ET-SBO Quality Monitoring Fault Management Pilot Project Description, Scope & Requirements

# Description

CBS/ET-SBO will seek to establish a fault management pilot project in partnership with Global NWP centers and WMO Members to assist in establishing and exploring the requirements, issues and benefits of the development of a global fault management system for observing systems of the GOS.

This activity is associated with the recommended actions from the CBS/WIGOS WIGOS Workshop on Data Quality Monitoring and Incident Management, held in Geneva, Switzerland, 10-12 December 2014[[1]](#footnote-0).

The project will be relatively small in size involving collaboration with several WMO Members agencies in a particular sub-region - preferably within WMO Region I - and under the coordinating leadership of a Member country that has or has had responsibility for WMO international data quality monitoring. The lead country will undertake to monitor and analyse on a frequent basis, the results of NWP data monitoring information and communicate the results with other participating countries based on established feedback mechanisms and protocols that will be established for the pilot project.

Quality monitoring information, diagnostics and tools will be provided by one or more NWP monitoring centers and by a participating WIS center and will be utilised by the participating members to detect and analyse observing system faults and outages. All records of faults and issues will be documented and used to analyse the outcomes of the project and the impact on quality of the relevant observing systems of the GOS.

# Scope

* Countries participating (to be confirmed): Kenya (Lead), Malawi, Tanzania, Uganda
* Monitoring information to be utilised:
  + Reports provided by Quality Monitoring Pilot Project (QM-PP)
  + WIS monitoring information available from a participating WIS Center
  + Other available online diagnostics available to participants
* (Initially) limited to observing systems associated with synoptic surface pressure measurement.
* **Period of pilot project - 3-6 month period commencing in late 2015**.

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# Requirements of Participants

## Requirements of ET-SBO

1. Pilot project (PP) definition and oversight.
2. Establish communications protocols to be used in the PP.
3. Define, establish and explain use of the fault management system to be used in the PP.
4. Define requirements for monitoring information and diagnostics for use in the PP.
5. Report on outcomes of the PP.

## Requirements of NWP Centres

## Provide monitoring data and diagnostics to the central repository:

## 6-hourly automated list of missing and poor quality observations for all stations.

## Requirements of Quality Monitoring Pilot Project (WMO Secretariat and NWP centres)

## Provide automated quality monitoring diagnostics to Lead Center:

## Automated daily summary QM report with problem stations for the participating countries including:

* + 1. missing
    2. poor quality

1. Provide online quality monitoring diagnostics to Lead Center:

## Regional map indicating 6-hourly status of stations in terms of availability and quality

## For participating stations, individual time series of QC results produced by NWP centres for pressure.

## Requirements of PP Lead Centre

1. Access and analyse 6-hourly frequency reports from QM-PP.
2. On a weekly basis:
   1. Use available diagnostics and determine likely cause of newly found faults on a station-by-station basis and identify responsible entity for fault action.
   2. Analyse feedback received from participating member focal points on previously identified faults and update fault management system (e.g. Excel spreadsheet) appropriately.
   3. Enter faults into an agreed fault management form (electronic) and dispatch to all required recipients.
   4. Update required PP documentation.
3. Feedback to QM-PP on the adequacy/functionality of the reports and maps
4. At conclusion of PP, document the results and outcomes of the project in consultation with ET-SBO.

## Requirements of Participating Member Countries

1. Initiate action for designated faults within reports provided by the Lead Centre.
2. On a weekly basis, provide a report to the LC on the status of open faults.

## Requirements of Participating WIS Center

1. Initiate action for designated faults within reports provided by the Lead Centre.
2. On a weekly basis, provide a report to the LC on the status of open faults.

# Outputs

1. Report from PP Lead Center at conclusion of the project.
2. Report from ET-SBO on FMS Pilot Project.

# Outcomes

1. Better understanding of the requirements for quality monitoring diagnostics to support Member observing system quality improvement.
2. Better understanding of the capabilities of monitoring centers to contribute to observing system quality improvement.
3. Better understanding of the requirements of Members in monitoring the status of their observing systems.
4. Improved understanding of the benefits of an international fault monitoring system and its required functionality.

1. Final Report, [WIGOS Workshop on Data Quality Monitoring and Incident Management](http://www.wmo.int/pages/prog/www/OSY/Reports/Final_Report_CBS_WIGOS_Workshop_QM_and_IM_Dec2014.pdf), Geneva, Switzerland, 10-12 December 2014 [↑](#footnote-ref-0)