Safety News

Out of the Ashes

The aviation community must be "faster and more flexible" in its responses to limit the disruption of air traffic caused by volcanic eruptions and other natural disasters, says Siim Kallas, the European Commission vice president responsible for transport.

"Most importantly, we need a package of measures to ensure that millions of people and businesses never have to re-live the crisis of the last few weeks," Kallas said, referring to the widespread grounding of air traffic in Europe in April and May because of clouds of volcanic ash from Iceland's Eyjafjallajokul volcano.

European Union (EU) transport ministers have identified five priorities, including accelerating implementation of the Single European Sky to provide for one regulatory authority with jurisdiction over aviation throughout the continent.

Other priorities call for drafting EU proposals to present to the International Civil Aviation Organization for managing risks from volcanic activity, creating guidance for the uniform application of rules for passengers, providing guidelines to avoid "undue distortions to competition" if EU members provide state aid to ease financial pressures on airlines, and developing pan-European transportation networks that can help remove transportation bottlenecks.

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"No one can prevent a volcano eruption or other kinds of natural disaster," Kallas said. "But we can build strong pan-European transport systems so that different modes can ease the pressure when a crisis occurs."

Meetings are planned for June on "possible options for a framework for pan-European mobility planning," Kallas added. "We will never compromise on safety, but we have to do everything possible to safeguard our citizens' freedom to travel."

Australia's PBN Plans

Australia's Civil Aviation Safety Authority (CASA) is working toward implementation of a performance-based navigation (PBN) plan designed to harmonize with international PBN concepts.

CASA's plan aims to provide the strategy for transitioning from route-based navigation to area navigation, and to avoid imposing unnecessary requirements for multiple pieces of equipment on aircraft, multiple systems on the ground, and multiple airworthiness and operational approvals for inter-regional and international operations.

"Australia's concept for the transition to PBN [calls for] parallel availability of area navigation and required navigation performance specifications in all classes of airspace [and] APV [approach with vertical guidance] enabled through barometric vertical navigation," CASA said.

Cockpit Distractions

U.S. air carriers have been told to crack down on distractions in the cockpit — including eliminating pilots' use of personal electronic devices.

The U.S. Federal Aviation Administration (FAA) issued guidance to air carrier operators, directing them to "emphasize to crewmembers and operators that engaging in tasks not directly related to required flight duties, including using personal electronic devices (PEDs), constitutes a safety risk."

A statement accompanying the guidance information cited an October 2009 event in which two pilots of a Northwest Airlines Airbus A320 over-flew their destination airport in Minneapolis by 150 nm (278 km) "because they were using their laptop computers for personal activities and lost situational awareness."

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The crew failed to respond to numerous radio calls from air traffic controllers. After a question from a flight attendant, the crew realized that they had flown past Minneapolis and returned for a normal landing.

The guidance information told operators to "create a safety culture that clearly establishes guidance, expectations and requirements to control cockpit distractions, including use of PEDs, during flight operations. … Crewmembers should evaluate their personal practices, including those regarding the use of PEDs, to ensure they do not distract from or interfere with duties and responsibilities related to the flight."

Overreliance on SMS?

Despite the significant safety advances made possible by data management systems, the aviation industry should avoid "overreliance on these systems to the neglect of forensic investigation," U.S. National Transportation Safety Board (NTSB) Chairman Deborah A.P. Hersman says.

Hersman told an April meeting of the International Society of Air Safety Investigators (ISASI) in Chantilly, Virginia, U.S., that the use of safety management systems (SMS) and other data systems is one reason for the low rate of aviation accidents.

SMS functions well for companies that already are "getting it right," Hersman said, but it may do little for companies without strong safety cultures.

In addition, some problems are impossible for SMS to identify in advance of a crash, she said, citing a Jan. 17, 2008, accident in which a British Airways Boeing 777 touched down hard short of the runway. The U.K. Air Accidents Investigation Branch traced the problem to ice that formed "within the fuel system from water that occurred naturally in the fuel while the aircraft operated with low fuel flows over a long

Marc-Antony Payne/Wikimedia

period." That risk was not recognized before the accident (*ASW*, 2/10, p. 20).

Hersman said that aviation safety personnel need "a measured approach — one that acknowledges the potential benefits and limitations of SMS and … doesn't discount tried and true methods for identifying vulnerabilities, such as accident investigations."

