



World Meteorological Organization

Weather • Climate • Water

***Third Meeting of the Working Group  
ASECNA/WMO***

***Status of Implementation of QMS and  
Competency Assessment of aeronautical  
personnel in Africa, cost recovery, and  
overview of the Global Air Navigation Plan***

by

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**QMS**

# QMS Implementation in Africa

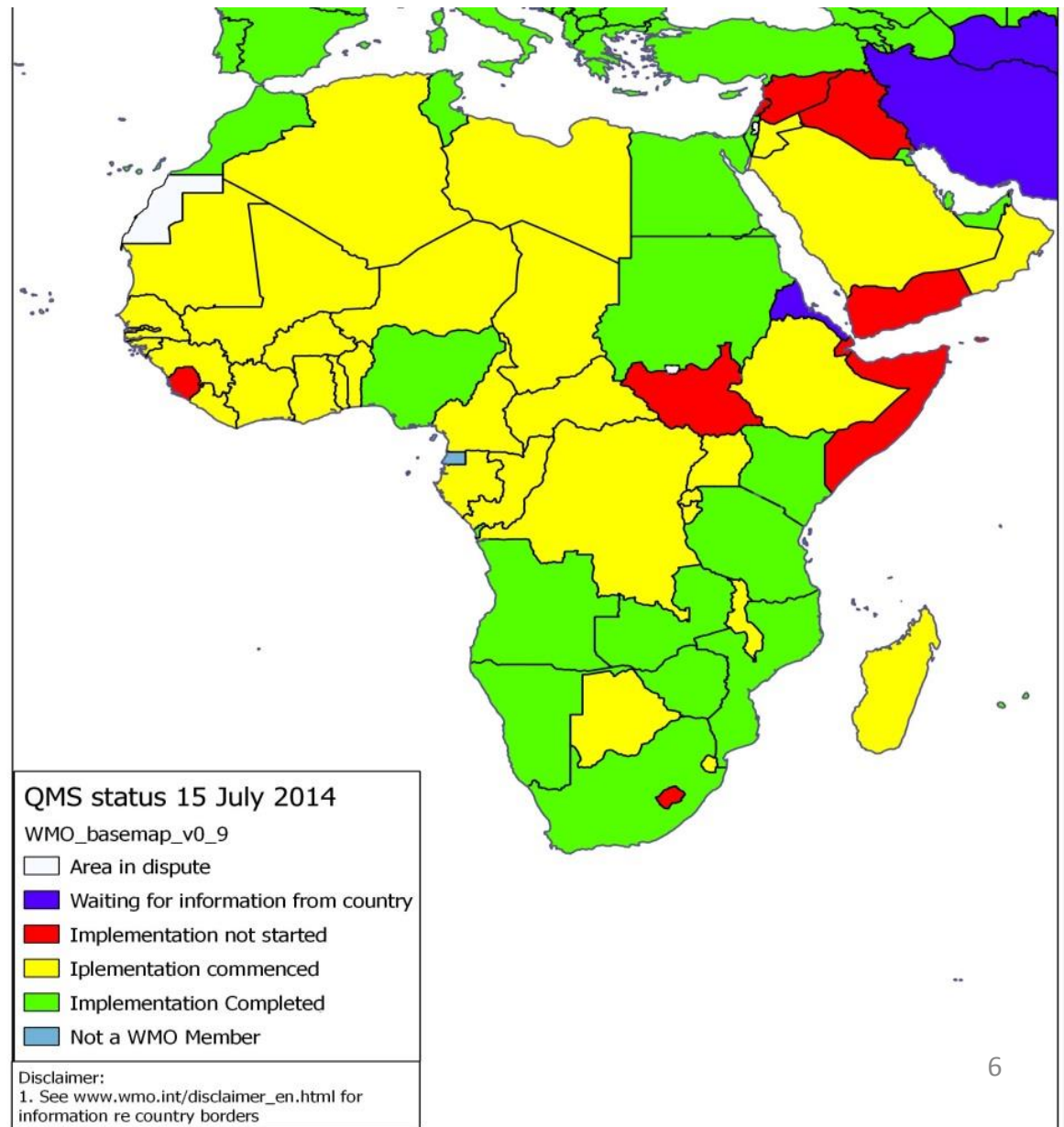
- Since the ministerial declaration made by AMCOMET/1 in April 2010 in Nairobi, WMO has continued working with Members on QMS implementation through workshops, one to one communication between Quality Managers with the Secretariat, gap analysis questionnaires and arranging twinning partnerships
- The latest to certify include Sudan, Morocco and the MET service providers in the 17 ASECNA countries, with which the total percentage of implementation reached about 57%

