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Migration to Table Driven Code Forms

**Status of Migration in RA I**

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**Summary and Purpose of Document**

This document summarises the MTDCF status in RA-I and the migration challenges encountered

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**ACTION PROPOSED**

The Team is requested to note the current MTDCF status, the migration challenges in the RA I and consider the recommendations listed therein

## Introduction and Background Information

The migration to TDCF has been a challenge to most of the NMHS in RA I. However, in the last one year few started transmitting BUFR messages mainly SYNOP to GTS. Although most of them have had some training on TDCF the survey carried out in 2014/2015 indicates that many NHMS in the region lack capacity to implement TDCF operations.

This report describes the current status of migration to TDCF especially in East and South Africa sub region. Migration status in all NMHS could not be completely established because of difficulties in contacting the focal points. Other source of information on countries exchanging TDCF data was the newly installed WIS portal in Nairobi (though not yet commissioned) and Meteo France GISC in Toulouse.

1. **Migration Status**

The major setback in TDCF migration is lack of encoding software. However, some countries have made efforts to implement encoding systems and started transmitting BUFR messages to GTS. Countries whose information on their migration status has been obtained are listed below;

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| **Country** | **Migration Status** | **Encoding Software** | **Remarks** |
| Tanzania | Exchanging TDCF reports | Customized ECMWF decoder | BUFR SYNOP being received in Nairobi |
| Kenya | Exchanging TDCF bulletins | CLIMSOFT | TDCF bulletins being forwarded to Toulouse |
| Rwanda | Exchanging TDCF bulletins | CLIMSOFT | BUFR SYNOP being received in Nairobi |
| Uganda | TDCF data exchange not started |  | TDCF Training done |
| Burundi | TDCF data exchange not started | Planning to use CLIMSOFT | TDCF Training done |
| Malawi | TDCF data exchange not started |  | TDCF Training done |
| Botswana | Arrangement with Pretoria to implement TAC to BURF converter |  | TDCF Training done |
| Zambia | TDCF data exchange not started |  | TDCF Training done |
| Madagascar | AWS data being exchanged in BUFR | CLIMSOFT | BUFR AWS being exchanged between Antananarivo and Exeter |
| Zimbabwe | TDCF data exchange not started |  | TDCF Training done |

1. **Migration Challenges**

The TDCF migration challenges that have been identified are;

* 1. **Lack of TDCF encoding and transmission systems**

Even after undergoing training and appreciating the importance of TDCF, several countries have been unable to proceed with the migration as they lack capacity to implement TDCF processing systems. The more affected are those that have been using communications means that are only capable of handling TAC data exchanges. Transfer of TDCF messages requires upgrading to more advanced means such as FTP. Some have implemented CLIMSOFT which can encode observations into TDCF but so far they have not been able to transmit the produced BUFR files to the responsible RTHs due to the same reasons. Examples are Uganda, Burundi and Malawi.

* 1. **Incapability of TDCF Bulletins Compilation in Message Switching Systems**

Some message switching systems require upgrading in order to compile BUFR files into GTS bulletins. An example is the Nairobi messages switch which can only forward BUFR files but cannot compile them into bulletins. Application for compiling bulletins has been separately developed.

* 1. **Parallel Transmission**

The requirement for parallel transmission has been seen as an extra work in those NMHS that have started TDC data exchange. In cases where staff capacity is low the newly implemented TDCF operations are given a lower priority thereby reversing the gains made towards full migration. Examples are Kenya and Rwanda.

1. **Recommendations**

* The RTCs in RA I should be encouraged to play a guiding role in identifying the suitable connectivity means that can be easily implemented for TDCF data exchange between the centres under their responsibilities.
* TAC-TDCF converters be implemented in the existing message switching systems to act as a temporary measure before a full migration is achieved in those NMHS that are far in their TDCF migration path.
* System developers be encouraged to develop TDCF processing applications that are simple and integrate well with the region’s data processing practices.
* Those countries that have started TDCF data exchange but have only partially migrated be requested to speed up the migration process so that all the data types are exchanged in TDCF.