



ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY

AIR LAW TREATY SEMINAR

An overview of the Current aviation security threat landscape

February 2026

Dar es Salaam, Tanzania

Outline

- Background Information
- Civil Aviation as an attractive Target
- Types of Threats to Civil Aviation and effects
- Real Threat Incidents- Global Examples
- Categories Of Offenders
- Acts of Sabotage to civil aviation
- Emerging Threats to civil aviation
- Conclusion

Background Information 1/2

- The aviation industry continues to see evolving world-wide attacks against the security and safety of the travelling public, airports, aircraft, and aviation workers.
- Seriousness of threats against civil aviation and the necessity of appropriate, effective and sustained universal participation by ICAO Member States to counter and mitigate the associated risks involved, remains critical
- Industry collaborative interventions are necessary to counter the attacks against civil aviation, such as;

Background Information 2/2

- ✓ *Legislative framework and application of Aviation security measures aligned with relevant international air law treaties is necessary.*
- ✓ *States collaboration to apply uniform counter security measures to detect and prevent threats is necessary, to safeguard the industry, property and the traveling against these transnational crimes*

Why Civil Aviation is an attractive target

- Ability to inflict mass casualties
- Ability to inflict damage to economy or travel
- Ability to disrupt scheduled air travel
- Vulnerable due to high passenger traffic levels
- Attractive, high-profile target
- Symbolic statement generating media imagery
- Generates public anxiety
- Low risk of capture by perpetrators

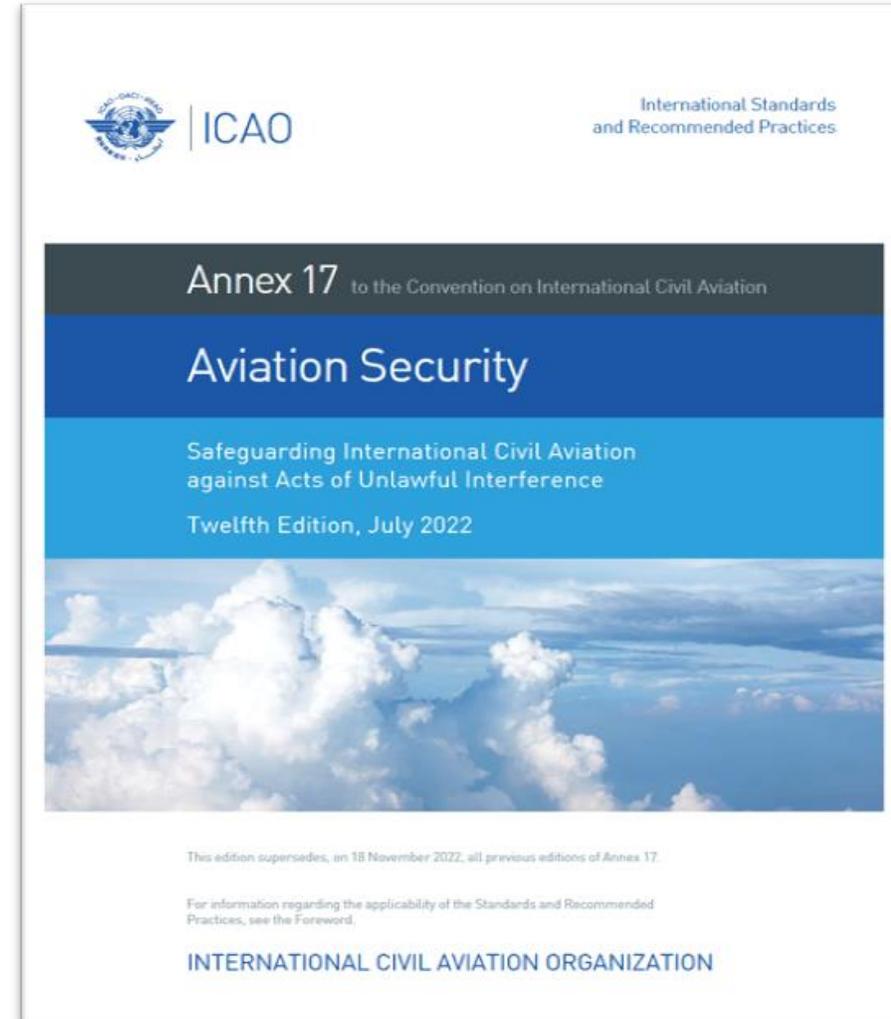
Types of Threats against Civil Aviation

- Collectively termed by ICAO as Acts of Unlawful Interference (Annex 17 - Security) to the Convention on International Civil Aviation(**Chicago Convention**) or Unlawful acts related to Int Civil Aviation(**Beijing Convention**)
- Annex 17 Standard 2.1.1

”Each Contracting State shall have as its primary objective, the safety of passengers, crew, ground personnel and the general public in all matters related to safeguarding against acts of unlawful interference with civil aviation.”

