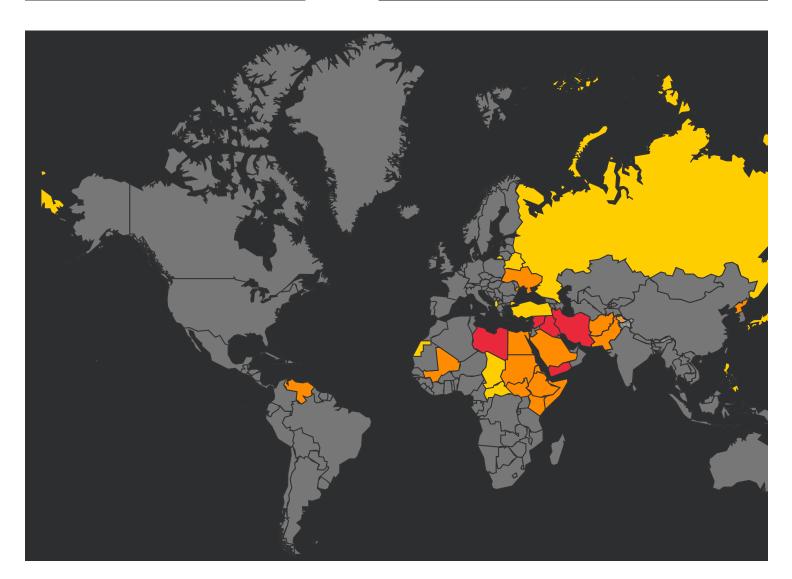
WORLD AIRSPACE RISK SUMMARY



RISK SUMMARY 02 JUN 2021

ISSUED BY OPSGROUP

SITA HNLFSXH AKLFSXH AFTN KMCOXAAL EMAIL REPORT@SAFEAIRSPACE.NET



Danger

In assessing risk to flight over each countries borders, **two scenarios** are predominant for civil flight:

- 1. Risk of shootdown, inadvertent or intentional.
- 2. Aircraft emergency requiring a landing.

Both these elements are taken into consideration in determining a classification. The highest level of risk here is "Moderate", on the basis that calling it "high" or A current overflight risk map is maintained at safeairspace.net. We encourage operators to report any new information to report@safeairspace.net.

Guidance

This document is intended to provide operator guidance in determining whether to avoid specific airspaces. Exclusion from this advice, naturally, does not mean that other airspace is risk free.

"severe" would exaggerate the actual level or risk in landing or overflying the territories concerned.

Classification

Three levels of airspace risk are used in our assessment.

LEVEL 1. Moderate risk - No Fly LEVEL 2. Assessed risk

LEVEL 3. Caution

Information Sources

The countries that issue the most relevant updates for unsafe airspace are:

- US (FAA) through Notams and SFARs
- UK (DFT) AIP
- Germany (BMVI) Notam
- France (DGAC) AIC

Operators should note that in general, the Civil Aviation Authorities of the countries whose airspace is determined to be unsafe are unlikely to issue reliable guidance. Read more at safeairspace.net.

LEVEL 1: Moderate Risk - No Fly

For these countries, the basis for inclusion is the highly unstable current events on the ground, and in all cases the ground factions having access to MANPADS or SAMS. We strongly recommend avoiding this airspace entirely. All countries have multiple warnings, and your country of registry is likely to have issued specific instructions not to penetrate these airspaces

Iraq

Iraq is an active conflict zone. Local and foreign military continue to fight against an armed insurgency that has existed since 2017. There is a high risk to civil aircraft. Iraqi airspace (ORBB/Baghdad FIR) should be avoided entirely. There is a total flight ban in place for US aircraft. Canada, the UK and France have all issued airspace warnings advising against operating in Iraqi airspace. The airspace adjoining the Baghdad FIR is also at risk: Iran, Turkey, Syria and Saudi Arabia.

