality monitoring and incident management.

The workshop was organised by the CBS Expert Team on Surface Based Observation (ET-SBO) in collaboration with the WIGOS Project Office and was attended by a small group of experts representing NWP centres, WMO monitoring centres, observing systems management and WMO Regions.

The two diagrams below reflect the structure and architecture of the system that was envisaged to be required to meet the current and future needs of WMO observing system quality monitoring functionality. Such a system would be designed to meet the following requirements:

* Integrated monitoring of both availability and quality at the measurement parameter level;
* Multi-monitoring centre participation;
* Regional and sub-regional responsibility for quality monitoring and fault analysis and reporting functions, possibly under the WIGOS Regional Centre structure; and
* Feedback mechanisms between centres and Members for fault reporting, action and rectification.

The WIGOS Data Quality Monitoring System will be further developed under the direction of the EC Inter-Commission Coordination Group on the WMO Integrated Global Observing System (ICG-WIGOS) and its task teams in cooperation with CBS and other WMO Technical Commissions. This activity is in line with Resolution 4.2.2(1)/1 (Cg-17), Pre-operational Phase of WIGOS, which decided that one of the five priorities for the WIGOS Pre-operational Phase will be: (d) Development and implementation of the WIGOS Data Quality Monitoring System.





**Issues relating to the transition to Table Driven Code Formats**

2. Several national and global NWP centres are identifying issues with various BUFR message types arising from the migration to TDCF. These are summarised as:

1. Members are not providing clear and adequate notification of their transition from alpha-numeric formats to TDCF.
2. Members are not clear on what process should be undertaken in the testing and validation of new code formats.
3. Data users are not being adequately informed regarding changes to message formats.
4. Feedback and communications mechanisms between data users and data providers for reporting of coding changes and issues are inadequate.

The WMO Secretariat has been providing a NWP Observations Data Quality Issues forum that is identifying issues encountered by NWP centres as they arise. ECMWF also has developed an online forum for reporting and discussion of issues relating to transition to BUFR.

One of the significant issues currently affecting data quality is that of transition of alpha-numeric TEMP messages to BUFR TEMP messages. A discussion of this issue will be provided in the item 7.3.

3. The meeting will discuss the possible involvement of the Task Team on Data Standards Monitoring (TT-DSM) in the WIGOS Monitoring System as a consultative body to provide expertise on BUFR coding, noting the progress of WIGOS Monitoring System development and recent initiatives to identify and correct erroneous BUFR messages shown above.

4. The meeting may discuss a change of the TOR of TT-DSM to reflect the new task in the current TORs below, if the involvement is effective and possible.

|  |  |
| --- | --- |
| (a) | Develop requirements for and specifications of monitoring to identify whether information is being represented correctly in the data formats recognised by WMO for exchange on WIS (including the Table Driven Code Forms and those data representations that have been mapped onto the WMO Logical Data Model). |
| (b) | Implement mechanisms to monitor the quality of data representation used within the WIS. |
| (c) | Analyse the data produced by monitoring the quality of data representation within the WIS and take appropriate action to remedy systematic problems that are identified by the analysis. |
| (d) | Report annually to ICT-ISS on the quality of data representations used within WIS. |

1. Final report : http://www.wmo.int/pages/prog/www/OSY/Reports/Final\_Report\_CBS\_WIGOS\_Workshop\_QM\_and\_IM\_Dec2014.pdf [↑](#footnote-ref-1)