



INFORMATION PAPER

**COMPREHENSIVE REGIONAL IMPLEMENTATION PLAN FOR AVIATION SAFETY
IN AFRICA (AFI PLAN)**

SIXTEENTH STEERING COMMITTEE MEETING

Montréal, Canada, 26 November 2015

**Information Paper: The United States Federal Aviation Administration (FAA)
assistance.**

(Presented by the United States)

SUMMARY

This paper offers information on the U.S. Federal Aviation Administration's cooperative efforts with its counterparts in the Sub-Saharan African region in cooperation with ICAO.

1. INTRODUCTION

1.1 This paper provides details of the U.S. Federal Aviation Administration's (FAA) assistance to the AFI region during the period of October 2014 – October 2015. The FAA was able to accomplish a majority of the activities herein through the support of the U.S. Department of Transportation's Safe Skies for Africa (SSFA) program. The paper will also provide a brief description of the planned activities for the FAA fiscal year (FY) 2016 (October 2015 – September 2016).

2. BACKGROUND

2.1 During the 15th AFI Steering Committee Meeting held in Maputo, the U.S. delegation provided an in-depth presentation on its engagement in the region and the new data-driven initiatives going forward. This paper will provide a closer look at the scope, the reach, and ultimately the impact of the assistance and training provided in the region during the aforementioned period.

3. FAA ASSISTANCE

3.1 AERODROMES

3.1.1 The principal goal of the aerodrome safety initiative is to advance ICAO aerodrome safety standards, particularly in the area of runway safety. Additionally, we support the AFI region's Abuja ministerial target to increase the number of certified aerodromes.

3.1.2 In October 2014, the FAA provided an experienced airport safety inspector to support the Airports Council International's (ACI) Airport Excellence in Safety (APEX) mission to the Port-Gentil International Airport (POG) in Gabon. In September 2015, the FAA provided a wildlife expert to support a second ACI APEX mission to Kotoka International Airport (ACC) in Accra, Ghana.

3.1.3 In October 2015, the FAA conducted the "Comprehensive Aerodrome Safety" workshop, hosted by the Ethiopian Civil Aviation Authority (ECAA) in Addis Abba, Ethiopia. The workshop had 73 participants from 27 States of which 41% represented Francophone Africa. Workshop participants received an overview of ICAO Annex 14; engaged in discussion on best practices for establishing and implementing an Airport Runway Safety program; discussed methods for addressing wildlife hazards; aerodrome emergency procedures and the elements of a successful Airport Emergency plan. Representatives from Ethiopia, Ghana and Senegal also presented on topics including Wildlife management, Aircraft Rescue and Fire Fighting (ARFF), and Search & Rescue. The workshop offered participants an ideal forum to share concerns, solutions, and bolster communication with regional counterparts who contend with similar challenges. Going forward, we want to enhance our impact by focusing not only on the completion of the workshop or seminar itself, but the ability of participants to effectively implement the tools they obtain when they return home. We intend to continue with pre and post course surveys and introduce participant "action plans" at the end of a training session. The "action plan," developed by the participant will provide a document with clear self-identified goals for the participant to track once they return to their post. It will also provide a reference point for us to follow up with participants to determine if they are able to appropriately convert their training to real life use.

3.2 AIR NAVIGATION

3.2.1 The principal goal of the air navigation initiative is to assist the AFI States with improving Communications, Surveillance and Safety in the region while using proven and available methods of air traffic control. Our initial visits to the region allowed us to develop a baseline of where most States stood in their efforts to modernize. This baseline was essential to creating a needs assessment and allowed the FAA to develop a plan for the most appropriate assistance.

3.2.2 Over the past year, the FAA provided subject matter experts (SME) to engage with counterparts at the critical air navigation forums below to promote expanding the use of Controller Pilot Data Link Communications (CPDLC) to reduce the need for In-Flight Broadcast Procedure in the AFI region and reduce the potential for human error:

- Regional Coordination Group (RCG) meeting;
- African Planning and Implementation Regional Group (APIRG) meeting;
- Technical Advisory Group (TAG) meeting;
- Air Traffic Services (ATS) Aeronautical Information Services Group (AIAG) meeting;

- Regional Aviation Safety Group (RASG) meeting;
- Flight Procedures Program (FPP-SC); and
- SAT Group meetings.

