



## WMO OMM

World Meteorological Organization  
 Organisation météorologique mondiale  
 Organización Meteorológica Mundial  
 Всемирная метеорологическая организация  
 المنظمة العالمية للأرصاد الجوية  
 世界气象组织

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Our ref.: 03075/2019/OBS/WIS/DRMM/DRC

18 February 2019

Annexes: 2 (available in English, French, Russian and Spanish only)

Subject: Amendments to the *Manual on Codes*

Action required: To consider the amendments to the *Manual on Codes* (WMO-No. 306) and inform the Secretariat of your concurrence on the amendments by **17 April 2019**

Dear Sir/Madam,

In accordance with the *Procedures for Maintaining Manuals and Guides Managed by the Commission for Basic Systems* (Resolution 21 (Cg-17)), I am pleased to attach herewith in Annex I draft amendments to the *Manual on Codes, Volume I.2*.

I should be grateful if you could consider these draft amendments for implementation on 6 November 2019, and if you could inform me of your concurrence on these amendments, as soon as possible but within the two months following the date of dispatch of this letter, so that the amendments can be incorporated into the next edition of the *Manual on Codes* in an appropriate manner.

If you disagree with or have comments on any or all of these draft amendments, I should be grateful if you could designate a focal point to discuss them with the CBS Inter-Programme Expert Team on Codes Maintenance (IPET-CM). Please note that any WMO Member who does not reply within the two-month period following the dispatch of this letter is implicitly considered as having agreed to the draft amendments.

A list of the amendments approved by WMO Members will be included in an issue of the Operational Newsletter on the World Weather Watch and Marine Meteorological Services available on the WMO website two months from the date of this letter. The date of issue of this Operational Newsletter will be considered as the date of notification of the approved amendments.

Yours faithfully,

(P. Taalas)  
 Secretary-General

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

cc: Hydrological Advisers to Permanent Representatives

**AMENDMENTS TO THE MANUAL ON CODES (WMO-NO. 306)  
BY THE PROCEDURE FOR ADOPTION BETWEEN CBS SESSIONS**

**CONTENTS**

**Part C – Common Features to Binary and Alphanumeric Codes**

d. Regulations for reporting traditional observation data in  
Table-Driven Code Forms (TDCF): BUFR or CREX

1. [New sequence for representation of radiosonde observation data with higher precision of pressure and geopotential height](#)
2. [Amendments to B/C Regulations for standard time](#)

**1. New sequence for representation of radiosonde observation data with higher precision of pressure and geopotential height**

**ADD:**

Note (6) to B/C25.

Note (6): When a station has a capability to report pressure and geopotential height in a higher precision, the sequence 3 09 057 (Sequence for representation of TEMP, TEMP SHIP and TEMP MOBIL observation type data with higher precision of pressure and geopotential height) can be used instead of TM309052.

**2. Amendments to B/C Regulations for standard time**

**AMEND:**

in B/C1.1.2,

- Year ~~(standard time)~~ (see Note 31);
- Month ~~(standard time)~~ (see Note 1);
- Day (standard time — YY in the abbreviated telecommunication header for SYNOP data) ~~(see Note 1)~~;
- Hour (standard time — GG in the abbreviated telecommunication header for SYNOP data) ~~(see Note 1)~~;
- Minute (standard time — 00 for SYNOP data) ~~(see Note 1)~~.

Notes:

- ~~(1) Inclusion of these entries is required starting with CREX edition 2.~~
- (12) If inclusion of international data sub-category is required, Note 12 under Regulation B/C1.1.1 applies.
- (23) If an NMHS performs conversion of SYNOP data produced by another NMHS, Note 23 under Regulation B/C1.1.1 applies.
- (3) Date (year, month and day) and time (hour, minute and second) are the most typical time in the BUFR message contents and specified in UTC.

in B/C20.1.1,

- Year ~~(of standard time), (year of the century up to BUFR edition 3)~~ (see Note 3);
- Month ~~(of standard time)~~;

- Day (~~when standard time, =~~YY in the abbreviated telecommunication header for all PILOT type data);
- Hour (~~when standard time, =~~GG in the abbreviated telecommunication header, e.g. = 00, 06, 12 or 18 for all PILOT type data);
- Minute (~~when standard time, =~~00 for all PILOT type data);
- Second (~~=~~00) (~~see Note 1~~).