# QMS Implementation in Africa

- Outstanding issues:
  - The remaining countries, especially DR Congo, Lesotho, Swaziland could speed implementation by twinning with willing certified neighbors
  - Guinea, Liberia and Siera Leone need special attention immediately after the Ebola epidemic gets under control
  - Those in political and civil unrest we will have to wait
  - Support from WMO Secretariat will continue

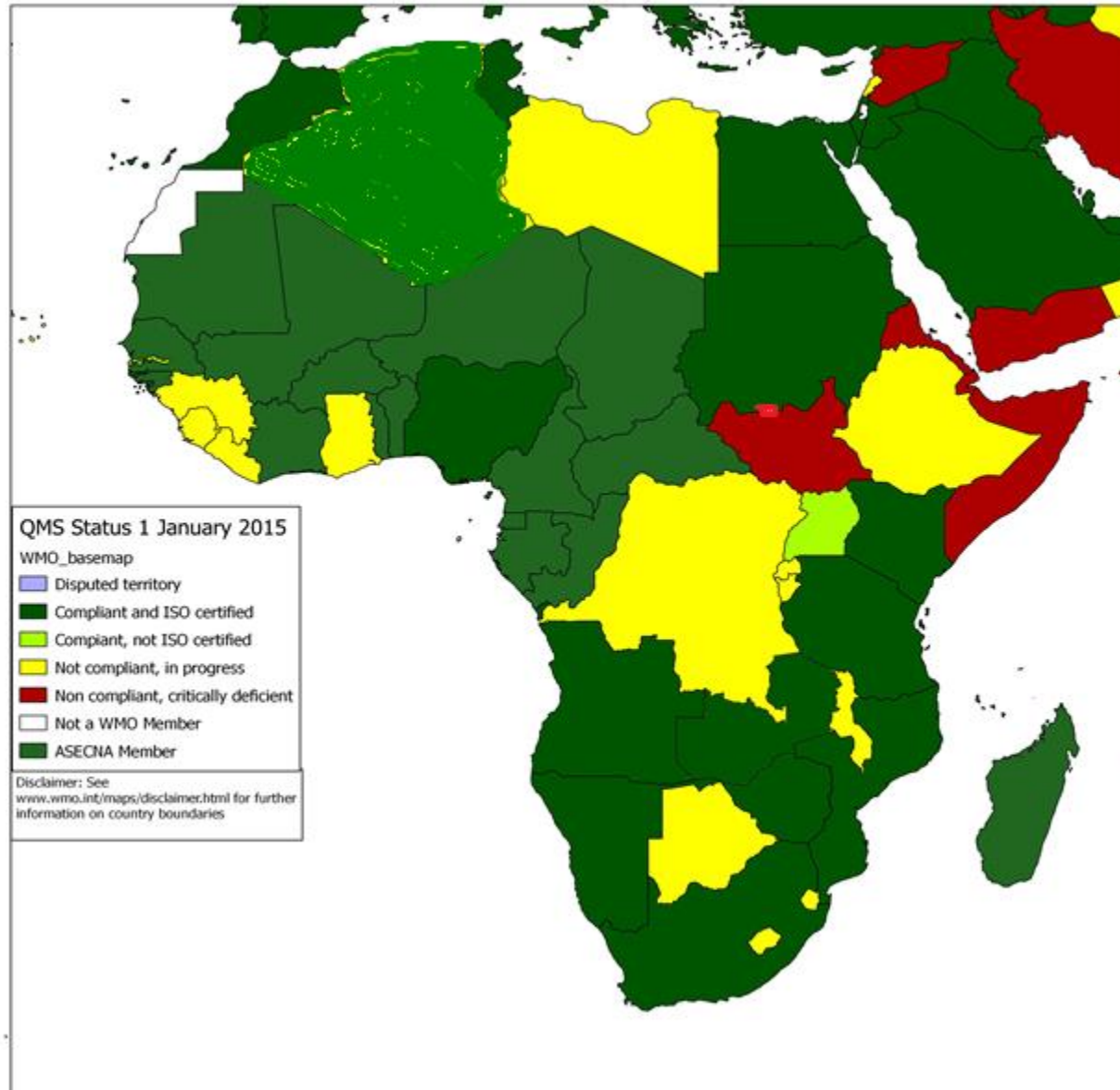
# QMS Implementation in Africa

July 2014

