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Osprey Flight Solutions

A new age for aviation risk management

Whitepaper

Iraqi Airspace: Is your flight risk mitigation data giving you all the facts?

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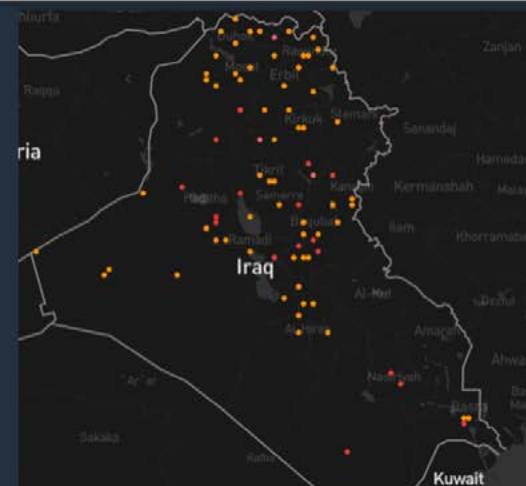


In October 2021, the US and Canada’s flight regulators changed their status of Iraqi airspace from full restriction to unrestricted above FL320. They join France and the UK, and also Germany and EASA in declaring Iraqi airspace safe to fly at certain altitudes. However, since October Osprey’s unique data led risk assessment process has identified an increase in relevant incident types in Iraq, which remains an active conflict zone.

While government regulators have political and economic considerations which will, in part, inform their flight risk assessments, it is also of concern that several of the world’s leading risk management and intelligence companies are not reporting on the significant deterioration in Iraqi airspace, which we strongly believe will put commercial flights at risk.

Our revolutionary and cutting-edge aviation risk assessments determine that there are several critical issues present within Iraqi airspace. As a result of these issues converging, the current situation over Iraq has all the makings of an airspace environment where another tragic event, like the Ukrainian International Airlines passenger flight PS752 being shot down, could occur.

Osprey: Explore graph and ‘ping’ map showing Iraq locations of non-state actor drone use, attacks on air assets inflight, missile launches & airport/airbase attacks



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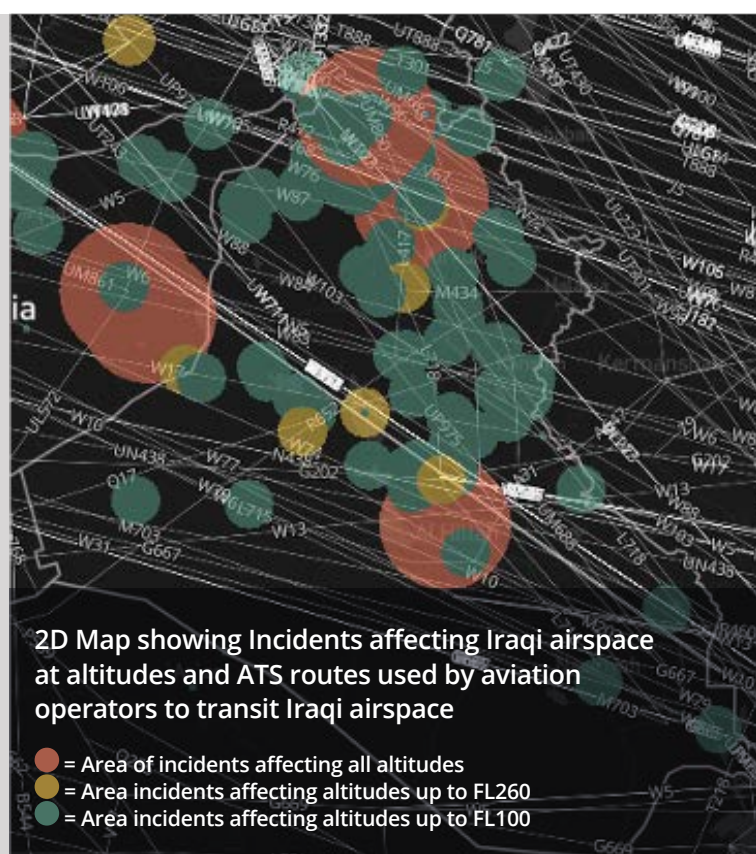


This is a serious issue and one in which we have been reporting on for many months. In an [article](#) published in October 2021, we reported on the regulatory developments and the activities, issues and threats to Iraqi airspace. We also published a [case study](#) a month prior in which we discussed the evolving airspace operating environment over Iraq.

Do you trust your flight risk mitigation data?

By seamlessly integrating cutting-edge technology, including the power of Artificial Intelligence (AI), in combination with industry leading aviation centric analysis expertise, the [Osprey risk assessment system](#) is the most powerful resource in the aviation industry for understanding the risks in the global aviation operating environment. We deliver an accurate, objective and dynamic picture of the threat to airspace.

Following a quantified risk assessment of FIR Baghdad (ORBB) at three altitudes we report the risks/threats for Iraqi airspace shown overleaf



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All-Altitude Air & Air-Defence Weapons

Iranian-Backed Militant Groups: Evolving Air Defence Threat

Iraqi Iranian-backed militant groups (IBMGs) are known to be in possession of the Iranian-made '358' air-defence system, which is assessed to be capable up to at least FL320. IBMGs have also procured a variety of Russian and Iranian made man-portable air-defence systems (MANPADS) capable up to FL260.