The **primary risk** is intentional targeting by terrorist organisations who possess portable anti-aircraft weaponry. Civil aircraft may also be misidentified by the air defence systems of both local and foreign military who are active in the country. There is a clear risk to civil aircraft operating throughout the FIR at all levels however the eastern airways UL602 (between TAMSI and ALPET), UM860 and UM688 are considered acceptable by France and the UK above FL320.

Major events: Jan 2020: US drone strike near ORBI/Baghdad killed a high ranking Iranian general. Considered a serious escalation. Anything that looks like a US asset or ally is now considered a target. Jan 2020: Ukrainian Airlines 737 misidentified and shot down by Iranian armed forced in Tehran hours after retaliatory missile attacks against US bases in Iraq. June 2020 onwards: Multiple rocket attacks on ORBI and the US embassy. In general anti-US sentiment is worsening, the US Government is threatening to shut down the embassy if sporadic attacks don't stop.

Read: Iraq Airspace Update, March 2020 (OPSGROUP article)

23APR21 USA FAA Information Note Iraq More weaponised drones and indirect fire attacks are likely across Iraq, increasing the risk to aviation. At least three rockets were fired at ORBI/Baghdad on Apr 22, which wounded one person. Several more unfired rockets were found stashed on the rooftop of a nearby building which overlooks the airport. Iranian backed militia are thought to be responsible and continue to actively target US interests at airports throughout Iraq.

15APR21 USA FAA Information Note Iraq Explosive drone attack by militia on US interests at ORER/Erbil Airport on April 14. It is unique as these kinds of attacks usually use less accurate rockets and mortars. It may signify that militia have increasing access to more sophisticated weapons which may pose a new threat to airports throughout Iraq including ORBI/Baghdad.

26FEB21 Germany AIC 07/21 Do not overfly Iraq below FL260 or operate to any airports in the country due to the risk posed by military operations, anti-aviation weaponry, and possible terrorist attacks.

11FEB21 France AIC 02/21 Overflights should only be on airways UM860 and UM688, and UL602 between TASMI and ALPET. Fly at or above FL320.

16OCT20 USA SFAR 77 US operators are prohibited from overflying the Baghdad FIR below FL320. However, the long running FAA Notam (KICZ A0036/20) which completely bans traffic at all levels still stands. The difference between the two is added flexibility should the security situation improve. Based on a recent flare up in hostilities between local militia and US forces, this is unlikely to happen anytime soon.

17JUN20 Ukraine Notam A1970/20 Ukranian operators are prohibited from overflying Iraq

22APR20 UK UK AIP ENR 1.1 (1.4.5) UK operators should not overfly the Baghdad FIR, except on airways UL602 to ALPET, UM860 and UM688, when operating above 25,000ft AGL. (The previous Notam issued by the UK on 9th Jan 2020, advising UK operators that they must not enter the Baghdad FIR, is now cancelled).

12MAR20 USA Notam KICZ A0036/20 US operators are prohibited from overflying Iraq

10JAN20 Canada AIC 16/21 Operators should not enter the airspace of Irag.

08JAN20 Iraq Notam A0018/20 Iraq issues warning to operators that Iran fired missiles into the ORBB/Baghdad FIR, altitude and trajectory unknown.

29JUL18 South Africa Notam A2919/18 Overflights should be above FL300

Yemen

Yemen is an active conflict zone. A civil war which began in 2014 has developed into an international conflict. There is a high risk to civil aircraft. The vast majority of Yemeni airspace (OYSC/Sanaa FIR) should be avoided. The US, UK and Germany all prohibit aircraft from overflying any land portion of the FIR. US operators can still use UT702 and M999, while UK and German operators can use over water portions of N315, UL425 and R401 with limits as published by Notam (all well off the coast). France completely prohibits aircraft from entering the Sanaa FIR. Saudi Arabian airspace to the north and Somali airspace to the South also have risks.

