Safety oversight and air service 'liberalization' are two sides of the same coin, says a specialist's new book.

Catalytic

A visionary pact by three-fourths of African civil aviation ministers — fully effective three years after their negotiations ended at Yamoussoukro, Ivory Coast — set the stage 11 years ago for comprehensive improvements to commercial air transport safety and its economic underpinnings. Few expected that initiatives to implement principles of this agreement — called the Yamoussoukro Decision[1] (*ASW,* 11/06, p. 18) — also would reveal unresolved safety disparities among states and, in some cases, even impede critical reforms, says a new book.

Aviation safety professionals will find the book a practical guide to relevant flight risk factors, organizational roles, persistent issues, recent academic research and expert opinions.

Airline deregulation — often called *air service liberalization* in international contexts — is deeply intertwined with the continent's safety issues, explains author Charles Schlumberger, principal air transport specialist, Energy, Transport and Water Department, at the World Bank Group. "Although justified, the strong focus on safety and security has become the main obstacle to timely implementation as many African states do not [comply] or only marginally comply with the International Civil Aviation Organization's [ICAO's] safety and security standards and recommended practices [SARPs]," he says. "In Africa, the two most critical problems are the lack of continued surveillance and the poor resolution of safety audits.

In other words, when addressing high accident rates in Africa, the most important factors for improvement are compliance with SARPs and establishment of an adequate safety regulatory oversight regime."

The concerns grew out of his seven-year, interdisciplinary analysis of treaties, national laws, aviation regulations harmonized by regional economic communities (RECs), major accidents, economic factors and political forces. "This is significant, especially because international air services in general, and the Yamoussoukro Decision in particular, foresee the restriction or suspension of air services in the case of poor safety standards," he said.

Bilateral Balancing Acts

The Yamoussoukro Decision, effective since August 2002, culminated decades of fresh thinking and negotiations about how to thrive under twin pressures for liberalization and for reduced accident risk. Around the time frame of the decision, the African Union was formed — effective May 2001 — by African heads of state under the Abuja Treaty. This treaty provided a continuing legal basis for states to be bound to the Yamoussoukro Decision, yet the air traffic rights granted so far have been exercised by states in a only few cases, according to the book. A few disputes remain about which of 44 party states that ratified the decision today are bound to follow it.[2]