Definition of Acts of Unlawful Interference

- Unlawful seizure/hijacking of aircraft - (*Beijing Protocol 2010*)
- Destruction of an aircraft in service
- Hostage-taking on board aircraft or on aerodromes
- Forcible intrusion on board an aircraft, at an airport or on the premises of an aeronautical facility



Acts of Unlawful Interference (2/2)

- Introduction on board an aircraft or at an airport of a weapon or hazardous device or material intended for criminal purposes
- Use of an aircraft in service for the purpose of causing death, serious bodily injury, or serious damage to property or the environment
- Communication of false information such as to jeopardize the safety of an aircraft in flight or on the ground, of passengers, crew, ground personnel or the general public, at an airport or on the premises of a civil aviation facility

Explosive device
- cargo



Explosive device &
sabotage
Ground services &
catering



Hijacking



Threat to Civil Aviation



Terrorist -
missile threats



Explosive device - passengers



Threats to Civil Aviation

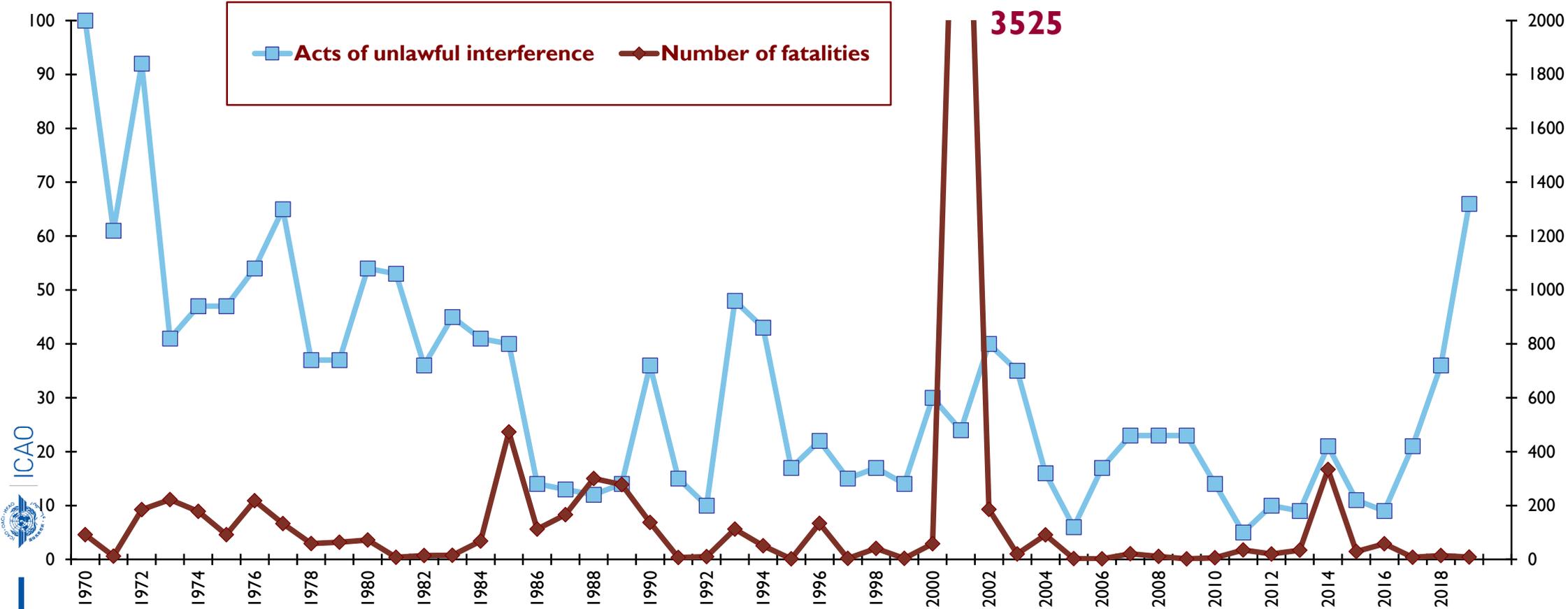


Suicide bomber

Threat Incidents - Global examples;

