

BY TOM KOK

# ICAO Looks to AFRICA

**The most recent ICAO meeting on air navigation in Africa included a focus on safety for the first time.**

The November 2008 International Civil Aviation Organization (ICAO) Africa-Indian Ocean (AFI) Regional Air Navigation (RAN) meeting in Durban, South Africa, was exceptional in how it dealt with safety as much as its approach to efficiency.<sup>1</sup> This meeting takes place on average once every 10 years, and in the most recent event Flight Safety Foundation and the AviAssist Foundation participated in the safety committee of the AFI RAN meeting.<sup>1</sup>

Under ICAO's Universal Safety Oversight Audit Program, audits to determine the implementation of ICAO critical elements of a safety oversight system were conducted in 36 African countries as of Oct. 31, 2008 (Figure 1, page 34).

From these, 25 African civil aviation authorities were referred to the ICAO Audit Results Review Board. Nineteen of them still have unresolved issues stemming from their safety audits. And of the six countries identified on the ICAO Flight Safety Information Exchange Web site as having significant safety concerns, five are in Africa. At the same time, the latest medium-term traffic forecast from ICAO calls for Africa to post the highest growth rate of any world region by 2010, with an 8.5 percent increase in passenger kilometers expected. In the long term, African airlines are expected to grow faster than the global rate.

The AFI RAN meeting offered a new opportunity to strengthen regional commitment to improving safety and efficiency. It attempted to resolve deficiencies and address critical issues through development of a comprehensive set of work programs with associated performance metrics. The inclusion of safety metrics was introduced in 2006 to the world aviation community by the Global Aviation Safety Roadmap (GASR).

### Careful Move to Regional Solutions

One paper presented at the AFI RAN analyzed results of the audits performed during the present cycle of ICAO safety oversight audits using the comprehensive systems approach. The study looked at a possible relationship between the rate of non-compliance with the eight critical elements of state safety oversight systems and accident rates. Each critical element was tested independently for a linear relationship using a statistical model.

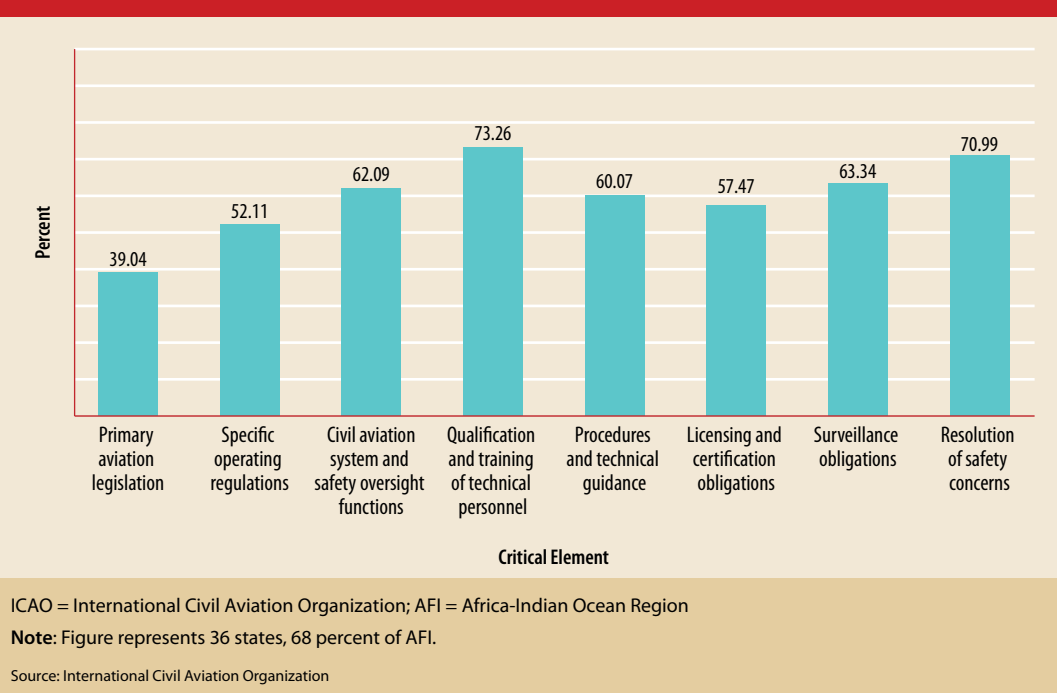
Many African countries may initially focus attention on issues such as renewal of primary aviation legislation. However, the 2007 ICAO study that forms the basis for the paper presented at the AFI RAN points out that among the critical elements, resolution of safety concerns has a strong relationship with accident rates, whereas another, primary aviation legislation, has a weak relationship with rates (Table 1).