The **primary risk** is intentional targeting by terrorist groups with access to sophisticated anti-aircraft weaponry. Civil aircraft may also be at danger from on-going high intensity military operations including the use of explosive drones and missiles. Saudi-led airstrikes can occur at any time with little regard to civil traffic, including in the capital Sana'a.

Major events: 2017: OYSN/Sanaa badly damaged by coalition airstrikes. April 2018: Saudi airstrikes on Sana'a in retaliation for Houthi drone attacks across the border. July 2018: Houthi target Abu Dhabi Airport with explosive drones. Throughout 2020: Ongoing Houthi drone and rocket attacks targeting OEAH/Abha and OEGN/Jizan airports along the Yemeni-Saudi Border. September 2020: Multiple Saudi airstrikes on rebels in Sana'a, several near the airport. October 2020: Riyadh briefly on high alert for Houthi cruise missile and drone attack.

Read: Saudi-Yemen Airspace Update, Oct 2020 (OPSGROUP article)

11FEB21 France AIC 02/21 Operators should avoid Yemeni airspace.

09FEB21 Canada AIC 16/21 Operators should not enter the airspace of Somalia, including the oceanic part up to and including airway UT702.

11DEC19 USA Notam KICZ A0030/19 As per SFAR 115, US operators are prohibited from overflying the OYSC/Sanaa FIR north of a line KAPET-NODMA-ORBAT-PAKER-PARIM-RIBOK (i.e. the landmass). The US FAA specifically mentions UT702 and M999 offshore routes as being ok to use.

11DEC19 USA SFAR 115 US operators are prohibited from overflying the OYSC/Sanaa FIR north of a line KAPET-NODMA-ORBAT-PAKER-PARIM-RIBOK (i.e. the landmass). The US FAA specifically mentions UT702 and M999 offshore routes as being ok to use.

 ${f 08SEP15}$ UK UK AIP ENR 1.1 (1.4.5) Operators should avoid Yemen airspace, except airways N315, UL425 and R401.

20JUN15 Germany AIC 07/21 German operators are prohibited from operating on airways over the Yemen landmass within the OYSC/Sanaa FIR.

Iran

Following the shoot-down of Ukraine Int Airlines flight 752 over Tehran in Jan 2020, several countries issued airspace warnings for Iran, including: the UK, Ukraine, Canada, Germany, and France. The US and Ukraine are the only countries to have issued outright flight bans, but all the others advise against landing or overflying the country at the lower flight levels. The airspace adjoining the Tehran FIR is also at risk: Iraq, Afghanistan and Pakistan.

The **primary risk** is a misident by Iranian air defense systems. Iran has shown willingness to use long-range, advanced anti-aircraft-capable weapons during heightened tensions and in close proximity to heavily flown international air routes. There is also a potential for Iranian surface-to-surface missile fire from western Iran, targeting terrorist positions in Iraq. The **secondary risks** come from ballistic missile test launches with no warning by Notam, and GPS jamming (including in overwater airspace over the Persian Gulf and the Gulf of Oman).

Major events:

Jan 2020: Iranian Armed Forces shot-down Ukraine Int Airlines flight 752 over Tehran, having mistaken the aircraft radar return for an inbound missile. Just hours prior to the shoot-down, the US FAA issued "Emergency Order" Notams banning all US operators from overflying the airspace of Iraq and Iran. This was in response to an Iranian missile strike on US military bases in Iraq, which had occurred earlier that night.

June 2019: Iran shot down a US military unmanned aircraft operating in airspace over the Gulf of Oman with a SAM system.

Since 2017: Iran has conducted multiple ballistic missile test launches without issuing any Notams to warn civil operators, the latest taking place in late December 2019.

Read: Iran Airspace Update, March 2020 (OPSGROUP article)

11FEB21 France AIC 02/21 Operators should not overfly the western half of the country (everywhere west of 54 Degrees East longitude); overflights of the eastern half should be at or above FL320.

