

It is no secret that Africa presents the most daunting challenge in the world to aviation safety; accident rates continue to reflect that reality. However, over the past decade, there has been a new stabilizing force in the region.

To most aviation professionals, the operating environment faced by the World Food Programme (WFP) and its partner agencies of the United Nations Humanitarian Air Service (UNHAS) is as alien as another planet. All of the terms are familiar, but nearly everything else about WFP operations is ... different, sometimes startling so.

The entity bringing order and an elevated level of safety to these operations on the frontiers of aviation is the WFP's Aviation Safety Unit (ASU), headquartered in Rome but with regional offices in Sharjah, United Arab Emirates; Nairobi, Kenya; and Johannesburg, South Africa.

Through a series of audits, regulator reviews, training and oversight of its own operations, the WFP has set a new standard for operations in underdeveloped areas.

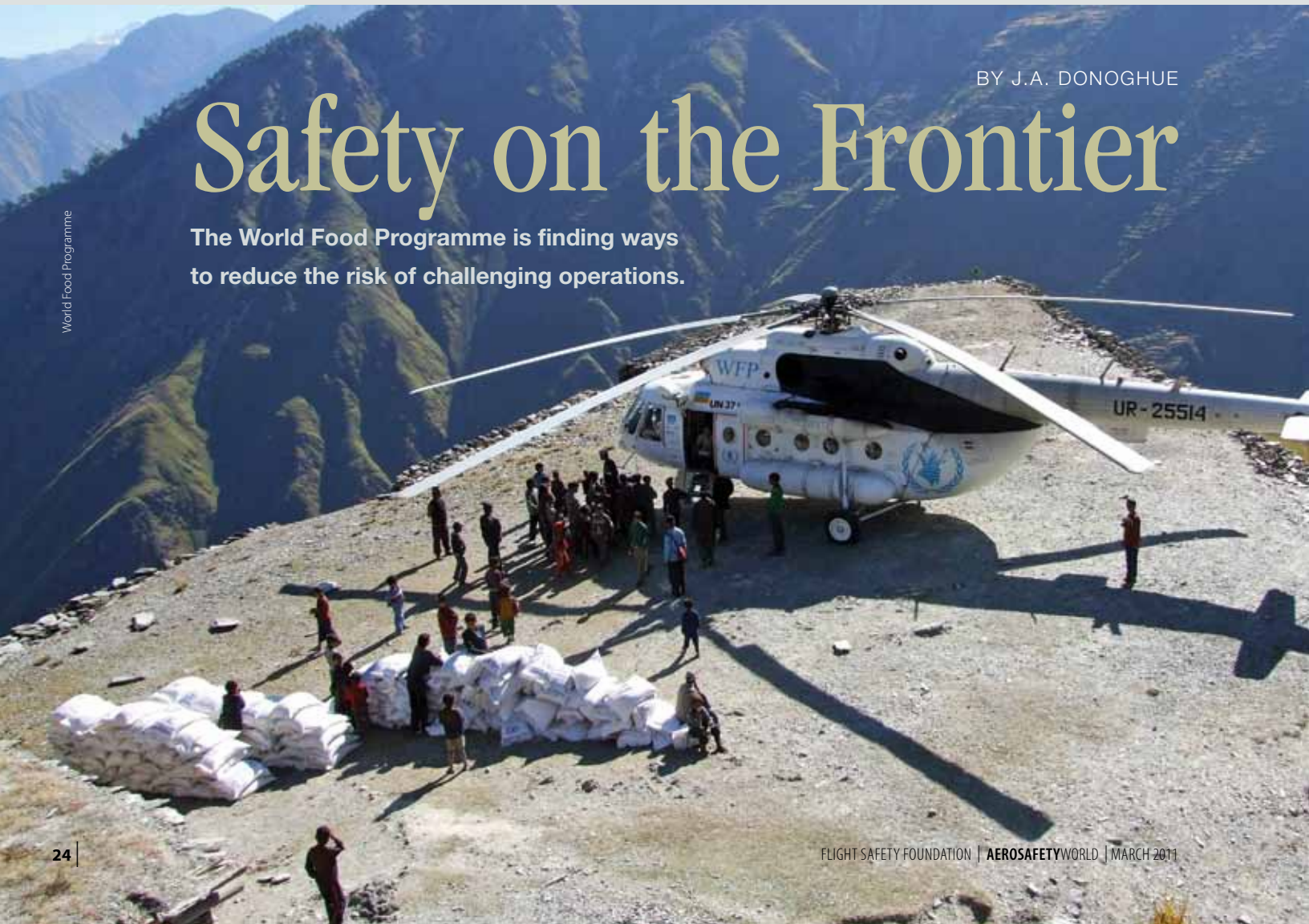
In the early days of U.N. relief efforts involving wide-scale use of contracted aviation assets, says Conny Akerstrom, ASU's Nairobi-based aviation safety officer, the contracting arm of the WFP stopped its inquiry into an aviation operator's fitness when an air operator's certificate (AOC) was produced. This light-touch involvement in safety began changing in 1999, after a WFP-chartered ATR 42-300 struck high terrain while in the clouds on radar vectors from a newly opened air traffic control facility at Pristina, Kosovo. The aircraft had an inoperable ground proximity warning system. All 24 aboard died (*Accident Prevention*, 10/2000).

