



AVIATION RISK INTELLIGENCE BRIEFING – APRIL 2025

ABOUT

Aviation Risk Intelligence Briefs (ARIBs) deliver a forward-looking snapshot of the top aviation threats for the next 30 days—along with early warning signals of risks on the horizon. Each brief distills complex geopolitical, environmental, cyber, and regulatory developments into clear, actionable intelligence for aviation leaders and policymakers.

Note that ARIBs are generally derived from public records and are not meant to be exhaustive or complete assessments of every issue.

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CONTACT

INFO@AVIATIONRISKINTEL.COM

Table of Contents

Executive Summary	3
Primary Threats	3
Risk Mitigation Recommendations	4
Global Threat Overview	4
Key Trends in Aviation Risk	4
Geopolitical Risks	4
Regional Threats and Advisories	5
Environmental and Natural Hazards	5
Emerging Conflict Zones.....	7
Spotlight Analysis: Militarized Airspace - A Growing Threat to Civil Aviation	8

Executive Summary

- **Persistent Geopolitical Flashpoints:** Renewed conflict in the Red Sea, combined with ongoing tensions in the Taiwan Strait and the war between Russia and Ukraine, continues to impact aviation operations. Unfortunately, little relief is ahead in the next 30 days.
- **Growing Tariff Pressures:** Trade tensions between the U.S. and key global partners are intensifying, with new or threatened tariffs on aerospace components, electronics, and rare earth materials. These measures may increase operational costs and introduce delays in maintenance and aircraft production cycles, particularly for airlines and MRO providers reliant on international sourcing.
- **GPS Interference from Electronic Warfare:** Electronic warfare incidents continue to affect flights operating in the Black Sea, Eastern Mediterranean, and the Levant. Although incidents do not appear to be directly targeting non-military aircraft, thousands of incidents have been recorded in the last twelve months alone.
- **Surging Cyber Security Threats Across Aviation Infrastructure:** Continued cyberattacks — including ransomware and phishing — are now targeting smaller aviation operators and regulatory bodies.

Primary Threats

- **High-Risk Regions** - Yemen, Taiwan Strait, North Korea, and Eastern Europe
- **Threats to Monitor** -
 - GPS/electronic warfare near military zones
 - Sudden ATC reroutes due to U.S. or allied drills
 - Cybersecurity vulnerabilities exploited amid regional crises
 - Political developments that could impact flight paths or lead to temporary restrictions

Risk Mitigation Recommendations

1. **Route Planning Based on Military Activity** - Establish thresholds for rerouting based on nearby conflict or live-fire exercises. Proactively use conflict zone briefings and military NOTAMs.
2. **Upgrade Navigation Resilience** - Install and test alternative navigation systems (e.g., inertial backup) in regions impacted by electronic warfare.
3. **Coordination with Ground-Based Intelligence** - Cross-check geopolitical risk alerts with airport and flight information region operations for conflict-adjacent zones.

Global Threat Overview

Key Trends in Aviation Risk

- **Trend 1 - Militarization of Civilian Air Corridors** - Flight paths near conflict zones are increasingly intersecting with military zones, particularly around the Red Sea, Taiwan Strait, and Eastern Europe.
- **Trend 2: Rise in Navigation System Interference** - Jamming/spoofing incidents are escalating, disrupting cockpit displays, and triggering false proximity warnings in affected regions.
- **Trend 3: Political Influence on Airspace Regulations** - Increased regional tensions may lead to rapidly changing airspace regulations. Owners and operators should stay updated on political developments that might impact flight paths.

Geopolitical Risks

- **Red Sea/Yemen** - The U.S. has resumed airstrikes on Houthi targets in Yemen following a months-long campaign by the Iranian-backed group that sank two ships and killed four sailors since November 2023. While earlier strikes under President Biden were limited, the second Trump administration appears to be escalating, now hitting Houthi leaders in urban areas. Iranian media aired footage of civilian casualties, and President Trump has not ruled out direct strikes on Iran if nuclear talks stall [[Associated Press](#), March 2025]. We assess with high confidence that the risk to aviation in the region appears to be at an all-time high, with further destabilization likely.

