

'Sharing is Caring'

If you have friends preparing for Civil Services, tell them that they can also receive Updates from PrepMate IAS by sending 'Name' and 'State' through WhatsApp on 75979-00000

1. South Korea Plane Crash leaves 179 people dead: How do bird strikes impact flights?

South Korea Plane Crash

BIRD STRIKE, LANDING GEAR GLITCH

INSIDE SOUTH KOREAN PLANE CRASH



All passengers except two crew members of a flight were killed in an aviation accident in South Korea recently, when an aircraft skidded off the runway during landing, hit a wall and burst into flames at the Muan International Airport.

The Jeju Air flight 7C2216 was arriving from the Thai capital Bangkok to Muan, nearly 300 km

from the capital Seoul, with 181 people on board. With only two people rescued from the tail section of the aircraft, 179 people were reported dead. Given the death toll, it is among the country's biggest aviation accidents to date.

Lee Jeong-hyeon, chief of the Muan fire station, said in a televised briefing that workers were looking into various possibilities about what caused the crash, including whether the aircraft was struck by birds, he said.

Korean media agency Yonhap also cited airport authorities as saying a bird strike may have caused the landing gear to malfunction. A transport ministry official has said the control tower issued a bird strike warning and shortly afterwards the pilots declared mayday. However, it is not confirmed yet whether the flight said it struck any birds.

What are bird strikes and what can happen as a result of a strike?

Bird strikes are among the most common threats to aircraft safety, and they typically occur during the take-off or landing phases of a flight. Dozens of bird strike incidents happen each day but some can be more dangerous than others. Typically, when birds collide with an aircraft's airframe, it is unlikely to cause significant problems for the pilots flying.

But there are cases where the aircraft engine has ingested birds, causing damage to the power plants. This can lead to a loss of thrust for the engine and cause manoeuvrability problems for the crew. In these cases, where a jet engine ingests a bird, procedures would generally call for pilots to get the plane on the ground at the closest airport.

However, while most airframe bird strikes are not considered critical to air safety, if the collision has happened with a window or a windscreen resulting in cracking of the structure, pilots will look to land the plane as early as possible.

Could bird strikes be critical to air safety?

Smaller planes would generally be more susceptible to the dangers of bird strikes than larger ones. Also, modern jetliners are built with a number of redundancies and common passenger aircraft like Boeing 737 or Airbus A320 are designed to safely land with even a single engine.

However, given that bird strikes mostly happen during take-offs and landings, these incidents could distract the pilots during what are highly critical phases of a flight that demand the complete attention of the crew.

What causes bird strikes and what are some of the solutions to this problem?

In the simplest of terms, the presence of birds around an airfield increases the chances of a bird strike. In monsoons, as water puddles emerge in open grounds attracting insects to breed, it also increases the presence of birds in these regions.

In some cases, bird hits also happen at higher altitudes when a plane is cruising. These are more dangerous than the low-altitude hits given that they can cause rapid depressurisation of cabins. Other reasons for bird activity around an airfield could be the presence of landfills or waste disposal sites that attract a large number of birds.

For example, in 2019, the Ahmedabad airport saw 11 wildlife strike events every 10,000 flights. One of the key reasons behind this was the dismantling of a large garbage dump in Ahmedabad that was located almost directly in the trajectory of flights approaching the airport, a move that has caused the birds circling the landfill to disperse.

India's Ministry of Civil Aviation and the Directorate General of Civil Aviation (DGCA) has recognised wildlife strikes, including bird and animal hits, to aircraft as one of the "State Safety Priority", and the aviation regulator regularly carries out aerodrome inspections that are considered critical with regard to wildlife strikes. Aviation authorities, along with local agencies, work on reducing wildlife presence around airports from time to time.

A recent report in The Conversation further said, "The two largest manufacturers of passenger jets, Boeing and Airbus, use turbofan engines. These use a series of fan blades to compress air before adding fuel and flame to get the thrust needed to take off. Bird strikes in one of these engines can cause severe damage to the fan blades, causing the engine to fail. Engine manufacturers test the safety of these engines by firing a high-speed frozen chicken at them while the engine is operating at full thrust."

Relevance: GS Prelims; Internal Security

Source: Indian Express

2. Rising Risks for Airlines Amid the Russia-Ukraine War

Azerbaijani Airliner Crash



The crash of an Azerbaijani Embraer 190 airliner near Aktau, Kazakhstan, killing 38 people, highlights the perils of flying over the Russia-Ukraine conflict zone. The plane, en route from Baku to Grozny, was diverted and attempted an emergency landing after a suspected Russian anti-drone attack. Signs of depressurization, damaged control systems, and restricted landing

permissions suggest a complex and dangerous scenario for civilian flights in the area.

Investigations Underway

The recovered flight data and cockpit voice recorders will be key to determining the cause of the crash. The investigation involves multiple stakeholders, including Azerbaijan and the Brazilian manufacturer, Embraer. Early reports suggest the plane's control systems may have been affected by Russian air and drone defense measures, potentially explaining its erratic flight paths.

Geopolitical Implications

Azerbaijani and U.S. officials have blamed Russian air defense systems reacting to a Ukrainian drone attack. Russian President Vladimir Putin offered a partial apology to Azerbaijani President Ilham Aliyev, avoiding full acknowledgment of responsibility. This incident, occurring 500 miles from the Ukrainian border, underscores the growing role of drones as cost-effective weapons capable of causing widespread destruction far from conflict zones.

Call for De-escalation

The crash highlights the urgent need to de-escalate military actions in the region. A resolution hinges on Moscow's willingness to end its invasion of Ukraine and negotiate NATO's expansion. Failure to act risks further civilian casualties, collateral damage, and the involvement of additional regional players in the conflict.

Relevance: GS Prelims; International Issues

3. South Korea's Political Turmoil and the Need for Stability

Democracy Under Strain



South Korea's evolution from military dictatorship to democracy has been marred by corruption, abuse of power, and political vendettas. The impeachment of interim President Han Duck-soo, following the impeachment of President Yoon Suk Yeol, highlights deep vulnerabilities in the nation's political system. Governance has remained paralysed since Mr. Yoon's 2022 election, with

his presidency plagued by controversies and low approval ratings.

Martial Law and Public Outrage

Amid increasing tensions with the opposition-controlled National Assembly, Mr. Yoon's declaration of martial law earlier this month sparked protests, recalling the country's dark history under military rule. His impeachment marked an extreme response to the growing crisis. However, Mr. Han's brief tenure as interim leader has also ended in impeachment, a first in South Korea's history.

Constitutional Deadlock

At the heart of the crisis is Mr. Han's refusal to appoint three judges to the nine-member Constitutional Court. The opposition accuses him of delaying the impeachment process, while the ruling party claims only an elected President can make such appointments. This standoff risks prolonging the political and constitutional crisis, weakening democratic institutions at a time when South Korea faces economic challenges and security threats from North Korea.

The Path Forward

This crisis represents South Korea's most severe democratic challenge since its transition in the late 1980s. The political class must prioritize constitutional stability over partisan interests. The new acting President should work toward consensus on Constitutional Court appointments and expedite impeachment proceedings to restore governance and public trust.

Relevance: GS Prelims; International Issues