3.2.2.1 In September 2015, the FAA provided SMEs to support the ICAO/AFCAC ASBU Implementation, Monitoring, and Reporting workshop in Zambia. The SMEs presented an analysis on African traffic flows as a means for sub-regional ASBU planning and implementation as well as a presentation on FAA's NextGen initiatives. The SMEs urged participants to make use of the resources available through the ICAO i-stars site to develop sub-regional plans. We are looking into the possibility of developing focused assistance in this area in the future.

3.2.2.2 Working closely with ICAO, we held the Global Operational Data Link Document (GOLD) Manual and CPDLC Familiarization workshop in Nairobi at the beginning of this month. This workshop included guidance specified in the GOLD Document (ICAO Doc 10037). The target audience was those States who were about to implement; had bought the equipment and were looking for guidance on how to properly start their program; and those who implemented but found their efforts had fallen short of a proper complete program. Additionally, the FAA worked with ICAO to begin coordination and content development for a Global GOLD Workshop on the African continent in 2016. Earlier this year, we distributed a "Survey on Needs and Expectations of the upcoming AFI CPDLC/ADS-C Seminar/Workshop". The purpose of the survey to identify the various needs/expectations of Air Navigation Service Providers (ANSPs)/Directors General of Civil Aviation (DGCA) regarding information/instruction that would be beneficial in establishing and/or enhancing CPDLC/ADS-C operational capabilities. The information was used to tailor the workshop held in Nairobi and is being used for the upcoming workshop in 2016.

3.3 SAFETY OVERSIGHT

3.3.1 FLIGHT STANDARDS

3.3.2 The principal goal of the safety oversight initiative is to advance compliance with ICAO safety standards, particularly in the areas of ICAO Annex 1 (Personnel Licensing), Annex 6 (Operation of Aircraft), and Annex 8 (Airworthiness of Aircraft).

3.3.2.1 In February 2015, the FAA conducted the Surveillance of Foreign Service Providers course for the BAGASOO member States, hosted by the Ghana Aviation Training Academy (GATA) in Accra, Ghana. There were 31 participants representing each BAG State. This course is designed for Civil Aviation Authority (CAA) Aviation Safety Inspectors to provide instruction on how to properly accomplish their oversight duties and responsibilities associated with the surveillance of operators. This course demonstrated to participants how the procedures in the pertinent ICAO Annexes and documents are used to fulfill those requirements.

3.3.2.2 In July 2015, the FAA conducted a second Surveillance of Foreign Service Providers course for 24 participants from the BAGASOO member States (Ghana, Guinea, Nigeria and Sierra Leone), hosted by the Nigeria Civil Aviation Authority (NCAA) in Lagos, Nigeria.

3.3.2.3 In September 2015, the FAA conducted two Surveillance of Foreign Service Providers course offerings: (1) for 26 participants from the EAC States hosted at the East Africa School of Aviation

(EASA) in Nairobi, Kenya and (2) for 21 participants from the SADC member States, hosted by the South African Civil Aviation Authority (SACAA) in Johannesburg, South Africa.

3.3.2.4 AIR TRAFFIC SAFETY OVERSIGHT

3.3.2.4...1 The principal goal of the air traffic management oversight initiative is to facilitate an increase in the ability of AFI states to effectively conduct oversight of ANSPs in order to increase effective implementation of the ICAO Air Navigation Services (ANS) SARPs.

3.3.2.4...2 In March 2015, the FAA presented seminar titled “Improving the Safety of Air Traffic Services through Independent Oversight,” hosted by the Tanzania Civil Aviation Authority (TCAA) in Dar es Salaam, Tanzania. The seminar had 67 participants from 17 States. Seminar attendees received an overview of ICAO’s Eight Critical Elements of safety oversight as well as strategies for applying these concepts to the oversight of ANSPs.

