

# Airports Safety Regulations in India

*The flight, carrying 71 passengers and crew, crashed while landing at Nepal's Tribhuvan International Airport on March 12, 2018, killing 49 people. It is the worst aviation disaster to hit Nepal in years. South Asia has a chequered history when it comes to air safety, with crashes involving planes and helicopters since the year the first aircraft landed. Flooded airports are not a new scene.*

Airports are an important asset to the nation as they facilitate the rapid transportation of people and ideas. Built at exorbitant costs, these airports are designed to be safe and robust megastructures for scores of air commuters. However, even these airports are not spared the wrath of disasters and emergencies.

Some recent examples of airports affected by natural disasters in India are as follows:

1. Gujarat Floods, 2017-affected Ahmedabad International Airport.
2. Chennai Floods, 2015-affected Chennai Airport.
3. Cyclone Hudhud, 2014-affected Vishakhapatnam Airport.
4. Heavy Rains in Delhi, 2013 and 2011-affected Terminal 3 of Delhi's Indira Gandhi International Airport.
5. Mumbai Floods, 2015-affected Mumbai Airport.

Disasters and emergencies can lead to a lot of adverse impacts on the airports, some of them are listed below:

1. Inundated runways leading to disruption of flights.
2. Damage to runways jeopardising the take-offs and landings.
3. Damage to air surveillance installations leading to impairment of Air Traffic Control operations.
4. Damage to fuel systems and fuel farms which in turns poses a great potential risk for aircrafts.
5. Cancellation of flights due to inclement weather conditions.



6. Emergency landing/crash due to bad weather.
7. Partial to substantial damage to the airport infrastructure due to cyclones.

One of the most recent instances that highlight the vulnerability of airports in India to the ravages of natural hazards was the plight of Chennai airport during the floods of December 2015. In what was referred to as the worst floods in 40 years in Chennai, the Chennai Airport was submerged leading to disruption of operations. More importantly, 3500 passengers were left stranded at the airport because of the floods.

More recently, during the 2017 Gujarat Floods, the Ahmedabad Airport also sustained severe damages. Due to the heavy torrential downpour, the Ahmedabad airport's runway was damaged leading to the diversion of flights to Mumbai airport. As India's civil aviation sector expands, it behoves the decision makers to incorporate risk sensitive planning in airport construction and maintenance to ensure the functioning of airports during exigent circumstances.

Since 1958, India has witnessed 19 airplane mishaps that have caused to several deaths. At present there are 122 airports in India operated by the Airports Authority of India (AAI). To protect these airports and the flights operating there needs to be concerted airport disaster management provisions. Another important factor to consider is that the resilience of airports and airport staff is of paramount importance to ensure an effective and immediate response to crisis and disaster. This is because airports are key to ensuring the smooth and quick flow of relief in the aftermath of a disaster or emergency.

There has been an effort to address airport safety need in India. In a workshop jointly organized by AAI and UNDP in October 2015, several issues concerning the safety of airports in the face of emergencies brought about by natural hazards was discussed. Follow up actions were enlisted.

Speaking at this workshop, the then Chairman of AAI said, "The surge in demand for transporting lifesaving supplies in the immediate aftermath of disaster can often delay or stop relief from being delivered to people in need. Airports need to prepare themselves effectively for natural hazards."

UNDP and AAI have jointly organized Get Airports Ready for Disasters (GARD) workshops at Guwahati and Patna airports. The workshops examined the capacity of these airports to deal with sudden

increases in volumes after disasters; finalize detailed preparedness and actions plans; and develop capacities of airport personnel to respond more efficiently to emergencies. UNDP also supported the pilot implementation of a disaster management planning and preparedness in Bagdogra and Vishakhapatnam airports.

To counter the vulnerability of the airports to such disasters, the following Airports Safety Regulations have been promulgated:

1. Corporate Safety Management System Manual has been prepared by Airports Authority of India (AAI) in 2015, on the lines of International Civil Aviation Organization (ICAO) Guidelines. It is applicable at all locations/ aerodromes, and also details the practices, processes and procedures to achieve these Safety Requirements, which are essential for safe Air Navigation Services & Airport Operations in air space & at airports.
2. ICAO (International Civil Aviation Organization) Safety Management Manual, 2013 is intended to provide Countries/ States with guidance on development & implementation of a State Safety Programme (SSP), in accordance with International Standards and Recommended Practices (SARPs). The manual also provides guidance material for the establishment of Safety Management System (SMS) requirements by States (Countries).
3. Communication, Navigation & Surveillance (CNS) Manual 2015 by AAI is intended to establish the CNS procedures and to provide information and instructions pertaining to CNS facilities, which are essential for the provision of safe and efficient air traffic services by

AAI, including the coordination with neighbouring / adjacent states.

4. Air Safety Procedures Manual, 2014 has been prepared by DGCA. The Manual has been developed for use and guidance for officers of Air Safety Directorate in the performance of their duties. All matters pertaining to Air Safety Officers duties, responsibilities and procedures have been covered with clarity, to the fullest extent possible, in this detailed manual.
5. Civil Aviation Regulations (CAR) were issued to specify the detailed requirements and compliance procedures for the establishment of Safety Management System. Primarily the thrust of CAR is on the aviation safety-related processes, procedures and activities for establishment of SMS, also including the safe transportation of dangerous goods, flight crew standards and air traffic management etc.
6. Aircraft Act 1934 confers power to Central Government to regulate Civil Aviation in India. As per Section 4A of the Act, DGCA or any other officer empowered by Central Government shall perform safety oversight functions in respect of matters specified in this Act. Section 5A of the Act empowers DGCA to issue directions for securing safety of aircraft operations.
7. Aircraft Rules 1937: In the exercise of the powers conferred under the sections of Aircraft Act 1934, the Central Government has made the Aircraft Rules, 1937. Part III of the Aircraft Rules is specifically focused on General Safety Considerations, which addresses the Rules 21 to 29 applicable to the Aircraft, including the safety

management system, safety of the aircraft etc.

8. Airports Authority of India Act 1994 (Amended in 2003) provides undertaking of the airports to AAI for better administration and cohesive management of airports and civil enclaves. The Act highlights the functions of AAI, including the provision of air safety services, search & rescue operations, in coordination with other authorities and ground aid support facilities.
9. The Suppression of Unlawful Acts Against Safety of Civil Aviation (Amendment) Act 1994 mainly highlights the safety and security related offences and committing of unlawful acts at the airport, followed by the powers of investigation, and the subsequent judiciary mechanism to address the same.
10. Airport Fire Service in India Airport Rescue and Fire Fighting (ARFF) services provided at 67 airports as per guideline provided by International Civil Aviation Organization (ICAO) & Directorate General of Civil Aviation (DGCA).
11. Fire Training establishments which are responsible for ensuring that safety services are well organized, equipped, staffed in such a manner to fulfill its principal objectives of Airport Rescue and Fire Fighting Services (ARFF).

Time has come for AAI and NDMA to join forces to ensure safety of India's airports from national disasters as well as enhancing the role and performance of India's airports before, during, and after a disaster to manage and reduce risks. Perhaps such joint action will place AAI and NDMP of India in a lead position in South Asia. ■

— AIDMI Team