Notes:

~~(1) Inclusion of this entry is required starting with BUFR edition 4.~~

(12) If required, the international data sub-category shall be included at all observation times as follows:

= 001 for PILOT data;

= 002 for PILOT SHIP data;

= 003 for PILOT MOBIL data.

(23) If an NMHS performs conversion of PILOT, PILOT SHIP or PILOT MOBIL data produced by another NMHS, originating centre in Section 1 shall indicate the converting centre and originating sub-centre shall indicate the producer of PILOT, PILOT SHIP or PILOT MOBIL bulletins. Producer of PILOT, PILOT SHIP or PILOT MOBIL bulletins shall be specified in Common Code table C-12 as a sub-centre of the originating centre, i.e. of the NMHS executing the conversion.

(3) Date (year, month and day) and time (hour, minute and second) are the most typical time in the BUFR message contents and specified in UTC.

in B/C1.2.2.1,

The time in Section 1 (B/C1.1.1) may be reported instead of the actual time of observation, if the actual time of observation differs by 10 minutes or less from the nearest hour. ~~If the actual time of observation differs by 10 minutes or less from the standard time reported in Section 1, the standard time may be reported instead of the actual time of observation.~~ [12.2.8]

Similarly in B/C1.1.1, B/C5.1.1, B/C5.1.2, B/C5.2.2.1, B/C10.1.1, B/C10.1.2, B/C10.2.4.1, B/C20.1.2, B/C25.1.1, B/C25.1.2, B/C26.1.1, B/C26.1.2, B/C30.1.1, B/C30.1.2, B/C32.1.1 and B/C32.1.2.

Full amendments including other consequential changes

[http://www.wmo.int/pages/prog/www/WMOCodes/Amendments/2019/betweenCBS/Full\\_AMD.zip](http://www.wmo.int/pages/prog/www/WMOCodes/Amendments/2019/betweenCBS/Full_AMD.zip)

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PROCEDURES FOR AMENDING WMO MANUALS AND GUIDES THAT ARE THE RESPONSIBILITY OF  
THE COMMISSION FOR BASIC SYSTEMS

(Rec. 15 (CBS-Ext.(2014)/Res. 21 (Cg-17)/Res. 12 (EC-68))

1. DESIGNATION OF RESPONSIBLE COMMITTEES

The Commission for Basic Systems (CBS) shall, for each Manual and Guide, designate one of its Open Programme Area Groups (OPAGs) as being responsible for that Manual and its associated technical guides. The Open Programme Area Group may choose to designate one of its Expert Teams as the designated committee for managing changes to all or part of that Manual; if no Expert Team is designated, the Implementation Coordination Team for the OPAG takes on the role of the designated committee.

2. GENERAL VALIDATION AND IMPLEMENTATION PROCEDURES

2.1 Proposal of amendments

Amendments to a Manual or a Guide managed by CBS shall be proposed in writing to the Secretariat. The proposal shall specify the needs, purposes and requirements and include information on a contact point for technical matters.

2.2 Drafting recommendation

The designated committee for the relevant part of a Manual or a Guide, supported by the Secretariat, shall validate the stated requirement (unless it is consequential to an amendment to the WMO Technical Regulations) and develop a draft recommendation to respond to the requirement, as appropriate.

2.3 Procedures for approval

After a draft recommendation of the designated committee is validated in accordance with the procedure given in section 7 below, depending on the type of amendments, the designated committee should select one of the following procedures for the approval of the amendments:

- (a) Simple (fast-track) procedure (see section 3 below);
- (b) Standard (adoption of amendments between CBS sessions) procedure (see section 4 below);
- (c) Complex (adoption of amendments during CBS sessions) procedure (see section 5 below).