- Recent Intelligence and Events show a range of attack types:
 - ✓ artfully concealed complex Improvised Explosive Devices (IEDs)
 - ✓ Home made explosives
 - ✓ attacks targeting the plane
 - ✓ attacks (IEDs and small arms) against soft targets
 - ✓ Man-portable Air Defense Systems (MANPADS)
- Potential adversaries are becoming smarter on how to approach aviation:
 - ✓ insider/non-passenger exploitation
 - ✓ identifying more vulnerable areas

Acts of Unlawful Interference



@ ICAO 2024

Threat to Civil Aviation

S 1.11

Airport Attacks (1/2)

- Glasgow, Scotland (2007) – VBIED
- Moscow, Russia (2011) – suicide bomber with IED
- Karachi, Pakistan (2014) – heavy weapons and suicide vests
- Brussels, Belgium (2016) – suicide bomber with suitcase IED
- Istanbul, Türkiye (2016) – assault rifles and suicide vests

Airport Attacks (2/2)

- Ft. Lauderdale Florida (2017) – mass shooting
- Papua New Guinea (2018) – security breach/civil unrest
- Georgetown Grand Cayman (2018) – security breach
- Port Moresby, Papua New Guinea (2021) – security breach
- Cucuta, Colombia (2021) – explosions
- Bangkok, Thailand (2022) – security breach

Categories of Offenders

Two main categories

- Hijackers
- Saboteurs

In two forms

- Individuals
- Groups



Characters

- Criminals, refugees, psychotics
- Limited resources
- Limited technical expertise
- Unpredictable

Objective

Monetary gain,
criminal

Political asylum

Personal

Group Offenders

Characters

- Considerable resources
- Extensive technical expertise
- Special training

Objective

- Political
- Religious extremism
- ideological

Hijacking Techniques

Terrorist groups

- Organized with high visibility
- Command through flight deck
- Defined objectives

Individuals

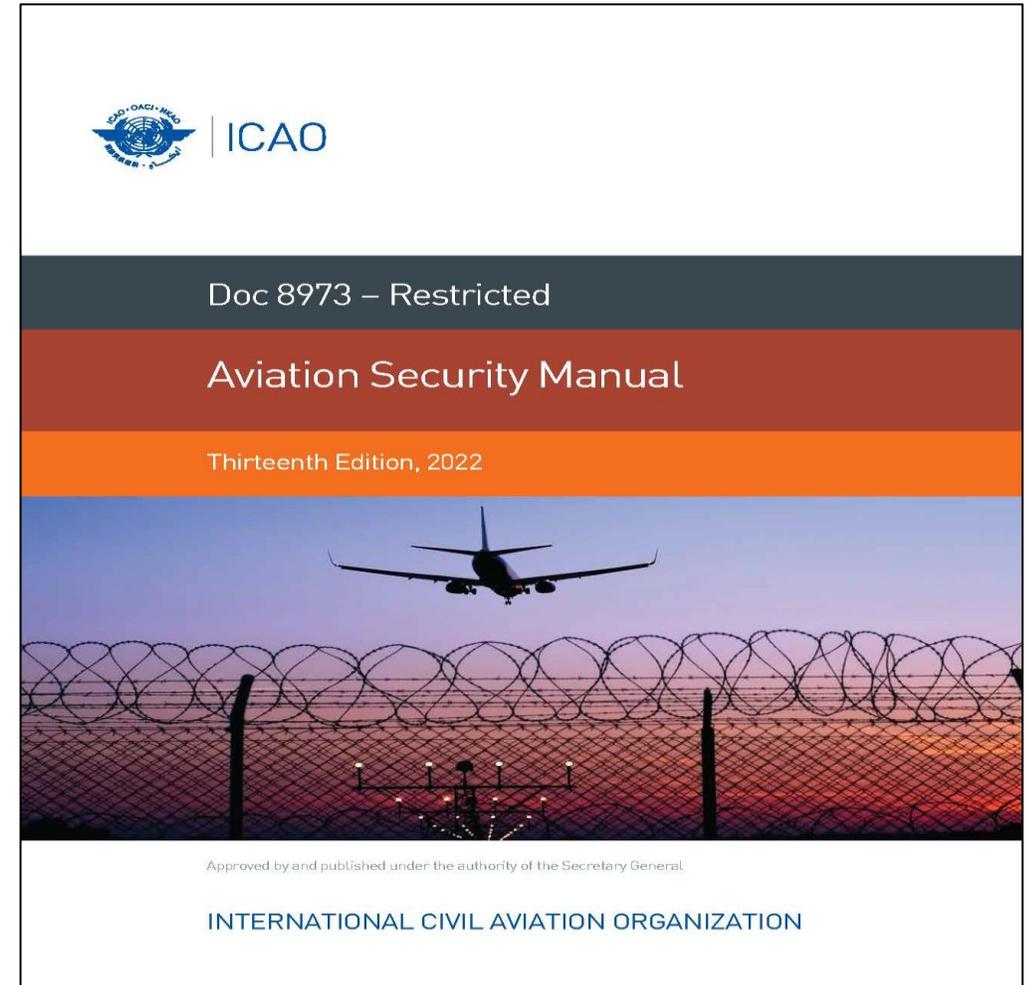
- Less organized
- Confused objectives
- Unpredictable behavior