3.3.2.4...3 In August 2015, the FAA conducted a workshop titled “Developing and Implementing an Air Traffic Safety Oversight Program”, hosted by the Tanzania Civil Aviation Authority (TCAA) in Dar es Salaam, Tanzania. The workshop had 70 participants from 16 States and 8 organizations. This workshop provided more in-depth information on strategies and tools for implementing an air traffic safety oversight program, as well as follow-on to the introductory seminar conducted in March. 45 of the 70 participants were returnees. The workshop attendees completed air traffic safety oversight organization self-assessments, received basic instruction in audit skills, participated in developing a mock air traffic safety oversight audit, and completed action plans to address gaps identified through the self-assessment activity. The self-assessments and action plans were intended to assist attendees in identifying air traffic safety oversight deficiencies within their organizations, and in creating plans to address at least one of those deficiencies.

3.4 TRAINING CAPACITY

3.4.1 Promoting capacity development in the region remains a foremost priority for the FAA. The FAA’s goal is to work with the AFI States to establish a cadre of instructors for CAAs and/or civil aviation training academies with the necessary knowledge and skills needed to successfully instruct training courses.

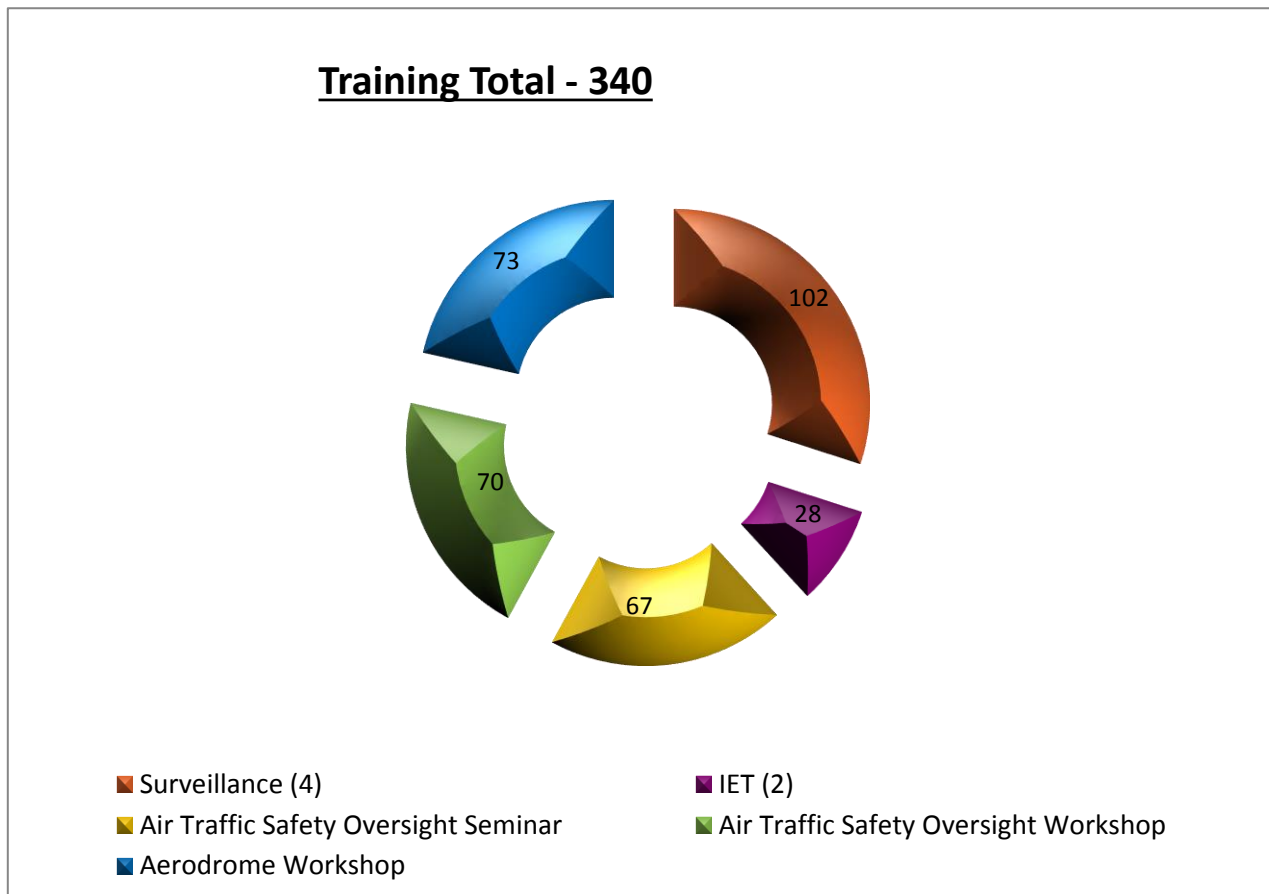
3.4.1.1 In August 2015, the FAA conducted the Instructor Effectiveness Training (IET) course for 17 participants from the BAGASOO member States (Gambia, Ghana, and BAGASOO HQ), hosted by the Ghana Civil Aviation Authority’s Aviation Training Academy (GATA) in Accra, Ghana. This course provided participants with a critical practicum on job-centered training, roles of an instructor, learning styles, presentation techniques, interactive learning activities, questioning skills, classroom management, using media, and using lesson plans. The interactive course gave participants the opportunity to present teaching exercises varying in length from 10-minutes to 30-minutes. Participants were provided feedback from peers and critiqued by the instructor. They were evaluated against established written criteria.

