

**WMO OMM**

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Our ref.: 31922/2018/OBS/WIS/DRMM/BUFR

30 November 2018

Annex: 1

Subject: Problem management for upper-air BUFR reports

Action required: To participate in the initiative to resolve problems identified in upper-air BUFR reports

Dear Sir/Madam,

I wish to refer to the decision made by the eighteenth meeting of the Commission for Basic Systems (CBS) Management Group (MG) (Geneva, March 2018) (see item 4 and Annex 5 of the [meeting report](#)), which agreed with resolving the problems identified in upper-air reports in FM 94 BUFR.

On the basis of the above decision and the fact that 25% of upper-air reports have yet to be migrated from the Traditional Alphanumeric Codes (TAC) to the Binary Universal Form for the Representation of meteorological data (BUFR) and 33% of the reports already available in BUFR are affected by problems that prevent their use for data assimilation purposes, the meeting of the Task Team on Global Information System Centres (TT-GISC) (Casablanca, Morocco, September 2018) under the CBS - OPAG on Information Systems and Services (OPAG-ISS) Expert Team on WIS Centres (ET-WISC) recently proposed an initiative to identify and resolve the problems in upper-air BUFR reports.

In the proposed problem management process, based on the work done by the Task Team on Upper-Air BUFR, the GISCs have the key role of facilitating the resolution of BUFR upper-air problems identified by users or Numerical Weather Prediction (NWP) centres.

In view of the above and by request from the president of CBS as the chairperson of the CBS MG, it is hoped as a pressing issue that you will participate, to a maximum extent, in the initiative, described in the Annex, to resolve the problems in upper-air BUFR reports.

Yours faithfully,

(W. Zhang)  
for the Secretary-General

To: Permanent Representatives (or Directors of Meteorological or Hydrometeorological Services) of Members of WMO  
Director General of ECMWF

cc: Hydrological Advisers to Permanent Representatives

## PROBLEM MANAGEMENT PROCESS OF UPPER-AIR DATA IN BUFR

Ref.: 31922/2018-1.3 OBS-WIS/DRMM

The aim of the problem management process of upper-air data in BUFR is:

- (1) To provide a clear framework for the resolution of problems affecting upper-air data in BUFR,
- (2) To clarify how the data producer can obtain support for the resolution of the problems,
- (3) To provide a database of solutions that can be used for future problems.

A graphical representation of the process can be obtained here [http://wiswiki.wmo.int/tiki-download\\_file.php?fileId=4598](http://wiswiki.wmo.int/tiki-download_file.php?fileId=4598).

The following roles are defined in the problem management process:

- (1) Issue originator

A data user who is able to individuate an issue in the data. A typical issue originator is a NWP centre encountering an issue which prevents the use of upper-air observations in BUFR for data assimilation purposes.

Issue originator is requested:

- (a) To notify its principal GISC of an upper-air BUFR report issue by providing a detailed report with data samples and a clear documentation of the issue,
- (b) To provide expert advice when requested by GISC or data producer,
- (c) To validate the test dataset provided by the data producer who has implemented a solution to the problem. If the test dataset is still affected by a problem, the issue originator has to propose an alternative solution that should be considered by the data producer.

- (2) Principal GISC

A principal GISC receiving an issue notification by an issue originator within the area of responsibility notifies the GISC responsible for the area where the observation is performed.

- (3) Responsible GISC

The responsible GISC manages the issue, facilitates its resolution and frequently updates the issues tracking system already in use in the GISC watch activity with:

- (a) All the necessary information to describe the issue,
- (b) The status of the issue and the expected date of resolution,
- (c) A summary of the communication with other participants.

The responsible GISC has also to manage the issues in the tracking system to avoid entering duplicates of the same issue and has to request the data producer to stop the transmission of BUFR data affected by the problem until a resolution is implemented.

(4) Data producer

The data producer is the producer of the BUFR data affected by the problem. When an issue is notified, the data producer has:

- (a) To stop transmission of the data affected by the problem,
- (b) To provide a plan and timeline for the resolution of the issue,
- (c) To request expert advice from IPET-CM and the issue originator when deemed necessary,
- (d) To provide a test data set to the responsible GISC to be used by the issue generator to confirm that the problem has been resolved,
- (e) To release the amended data on the WIS only after it has been clarified that the problem has been resolved.

(5) Expert Body (IPET-CM)

The expert body is the Inter-Program Expert Team on Code Maintenance responsible for providing technical advice on the data format issues when requested by the data producer or the GISC.

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