SABOTAGE

ICAO Doc 8973 - definition...

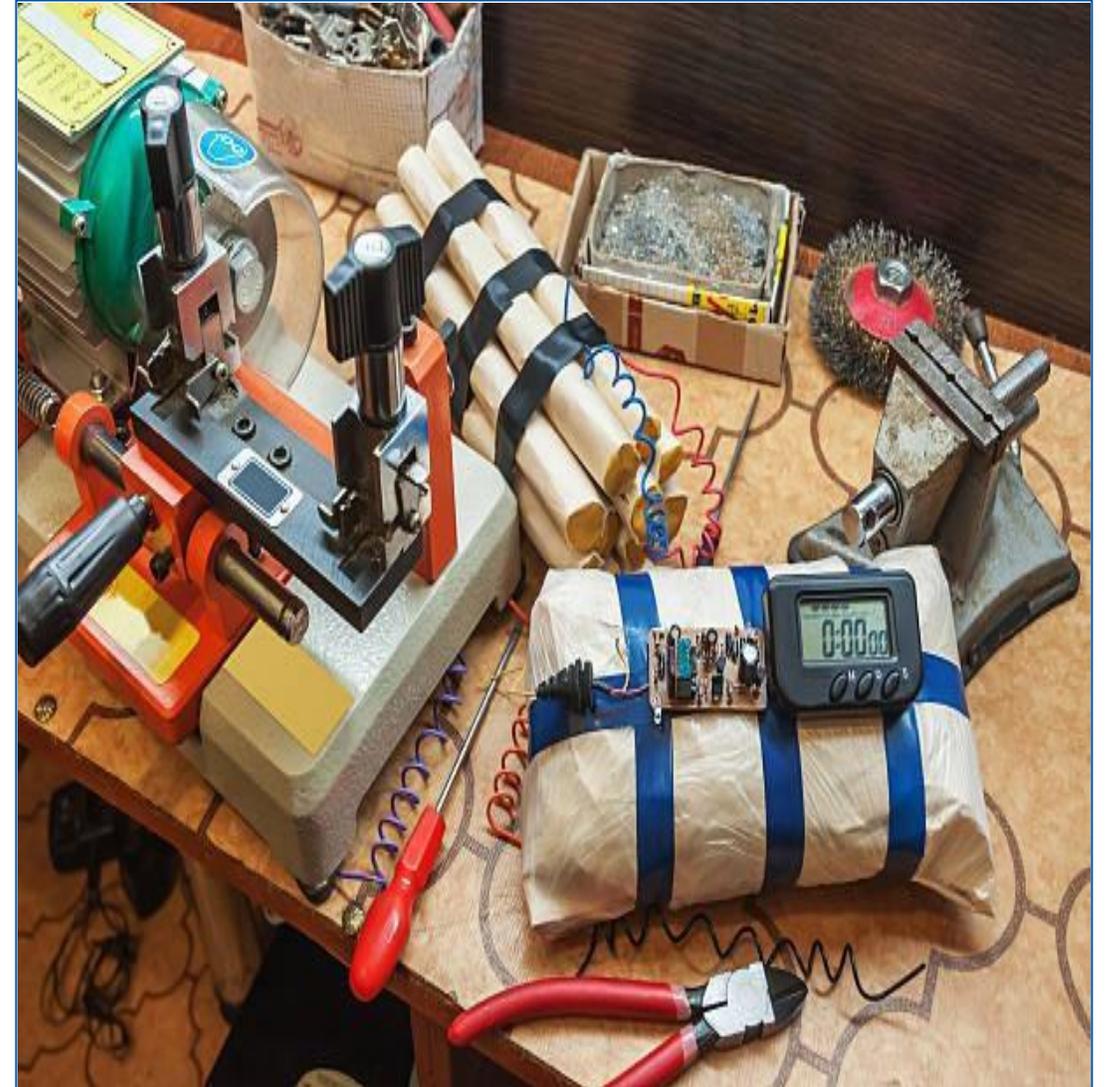
“An act or omission, intended to cause malicious or wanton destruction of property, endangering or resulting in unlawful interference with civil aviation and its facilities”