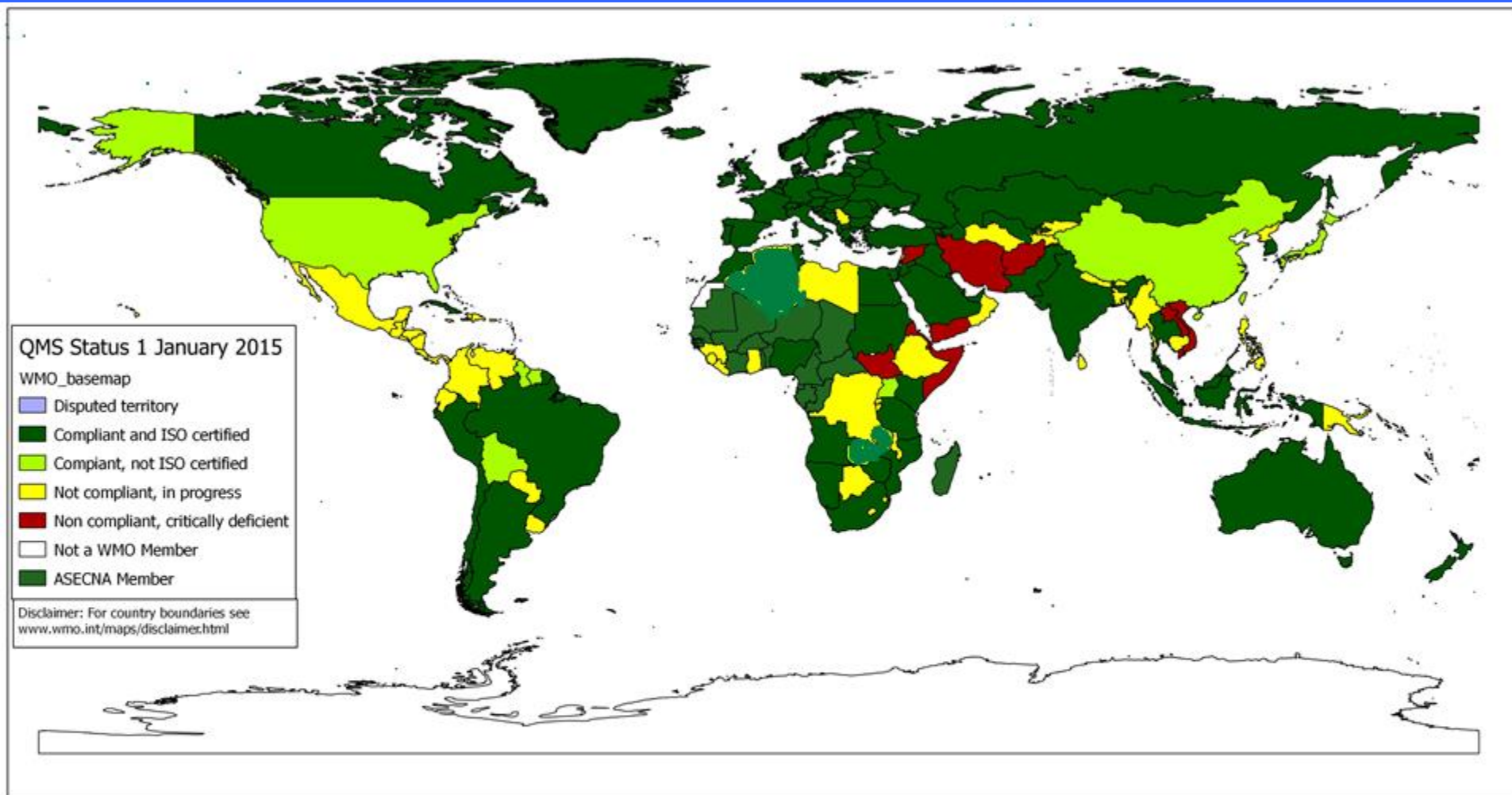


# QMS Implementation in Africa

Jan 2015



# Global QMS Implementation – January 2015





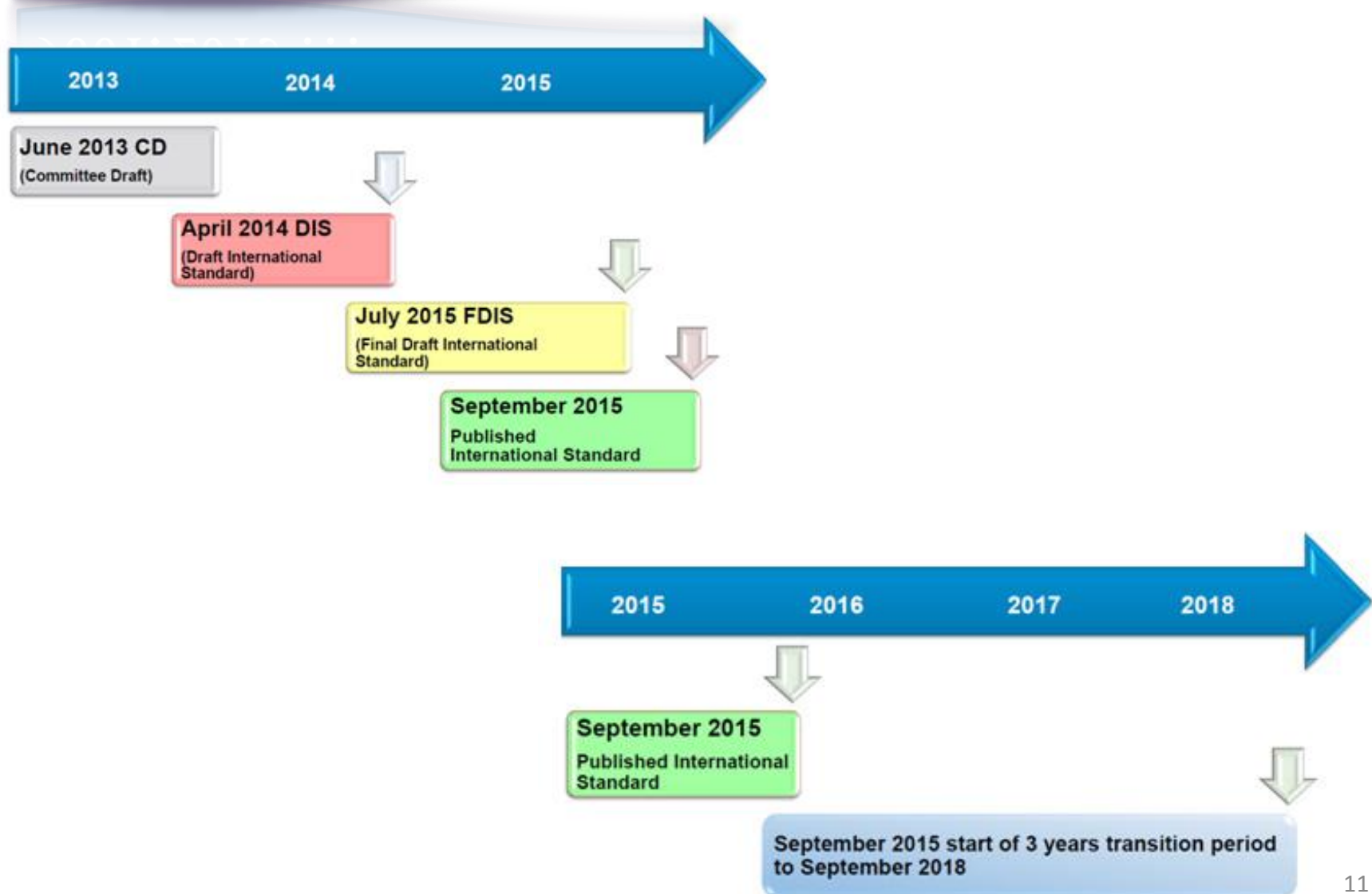
# QMS Implementation by Region - as of Jan 2015

- **RA I (Africa):** 17 (ASECNA) + 14 = 31/54 **57%**  
Non-compliant - critically deficient: South Sudan, Somalia, Eritrea, Djibouti and to some extent Lesotho, Sierra Leone, and Guinea
- **RA II (Asia):** 18 – 19 out of 34 **56%**  
Non-compliant - critically deficient: Yemen, Afghanistan, Lao PDR, Vietnam, North Korea, Cambodia
- **RA III (South America):** 6 out of 12 **50%**  
Non-compliant - critically deficient: none
- **RA IV (N & C America and the Caribbean):** 8 out of 22 **36%**  
Non-compliant - critically deficient: Haiti
- **RA V (South West Pacific) :** 11 out of 21 **52%**  
Non-compliant - critically deficient None
- **RA VI (Europe):** 46 out of 49 **94%**  
Non-compliant - critically deficient: Syria, Lebanon
- **Total 120 out of 192** **63%**