In Schlumberger's analysis, little progress on liberalization has been

made despite numerous meetings in the last eight years. Also, initiatives by RECs and associated international stakeholders were, and still are, expected to be the main drivers for prioritizing work on improving African economies and air safety. Meanwhile, he said, pairs of states have acted within and across RECs according to the common principles, and the African Airlines Association in recent years has encouraged a core group of states to follow through on air service liberalization.
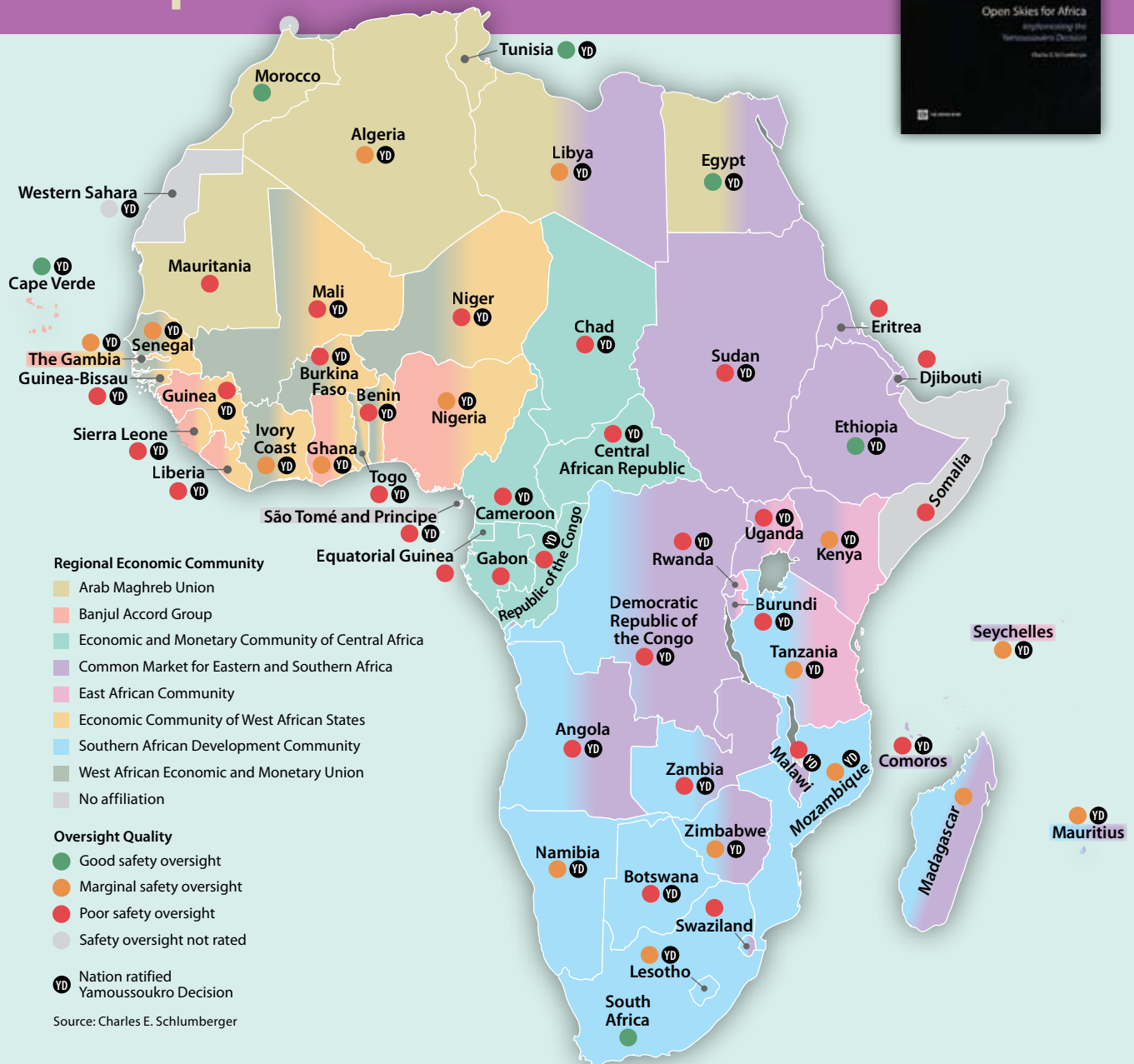
"The example of Ethiopia demonstrates that implementation … can be done successfully on a purely operational basis," he added. "In other words, even if certain [Yamoussoukro] elements … such as the executing agency are absent, implementation can be achieved between two or more states on a bilateral basis."

By the book's estimate — based on on-site discussions with leaders in states of the African Union — a "clear majority," 34 countries, are considered ready and willing to implement liberalization and to fulfill associated safety obligations, while 20 "maintain weak or small state-owned carriers and … are procrastinating in opening up their air service markets."

Safety and liberalization are intertwined essentially because of each African state's power to "limit the volume of traffic, the types of aircraft to be operated and the number of flights per week for environmental, safety, technical or other special considerations"

Aspirations

BY WAYNE ROSENKRANS

Open Skies for Africa

Map of Africa

Tunisia YD
Morocco
Algeria YD
Libya YD
Egypt YD
Western Sahara YD
Cape Verde YD
Mauritania
Mali YD
Niger YD
Chad YD
Sudan YD
Eritrea
Djibouti
The Gambia
Senegal YD
Guinea-Bissau YD
Guinea YD
Burkina Faso YD
Benin YD
Nigeria YD
Ethiopia YD
Sierra Leone YD
Ivory Coast YD
Ghana YD
Togo YD
Central African Republic YD
Somalia
Liberia YD
São Tomé and Principe YD
Cameroon YD
Equatorial Guinea
Gabon YD
Republic of the Congo YD
Rwanda YD
Uganda YD
Kenya YD
Seychelles YD
Democratic Republic of the Congo YD
Burundi YD
Tanzania YD
Angola YD
Malawi YD
Mozambique YD
Comoros YD
Madagascar
Mauritius YD
Zambia YD
Zimbabwe YD
Namibia YD
Botswana YD
Swaziland
Lesotho YD
South Africa