Sabotage Techniques (1/2)

Devices

- Explosives
- Incendiary
- Triggers
- Timers
- Pressure-sensitive devices



Sabotage Techniques (2/2)

Means

- Devices in checked /hold baggage
- Collusion with airport or airline employees
- Unsuspecting victim
- Suicide bombers



Example of Aircraft Bombing



PAN AM 103

- Lockerbie, Scotland, UK
- (Libyan PFLP terrorist) on 21 December 1988
- Frankfurt to Detroit via London
- Bomb exploded in flight
- **Killed 259 on board and 11 on the ground**

***Unaccompanied suitcase
with IED in hold baggage***



Airport Critical Points

“Any facility that, if successfully attacked will reduce the operational capability of the airport to an unacceptable degree”



Sabotage of Airports – vulnerable/Critical points

- Runway
- Passenger Terminal buildings
- Navigational Aids
- Electrical Power
- Air Traffic Control Communications
- Aviation Fuel Storage
- Rescue and Fire Fighting Services

Man-portable Air Defense Systems - MANPADS

- Large passenger/Cargo Aircraft

Attacks typically occur;

- At take-off
- In-flight at cruise altitude
- Landing mode



Example--Arkia Airlines MANPADS Attack

Attacked on take-off from Mombasa on 28 November 2002



Arkia Airlines MANPADS Attack



Recovered Launch Tubes



Po

police inspect area where one missile launcher was found

Emerging Threats



- Cyber-Attacks
- Insider Threat
- CBRN Attacks
- Unmanned Aircraft Systems(RPAS/DRONES)

Cyber-Attacks



These are Malicious attacks or attempts to access, steal or disrupt Aviation digital systems(ranging from ransomware encrypting data to phishing scams stealing credentials).*Eg the 2025 colins aerospace ransomware attack*

Insider Threat

The risk arising from aviation employees conducting or facilitating an act of unlawful interference through use of their authorized access, thereby giving them a tactical advantage



Insider Threat Incident

DAALLO AIRLINES 159



- **Mogadishu** – Djibouti Aden Adde Airport, Somalia **2 February 2016**
- A laptop bomb exploded on board 20 mins after takeoff. Bomber killed, two others injured. Aircraft landed safely.
- Attack intended for cancelled Turkish Airlines flight.

Laptop believed to have been passed to bomber by airport staff airside.

(al-Shabab)



CBRN Attacks

The malicious use of **Chemical, Biological, Radiological & Nuclear** materials or weapons with the intention to cause significant harm or disruption



Remotely Piloted Aircraft Systems (RPAS/ **DRONES**)



Attacks using drones have become a prominent feature of modern conflict and criminal activities worldwide, involving different actors targeting critical infrastructure;

Conclusion

- Mitigation of the evolving world-wide attacks against the security and safety of the travelling public, airports, aircraft, and aviation workers call for collective efforts,
- Mindful of the Seriousness of threats against civil aviation, the international community came up with the **2010 Beijing Convention and Protocol**, to modernize the legal framework for aviation Security.
- All acts constituting new and emerging threats(*highlighted*), including certain preparatory acts for the offences are criminalized under the **Beijing Instruments**.
- The Beijing Instruments also contribute to the implementation UN Global Counter-Terrorism Strategy 2006 by enhancing the global treaty regime on counter-terrorism
- States are urged to ratify these international legal instruments, to strengthen the capacity of States to prevent the commission of these offences, prosecute and punish those who commit such offences.

Thank You