BY J.A. DONOGHUE

Safety on the Frontier

The World Food Programme is finding ways to reduce the risk of challenging operations.

World Food Programme



WFP, FSF Partner

The United Nations (U.N.) World Food Programme (WFP) and Flight Safety Foundation (FSF), after several years of informal collaboration, in February signed a memorandum of understanding formalizing the partnership between the Foundation and one of the world's largest humanitarian organizations.

Speaking earlier this year at the FSF European Aviation Safety Seminar in Istanbul, Turkey, Conny Akerstrom, WFP aviation safety officer based in

Akerstrom and Voss



J.A. Donoghue

the organization's East African Aviation Safety Office in Nairobi, Kenya, said, "It is a true pleasure to announce on behalf of the United Nations WFP the new and exciting partnership we have entered with Flight Safety Foundation, one of the most respected flight safety organizations in the world. This partnership will include many levels of valuable support for the WFP aviation department, which will directly enhance the safety of U.N. Humanitarian Air Services operations.

"As our safety and aviation officers work directly with air operators in many remote regions, this partnership will also ensure that the Foundation's important safety initiatives will reach those operators and improve their safety standards as well.

"WFP takes the need to continuously improve our standards and promote aviation safety very seriously. Even though we have not had any

fatal passenger aircraft accidents in the past 10 years, we are still looking for ways to constantly improve our safety standards, and one new important avenue is this partnership with the Foundation," Akerstrom said.

In addition to the Foundation providing briefings for WFP operators on the *Approach and Landing Accident Reduction (ALAR) Tool Kit*, and the donation of hundreds of ALAR Tool Kits to the WFP, William R. Voss, Foundation president and chief executive officer, said the WFP also was enlisted in the Basic Aviation Risk Standard (BARS) program. Developed initially to provide mining and drilling businesses a common audit standard for aviation service providers, BARS is similar in concept to the WFP operator audit program. Akerstrom said that the WFP is considering how BARS audits can be integrated into the WFP audit registry.

— JD

At that time, WFP activities were ramping up, trying to come to grips with the desperate needs of large populations going hungry due to disasters, both natural and manmade. In response to WFP accidents, the U.N. asked the International Civil Aviation Organization (ICAO) to take a look at U.N. aviation activities, Akerstrom said. That audit resulted in two recommendations, one that the WFP logistics office set up a separate aviation contracting unit and the second that led to the establishment of the ASU.