Regional Economic Community

- Arab Maghreb Union
- Banjul Accord Group
- Economic and Monetary Community of Central Africa
- Common Market for Eastern and Southern Africa
- East African Community
- Economic Community of West African States
- Southern African Development Community
- West African Economic and Monetary Union
- No affiliation

Oversight Quality

- Good safety oversight
- Marginal safety oversight
- Poor safety oversight
- Safety oversight not rated

YD Nation ratified Yamoussoukro Decision

Source: Charles E. Schlumberger

under the decision. The baseline level of safety performance expected — called the state's *eligibility* — requires maintaining standards at least equivalent to ICAO SARPs, and establishes a further duty to respond to safety-related queries from any other state. "A party state may revoke, suspend or limit the operating authorization of a designated airline of the other party state if the airline fails to meet the eligibility criteria," he said.

Improving Safety Situation

Air carrier accident rates per million departures in 2006, for the continent as a whole, were 6.6 times the world average, based on International Air Transport Association (IATA) data, the

Susan Reed

book recalls. Discussing recent fatal accidents, Schlumberger tried to simplify their recurrent nature and context by broadly categorizing types of operators, operations and known causes.

"The first group is the major intercontinental carriers that operate between the African continent and Europe, Asia and the Americas … and have an excellent safety record," Schlumberger said. "The second group involves operators that are registered in an African country and that operate Western-built air transport category aircraft that are currently still in use in most developed countries. … The third group of carriers consists of various African carriers that operate older Western- or Eastern-built aircraft. During February 1998 through October 2007, at least 29 accidents involving such aircraft were recorded."

Obtaining reliable accident data and causes for the third group of carriers remains problematic, he says. Sometimes a majority of accidents still are not reported to authorities outside of the state of occurrence, fully investigated or assigned a probable cause. "The reasons for the accidents are therefore mostly unknown," Schlumberger said, and the linkage to government oversight factors can be vague.

"Another concern … is the large number of accidents involving flights conducted by [a nation's] air force, which in many African countries transports passengers and cargo for profit," he added. "The ministry of defense generally regulates and supervises these flights, which therefore do not need to comply with the same regulations as civilian flights."

On more positive notes, civil aviation authorities since 2000 have made a concerted effort, as shown in several of the book's examples, to revoke the air carrier certificates held by so-called flag of convenience airlines[3] as part of their reforms.

Safety Report Card

To define and compute overall good/marginal/poor ratings of African commercial aviation safety at the state level, the author cross-referenced data on fatal accidents in African air transport, state results from the ICAO Universal Safety Oversight Audit Program, results from the IATA Operational Safety Audit program (nine certified airlines in seven states), operators and states banned then by the European Union Aviation Blacklist, and results from 10 states audited by the U.S. Federal Aviation Administration International Aviation Safety Assessment Program. "The conclusion of this research leads to six states being rated as good, 16 states being considered marginal and 31 states being rated poor," the book says.

At the level of RECs, he assessed their effectiveness in promoting sound regulation of airlines and their progress in establishing safety oversight capability by a regional authority to complement state capacity (Table 1). "However, the analysis reveals that most RECs have taken only minor steps toward regional oversight, and states rated as poor can be found in most [RECs] except North Africa," he said.

Although sub-Saharan Africa has been the focus of many safety initiatives by non-African organizations, the states of northern Africa — including several Arab state parties to the Yamoussoukro Decision — have parallel challenges, the book notes. So far, the Arab Maghreb Union countries have not pursued deregulation of air services to sub-Saharan Africa, although some airlines from these states have a growing presence in the sub-Saharan airline markets through

bilateral agreements. The Arab League Open Skies Agreement, meanwhile, shares some similarities with the decision, and these two agreements generally do not conflict, he said.

"Of the six Arab states of the African continent — Algeria, Egypt, Libya, Mauritania, Morocco and Tunisia — four [excluding Morocco and Mauritania] are Yamoussoukro Decision party states that are bound to the decision," Schlumberger said. "Egypt, Morocco, and Tunisia operate modern and competitive carriers and have a good safety rating, and these are the states that should jointly act as the driving force toward liberalization."