290CT20 USA SFAR 117 This gives a lot of background info and in-depth detail of the airspace risk in Iran, but it's basically just a longer version of their old KICZ Notam A0002/20, and the rules haven't changed - US operators are prohibited from overflying the OIIX/Tehran FIR.

18MAR20 Ukraine Notam A3270/20 Ukranian operators are prohibited from overflying Iran

17FEB20 USA Notam KICZ A0016/20 US operators should exercise caution in the overwater airspace in the Persian Gulf and Gulf of Oman. Avoid the airways nearest to the OIIX/Tehran FIR whenever possible, to reduce the risk of miscalculation or misidentification by air defence systems.

30 JAN20 Germany AIC 07/21 Exercise caution in the Tehran FIR due to risk posed by anti-aircraft weaponry.

20JAN20 UK UK AIP ENR 1.1 (1.4.5) UK operators should not overfly the Tehran FIR below 25,000ft AGL

10JAN20 Canada AIC 16/21 Operators should not enter the airspace of Iran.

08JAN20 USA Notam KICZ A0002/20 US operators are prohibited from overflying Iran

22JUN19 Italy Notam LIXX A4578/2019 Unsafe situation in Persian Gulf

22JUN19 India DGCA Notice 22JUN19 Indian aircraft operators required to avoid 'affected' part of Iranian airspace.

21JUN19 UAE Safety Decision 2019-04 Risk to UAE Operators over Gulf, required to conduct risk assessment for overwater area of Tehran FIR.

Libya

Libya is an active Conflict Zone. A civil war is ongoing since 2014. There is a high risk to civil aircraft. Libyan airspace (HLLL/Tripoli FIR) should be avoided entirely. Total flight ban for US, UK, Canadian and French operators.

The **primary risk** is a misident by Libyan air defense systems, or by militia who have threatened to shoot down aircraft operating in western Libya, including HLLM/Tripoli Mitiga airport. Risk remains high across Libya at all flight levels, and avoidance of all airspace and airports is strongly recommended. The **secondary risk** is that reliable ATC services cannot be guaranteed. The past few years have seen regular ATS and radar outages across the HLLL FIR airspace, and severe limitations in VHF capability, with operators having to communicate with Malta ATC for quidance.

Major events: Jan 2020: Multiple airstrikes targeting HLLM/Tripoli Mitiga airport. Videos on social media showing planes landing at the airport as shells are falling in the background. Nov 2019: Militia advancing on the capital, Tripoli, declared a no-fly-zone around the city, threatening to shoot-down civil aircraft attempting to fly to HLLM/Tripoli Mitiga airport. Oct 2019: The US issued an emergency order prohibiting US operators from overflying the HLLL/Tripoli FIR except for altitudes at or above FL300 "outside of Libyan territorial airspace" - which is basically the international airspace over the southern Mediterranean Sea that is managed by Libya.

Read: Libya Airspace Update, Oct 2019 (OPSGROUP article)

16APR21 Germany Notam EDWW B0410/21 Operators should avoid Libyan airspace. (Their previous warning, issued on 09 Apr 2019 and contained in AIC 07/21, completely prohibited German operators from entering Libyan airspace).

11FEB21 France AIC 02/21 Operators should avoid Libyan airspace.

27JUL20 USA SFAR 112 US operators are prohibited from overflying the HLLL/Tripoli FIR except for altitudes at or above FL300 "outside of Libyan territorial airspace" - which is basically the international airspace over the southern Mediterranean Sea that is managed by Libya.

18FEB20 Canada AIC 16/21 Operators should not enter the airspace of Libya.

12JUN15 UK UK AIP ENR 1.1 (1.4.5) Operators should avoid Libyan airspace.

Syria

Syria is an active Conflict Zone. A civil war is ongoing since 2011. There is a high risk to civil aircraft. Syrian airspace (OSTT/Damascus FIR) should be avoided entirely. Airspace adjoining the Damascus FIR is also at risk: Cyprus, Turkey, Israel. Total flight ban for US aircraft, and several other countries advise operators to avoid the airspace of Syria.