The safety unit began operations in 2002 with Afghanistan relief efforts, but it wasn't until 2004 that its existing structure took shape, "and we started the real work," Akerstrom said. At the headquarters in Rome, the ASU is led by Cesar Arroyo.

The WFP safety officers quickly learned that "the [abilities of the national] civil aviation

authorities (CAA) is the main problem we have; if they did their job, we wouldn't have to do so much," Akerstrom said.

And the unit does quite a lot. The ASU established a registry of audited contractors. They conducted 121 audits last year, with two safety officers spending five to eight days on each full audit, looking at an operator's training, maintenance and flight operations procedures. After that initial audit, a program of continued surveillance is maintained. "Every two years, we do a full audit," Akerstrom said. "When we have some findings, we go back and review. We like to see every operator every six

Arroyo



J.A. Donoghue

months,” more often if there are open issues, or to perform a spot check, he added.

Then they track events in the field in several ways, some of which involve the UNHAS on-site manager of the specific relief effort, ASU drop-in checks and extensive use of reports using the European Coordination Centre for Accident and Incident Reporting Systems (EC-CAIRS). All reports of accidents, incidents and events are handled with a no-fault, just culture

approach, seeking to fix a problem rather than punish an offender.

The ASU and its registry are used by all of the UNHAS agencies, including the U.N. High Commissioner for Refugees, the U.N. Children’s Fund (UNICEF) and the U.N. Development Program. The U.N. branch providing transportation for U.N. peacekeeping forces has its own safety office in New York, but it uses the

same standards as the WFP — the U.N. Common Aviation Safety Standards, Akerstrom said.

Although an aviation operator from Canada might be hauling food and people around in Kenya or Somalia, the WFP “tries to use as many African operators as possible,” Akerstrom said. “It is easier to get them into the operation faster, it builds local expertise and it builds the local economy.” When disasters strike anywhere in the world, such as the 2010 earthquake in Haiti or Japan’s multiple disasters, the WFP turns to its registry to get going as quickly as possible.

The WFP is a very active agency. In 2010, WFP used an average of 54 aircraft per month and during the year, transported more than 350,000 passengers and 14,000 tonnes (15,428 tons) of cargo in 19 country operations. The East Africa Region of the WFP contracted fleet alone encompasses 30 aircraft, including Boeing 737s, Ilyushin Il-76s, de Havilland Dash 8s, a couple of regional jets, five Mil Mi-8 helicopters and a clutch of Cessna Caravans; most are based in south Sudan and Darfur.

Keeping close tabs on events, the East African Region of the WFP counted 114 occurrences and 75 hazard reports in the last half of 2010; there are 135 open hazards in the region, 24 of them considered significant. There were no accidents in the period; however, five serious incidents — two involving non-WFP contracted aircraft — and 35 significant incidents were recorded.

“The number of serious incidents has decreased, but we want the number of reports to increase,” allowing for more comprehensive searching for hazard precursors, Akerstrom said. He added that analysis of the reports is kept at the local level.

The two most troubling categories of incidents are air traffic control (ATC), with marginal infrastructure falling further behind rapidly expanding air traffic, and the broad category called “airfield conditions and control.” This includes farmers digging irrigation ditches across runways, but also involves the number of people and animals wandering on the runways. In this area of the world, goats constitute a significant safety hazard, although

WFP flight crews use hand-drawn airport diagrams depicting obstructions, wildlife and other hazards.

WFP Airworks (Kenya) Ltd.
DAILY VOYAGE REPORT FORM

BASE: WALI	CAPI: BILL L.	DATE: 06 MAR 2010
AC REG: SYNLN	AC TYPE: C208	CALL SIGN: UNCOB4W

ROUTE COMMENTS:
 • TAMBURA AIRSTRIP.
 • FIREHOLD 02/20 HAS OVERGROWN P SHRUBS AND GRASS NEEDS TO BE CLEARED.
 • EXTREME CAUTION TO BE EXERCISED AT THIS AIRSTRIP!! PEOPLE AND ANIMALS CROSSING THE AIRSTRIP AT ALL TIMES. NO CROWD CONTROL WHATSOEVER.
 • RUNWAY TO BE CLOSED UNTIL ABOVE ISSUES ARE ADDRESSED.