- **South China Sea** - In March, the U.S., Japan, and the Philippines held joint naval drills near a disputed South China Sea shoal as Chinese forces maneuvered nearby [[Associated Press](#), March 2025]. Such drills, by both sides, have become routine, raising risks of miscalculation in a region crisscrossed by vital air corridors. Yet attention remains fixed on the Taiwan Strait, where China broke single-day sortie records and appears to be developing amphibious landing barges with extendable piers—echoing WWII-era invasion tactics [[AEI](#), March 2025].
- **Black Sea/Eastern Europe** - Areas around the Black Sea and Eastern Europe continue to experience GPS spoofing and signal jamming incidents, attributed to Russian electronic warfare activities against Ukrainian military aircraft. These disruptions pose significant risks to civilian aviation operations in the region and should be accounted for if flying in the region ([Inside GNSS](#), March 2025)

Regional Threats and Advisories

- **Middle East and North Africa (MENA)**
 - **Concerns:** Hostilities in Yemen and Syria; GPS interference; regional airspace unpredictability.
 - **Advisory:** Avoid low-altitude operations near Yemen; monitor NOTAMs for sudden restrictions. Consider alternate routes where possible.
- **East Asia / Indo-Pacific**
 - **Concerns:** Rising tensions in the Taiwan Strait; North Korean missile activity; South China Sea flashpoints.
Advisory: Reroute flights during joint military drills; verify ATC communications in disputed areas.
- **Arctic**
 - **Concerns:** Increased military activity and Arctic patrols; coordination challenges near Russian airspace.
 - **Advisory:** Monitor polar route conditions and early warning notices; confirm deconfliction protocols when flying trans-Arctic routes.

Environmental and Natural Hazards

- **Southeast Asia** - Myanmar's devastating earthquake on Friday, March 28th, will likely have limited impacts on regional aviation operations. However, the earthquake's initial shake and subsequent aftershocks being felt in neighboring

Thailand and China will likely renew calls for stronger building regulations, especially since the quake is allegedly responsible for toppling an unfinished skyscraper in Bangkok located more than 621 miles from the epicenter of Friday's earthquake ([BBC](#), April 2025).

- **United States** - Warmer and drier conditions are expected across much of the U.S. from mid to late April, with an increased risk of early-season wildfire impacts in the West and convective weather disruptions in the Southern Plains and Lower Mississippi Valley. If storms develop, localized thunderstorms may lead to delays or diversions at major hub airports such as Dallas-Fort Worth International Airport (ICAO: [KDFW](#)), George Bush Intercontinental Airport (ICAO: [KIAH](#)), and Hartsfield-Jackson Atlanta International Airport (ICAO: [KATL](#)) [[NOAA](#), March 2025].

Emerging Conflict Zones

Region	Risk Indicator	Aviation Implication(s)
Red Sea / Yemen	Renewed military operations against Houthi military members/sites	Airspace closures
Taiwan Strait	Military drills, near-daily ADIZ incursions	Conflict and/or airspace closure
Ukraine / Black Sea	GPS spoofing, active military operations	Interference from electronic warfare operations
North Korea	Intercontinental ballistic missile launches	Launch window avoidance
Syria / Iraq	Military operations	Risk of collateral airspace conflict
Philippines / SCS	Military drills	Contested ATC guidance
West Africa (Sahel)	Militant activity	No-fly zones, political instability
Arctic	Military drills, growing resource competition	Growing risk of accidental conflict

Spotlight Analysis: Militarized Airspace - A Growing Threat to Civil Aviation

Overview: As tensions flare globally, a growing number of flight operating areas are overlapping with conflict zones, leading to navigation disruptions, spoofed ADS-B signals, and ATC rerouting without prior warning.

Case Study: As global conflicts intensify, civil aviation is increasingly exposed to risk in contested airspace, especially where military operations overlap commercial routes. One of the clearest examples is the growing electronic warfare footprint over the Black Sea and Eastern Mediterranean, which is disrupting cockpit systems and affecting thousands of flights [[Reuters](#), May 2024].

Incident: Between late 2023 and early 2025, up to 1,600 civilian aircraft per day have reported GPS jamming or spoofing incidents, especially while operating near Cyprus, Israel, Syria, and the Black Sea [[The Times](#), March 2024].

Impact: Flights impacted by jamming or spoofing experience degraded navigation performance, cockpit alerts (e.g., false terrain warnings), and required contingency rerouting [[Dyami](#), September 2023].

Key Takeaway: Civilian aircraft are increasingly at risk from spillover effects of military conflict, especially where airspace is congested with surveillance operations, air defense activity, and electronic warfare. Operators must integrate electronic warfare risk assessments into flight planning, particularly over regions bordering active conflict zones.