The **primary risk** is a misident by Syrian air defense systems. Civil aircraft may be targeted in error, or caught in crossfire during ongoing air attacks involving Israel, Russia, Iran. Missiles may erroneously lock on to civil aircraft. Israeli airstrikes on Syria are regular, and do not show any regard for civil traffic. There is a clear risk to civil aircraft operating on airways UL620, UW74, UR18, and UP62. In simple terms, if you find yourself planned overwater east of Cyprus, reconsider your route.

Major events: Sep 2018: Russian IL-20 shot down in error on FIR boundary with Cyprus (Nicosia FIR) - airline flights on UL620 within 50nm of this position. Feb 2020: An A320 enroute OSDI/Damascus caught in crossfire during attack by 4 Israeli F-16's, forced to divert to Russian controlled air base. **Read:** OpsGroup Note -Syria, Sep 2018 (PDF)



23APR21 USA FAA Information Note Syria/Israel An errant surface-to-air missile fired by Syrian air defences missed its target and landed in Israel on Apr 22. Syria is actively using long range anti-aircraft weaponry which poses a risk to civil aircraft in the region. While US operators are banned from the OSTT/Damascus FIR, the FAA warns the threat is extended to adjacent FIRs in the Eastern Mediterranean region including the LLLL/Tel Aviv, OJAC/Amman, OLBB/Beirut and LCCC/Nicosia FIRs. Use caution if operating in the area. **11FEB21** France AIC 02/21 Operators should avoid Syrian airspace.

27NOV20 USA Notam KICZ A0053/20 As per SFAR 114, US operators are prohibited from entering the OSTT/Damascus FIR.

27NOV20 USA SFAR 114 US operators are prohibited from entering the OSTT/Damascus FIR.

09FEB20 Canada AIC 16/21 Operators should not enter the airspace of Syria, and there is a potential risk to aircraft within 200nm of the Damascus FIR.

220CT18 UK UK AIP ENR 1.1 (1.4.5) Potential risk to aircraft within 200nm of the Damascus FIR.

14APR18 USA Notam KICZ A0009/18 Exercise caution within 200nm of the Damascus FIR due to military activity. Possibility of GPS Interference, Communication jamming, and long-range surface to air missiles in the area

150CT15 Germany AIC 07/21 Do not enter Syrian airspace.

12JUN15 UK UK AIP ENR 1.1 (1.4.5) Potential risk to aircraft over Syria airspace at all flight levels.

LEVEL 2: Assessed Risk

Assessed Risk applies to countries that are the subject of airspace warnings by EASA, FAA, UK DFT, German BMVI, French DGAC, but only for specific portions or below certain altitudes

Ukraine

There is an active conflict zone in eastern Ukraine along the border with Russia. The main hotspot is the Line of Contact which runs north-south through the UKDV/Dnipropetrovsk FIR. Escalating tensions here as of April 2021, with a large military build-up and an increase in ceasefire violations. Essentially, similar conditions to those prior to the shoot-down of MH17 in 2014. The US warns operators to exercise extreme caution within 100nm of the entire Russia-Ukraine border, and bans US operators from overflying the eastern part of the UKDV FIR. Several other states have also issued airspace warnings for eastern Ukraine.

The **primary risk** is for operations near the Russia-Ukraine border and Line of Contact in the UKDV/Dnipropetrovsk FIR. Should hostilities escalate here, the airspace on both sides could be exposed to potential weapons activity posing a risk to civil aircraft from misidentification or miscalculation.