COPY TO UN: _____ CAPTAIN SIGNATURE: _____



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camels, wild pigs, gazelles, cattle and donkeys all present problems. Imagine starting your takeoff roll in a Dornier 328 Jet and having to veer around a wild pig.

The weak ATC issue is one reason that WFP highly recommends that its aircraft have a functional traffic-alert and collision avoidance system (TCAS II), adding, “PCAS (Portable Collision Avoidance System) is not an acceptable substitute.”

Official airport documentation is nearly nonexistent in the regions where the WFP flies, so the organization requires that its operators create their own maps of route infrastructure and airports. Some of these begin as crew-produced hand-drawn diagrams similar to those that, from their beginnings in the earliest days of commercial aviation, evolved into the comprehensive documents we see today. These drawings are copied and passed around, noting hazards such as trees, animals and high terrain. Eventually, diagrams of some of the busier airports are more professionally rendered, with a more familiar information format, and widely distributed.

The WFP also requires that operators institute its real-time flight following system with Internet access so all aircraft can be tracked all of the time. As Arroyo said in 2009 when he accepted the Flight Safety Foundation President’s Citation on behalf of the WFP, “Every single aircraft is equipped with a satellite tracking system, TCAS, and EGPWS [Enhanced Ground Proximity Warning System], even in small planes such as Cessna Caravans. Pilots are proud to be properly trained, and aircraft maintenance is done by appropriately authorized maintenance organizations.”

The weakness — or even functional existence — of many CAAs is one of the reasons the old WFP practice of simply checking for an AOC and assuming the best was doomed to failure. “In some countries, you don’t have to do anything to get an AOC,” Akerstrom said. “You can operate a [Boeing] 737 on a 60-day waiver. We’ve gone to the CAA and asked to see records on an operator to find they have no data, despite having issued an AOC.

WFP Volunteer Opportunities

The partnership between Flight Safety Foundation (FSF) and the U.N. World Food Programme (WFP) will offer some unique volunteer opportunities for members of the aviation safety community. The Aviation Safety Unit (ASU) of the WFP needs volunteers to contribute time, expertise and knowledge to various programs and projects throughout the year. The primary needs are:

- Speakers at WFP aviation workshops, especially specialists in helicopter operations, approach and landing accident reduction, controlled flight into terrain and safety data management;
- Data analysts to interpret WFP operational safety risk environment data;
- Trainers in crew resource management and human factors, for both crew and corporate staff;
- Accident investigators; and,
- Specialists in ATC operations.

These categories may vary in scope and need, according to time and circumstances.

If you have an interest in volunteering your time with the ASU, your information will be kept on file and the Foundation and/or the ASU will contact you on an as-needed basis. Please email information about your qualifications, along with a résumé, to Susan Lausch, FSF director of development, at <lausch@flightsafety.org>. You can make a tax-deductible, charitable contribution through the Foundation to support WFP activities. Contact Lausch for more information or contribute via the FSF Web site at <flightsafety.org/donate>.

FSF President and CEO William R. Voss welcomed the new formal relationship “so that the community of aviation safety experts in the Foundation can have an opportunity to volunteer their assistance to this organization doing this most difficult work under the most difficult of conditions.”

— Susan Lausch

Sometimes the CAA will inspect, but they don’t write a report,” so there’s nothing to research, he said. WFP has learned that the relative strength or weakness of a CAA can be easily seen when they audit that nation’s operators.

In a manner of looking at the situation, the expression “a rising tide lifts all boats” applies perfectly to the WFP experience; a small, dedicated group of aviation safety professionals, using existing techniques and standards and adapting them to fit the circumstances, has lifted African safety values. And, as more and more operators adopt WFP practices, the higher all of the boats will rise. ➔