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By Andrea Rothman and Richard Weiss

March 11 (Bloomberg) -- The disappearance four days ago of a Malaysian Airline Systems Bhd. aircraft with 239 people on board is confounding search teams and a global audience used to around-the-clock connectivity and real-time updates.

The Boeing Co. 777-200 wide-body, among the world's safest planes, vanished without any distress call or other indication that something was amiss. Half a week later, nine nations including the U.S. and Australia have joined a search that while focused on the Gulf of Thailand between Malaysia and Vietnam now extends west to Indonesia and east to the South China Sea.

That the largest civil twin-engine airliner could disappear without a trace and elude a frenzied search that includes satellite surveillance runs counter to the advances in technology that have facilitated both flying and reconnaissance efforts after an incident. While authorities quickly traced two passengers who boarded the 777 with stolen passports, the area being combed has grown so vast that the search may take some time, said Remi Jouty, president of France's BEA air-accident investigation bureau, which was instrumental in finding the Air France Flight 447 jet that crashed over the Atlantic in 2009.

"It is indeed striking that a plane can disappear like that in an era where mobile phones make it possible to know at any time where anyone is," Jouty said in a telephone interview. 'What we tend to forget is that the sea is wide and still very much a hostile environment."

Bermuda Triangle

In the 1940s and 1950s, when planes were powered by piston engines and communications was in its infancy, disappearance of an aircraft wasn't unusual. In 1948, a Douglas DC-3 en route to Miami that never reached its destination and vanished without a trace helped feed myths about paranormal activities in the region that's become known as the "Bermuda Triangle."

Yet recently modern aviation history offers only two examples of aircraft that eluded investigators for as long as the Malaysian Flight 370 jetliner.

It took five days before searchers found any debris from the AF447, though search teams needed almost another two years to locate the actual aircraft and its flight recorders to help reveal why the Airbus Group NV A330 had gone down.

Major Search

It was 10 days before the discovery of wreckage from Adam Air Flight 574, which had disappeared in 2007 near the island of Sulawesi in Indonesia.

Hundreds of search and rescue personnel led by the Indonesian Air Force found no sign of the plane following initial reports of debris on land, and only after a team of more than 3,600 was mobilized -- including a Boeing surveillance plane and two Fokker-50s from the Republic of Singapore Air Force -- was the first wreckage detected in the sea.

Oceans aren't the only realm where planes can disappear.

Among the most notorious incidents was a Uruguayan Air Force charter flight carrying 45 people, including a rugby team with friends, that crashed in the Andes mountain range in 1972, killing passengers on impact and later from cold and an avalanche. It took 72 days before search crews found survivors, who had fed on bodies preserved in the snow.

An earlier accident in the Andes in 1947 produced no wreckage for 50 years. In that case, Flight CS-59 operated by British South American Airlines disappeared into the mountains on its way to Santiago, Chile, from Buenos Aires.

Ice Field

An air and ground search by Chilean and Argentine military found no trace of the aircraft, making the incident one of the unsolved mysteries of aviation for the next five decades until climbers discovered debris at the base of an ice field in 1998, leading to the conclusion that the plane had been dragged slowly along under the glacier during the intervening years.

Glaciers in the region have contributed other finds, with a climbing team on Mount Illimani, Bolivia's second-highest peak, discovering the wreckage of a Boeing 727 in 2006. The Eastern Air Lines plane had crashed soon after takeoff in 1985, killing all 29 people aboard.

As the Malaysian search drags on, there will undoubtedly be another review of technologies that could make it easier to locate planes that go down in future, says BEA's Jouty.

After its final report on AF447, the Paris-based investigator suggested equipping all planes with systems that could send data in real time, transmitting an aircraft's speed, altitude and location. That way, if a plane disappeared, investigators would have more precise information, Jouty said.

For now, the best clues about an incident can still be gleaned from the so-called black boxes that store voice and data files from the flight.

"Our society has an urge for real-time information," says Thomas Friesacher, a consultant at AeroXpert and professional commercial pilot. "It's a phenomenon of our time, and it is a blatant contradiction to the diligence and detail required when determining what might have happened."

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