# QMS Implementation; New ISO standard 9001: 2015

- QMS certification is a result of a third party audit
- Audits are always done against a standard. The certification as it stands now, was done against ISO 9001: 2008
- A new ISO 9001: 2015 is coming in September 2015 which will become mandatory in September 2018
- To ensure compliance:
  - Members not yet certified by Sept 2015 should seriously consider an effort to certify against ISO 9001:2015;
  - Those that will have to re-certify after Sept 2015, should seriously consider to adapt to the new standard in order to get a **3-year certification validity period**.
  - Start talking to your registrar about it NOW!

# Timeline for ISO 9001:2015 ...



# Competency & Qualification

# Implementation of competency standard

- As of 1 December 2013, competency standards for aeronautical meteorological forecasters (AMF) and aeronautical meteorological observers (AMO), included in WMO Technical Regulations, Vol I, Part II, Chapter 5, came into force
- Members required to assess and provide evidence of the attained competency of their AM personnel and to ensure their continuous professional development
- CAeM provided ample guidance and training material - <http://www.caem.wmo.int/moodle/>
- RA I workshops on competency assessment were done in Nairobi, Kenya in Sept/Oct 2010 and South Africa in Oct 2012. A few participants from the region also attended similar courses in New Delhi and Israel.
- Members requested to expedite the implementation and notify Secretariat on the attained level of compliance with the competency standards (to reply to WMO circular letter of 3 December 2013 and reminder of 25 March 2014)

