

SCIENCE NEWS

Airlines, scientists split over impact of ash

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PARIS, Apr. 19, 2010 (Reuters) — Experts disagree over how to measure the dispersal of volcanic ash and who should decide when it is safe to fly, as millions of travelers remain grounded and revenue losses top \$1 billion due to the Icelandic ash crisis.



Steam, rocks and ash are thrown out of an erupting volcano near Eyjafjallajokull April 19, 2010. An Icelandic volcano that has grounded planes across Europe is spitting lava but less ash, officials said on Monday, offering travellers hope that skies might clear at a faster rate. REUTERS/Lucas Jackson

"I would call it a European mess because we did not focus on figures and facts," Giovanni Bisignani, director general of the International Air Transport Association (IATA) said on Monday.

"Europe was using a theoretical mathematical approach and this is not what you need. We needed some test flights to go into the atmosphere and assess the level of ashes and take decisions," he told Reuters in an interview.

British Airways and Air France-KLM said they had operated test flights and encountered no difficulties from ash ejected by an Icelandic volcano, whose eruption has halted thousands of flights and spread disruption worldwide.

There is a stark difference of opinion between experts in academia and airlines, but the European Union's top transport official said the EU would not compromise on safety. NATO took the threat seriously enough to limit military exercises after volcanic glass built up in fighter engines.

Few people dispute the damage that volcanic ash can wreak inside a modern turbofan engine, after a British Airways jumbo jet narrowly avoided disaster over Indonesia in 1982 when all four of its engines stalled at 37,000 feet due to ingested ash.

Volcanic ash contains minute particles of angular rock and silicates which can strip away the aerodynamic surfaces and instruments and deposit a glass-like coating inside the engine.

Bisignani said governments were wrong to impose a "blanket ban" on air travel in northern Europe and said decision-makers should consider setting up "corridors" to repatriate the estimated 7 million passengers stranded across the globe.

ESCAPING THE ASH

Joachim Curtius, professor at Frankfurt Goethe University's Institute for Atmospheric and Environmental Sciences, defended the ban and said it would make sense for airlines to install instruments to measure particles in the air on their aircraft.

Currently, only a small number of such instruments, which cost tens of thousands of euros each, are made every year.

Pilots cannot see pockets of ash, and an instrument measuring particles in the air could warn a pilot in time to react, for instance by flying to a lower altitude, he said.

But simply lowering altitude is no guarantee of success.

"You could think that you're safe flying along at 20,000 feet rather than up at 40,000 where the ash is, only to find that the wind has suddenly dropped and the ash is now at 20,000 feet," said Stewart John, Fellow of the UK's Royal Academy of Engineering and ex-president of the Royal Aeronautical Society.

Australia's Volcanic Ash Advisory Center is one of nine centers around the world that issue warnings on aviation.

"The main problem is that the volcano keeps erupting, so it keeps producing more ash," said manager Rebecca Patrick.

"If it is at high (altitude) levels it can hang around for 20 days," she said, citing a volcanic ash cloud which stretched from South America to the western Pacific in 2002.

"So it is best to be overly cautious because of what can happen if an aircraft goes through the cloud."

Meteorologists try to anticipate threats such as this by using models unfathomable to outsiders.

Airlines are still smarting from what many of them see as expert over-reaction to the threat of swine flu last year.

"We have to make decisions based on the real situation not theoretical models," Bisignani said.

Volcanic ash guidelines are drawn up by the International Civil Aviation Organization, a United Nations body, but experts say there is no commonly agreed safe concentration of ash.

"The ICAO regulation that has prompted this widespread grounding is from experience gained from over 80 incidents between 1980 and 2000 and computer modeling (or) best guestimate," said aviation consultant Chris Yates.

"The airline industry will know this very well and are clearly making the argument that we are being over cautious." * Q+A-Why is volcanic ash a threat to planes?
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(Additional reporting by Sydney bureau, Ron Popeski, Ben Hirschler, Matthias Blamont, Maria Sheahan, Gyles Beckford; Editing by Simon Cameron-Moore)