A report on the 10 June indicated that an Iraqi IBMG is in possession of Russian-made 2K12 Kub (SA-6 GAINFUL) conventional surface-to-air missile (SAM) systems. These missiles have the capability to engage aircraft at altitudes up to FL450 and at ranges out to 24km. An international media outlet has reported that an Iraqi IBMG launched SA-6's at two US Air Force fighter jets over Dayr az Zawr in an unsuccessful shoot-down attempt.

IBMGs currently operate freely across the Syria-Iraq border. While at present the IBMGs appear to have the SA-6s deployed in eastern Syria, we assess IBMG deployment of SA-6 systems within Iraq to be a credible emerging scenario going forward.

Iraqi Army Air Defence Activity: Potential for Misidentification

The Iraqi Army possesses Russian-made Pantsir-S1 (SA-22 GREYHOUND) conventional SAM systems capable up to FL490 and out to 20km (12.4 miles), as well as US-made Avenger air-defence systems capable up to FL260. On 29 January 2022, an Iraqi military SA-22 air-defence unit mistakenly identified a US-led coalition drone as a hostile target and unsuccessfully attempted to shoot it down. In late 2021, the Iraqi military deployed SA-22 conventional SAM systems to the Baghdad area to defend against military-grade weaponised drones launched by IBMGs.

US Military Air & Air Defences: All Altitude Operations

The US military has various anti-missile systems, counter-drone weapons and/or short-range air defences deployed at several locations in Iraq and east/northeast Syria, some of which are capable well above FL260. Such weapons have been employed on a number of occasions since 2021 to shoot down rockets and drones targeting airports/airbases in Iraq where US military forces are present. In addition, US-led coalition fighter jets with air-to-air missiles capable well above FL260 frequently operate over Iraq and east/northeast Syria. On 31 January and 12 February, IBMG Iranian-made military-grade weaponised drones were shot down by the US-led coalition over central Iraq.



Missiles, Rockets & Drones

Iraqi IBMGs are reportedly equipped with a variety of military-grade and commercial drones. Of most immediate concern are the **Shahed-136 drones** which have an approximate range of 2,000-2,200km - therefore potentially capable above FL300.

Since the start of 2022, suspected Iraqi IBMGs have attempted over 40 rocket and **drone attacks** in Iraq and Syria, mainly against locations where US interests are present. In addition, Iraqi IBMGs have displayed the capability and intent to target sites in Israel, Saudi Arabia and the **UAE** via drones.

The Iranian military and IRGC forces are equipped with a variety of cruise missiles, medium-range ballistic missiles (the most capable of which can reach 2,000km) and short-range ballistic missile (SRBM) variants. On multiple occasions since 2018, Iran has launched SRBMs, guided rocket artillery and/or military-grade weaponised drones into Iraq - all without NOTAMs issued in advance. These represent an all-altitude hazard.

The following SRBM attacks have been reported:

September 2018, June & September 2020, & September 2021, Iran conducted SRBM, guided rocket artillery and/or drone strikes against Kurdish rebel groups in the Iraqi Kurdistan Region.

12 March 2022 the IRGC launched 12 Fateh-110 SRBMs from the northwest Iranian city of Tabriz into Erbil province, targeting a compound owned by the head of the KAR Group energy company.

7 January 2020 the IRGC launched 16 SRBMs targeting US military sites in Iraq at Ain Al Asad Air Base and Erbil International Airport.

11 May 2022 the IRGC conducted guided rocket artillery strikes and military-grade weaponised drone attacks on Kurdish rebel group sites in northern Iraq's Kurdistan Region within eastern areas of Erbil province, along the border with Iran.

Outlook

Whilst there are no indications that any of these actors intend to directly target legal civil aviation flights, the intent of the militants to target military aviation assets both in flight and on the ground is highly concerning. Iraqi IBMG air-defence units, the Iraqi Army and US military air-defence in eastern Syria and Iraq are all assessed to be on a heightened alert status which means there is increased potential for miscalculation and/or misidentification at present over Iraqi airspace at all altitudes.

Risk assessment recommendations

We are recommending deferring flights over the entirety of FIR Baghdad (ORBB) subject to an operation-specific risk assessment. Should flights be undertaken, at a minimum, you should consider the following risk mitigation measures in the airspace:

- ◆ Systemic risk assessment of each flight with automated threat intelligence integration;
- ◆ Flights over FIR Baghdad (ORBB) should occur during daylight hours only;
- ◆ Flights at Iraqi airports should be during daylight hours only & on short turnaround schedules;
- ◆ Security and operational risk-based identification of pre-planned divert airports;
- ◆ Defer diverting from flight plan except for ATC instruction or life-threatening situations;
- ◆ Reliable and redundant communications with an established communication plan;
- ◆ Fully coordinated and robust emergency response plan supplemented by asset tracking.

The incidents we have highlighted above are not insignificant or niche incidents – they have all been pulled from open source information to build up a clear and comprehensive understanding of the risk. It is concerning that other risk advisory companies, and indeed governments, have access to the same information (the very definition of open source information) yet come to very different conclusions. Either they are not picking up on this, which is concerning and should make you ask some hard questions of your information providers, or they are picking it up and are drawing very different conclusions - in which case you may need to ask some even harder questions about how they come up with those conclusions if they know these incidents are happening.

If you want to find out more about how we developed this assessment and our leading aviation risk assessment tools that you can use to gain a better understanding of the risk facing your flight operations, please get in contact today.

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