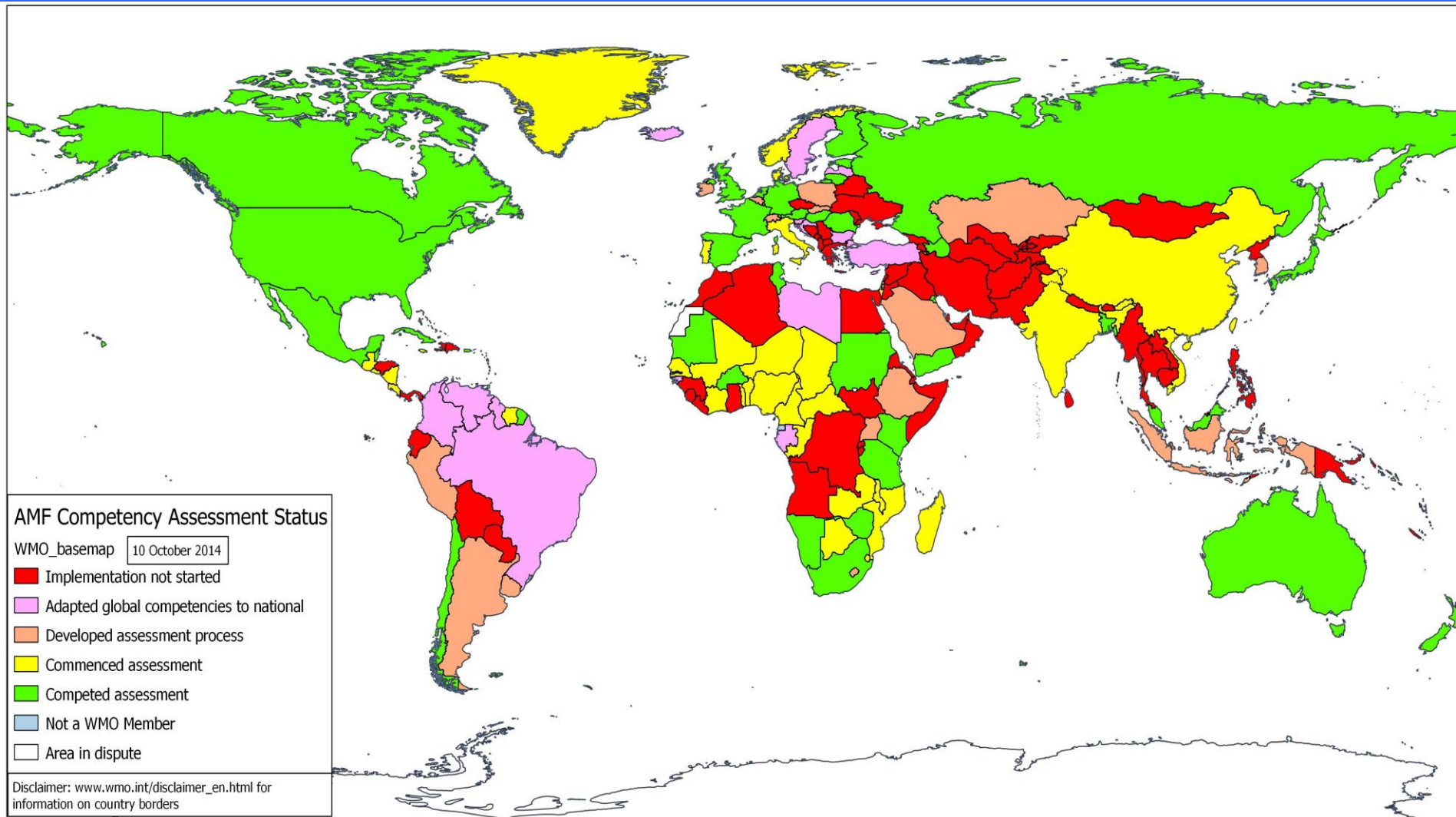
# Qualification standard

- Qualification requirements for aeronautical meteorological forecasters (AMF) are included in WMO Technical Regulations (WMO-No.49), Vol I, Part II, Chapter 4, and will become a **standard practice as of 1 Dec 2016**
- ICAO Annex 3 – *“2.1.5 Each Member shall ensure that the designated meteorological authority complies with the requirements of the WMO in respect of qualifications and training of meteorological personnel providing service for international air navigation.”*
- Members will have to provide evidence of compliance with the qualification standards, i.e. the qualifications of the AMF are compliant with the Basic Instruction Package for Meteorologist (BIP-M)
- Guidance on the implementation is provided in *WMO-No. 1083, Volume I, Manual on the Implementation of Education and Training Standards in Meteorology and Hydrology, Volume I – Meteorology*

# Proposed steps of CA implementation

- 1) Customise the global CA toolkit to get a national one.
- 2) Develop CA Implementation plan with budget lines, stations and dates
- 3) Have a team of assessors for AMF and AMO
- 4) Perform the assessments
- 5) Re-train the “not yet competent staff” and re-assess them
- 6) Issue certificates and complete records on their personal files

# Global CA Status (latest) Oct 2014





## Conclusion (QMS and CA):

- Corrective actions that follow QMS maintenance audits need to be budgeted upfront
- Competency assessments also need to be budgeted upfront
- Remember: Cost recovery strongly facilitated where QMS is in place and working
- The implementation of QMS and competency assessment for the remaining Members of RA I needs to be expedited.

# **Conjoint ICAO/WMO MET DIV 2014**

# Conjoint ICAO/WMO meetings in July 2014

- The following meetings were held:
  - ❑ 7 – 8 July: CAeM Technical Conference (TECO) “Aviation Meteorology – Building Blocks for the Future”
  - ❑ 9-14, 17-18 July: Conjoint ICAO/WMO Meteorology Divisional Meeting  
<http://www.icao.int/meetings/METDIV14/Pages/default.aspx>
  - ❑ 15 – 16 July: 15<sup>th</sup> Session of CAeM <http://caem-15.wmo.int>
- Main topics discussed:
  - ❑ ICAO Global Air Navigation Plan (GANP) and the Aviation System Block Upgrades (ASBU) approach – how to plan and implement the meteorological components up to year 2028
  - ❑ Transition from “product-centric” to “data-centric” services through the System-Wide Information Management (SWIM)
  - ❑ Further regionalization of services (e.g., SIGMET) and related institutional and cost-recovery issues
  - ❑ Further development of a new “Space Weather” service
  - ❑ Roadmaps for the evolution of main services, such as WAFS and IAVW
  - ❑ Climate change impacts on aviation



# MET DIV 2014 - Outcomes

- 29 Recommendations
- Most are to be followed by ICAO (through appropriate expert bodies) in close coordination with WMO. They cover:
- Institutional changes
- Technology development
- Service enhancements
- Regulatory framework developments

