



WORKING PAPER

TWELFTH AIR NAVIGATION CONFERENCE

Montréal, 19 to 30 November 2012

Agenda Item 4: Optimum capacity and efficiency – through global collaborative ATM

4.3: Enhance operational decision-making through integrated meteorological information

**AVIATION SYSTEM BLOCK UPGRADE MODULES RELATING
TO METEOROLOGICAL INFORMATION**

(Presented by South Africa)

SUMMARY

This working paper presents the requirements and challenges as well as indicates a way forward relating to integrating meteorological information to enhance operational efficiency and to facilitate the safety of air transport. The paper highlights the upgrade and provision of the aeronautical meteorological service in the Southern African Development Community (SADC) Region through the initiatives taken by the Meteorological Association of Southern Africa (MASA) to promote regional cooperation.

Action: The Conference is invited to agree to the recommendation in paragraph 3.

1. INTRODUCTION

1.1 The Meteorological Association of Southern Africa (MASA), a formally constituted association of the National Weather Services of the Southern African Development Community (SADC) States recognized by the World Meteorological Organization (WMO), adopted “The Upgrade of Aeronautical Meteorological Services in the Southern African Development Community to satisfy ICAO Requirements” as a project. Meteorological information is an important integral part in supporting operational efficiency and safety. MASA was established to, amongst others, promote the establishment, development and operation of efficient, affordable and accessible meteorological services within SADC that meet the diverse needs of users in compliance with international standards.

1.2 Regional cooperation is critical for establishing a sustainable provision of reliable meteorological services in Southern Africa. This will help to significantly reduce the aircraft accidents in the Region as part of strengthening the Aviation Safety Plan in Africa (AFI Plan) initiatives as endorsed by the 36th Session of the ICAO Assembly. This cooperation is within the context of the African Comprehensive Regional Implementation Plan (ACIP) which was established to effect the implementation of the AFI Plan.

1.3 It is evident that severe weather contributes to about 60 per cent of aircraft accidents in Africa, and for this reason, it is imperative to have a sustainable and reliable meteorological service provider in the SADC Region. This could be achieved through MASA cooperation as well as the endorsement and implementation of the SADC Regional Infrastructure Development Master Plan in the Transport and Meteorology Sectors.

1.4 Continued support from MASA for capacity building through education and training, technology transfers implemented through programmed areas of training in aviation safety as well as environmental protection and climate change is crucial. In addition, it is important that the training needs of MASA Member States be dealt with individually according to the specific needs of a country, particularly as

each country has different training needs depending on their developmental status and available financial resources.

2. METEOROLOGICAL CHALLENGES AND INITIATIVES

2.1 The reports of the African Planning and Implementation Regional Group (APIRG) meetings held in Burkina Faso and Uganda in August 2010 and March 2012, respectively indicate that most of the SADC Member States have great challenges in providing ICAO compliant meteorological services. The cost recovery of funds for meteorological services have proved inadequate to sustain the required technological advancements in most African States due to the number of aircraft and the volume of traffic criss-crossing the Flight Information Region (FIR).

2.2 The technological requirements for meteorological information will equip users with the necessary information in decision-making (and a system should be in place) which will enable aircraft operators to operate with real-time, reliable and airspace/ground program or solutions around the integrated meteorological observations and forecasts. The proposed new meteorological information transition will enhance the safety and reduce ground and en-route delays. The integration of air traffic management and meteorological information will maximize capacity and optimize the flow of air traffic.

2.3 Communication networks have been identified as one of the major challenges towards the implementation of ASBU Block 0 in the SADC Region. This was confirmed during the test period of the SIGMET advisory conducted at the South African Weather Service Aviation Weather Centre (SAWS-AWC). Most Member States were unable to provide feedback due to communication network problems.

2.4 MASA has recognized the importance of transport in the socio-economic development of the African Continent as one of the key sectors which needed to be strengthened through enhanced meteorological services. SADC has encouraged regional cooperation and has called for greater cooperation within SADC Member States to meet ICAO requirements.

2.5 The up-skilling of the forecasting personnel and technological improvements are critical in order to address challenges of predicting severe weather events. Therefore the proposed dynamic integration of ATM and MET information will play a significant role in addressing this challenge.

2.6 The upcoming priority of MASA to include Management Courses, Skills and Competences in Aviation Courses, products delivery and attachments with other training centres will assist SADC States in terms of capacity building and human resource development in the region.

2.7 The objective of MASA to enhance observations networks, data communication and management in the region will assist the region to improve access to aeronautical meteorological products and services as well as dissemination of information.

3. CONCLUSION

3.1 Since resource availability is the biggest challenge in most African States, drastic measures are required to assist struggling States in the African Region to implement the ASBU modules, therefore it is important that the Conference recall the resolution of the 37th Session of the ICAO Assembly that urged the Secretary General to ensure that the African Regional Offices are provided with the required personnel and financial resources to ensure the effective continuation of the work programme initiated by ACIP.

3.2 The successful implementation of ASBU within the SADC region will depend mostly on the MASA regional cooperation on enhanced aeronautical meteorology for improved aviation safety, increased investment in education and training as well as the financial sustainability of SADC Member States. It is, therefore, imperative for the Conference to agree to the following recommendation:

Recommendation 4/x - ICAO aviation system block upgrades (ASBUs) relating to meteorological information

That the Conference:

- a) note and support the initiatives of the Meteorological Association of Southern Africa to address the challenges facing the Southern African Development Community Region;
- b) urge the Southern African Development Community States to work together in the implementation of the aviation system block upgrade relating to meteorological information;
- c) urge States to pledge financial support for the struggling Southern African Development Community Member States to enable them to meet their obligations in the implementation of the aviation system block upgrade; and
- d) urge States to increase investment in education and training.

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