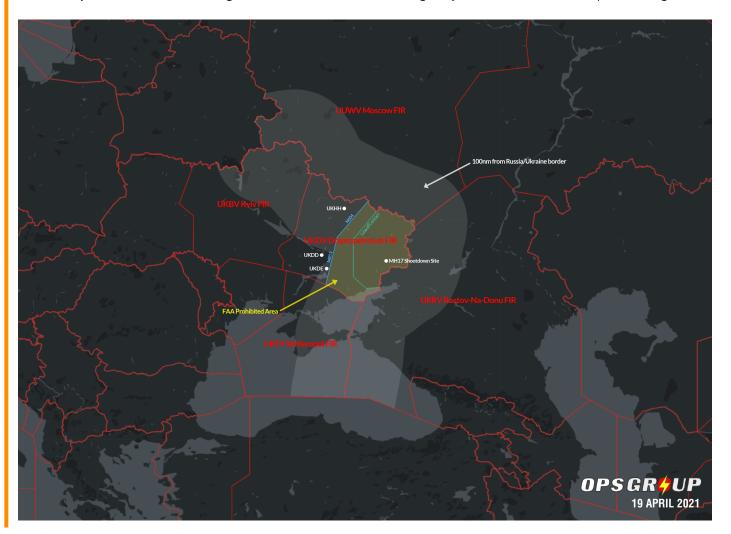
The **secondary risk** affects the UKFV/Simferopol FIR which is disputed airspace. (Ukraine:UKFV, Russia:URFV). The risk here stems from aircraft potentially receiving confusing and conflicting air traffic control instructions from both Ukrainian and Russian ATC when operating over the region.

Major events:

Apr 2021: US FAA warns of escalating tensions along the Ukraine/Russia border.

Oct 2020: US operators now allowed to overfly Crimea again (UKFV/Simeropol FIR). Ops in the eastern half of the UKDV/Dnipro FIR remain prohibited.

July 2014: Malaysia Airlines Flight 17 flying over Ukraine at FL330 just west of the Russian border was mistakenly shot down after being misidentified as a hostile target by Russian-backed troops on the ground.



29APR21 Canada Notam CZQX H1069/21 Avoid the UKFV/Simferopol and UKDV/Dnipropetrovsk FIRs in the east of the country due to risk from heightened military activity and anti-aviation weaponry.

17APR21 USA Notam KICZ A0013/21 Operators should exercise extreme caution within 100nm of the entire Russia-Ukraine border due to the risk of misidentification or miscalculation from potential weapons activity.

13APR21 USA FAA Information Note Russia/Ukraine Escalating tensions in the east of Ukraine along the border with Russia. Large military buildup and recent increase in ceasefire violations. Several new reports of GPS jamming in the area, along with known surveillance of civil flights by military systems. Similar conditions to those prior to the shoot-down of MH17 in 2014. Should hostilities escalate, the airspace on both sides of the border could be exposed to potential weapons activity posing a risk to civil aircraft from misidentification or misperception.

11FEB21 France AIC 02/21 Overflights of the UKFV and UKDV FIRs in the east of the country should only be planned over six Black Sea airways: M854, M856, M860, L851, M435, and M861.

27OCT20 USA SFAR 113 This SFAR extends the ban on US operators overflying the eastern part of the UKDV/Dnipropetrovsk FIR for another year due to a continued threat of arms fire in the region. However, restrictions have now been completely lifted on overflights of the UKFV/Simferopol FIR, as the security situation has sufficiently improved there.

26FEB20 USA Notam A0029/20 This is just a pointer Notam, directing people to read the SFAR which contains complete information about the US restrictions on Ukraine airspace.

25APR19 Ukraine Notam A0920/19 Ukraine asks aircraft within Dnipro, Odesa, and Simferopol FIRs to only speak to Ukrainian ATC - callsigns Dnipro Radar and Odesa Radar. (Comment: for Simferopol, Russia says only talk to Russian ATC - hence the problem)

26FEB19 Russia Notam A0937/19 Russia declares iteself as the valid source of information for Simferopol FIR. **13OCT17** UK UK AIP ENR 1.1 (1.4.5) Operators should not enter UKDV/Dnipro or UKFV/Simferopol FIRs with the exception of airways L851, M856, M860, and M854.