3.4.1.2 In October 2015, the FAA conducted the second IET course offering for 11 participants from the EAC States (Kenya, Rwanda, Tanzania, Uganda and CASSOA HQ), hosted by the EASA in Nairobi, Kenya.

3.5 **ASSISTANCE SUMMARY**

3.5.1 The FAA assistance in the form of training courses, seminars, and workshops provided from October 2014 – October 2015 reached 340 African aviation professionals and countless others during a variety of regional events. Feedback from the States indicated that Aerodrome Certification related training, remains in high demand. The most highly attended forums with the most diverse representation of States were the Air Traffic Safety Oversight seminar & workshop and the Comprehensive Aerodrome Workshop.

Figure 1:



3.6 **AVIATION METEOROLOGY**

3.6.1 In 2012, with the support of the Safe Skies for Africa program, the FAA initiated a partnership with the COMET program to develop the *Review of Aeronautical Meteorology Distance Learning (RAMDL) – Africa* training package for Aeronautical Meteorological Forecasters in Africa. The principal goal of the meteorology initiative is to assist AFI States with improving aviation weather forecasts and other contributing factors of weather-related aviation accidents. The COMET program’s training modules were

developed in line with the core competency requirements established by the World Meteorological Organization (WMO). You can access the training site via: www.meted.ucar.edu

3.6.2 Our records indicate that during the period of October 2014 – October 2015, the following States completed a number of the online modules. At the moment, the system does not indicate the specific affiliated organization, but we hope make adjustments in the future to reflect that information:

- Botswana
- Democratic Republic of Congo
- Ethiopia
- Ghana
- Kenya
- Liberia
- Nigeria
- South Africa
- Swaziland
- Tanzania
- Togo
- Uganda

3.6.2.1 The program is intended to provide free 24hr accessible core and refresher training to meteorology professionals. While this training appears to be widely used by the WMO, it is unclear whether it is reaching the wider audience within the CAAs and the ANSPs. We encourage you to explore the available training and consider how it can assist your personnel involved in aviation meteorology functions. The most common modules completed by the States listed above are :

- Regional Study Guide: Review for Aeronautical Forecasters in Africa
- Introduction to Tropical Meteorology
- Convective Weather and Aviation in West and Central Africa
- AMSET: Flooding in West Africa
- Weather Radar Fundamentals
- Writing TAFs for Convective Weather
- Principles of Convection I: Buoyancy/Shear Dependencies
- Topics in Precipitation Type Forecasting

3.7 **FAA FY 2016 ACTIVITIES AT A GLANCE**

3.7.1 Here is a quick list of the major activities we have coming up in 2016:

- Air Traffic Safety Oversight Workshop (2 sessions)
- ICAO GOLD Manual Workshop – South Atlantic (SAT)
- ATS Incident Analysis Course (2 sessions)
- Comprehensive Aerodrome Workshop
- Safety Oversight Training
- Air Traffic Quality Assurance Training
- ACI APEX Mission Support
- Capacity Development training
- Participation in critical ICAO regional meetings and conferences