2.4 Date of implementation

The designated committee should define an implementation date in order to give WMO Members sufficient time to implement the amendments after the date of notification. For procedures other than the simple (fast-track) one, if the time between the date of notification and implementation date is less than six months, the designated committee shall document the reasons for its decision.

2.5 Urgent introduction

Regardless of the above procedures, as an exceptional measure, the following procedure accommodates urgent user needs to introduce elements in lists of technical details, or to correct errors:

- (a) A draft recommendation developed by the designated committee shall be validated according to the steps defined in section 7 below;
- (b) The draft recommendation for pre-operational use of a list entry, which can be used in operational data and products, shall be approved by the chairperson of the designated committee and the chairperson of the responsible OPAG, and the president of CBS. A listing of pre-operational list entries is kept online on the WMO web server;
- (c) Pre-operational list entries shall then be submitted for approval by one of the procedures in 2.3 above for operational use;
- (d) Any version numbers associated with the technical implementation should be incremented at the least significant level.

## 2.6 Issuing updated version

Once amendments to a Manual or a Guide are adopted, an updated version of the relevant part of the Manual shall be issued in the languages agreed for its publication. The Secretariat shall inform all Members of the availability of a new updated version of that part at the date of notification mentioned in 2.4 above. If amendments are not incorporated into the published text of the relevant Manual or Guide at the time of the amendment, there should be a mechanism to publish the amendments at the time of their implementation and to retain a permanent record of the sequence of amendments.

## 3. SIMPLE (FAST-TRACK) PROCEDURE

### 3.1 Scope

The simple (fast-track) procedure shall be used only for changes to components of the Manual that have been designated and marked as "technical specifications to which the simple (fast-track) procedure for the approval of amendments may be applied".

Note: An example would be the addition of code list items in the *Manual on Codes* (WMO-No. 306).

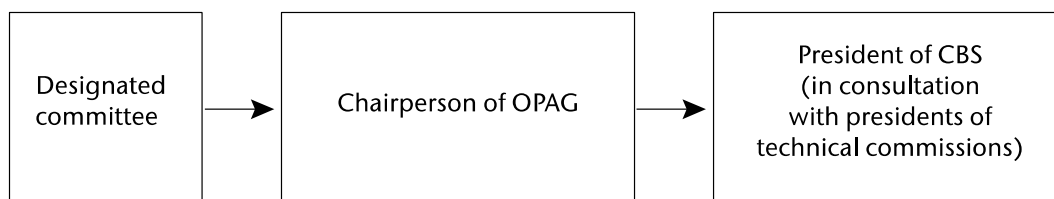
### 3.2 Endorsement

Draft recommendations developed by the responsible committee, including a date for implementation of the amendments, shall be submitted to the chairperson of the relevant OPAG for endorsement.

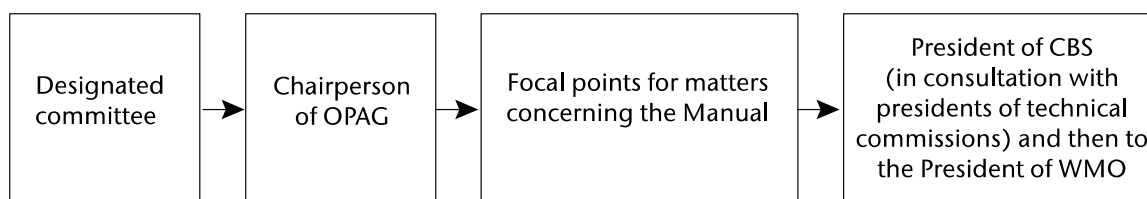
### 3.3 Approval

#### 3.3.1 *Minor adjustments*

Correcting typographical errors in descriptive text is considered a minor adjustment, and will be done by the Secretariat in consultation with the president of CBS. See Figure 1.



**Figure 1. Adoption of amendments to a Manual by minor adjustment**



**Figure 2. Adoption of amendments to a Manual by simple (fast-track) procedure**

### 3.3.2 *Other types of amendments*

For other types of amendments, the English version of the draft recommendation, including a date of implementation, should be distributed to the focal points for matters concerning the relevant Manual for comments, with a deadline of two months for the reply. It should then be submitted to the president of CBS for consultation with presidents of technical commissions affected by the change. If endorsed by the president of CBS, the change should be passed to the President of WMO for consideration and adoption on behalf of the Executive Council (EC).