RESA Recommendations

The Indonesian National Transportation Safety Committee (NTSC) is recommending a review of all airports in Indonesia to ensure that the dimensions of runway end safety areas (RESAs) comply with International Civil Aviation Organization (ICAO) standards.

The recommendation accompanied the NTSC's preliminary report on an April 13 accident in which a Merpati Nusantara Airlines Boeing 737-322 overran the departure end of Runway 35 and stopped 205 m (673 ft) beyond the runway, in the shallow, muddy waters of the Rendani River. Ten of the 110 people in the airplane received serious injuries.

The accident investigation is continuing, but the NTSC issued seven safety recommendations, including one that called on the Directorate General of Civil Aviation (DGCA) to ensure that RESAs meet ICAO standards at all airports that serve Civil Aviation Safety Regulation Part 121 and Part 135 aircraft.

The NTSC also recommended that the DGCA ensure that all Indonesian airports with visual approach slope guidance systems "maintain the equipment to a serviceable standard," especially during Part 121 and Part 135 operations, and that the DGCA review procedures and equipment used by aircraft rescue and fire fighting services to ensure that they meet requirements.

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Digital NOTAMs

The U.S. Federal Aviation Administration (FAA) has begun introducing digital notices to airmen (NOTAMs) to provide computer-generated information about airport safety conditions to pilots and air traffic controllers.

The first airport to participate is Atlantic City International Airport in New Jersey. Plans call for digital NOTAMs also to be provided at 11 other U.S. airports.

The FAA said that digital NOTAMs can be transmitted simultaneously to all air traffic management systems and that the information can be delivered more quickly and with greater accuracy than traditional NOTAMs.

"Digital information management is key to meeting the air traffic system's safety and efficiency goals," FAA Administrator Randy Babbitt said. "It provides one-stop shopping for airspace system changes. It's a great benefit to commercial airline dispatchers who need to quickly assess what's affecting their operations."

EGPWS Warning

Failure of a helicopter's radio altimeter system can interfere with the operation of Honeywell's MK XXII Enhanced Ground Proximity Warning System (EGPWS) by stopping the device's "look-ahead" feature from functioning without warning the pilot, the U.S. National Transportation Safety Board (NTSB) says.

The NTSB recommended that the U.S. Federal Aviation Administration (FAA) require Honeywell to revise the MK XXII EGPWS software logic "so that a fault in the radio altimeter system would not prevent the look-ahead feature from functioning without notification to the pilot." The FAA also should require users of the MK XXII to install the revised software, the NTSB said.

"The look-ahead feature provides visual and aural terrain avoidance alerts by comparing the aircraft's projected flight path to a database containing terrain and obstacle information," the NTSB said. "The absence of these alerts, when the pilot does not know the alerts are not functioning, could mislead the pilot, thereby significantly reducing the safety of flight."

Radio altimeters determine an aircraft's height above terrain and are designed to be accurate when the helicopter is within a specific altitude range. Outside those limits, the output

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signal is invalid, and a sign/status matrix identifier labels the signal as "no computed data (NCD)"; other system anomalies also may result in an NCD label. The MK XXII is specifically designed for use in helicopters equipped with a radio altimeter.

Nevertheless, the NTSB said, "If a radio altimeter system fault results in the radio altimeter transmitting a signal labeled NCD at the time the helicopter transitions from ground to air, the look-ahead feature of the EGPWS will not be enabled and the pilot will not receive any warnings that this important safety feature is not functional."

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Investigators examine the wreckage of an Air India Express Boeing 737-800 that crashed during an attempted landing at the Mangalore-Bajpe Airport in southern India on May 23 after a flight from Dubai. The airline said that eight of the 166 people in the airplane survived the crash, in which the airplane overran a hilltop runway and burned.

In Other News …

The Global Helicopter Flight Data Monitoring Steering Group has been established, with the announced goal of making helicopter **flight data monitoring** "as accessible as possible" for all helicopter operators. … Up to half of all flight delays in Europe are **"reactionary" delays** — associated with an earlier flight that was late — according to a study published by Eurocontrol. The study found that delays at hub airports affect not only that airport's operations but also flights at dozens of other airports. … The **European Aviation Safety Agency** has established a new working group to identify areas in which the rulemaking process can be streamlined. The group is considering adoption of a "tailor-made" rule-making process for specific areas over which the agency has jurisdiction.

Compiled and edited by Linda Werfelman.