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| WORLD METEOROLOGICAL ORGANIZATION  COMMISSION FOR BASIC SYSTEMS  -----------------------------  THIRD MEETING OF  INTER-PROGRAMME EXPERT TEAM ON CODES MAINTENANCE  MARRAKECH, MOROCCO, 15 - 19 APRIL 2019 |  | IPET-CM-III / Doc. 7.2(2)  27.03.2019  -------------------------  ITEM 7.2  ENGLISH ONLY |

MIGRATION TO TABLE-DRIVEN CODE FORMS

Status of the migration to TDCF in RA II

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**Summary and Purpose of Document**

The document describes the status of migration to Table-Driven Code Forms in RA II, highlighting monitoring results in January 2019 and related activities of Members since the last meeting.

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**ACTION PROPOSED**

The meeting is requested to note the information.

**ANNEXES:**

1. None

**DISCUSSIONS**

**1 Background of this report**

Following the decisions of the sixteenth session of Regional Association II (Abu Dhabi, February 12-16, 2017), the Management Group defined working structures and the terms of reference of Working Groups and Leaders. The Leader in Data Representation and Metadata, appointed under the Working Group on WMO Integrated Global Observing System (WIGOS) and WMO Information System (WIS) (WG-WIGOS/WIS), is responsible for:

*(a) Keeping under review inter-programme data representation matters, including migration to Table Driven Code Forms and regional codes, and make recommendations.*

*(b) Keeping under review the status of implementation of the WIS DAR metadata catalogue and migration from WMO Catalogue of Meteorological Bulletins (Volume C1) to DAR metadata.*

In accordance with this mandate, the leader monitors and gives technical assistance as well as conducts survey on migration status on a regular basis. This document summarizes the monitoring results of migration status of RA-II Members as of January 2019 and related activities by RA-II Members during the period between July 2018 and January 2019.

**2 RA-II Member activities related to TDCF**

Several activities related to TDCF were reported by RA-II Members since the last meeting in May 2018:

2.1 *Republic of Korea*

Republic of Korea started dissemination of hourly buoy observation in BUFR format in June 2018 with GTS headings of IOBC[18, 40] RKSL.

2.2 *Russian Federation (Asia region)*

Russian Federation started to disseminate upper-air observation data in BUFR format in November 2018 and January 2019. GTS headings are as follows:

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| --- | --- | --- | --- | --- |
| TTTAAii | CCCC | WMO station index number | Remarks | Date |
| IUKC01 | RUHB | 24266 | TEMP PART A, B | Nov 2018 |
| IUKC03 | RUHB | 30372, 30557, 30635, 30673, 30758, 30935, 30965 | TEMP PART A, B | Jan 2019 |
| IUKC04 | RUHB | 31088 | TEMP PART A, B | Nov 2018 |
| IUKC04 | RUNW | 29572, 29862, 30230 | TEMP PART A, B | Nov 2018 |
| IUKC05 | RUHB | 32540 | TEMP PART A, B | Nov 2018 |
| IUKD01 | RUNW | 20674, 23472 | TEMP PART A, B | Nov 2018 |
| IUKD02 | RUNW | 23921 | TEMP PART A, B | Nov 2018 |
| IUKD03 | RUNW | 28695, 28722 | TEMP PART A, B | Jan 2019 |
| IUSC01 | RUHB | 24266 | TEMP PART A, B, C, D | Nov 2018 |
| IUSC03 | RUHB | 30372, 30557, 30635, 30673, 30758, 30935, 30965 | TEMP PART A, B, C, D | Jan 2019 |
| IUSC04 | RUHB | 31088 | TEMP PART A, B, C, D | Nov 2018 |
| IUSC04 | RUNW | 29572, 29862, 30230 | TEMP PART A, B, C, D | Nov 2018 |
| IUSC05 | RUHB | 32540 | TEMP PART A, B, C, D | Nov 2018 |
| IUSD01 | RUNW | 20674, 23472 | TEMP PART A, B, C, D | Nov 2018 |
| IUSD02 | RUNW | 23921 | TEMP PART A, B, C, D | Nov 2018 |
| IUSD03 | RUNW | 28695, 28722 | TEMP PART A, B, C, D | Jan 2019 |

2.3 *Japan*

Japan started to disseminate daily CLIMAT in BUFR format in February 2019 with GTS heading of ISCC60 RJTD and ISCL60 RJTD (monthly). Japan stopped disseminating drifting buoy reports in TAC format (FM18 BUOY) in March 2019 with GTS headings of SSVB[01-19] RJTD.

2.4 *Hong Kong*

Hong Kong began dissemination of daily CLIMAT in BUFR format in February 2019 with GTS heading of ISCC60 VHHH (monthly).

2.5 *Pakistan*

Pakistan has been ready to disseminate daily CLIMAT in BUFR format since February 2019 with GTS heading of ISCD60 OPKC (monthly) and is coordinating with its principal GISC about routing of this bulletin.

**3 Monitoring and Analysis of Migration Status**

3.1 Monitoring method

Statistics were collected for the monitoring period (January, April, July and October 1 through 15). Resources were derived from the results of Special MTN Monitoring (SMM) pre-analysis and Integrated WWW Monitoring (IWM) created by WMC Melbourne/RTH Tokyo and from the latest version of the surface and upper-air station list of Regional Basic Synoptic Networks (RBSN) at the time of analysis.

In addition to WWW monitoring, the status of TDCF data communication is also monitored based on a catalogue created by GISC Tokyo (available at http://www.wis-jma.go.jp/csv/catalog.csv).

3.2 Migration progress and status

(1) SYNOP, TEMP and PILOT reports

The figures below show numerical representations of the progress of stations issuing BUFR-format bulletins equivalent to SYNOP and TEMP reports over the past three years. In the latest monitoring period from January 1 to 15, 2019, RTH Tokyo received (i) at least one surface synoptic observation report (excluding NIL reports) in BUFR format from 82% of RA-II observation stations registered as part of RBSN (TAC format from 94%), and (ii) at least one upper-air sounding report in BUFR format from 53% of registered stations (TAC format from 88%). Fourteen BUFR reports equivalent to PILOT reports were received by RTH Tokyo in the monitoring period, while TAC bulletins were received from fourteen stations.

Number of RA-II RBSN stations issuing surface synoptic observation (SYNOP) and upper-air sounding (TEMP) reports in TAC and BUFR format from April 2016 to January 2019

(2) CLIMAT reports

As of March 2019, 13 Members out of 35 Members who have Regional Basic Climatological Network (RBCN) stations were reporting CLIMAT data in BUFR format: China; India; Mongolia; Saudi Arabia; Pakistan; Japan; Bangladesh; Hong Kong, China; Macao, China, Republic of Korea, Myanmar, Thailand and Lao PDR. Hong Kong and Japan were also reporting daily CLIMAT reports in BUFR format.

(3) Marine reports

As of March 2019, India (TESAC), Hong Kong, China (SHIP), Japan (TESAC, TRACKOB, SHIP) and Republic of Korea (TESAC, VOS) were routinely disseminating marine observation data in BUFR format. Adoption of new templates for TESAC and BATHY is limited.