African states and safety support providers such as the U.S. Federal Aviation Administration (FAA), the European Aviation Safety Agency (EASA) and the AviAssist Foundation can use

this study to help further prioritize their activities.<sup>2</sup>

The AFI RAN meeting seemed to indicate that a trend toward regional solutions is gaining genuine support. Such support may be easiest to mobilize for regional solutions related to technical developments (e.g., air traffic management). However, the meeting also discussed regional cooperation in flight procedure development, accident investigation, and search and rescue.

**Implementation of ICAO Critical Elements of a Safety Oversight System, Selected States, AFI Region**



**Figure 1**

Realistically, the level of aviation activity in many African countries is too low to generate the funds necessary to support effective and sustainable national safety oversight systems. Regional organizations offer the most economically efficient way to pool resources for effective oversight, but there seems to be little progress in oversight cooperation where the AviAssist Foundation is active, in East and Southern Africa. The only progress on regional safety oversight is being made by the five states of the East African Community (EAC). Burundi, Kenya, Rwanda, Tanzania and Uganda have come together under the Civil Aviation Safety and Security Oversight Agency (CASSOA). CASSOA builds on an EAC organization that started just after independence of the three founding member states — Kenya, Tanzania and Uganda — in 1967. The EAC collapsed in 1977 but was successfully revived in 2000.

For future meetings such as AFI RAN, ICAO might have to encourage more African member states and the industry to present papers on their ideas for topical safety solutions. This meeting saw a majority of presentations made by the ICAO secretariat.

The AFI RAN meeting also underlined the importance of continuing the work of the GASR, in particular concerning programs in which industry and government interests are balanced. An approach in which neither industry nor government interests dominate efforts at improvement has been central to the success of other safety initiatives. A number of presentations at the AFI RAN meeting, made by the industry, were not perceived as presentations by peers in aviation safety but almost as presentations of safety competitors.

The AviAssist Foundation is assisting EASA and the African Civil Aviation Commission (AFCAC), a specialized agency of the African Union, in organizing a symposium on regional aviation safety authorities. It will take place in July 2009 in Livingstone, Zambia, and should enable the sub-Saharan African national stakeholders to better understand today's regional

### ICAO Critical Elements of a Safety Oversight System and Their Relationship to Accident Rates

Critical Element	Relationship to Accident Rates
8 (Resolution of safety concerns)	Very strong
6 (Licensing and certification)	Very strong
3 (State civil aviation system and oversight functions)	Very strong
7 (Surveillance obligations)	Very strong
2 (Specific operating regulations)	Medium
5 (Procedures and technical guidance)	Medium
4 (Qualifications and training of technical personnel)	Medium
1 (Primary aviation legislation)	Weak
ICAO = International Civil Aviation Organization	
Source: International Civil Aviation Organization	

**Table 1**

success stories in Africa, and particularly those in other parts of the world.

### Mozambique Roadmap Workshop

The fourth regional GASR workshop took place in Maputo, Mozambique, immediately after the AFI RAN meeting. Flight Safety Foundation and AviAssist Foundation facilitated the working group on focus area 11 of the GASR that aims to tackle the “Insufficient Number of Qualified Personnel.”

The meeting attracted more than a hundred participants, but some three-quarters were from Mozambique. Unfortunately, this participation did not fulfil the group's hope to have wider participation from the 15 states of the Southern African Development Community (SADC) at which the workshop was aimed.

SADC seems to have difficulty creating momentum for joint action on aviation safety oversight, perhaps because it is too large. Most other successful regional safety oversight initiatives are made up of fewer states. In such smaller groupings, it may be easier to find natural coherence. The low attendance from all 15 SADC states at the Maputo workshop might show insufficient marketing of the event by the organizing committee, insufficient interest and coherence in SADC, or a combination of factors.

In addition to the disappointing industry participation from outside Mozambique and



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South Africa, limited industry participation was also a problem with some of the other GASR workshops in the AFI region. Perhaps it was because the region lacks a widespread tradition of cooperation between governments and industry, or perhaps the regular channels of invitations for these meetings may not reach intended industry participants. The vast majority of operators in Africa are not International Air Traffic Association (IATA) members and are not automatically included in IATA communication efforts.

Against that background, the AviAssist Foundation has suggested including national aircraft owners' and operators' associations that exist in some countries, and associations such as the Airline Association of Southern African (AASA), in regular communication from the Industry Safety Strategy Group (ISSG), which produced the GASR. The low level of industry participation also underlines the need to train more national champions on the use of the GASR process to reach more operators and maintenance organizations. The ISSG is now working on a generic article that can be used to sensitize staff members of those non-IATA operators through alternative means of communication, such as African aviation magazines.

In all, the GASR Mozambique workshop participants learned the GASR process, including the

gap analysis procedures and the process of prioritization on the basis of the impact a change can have and the relative ease with which a change can be implemented, the impact-changeability prioritization. The workshop led to recommendations for the four focus areas of the GASR that were handled during breakaway sessions.