20FEB15 UK UK AIP ENR 1.1~(1.4.5) Possible conflicting ATC instructions due to disputed airspace in the Simferopol FIR

Afghanistan

There is an ongoing war in Afghanistan, which since NATO's withdrawal in December 2014, has been fought between the state and several factions. Diversion/Landing to Afghanistan – don't. Nowhere is safe. The UK and France advise that overflights should not be below FL250/260 respectively, but the US and Germany both advise FL330 - which we think is more sensible, given the mountainous terrain.

The **primary risk** is from indirect fire targeting airports and from surface-to-air fire targeting aircraft operating at low altitudes. Airports in Afghanistan have been targeted frequently by direct assault and indirect fire.

Major events:

Nov 2020: OAKB: Major rocket attack in Kabul. Nearly two dozen rockets were fired from vehicles in several neighborhoods around the city causing multiple casualties. The road between OAKB/Kabul Airport and the Intercontinental Hotel was also targeted with an explosive device.

Mar 2020: OAIX/Bagram was targeted by indirect fire on multiple occasions.

Sep 2017: Indirect attack on OAKB/Kabul Airport, when multiple munitions impacted within the airport perimeter.

16APR21 USA FAA Information Note Afghanistan Taliban forces intend to retaliate to the announcement that the withdrawal of US forces will be gradual, not immediate - as they believe this violates existing agreements. This has increased the risk to civil aviation. The Taliban have previously attacked aviation interests by a variety of means. There is threat of direct fire on the ground by rocket or mortar attacks, while the Taliban also have access to portable air defence systems.

28MAR21 USA Notam KICZ A0008/21 Stick to airways, and maintain FL330 or higher. If you have to land at airports in the country, minimise ground time; aircraft on the ground have been damaged or destroyed by indirect rocket or mortar fire from militant attacks.

28MAR21 USA US FAA Background Notice Stick to airways, and maintain FL330 or higher.

11FEB21 France AIC 02/21 Overflights should be at FL260 or above.

07JUL18 Germany AIC 07/21 Overflights should be at FL330 or above.

090CT15 UK UK AIP ENR 1.1 (1.4.5) Risk to aircraft overflying OAKB/Kabul FIR at less than FL250.

Kenya

Kenya is affected by the ongoing Somali Civil War - the main threat comes from militants in response to Kenya's military intervention in Somalia. The US has a warning in place to exercise caution below FL260 in Kenya's airspace east of 40 degrees East longitude (the border region with Somalia).

The **primary risk** is from indirect mortar and rocket fire, including MANPADS, which could target aircraft at low altitudes and at airports.

Major events:

Jan 2020: Two US military/govt aircraft (C-146A, DHC-8), and two helicopters, were destroyed in a militant attack on HKLU/Manda Airport, a US/Kenya joint military base in Lamu county, east coast. Security concerns in this part of Kenya have been ongoing for several years.

Jan 2019: Al-Shabaab militants launched an attack on a hotel complex in central Nairobi on 15 Jan 2019, killing at least 14 people. There were a number of attacks by Al-Shabab in Kenya in preceding years, but none in Nairobi since the attack on the Westgate shopping mall in 2013.

26FEB21 USA Notam KICZ A0005/21 Avoid operating below FL260 in Kenya's airspace east of 40 degrees East longitude (the border region with Somalia) due to extremist and militant activity. **26FEB21** USA US FAA Background Notice Avoid operating below FL260 in Kenya's airspace east of 40

degrees East longitude (the border region with Somalia) due to extremist and militant activity. **12AUG16** UK UK AIP ENR 1.1 (1.4.5) Risk to aircraft overflying Kenya at less than FL250.

Mali

The northern Mali War has been ongoing since 2012, and there have been no improvements in stability. The US, Germany, France and the UK all have warnings in place, advising to operate FL250/260 or higher, and avoiding GATB, GAGO, and GAKL airports, due to ongoing fighting and militant activity. We would suggest, as usual, that a higher level closer to FL300 is more sensible.