From 2001 to the present, ICAO's Cooperative Development of Operational Safety and Continuous Airworthiness Program has helped the RECs to prepare and execute action plans that complement those designed around economic development goals, including a push for all states to create autonomous civil aviation authorities. Results, however, have been mixed in some RECs, such as the Economic Community of West African States (ECOWAS).

"Despite the several ministerial meetings, the various studies and reports prepared, and the financial support by international donors such as the World Bank and the African Development Bank, ECOWAS has not adopted any legally binding legislation or regulations that could be seen as steps toward implementation of the Yamoussoukro Decision," Schlumberger said. "Member states of the two other [West African] subregional entities, West African Economic and Monetary Union (WAEMU) and Banjul Accord Group (BAG), appear to have been more successful in implementing some of the required regulatory framework."

Counterintuitive Safety Oversight vs. Liberalization of Air Service African Regional Economic Communities, 2009

REC	Liberalization Score[1]	Comments
Arab Maghreb Union	1	No safety oversight at the REC level; leaders have only acknowledged need for liberalization.
Banjul Accord Group	4	REC oversight ongoing through COSCAP plan for common safety agency; full YD liberalization in progress.
Economic and Monetary Community of Central Africa	5	REC oversight pending, including COSCAP plan for common safety agency; nearly full YD liberalization completed.
Common Market for Eastern and Southern Africa	3	No safety oversight at the REC level; full YD liberalization agreed but one agency's role still pending.
East African Community	3	Ongoing REC oversight since 2007 through common safety agency; conformity to YD to be only through bilateral air service agreements.
Economic Community of West African States	NI	No safety oversight at the REC level; no comment about YD status.
Southern African Development Community	2	No safety oversight at the REC level; no liberalization found despite stated intentions.
West Africa Economic and Monetary Union	5	REC oversight ongoing through COSCAP plan for common safety agency; YD principles fully implemented.

Total African states = 54; REC = regional economic community; NI = not included; YD = Yamoussoukro Decision; COSCAP = Cooperative Development of Operational Safety and Continued Airworthiness Program

Notes:

The map on page 33 contains the author's safety ranking of each nation and its REC membership(s).

1. On the author's scale, 1 means no observed progress toward liberalization of air service, and 5 means full liberalization of air service.

Source: Adapted with permission from Charles E. Schlumberger, *Open Skies for Africa*

Table 1

In safety terms, these subregions — like some other economic communities — have been working to create and sustain regional safety oversight agencies and common improvements to the organization of state safety oversight capacity, personnel licensing and training standards, bird hazard control, aviation medicine, aircraft operations, continuing airworthiness and transporting dangerous goods.

"WAEMU has adopted a total of 10 safety and security regulations to address the region's safety and security challenges," he said. "However, while the necessary regulations are in place, the overall safety and security situation remains unsatisfactory. … Nevertheless WAEMU's full liberalization of air services within its territory must be considered a successful step toward ultimate implementation of the Yamoussoukro Decision."

Another example was the provision for a regional safety oversight agency within the model of harmonized civil aviation regulations developed by the East African Community (EAC) air transport program. As one by one they adopt these regulations, EAC states commit to supporting this subregion's Civil Aviation Safety and Security Oversight Agency, created in 2007.

"Continued resistance to the liberalization of intra-African air services remains as yet another obstacle in the way of Africa's challenging path out of poverty," Schlumberger concluded. "The most effective single element of change has been the change in the rules of the game brought about by the Yamoussoukro Decision that, despite some shortcomings, has acted as a catalyst for change. … [I] recommend that a definite objective be set for the percentage of infrastructure investment to be dedicated to safety [by states] over the next 10 years; that is, 10 percent as recommended by the General Assembly of the United Nations. … [I also] strongly recommend that a definite time frame be fixed for establishing strong, independent and technically reliable supervision agencies, and that the target date for completing the establishment process should not extend beyond 2012." 🖊

Notes

1. The agreement's full title is *Decision Relating to the Implementation of the Yamoussoukro Declaration Concerning the Liberalization of Access to Air Transport Markets in Africa.*

2. The non–Abuja Treaty states are Djibouti, Equatorial Guinea, Eritrea, Gabon, Madagascar, Mauritania, Morocco, Somalia, South Africa, and Swaziland.

3. Flag of convenience aircraft registrations are those of airlines that have headquarters outside the country of registration and do not operate listed air services to and from the country of registration.