### EU-Africa Aviation Conference

Over the past few years, the European Union (EU) has held aviation summits in important aviation markets throughout the world — EU-India, EU-China, EU-Latin America and other summits and seminars. Most focused on bringing EU relationships with those markets into the 21st century. Africa was the only region not addressed before 2009.

With airline capacity on EU-Africa routes steadily growing over the past decade, this meeting was long overdue. The aviation markets of both the EU and Africa are undergoing significant economic and regulatory changes aimed at making market access easier and providing safe air traffic in a fast-growing environment. European Commission Vice President Antonio Tajani and Commissioner Louis Michel recently launched an initiative with Elham Ibrahim, African Union commissioner for infrastructure and energy.

The result of these calls was a two-day EU-Africa aviation conference in Windhoek, Namibia, on April 2–3, 2009. At the meeting, the European Commission and the African Union Commission agreed on an ambitious common strategic framework to develop safer and more sustainable air transport by fostering continuing policy. Its goal was to define a roadmap for further cooperation. Several initiatives were discussed in safety, economic regulation, air traffic management, navigation aids, environment and security.

“Improved safety standards and more choice are the basis of our new dialogue,” Tajani said. “There are a number of actions which can easily contribute to change the picture of air transport in Africa.” The two parties will establish arrangements for a permanent strategic dialogue in aviation matters, aiming at, among other things, improving safety and security. And, in that process, the European Commission could provide increased technical assistance.

The regions also looked at developing further cooperation in air traffic management (ATM) and the related Single European Sky ATM Research (SESAR) program, particularly to identify changes required to optimize the flow of traffic. They may include extending the European Geostationary Navigation Overlay Service (EGNOS) satellite navigation system to provide the same services to civil aviation over Africa as over Europe.

The EU-Africa aviation meeting also provided an important opportunity to discuss the European blacklist, which includes numerous African airlines and states. This discussion led to calls for a strengthened constructive EU-Africa partnership in civil aviation.

### Implementing Shared Solutions

As noted last year (*ASW*, 7/08, p. 18), the African aviation scene has to move from meetings that share challenges to meetings that share practicable solutions. The challenge for aviation experts all over the world is to put the knowledge obtained at a workshop or conference into practice. But with aviation safety in Africa requiring a bigger improvement than in some other regions, that hill is even steeper for African aviation safety experts.

However, there is also a hidden economic lure to attend meetings as a result of the civil service realities in many African countries. The allowance system in some African civil service systems makes it lucrative for senior staff to attend meetings abroad. Quite often, national and international allowance levels are disproportionately generous compared with the monthly salaries of staff in aviation administrations. Attending a meeting of a few days may bring an extra month's salary.

As a result, senior staff may even wish to spend substantial amounts of their time attending such meetings. While good for meeting attendance, this takes time away from operational responsibilities at their national offices. Given the low levels of salaries in many African civil services, one can hardly blame experts for attending meetings abroad. This is a general civil service problem in those countries that the global aviation community cannot be expected to solve, but it is important to be aware of the reality.

Access to meetings is often limited to management. Yet, to achieve a culture in which people's honest mistakes are protected from being seen as culpable, every member of aviation organizations must be made aware of the role they can play in improving safety in their national aviation system.

Safety training and exposure to hazards are not always related. Often, the people most exposed to hazards, and in a position to create the most damage, tend to be among the least technically qualified or trained. As part of its efforts to address these grassroots safety training needs, the AviAssist Foundation is creating a low-cost safety awareness training package that it aims to roll out from its office in Zambia.

The training will combine easily accessible lectures with scenarios that relate to the actual working environment of the participating staff instead of to generic international examples. The idea is to eventually embed this sort of training in the curricula of the many civil aviation training centers in Africa that often focus only on training in “hard” technical skills. Significant safety benefits can thereby be realized.

At a cost of just under \$3,000, these courses enable cost-efficient, simultaneous training of up to 20 participants in organizations that may not have a budget for expensive training abroad. Yet, they are at the “front end” of safety problems. Wide access to, and sponsorship of, such courses will be an important part of genuine immersion of the African aviation community in a positive safety culture. ➔

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### Notes

1. The full report is available at <[www.icao.int/afiran08/docs/AFI\\_RAN\\_Report\\_en.pdf](http://www.icao.int/afiran08/docs/AFI_RAN_Report_en.pdf)>. Reports on the agenda items relating to safety (4, 5 and 6) are available from the AviAssist Foundation via e-mail to <[info@aviassist.org](mailto:info@aviassist.org)>, as is a summary of most papers presented at the meeting.
2. The study is too large for many African civil service agencies to download, but a summary can be downloaded at <[www.icao.int/AFIRAN08/docs/SP-AFI\\_WP24\\_en.pdf](http://www.icao.int/AFIRAN08/docs/SP-AFI_WP24_en.pdf)>.