Singapore Incident Highlights Climate Change Impact on Aviation Safety

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The Transport Safety Investigation Bureau (TSIB) of Singapore recently released its final incident report on a Singapore Airlines flight (SQ319) incident that occurred in October 2022. The report sheds light on how climate change can introduce adverse weather conditions at airports, impacting flight operations and safety.

During the incident, flight SQ319, operated by a Boeing 777-300ER, faced severe weather conditions near Singapore Changi Airport (SIN) and was forced to divert to Batam Hang Nadim International Airport (BTH), Indonesia, due to low fuel. However, the weather system that affected SIN also moved into BTH territory, making landing challenging.

The TSIB's investigation revealed that the flight crew did not consider taking additional fuel despite weather concerns at the destination. They expected Air Traffic Control (ATC) to shorten the flight track, ensuring safe arrival at SIN. As the situation worsened, the crew decided to divert to BTH but faced delays in approval due to their dwindling fuel levels.

Ultimately, the flight landed at BTH with fuel levels below the final reserve fuel requirement, prompting a Mayday declaration. The TSIB noted that the decision to remain in a holding pattern for as long as possible, hoping for SIN to reopen, traded off safety margins.

The report also highlighted the increasing frequency and intensity of storms resulting from climate change. These storms could lead to weather conditions exceeding safe landing limits or impacting airport capacity, making the aviation environment more unpredictable.

The TSIB recommended that pilots interpret operating procedures more conservatively when ATC cannot provide definitive updates, allowing for earlier diversion decisions with higher safety margins.

While Singapore Airlines has taken actions in response to the incident, no safety recommendations were provided. Fortunately, no injuries were reported among the 280 people onboard.

The incident serves as a reminder of the challenges posed by extreme weather conditions on aviation operations and underscores the need for proactive measures to address climate change's impact on aviation safety.

Sources: AirGuide Business airguide.info, msn.com, simpleflying.com