
Human Performance Impacts of Civil Aviation Operations in Conflict Zones

Exceptional operations require exceptional safeguards.

INTRODUCTION

Operations in or near conflict zones need to be considered exceptional circumstances. These often include conflict-driven rerouting, airspace instability, recurrent security restrictions, GNSS interference, and sustained operational uncertainty that may persist for months or years. The duration does not make them routine.

A primary safety risk in prolonged crises is **normalization**: abnormal conditions can gradually come to be treated as ordinary because they recur without an immediate catastrophic outcome. Repeated uneventful operations are not, by themselves, evidence that risk has become acceptable, stable, or adequately controlled.

These operations present multiple complexities that add significant known and unknown risks with a profound impact which can directly endanger aircraft, passengers, and crew. These risks are not merely theoretical but require human performance considerations. Such environments create real-world threat conditions that cannot be fully anticipated or trained within normal aviation operations.

EXCEPTIONAL CIRCUMSTANCES

ICAO typically refers to "exceptional circumstances"¹ as unusual, unforeseeable, and unavoidable situations beyond an operator's control that justify deviations from normal operating standards, temporary restrictions on airspace, or the granting of regulatory exemptions. Such exemptions should be temporary and time-bound exceptions from regulations and should be supported by a safety risk assessment ensuring that an equivalent level of safety is maintained.

¹ Article 9b of the Chicago Convention Doc 7300, including article 38 and ICAO's Safety Oversight Manual doc 9734 supplemented by the HLCC 2021 recommendations 1/1

To quote the United Nations Office of the High Commission on Human Rights, “Passengers and flight crew cannot be left at the mercy of States and airlines who put revenue and other motives ahead of safety.”²

FIT-TO-FLY

Standard Fit-to-Fly principles remain fully applicable to operations in conflict zones and must be strictly upheld. Pilots are required to assess their own fitness prior to duty and must retain the absolute right to declare themselves unfit to fly, regardless of the reason. The I'M SAFE checklist³ is one commonly used method for such self-assessment.

Contributing factors affecting fitness may include fatigue, stress, or psychological strain, including the moral burden associated with operating in high-threat environments. This process must be explicitly non-punitive and aligned with Positive Safety Culture principles. A pilot's decision to declare unfitness is to be regarded as a proactive safety action rather than a disruption to operations.

COMMANDER AUTHORITY⁴

IFALPA urges operators to recognize the mental and emotional strain that conflict zone operations can impose on pilots. Therefore, the Commander's decision regarding the conduct or rerouting of a flight, including refusal to overfly a conflict zone, must be final and nonnegotiable. Additionally, this decision must not be influenced by financial or other incentives, career repercussions or other penalties, or commercial pressures. The Commander must make their decision solely according to safety and security factors. Accordingly, all affected operators should explicitly codify these provisions in their Safety/Security Policy and clearly communicate them internally.

DEGRADATION OF HUMAN PERFORMANCE

Conflict zone operations inherently introduce human performance degradation. This includes hypervigilance, cognitive overload, stress-induced fatigue with reduced recovery, automation mistrust due to GNSS interference, and operational uncertainty associated with rapidly changing conditions. These factors increase workload significantly, degrade decision-making, situational awareness, and crew resource management, and create non-linear risk escalation that is not captured in standard procedures.

²https://www.ohchr.org/sites/default/files/Documents/Issues/Executions/StatementCommercialAirlinesConflictZones_Jan2021.pdf

³I'MSAFE is an acronym for a personal fitness to fly checklist: Illness, Medication, Stress, Alcohol, Fatigue and Emotion

⁴https://www.ohchr.org/sites/default/files/Documents/Issues/Executions/StatementCommercialAirlinesConflictZones_Jan2021.pdf

While avoidance remains the safest strategy, when operations in these areas are unavoidable, layered risk mitigation combining human performance, safety and security briefing, planning, vigilance, and training is essential. Nevertheless, a reduction in human performance should be anticipated due to sustained exposure to elevated threat environments.

PILOT SUPPORT/DUTY OF CARE

Conflict zone operations present unique wellbeing concerns. Regulators and operators share a clear duty of care to anticipate and mitigate the psychological impact of these operations on aircrew. Exposure to these complex and high-risk environments may lead to acute stress symptoms, sleep disturbance and insomnia, impaired concentration, and heightened anxiety reactions in the short term. Without appropriate safeguards, this exposure may result in the longer-term development of unhealthy coping mechanisms, relationship breakdown, and/ or progress into psychological conditions leading to the potential loss of medical certification with serious career and financial impact.

Mitigation measures need to ensure post-flight recuperation opportunities, the provision of confidential support, whether peer-based or professional, that encourages early health care-seeking behavior. The measures must be designed to reduce anxiety and encourage disclosure without fear of consequences. Crews also need support to sustain self-care under significant moral and psychological strain.

Support systems should ensure confidentiality, psychological safety, trust, and recovery. The lack of any of these may become barriers to seeking help.

FATIGUE RISK MITIGATION AND FLIGHT TIME LIMITATIONS (FTL)

IFALPA calls on operators to implement robust mitigation strategies before flight duties are planned with anticipated exceedances of standard flight time limitations. These strategies should address compounded fatigue risks, including sleep disruption, inability to achieve restorative rest leading to circadian disruption, and cumulative hypervigilance fatigue. Measures must go beyond basic FTL compliance to ensure genuine “fitness to fly” under these conditions.

If rerouting, delay, holding, elevated workload, diversion complexity, or sector uncertainty are recurrent and foreseeable, they should be incorporated into scheduling assumptions, fatigue controls, and roster buffers with additional safety margins such as augmented crew rostering, rather than repeatedly managed as an ad hoc exception.

Routine reliance on commander’s discretion to absorb predictable disruption is a safety signal that the operation is being scheduled as ‘normal’ rather than reflecting the true operational burden. Regulators and authorities should mandate that operators maintain detailed records of such operations for oversight. Any exemptions or mitigations should be strictly monitored, remain specific to the conflict context, and be rescinded immediately upon cessation of hostilities to prevent normalization of degraded standards.

LICENSING AND TRAINING

In the event of a protracted conflict, authorities and operators should proactively mitigate potential disruptions to recurrent training access. Training standards and frequency needs to be upheld to ensure continued proficiency.

POSITION

Exceptional operations require exceptional safeguards. Conflict zone operations must continue to be treated as exceptional circumstances regardless of duration, as the passage of time does not reduce risk or diminish operational complexity. Normalisation of degraded conditions must be actively prevented, particularly where repeated uneventful outcomes may mask underlying and evolving hazards. Fatigue management, fitness-to-fly decisions, commander authority, and mental health protections must reflect the true operational burden on aircrew and remain free from commercial or operational pressure.

IFALPA calls on operators and National Aviation Authorities to ensure that these protections are explicitly embedded, actively supported, and never compromised.