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| WORLD METEOROLOGICAL ORGANIZATIONCOMMISSION FOR BASIC SYSTEMS-----------------------------THIRD MEETING OFINTER-PROGRAMME EXPERT TEAM ONCODES MAINTENANCEMARRAKECH, MOROCCO, 15 - 19 APRIL 2019 |  | IPET-CM-III / Doc. 10.101.04.2019-------------------------ITEM 10.1ENGLISH ONLY |

COLLABORATION WITH OTHER ORGANIZATIONS AND TECHNICAL BODIES

Task Team on the WIGOS Data Quality Monitoring System (TT-WDQMS)

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**Summary and Purpose of Document**

This document discusses the ongoing activities of the TT-WDQMS, under the auspices of the Intercommission Working Group on WIGOS (ICG-WIGOS).

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**ACTION PROPOSED**

The IPET-CM is invited to note the contents and discuss opportunities for support and collaboration with the TT-WDQMS.

**ANNEXES:**

 1. [IPET-CM-2 report on the WIGOS Data Quality Monitoring System](http://www.wmo.int/pages/prog/www/ISS/Meetings/IPET-CM_Offenbach2018/Documents/IPET-CM-II_Doc10-1_WDQMS.docx)

**DISCUSSION**

As discussed during the meeting of IPET-CM-2 (Offenbach, Germany, 28 May – 1 June 2018), the WIGOS Data Quality Monitoring System (WDQMS), when fully established, is envisioned to consist of 3 main component functions:

1. Monitoring Function
2. Evaluation Function
3. Incident Management Function

To further the development and prototyping of these functions, the Task Team on the WDQMS (TT-WDQMS) continues to hold periodic teleconferences, and it also met in plenary session from 4-6 December 2018 at WMO Headquarters in Geneva, Switzerland.

The monitoring function continues to be the most developed of the 3 functions, with a prototype web-based tool for monitoring the timeliness and quality of observations received at worldwide NWP centers. The prototype is currently housed on a dedicated server at ECMWF during the WIGOS pre-implementation phase, but a process is already underway to begin transitioning this functionality to server resources under the control of WMO. At present, the prototype portal is only monitoring 3 types of observational data (synoptic, radiosonde and aircraft) from 4 NWP centers (ECMWF, JMA, NCEP and DWD), but we hope to continue expanding it to cover other data types and NWP centers during the coming year. In doing so, we hope to leverage any real-time monitoring experience or resources that may already be established under the auspices of other WMO groups, such as JCOMM for marine data, GAW for air quality data, HWRP/WHOS for hydrological data, and GSICS for satellite data. This would follow a similar collaborative approach that was successfully used with the IPET-ABO (Interprogramme Expert Team on Aircraft-Based Observations) to add aircraft data monitoring to our existing portal. When collaborating with such groups, the idea is that if any of these groups already have robust and comprehensive monitoring systems in place for some of these observational types, then we could even consider linking directly to those systems from the eventual WDQMS portal. This would prevent the TT-WDQMS from having to expend resources reinventing the proverbial wheel, but still allow for a unified WDQMS portal under which monitoring resources for all data types could be found. To that end, a representative from GSICS briefed the TT-WDQMS during our December plenary meeting, and we will continue to build on that initial collaboration, but we would also welcome any possible advice or assistance from the IPET-CM in identifying suitable points-of-contact for some of the other groups mentioned above, as well as identifying other potential WMO groups with whom it might make sense for the TT-WDQMS to collaborate.

As discussed during the IPET-CM-2 meeting, the WDQMS evaluation function is envisioned to be housed at one or more Global WIGOS Centers (GWCs). These centers would take as input any specific issues noted by the monitoring function and determine if further action was needed. If so, it would then be assigned a tracking number and referred to the WDQMS incident management function for resolution. The incident management function would be housed at Regional WIGOS Centers (RWCs) within each of the WMO regions, where it is expected that relevant contact information within each of the regional member countries would be readily available as well as the capability to coordinate the resolution of any observational data issues spanning multiple countries within the region. To date, many WMO regions have already made progress towards the establishment of an RWC within their region, including in RA VI (Europe) where such a center has already been declared operational. Technical guidance on this process is available from [WMO No. 1224](https://library.wmo.int/doc_num.php?explnum_id=5681)

Going forward, the TT-WDQMS would also appreciate assistance from the IPET-CM in encouraging all WMO member countries to keep their national metadata up-to-date within OSCAR/Surface, as this metadata is used within the WDQMS monitoring function to help identify observational data anomalies, both in the expected physical location of reporting sites, and also in the timeliness and frequency with which such sites are expected to report. Any deviation from these official standards (as documented in OSCAR/Surface) would potentially be flagged as an anomaly for further evaluation by the WDQMS evaluation and incident management functions.