The MET Panel met end of April 2015 in Montreal, Canada. WMO is an ex-officio member of the Panel



# MET DIV 2014 - Outcomes

- The working group structure agreed during the Met Panel meeting are as follows:
- **1. WG/1** – MET Requirements and Integration (WG-MRI) – this group will deal with all ATM related issues
- **WG/2** – MET Information and Service Development (MISD) – this is the largest group and covers evolution of services. It will have several sub-groups: WAFS, IAVW, Space Weather, R/active material and the Regional Hazards Centres
- **WG/3** – MET Information Exchange (WG-MIE) – all SWIM-related issues including the migration to XML/GML



# MET DIV 2014 - Outcomes

- **WG/4** – MET Operations (MOG) – all legacy tasks of the WAFSOPSG, IAVWOPSG and SADISOPSG

Major policy issues like cost recovery, data policy, etc. will be dealt with by the Panel as a whole

The overarching outcome is that the future development of meteorological service will be fully aligned and integrated into the future ATM system as part of the Global Air Navigation Plan (GANP) and become part of Aviation System Block Upgrades (ASBU) methodology and timeline

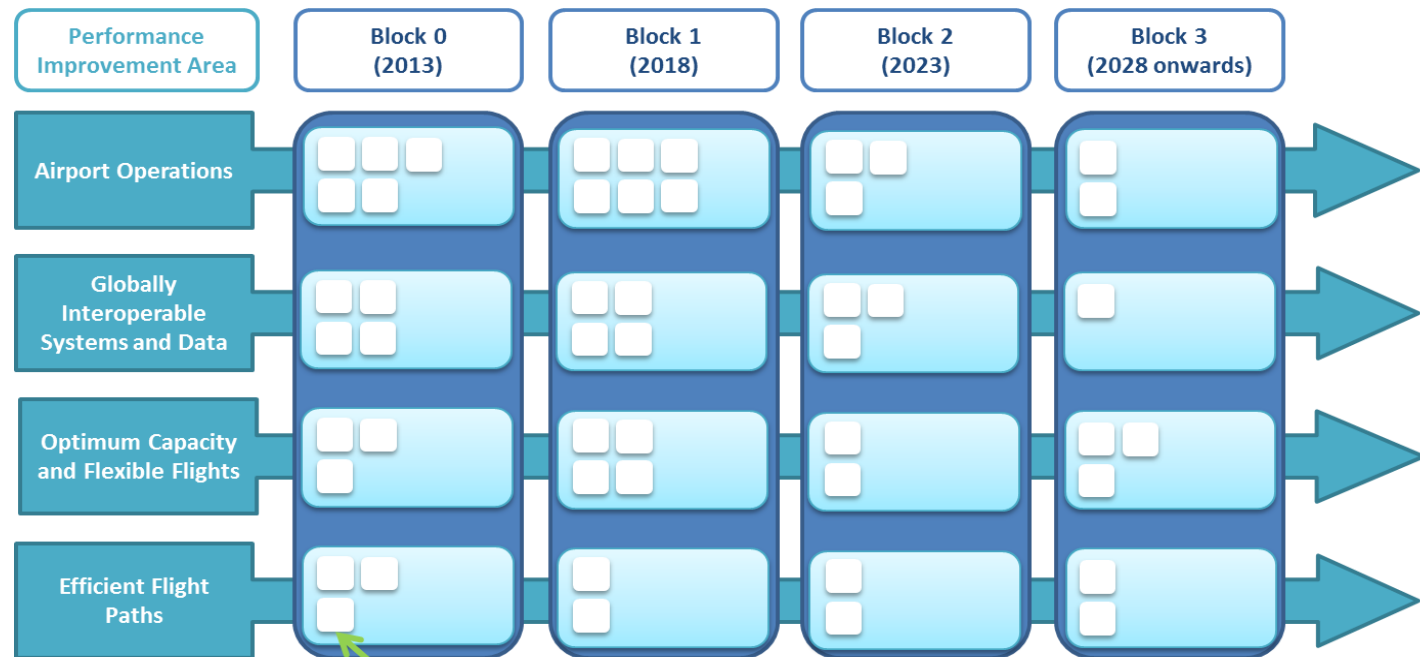


# MET DIV 2014 - Outcomes

- ASBUs provide a systems engineering modernization strategy for international air navigation, comprising a series of modules across **four** performance improvement areas and **four** time blocks.