### 3.3.3 *Frequency*

The implementation of amendments approved through the simple (fast-track) procedure can be twice a year in May and November. See Figure 2.

## 4. STANDARD (ADOPTION OF AMENDMENTS BETWEEN CBS SESSIONS) PROCEDURE

### 4.1 *Scope*

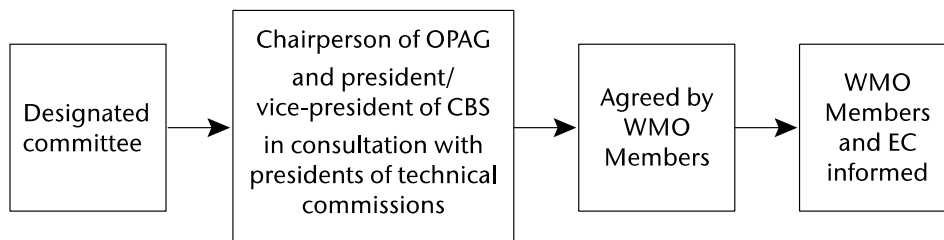
The standard (adoption of amendments between CBS sessions) procedure shall be used for changes that have an operational impact on those Members who do not wish to exploit the change, but that have only minor financial impact, or that are required to implement changes in the Technical Regulations (WMO-No. 49), Volume II – Meteorological Service for International Air Navigation.

### 4.2 *Approval of draft recommendations*

For the direct adoption of amendments between CBS sessions, the draft recommendation developed by the designated committee, including a date of implementation of the amendments, shall be submitted to the chairperson of the responsible OPAG and president and vice-president of CBS for approval. The president of CBS shall consult with the presidents of technical commissions affected by the change. In the case of recommendations in response to changes in the Technical Regulations (WMO-No. 49), Volume II – Meteorological Service for International Air Navigation, the president of CBS shall consult with the president of the Commission for Aeronautical Meteorology.

### 4.3 *Circulation to Members*

Upon approval of the president of CBS, the Secretariat sends the recommendation to all Members, in the languages in which the Manual is published, including a date of implementation of the amendments, for comments to be submitted within two months following the dispatch of the amendments. If the recommendation is sent to Members via electronic mail, there shall be public announcement of the amendment process including dates, for example by WMO Operational Newsletter on the WMO website, to ensure all relevant Members are informed.



**Figure 3. Adoption of amendments between CBS sessions**

#### 4.4 Agreement

Those Members not having replied within the two months following the dispatch of the amendments are implicitly considered as having agreed with the amendments.

#### 4.5 Coordination

Members are invited to designate a focal point responsible to discuss any comments/disagreements with the designated committee. If the discussion between the designated committee and the focal point cannot result in an agreement on a specific amendment by a Member, this amendment will be reconsidered by the designated committee. If a Member cannot agree that the financial or operational impact is minor, the redrafted amendment shall be approved by the complex (adoption of amendments during CBS sessions) procedure described in section 5 below.

#### 4.6 Notification

Once amendments are agreed by Members, and after consultation with the chairperson of the responsible OPAG, the vice-president of CBS and the president of CBS (who should consult with presidents of other commissions affected by the change), the Secretariat notifies at the same time the Members and the members of the Executive Council of the approved amendments and of the date of their implementation. See Figure 3.