## National Projects:

- ❑ *SESAR – Europe*
- ❑ *NextGen – USA*
- ❑ *CARATS – Japan*
- ❑ *SIRIUS – Brazil*
- ❑ *China*
- ❑ *Canada*
- ❑ *Etc.*



Modules (actual number of modules per Block/Performance Area may vary)



# Conjoint ICAO/WMO meetings in July 2014

- The decisions and recommendations of the Conjoint meeting will have significant impact on NMHSs and other MET service providers in the next decade and beyond
- RA I subsidiary body should monitor all relevant activities of RA I Members and keep the Management Group of CAeM abreast of the developments
- RA I session in Cabo Verde formed a Task Team to start preparations for a Regional Conference in Aviation Met as soon as possible to unpack the GANP and ASBU requirements for Africa.
- It is very important for you to read the reports, as individuals or as a group! The future of aviation meteorology, to a good extent, lies in the deliberations of that meeting.





# Link to report of the Divisional meeting 2014

- As part of the SWIM development, the next financial period (2016 - 2019) would be a period of intensive work towards the migration from the traditional alphanumeric codes to a XML/GML-based exchange format for METAR, SPECI, TREND, TAF and SIGMET

Time line: Nov. 2016 as a Recommended practice and Nov. 2019 as a Standard

- Regional Associations, with assistance from CAeM and CBS, to assess the Members' capacity building needs and provide guidance
- The link to ICAO MET Divisional Meeting report (ICAO Doc 10045) is:  
<http://www.icao.int/Meetings/METDIV14/Pages/YellowCoverReport.aspx>
- *Heads of NMHS should form a small team to study and customise the recommendations and develop GANP and ASBU country plans*



# Decisions of AMCOMET-3

**Praia, Cabo Verde Feb 2015**



# Extracts from the Third Session of the African Ministerial Conference on Meteorology (AMCOMET-3)

- AMCOMET 3 (Feb 1-10, 2015 Cabo Verde) formed a Task Force on the Quality Management System, Cost Recovery and Competency Assessment; and took a Decision 03/6 named: Compliance with the International Civil Aviation Organization (ICAO) Requirements on Quality Management Systems and Cost Recovery
- a) Agree to elevate QMS requirements to the national agenda, which is critical for the safety of air navigation over the African skies and a mandatory requirement by ICAO and WMO; urge



# Extracts from the Third Session of the African Ministerial Conference on Meteorology (AMCOMET-3)

- b) Urge Member States not yet QMS compliant to fast-track their QMS processes and consider twinning projects with compliant countries to aid with their certification; and
- c) Approve the establishment of a Task Force on QMS, Cost Recovery and Competency Assessment to provide guidance on their implementation on the continent.
- The Task Force was also tasked to engage Members in the preparations of a Regional Conference in Aviation Met as soon as possible to unpack the GANP and ASBU requirements for Africa.



# URGENT Issue



# Migration to Secure SADIS FTP service

- The MET DIV 2014 recommended that the SADIS 2G service be extended beyond 2015, but not beyond November 2019.
- It has now become evident that the satellite currently used for SADIS 2G is due to be replaced in 2016 and will not be capable of providing the current downlink parameters (frequency) used by SADIS 2G beyond July 2016 (end of SADIS satellite broadcast)
- All existing SADIS 2G users will have to migrate to the Secure SADIS FTP service by that date (July 2016)
- RA I to study eventual impacts on Members and advice SADIS provider State and WMO Secretariat accordingly



# Regional Aviation Met Conference for RA I

- WMO Secretariat is now seeking the support of all relevant international and regional partners including ASECNA for the organization a Regional Conference on Aeronautical Meteorology that would build on the outcomes of the Conjoint MET Divisional Meeting of 2014.
- Proposed dates – 1st half of 2016
- Main objective – to raise awareness of RA I Members of the forthcoming changes in the service delivery for aviation, including business model, further regionalization, transition from «product-centric» to «data-centric» approach, integration of MET information into SWIM
- To allow Members to conduct respective impact and risk assessment and develop their national action plans



# DEADLINES!





## Count the remaining days:

3 years ISO:2008 certification	end of <b>Sept 2015</b>
Migration SADIS 2G to Secure FTP	<b>July 2016</b>
Qualification standard (BIP-M)	<b>1st Dec.2016</b>
OPMET exchange in TAC to digital XML/GML	<b>before 2018/2019</b>





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Thank you for your attention

*Questions?*

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