### 5. COMPLEX (ADOPTION OF AMENDMENTS DURING CBS SESSIONS) PROCEDURE

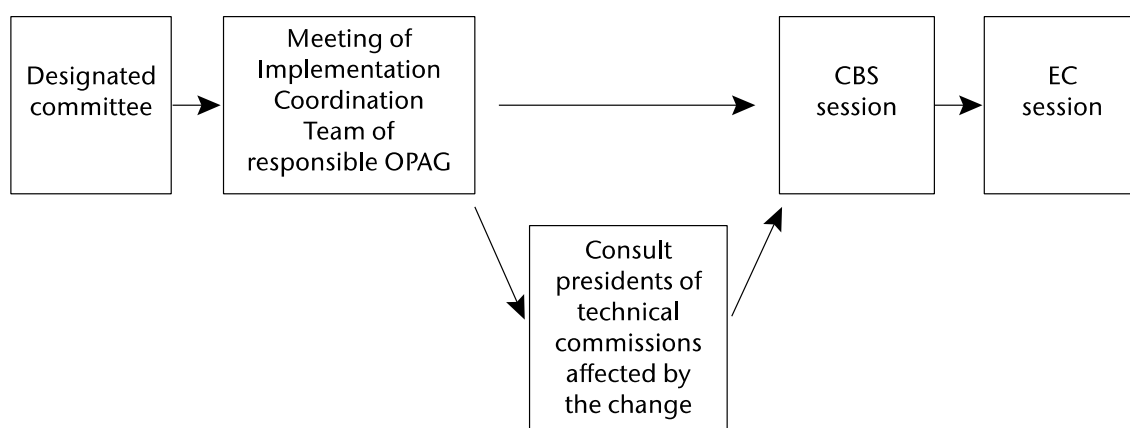
#### 5.1 Scope

The complex (adoption of amendments during CBS sessions) procedure shall be used for changes for which the simple (fast-track) procedure or standard (adoption of amendments between CBS sessions) procedure cannot be applied.

#### 5.2 Procedure

For the adoption of amendments during CBS sessions, the designated committee submits its recommendation, including a date of implementation of the amendments, to the Implementation Coordination Team of the responsible Open Programme Area Group. The recommendation is then passed to the presidents of technical commissions affected by the change for consultation, and to a CBS session that shall be invited to consider comments submitted by presidents of technical commissions. The document for the CBS session shall be distributed not later than 45 days before the opening of the session. Following the CBS session, the recommendation shall then be submitted to a session of the Executive Council for decision. See Figure 4.





**Figure 4. Adoption of amendments during CBS sessions**

## 6. PROCEDURE FOR THE CORRECTION OF EXISTING MANUAL CONTENTS

### 6.1 Correcting errors in items within Manuals

Where a minor error in the specification of an item that defines elements within a Manual is found, for example, a typing error or an incomplete definition, the item shall be amended and re-published. Any version numbers associated with items edited as a result of the change should be incremented at their lowest level of significance. If, however, the change has an impact on the meaning of the item, then a new item should be created and the existing (erroneous) item marked as deprecated. This situation is considered a minor adjustment according to 3.3.1 above.

Note: An example of an item for which this type of change applies is a code list entry for the Table Driven Code Forms or WMO Core Metadata Profile, in which the description contains typographical errors that can be corrected without changing the meaning of the description.

### 6.2 Correcting an error in the specification of how conformance with the requirements of the Manual can be checked

If an erroneous specification of a conformance-checking rule is found, the preferred approach is to add a new specification using the simple (fast-track) procedure or standard (adoption of amendments between CBS sessions) procedure approach. The new conformance-checking rule should be used instead of the old. An appropriate explanation shall be added to the description of the conformance-checking rule to clarify the practice along with the date of the change.

Note: An example of such a change would be correcting a conformance-checking rule in the WMO Core Metadata Profile.

### 6.3 Submission of corrections to errors

Such changes shall be submitted through the simple (fast-track) procedure.

## 7. VALIDATION PROCEDURE

### 7.1 Documentation of need and purpose

The need for, and the purpose of, the proposal for changes should be documented.

7.2 Documentation of result

This documentation shall include the results of validation testing of the proposal as described in 7.3 below.

7.3 Testing with relevant applications

For changes that have an impact on automated processing systems, the extent of the testing required before validation should be decided by the designated committee on a case-by-case basis, depending on the nature of the change. Changes involving a relatively high risk and/or impact on the systems should be tested by the use of at least two independently developed tool sets and two independent centres. In that case, results should be made available to the designated committee with a view to verifying the technical specifications.

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