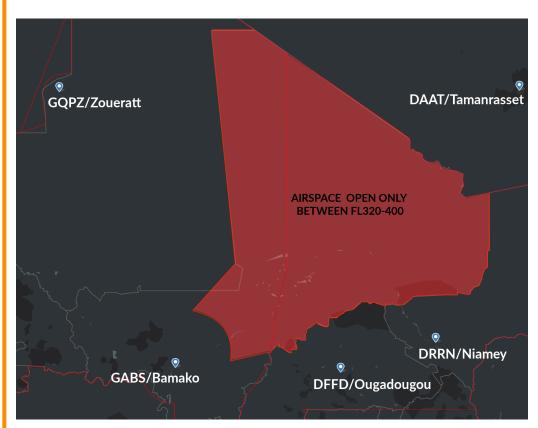
The **primary risk** is from indirect mortar and rocket fire, including MANPADS, which could target aircraft at low altitudes and at airports. The FAA say that militants in Mali primarily target UN and Malian forces which are often based near to Malian airports, and these attacks present an indirect threat to civil aviation.

Major events:

Aug 2020 All airports across the country were closed from Aug 19-20 following a military coup which overthrew the government. Bamako ACC remained operational throughout, with overflights unaffected. April 2018: Militants attacked UN peacekeepers at two bases near GATB/Timbuktu Airport using both indirect fire weapons and vehicle-borne improvised explosive devices.

Jan 2017 and Nov 2016: Militants conducted vehicle-borne improvised explosive attacks against GAGO/Gao Airport, and rocket attacks against GATB/Timbuktu Airport.

Senegal and Niger control the airspace over Mali, and they have long-standing Notams (published under the GOOO/Dakar and DRRR/Niamey FIRs) warning that you can only fly between FL320-400 through the entire airspace in Mali north of the GABS/Bamako TMA due to military ops across the region.



26FEB21 USA Notam KICZ A0003/21 Avoid operating below FL260 in Mali's airspace due to ongoing fighting and militant activity.

26FEB21 USA US FAA Background Notice Avoid operating below FL260 in Mali's airspace due to ongoing fighting and militant activity.

11FEB21 France AIC 02/21 Overflights should be at FL320 or above.

16AUG17 Germany AIC 07/21 Avoid GATB, GAGO, GAMB and GAKL airports. Overflights should be at FL260 or above.

09JUN17 UK UK AIP ENR 1.1 (1.4.5) Risk to aircraft overflying Mali airspace below FL250.

South Sudan

Following five years of civil war, a ceasefire has largely held since Sept 2018. Significant reduction in violence, but the political and security situation remains volatile. In the event of a serious deterioration, similar to those of July 2016 and Dec 2013, HSSJ/Juba airport may be closed at short notice. The UK, France and Germany still advise against overflying South Sudan below FL250/260 due to the risk posed by anti-aircraft weaponry. The US published a similar warning but rescinded it in Aug 2019.

The **primary risk** now comes from poor levels of ATC provision for overflights below FL245 or for aircraft operating to HSSJ/Juba airport. In Jan 2021, ICAO published a letter warning of service disruptions and lack of qualified ATC personnel, the lack of contingencies in place, communication issues, the number of withdrawn navigation aids and above all, the lack of information being supplied to operators regarding these issues.

Major events:

April 2019: Military coup in Sudan led to the temporary closure of South Sudan's airspace. June 2016: The South Sudanese army declared intention to shoot down aircraft without permits and/or not following proper procedures.

07MAY21 South Africa Notam FACA FAJO FAJA A1153/21 Risk for overflights of South Sudan below FL245 or for aircraft operating to HSSI/Juba airport due to poor levels of ATC provision.

11FEB21 France AIC 02/21 Overflights should be at FL260 or above, in the part of the HSSS/Sudan FIR above South Sudan.

02FEB21 South Sudan Notam HSSJ A0021/21 ATC radio is not good enough to cover all airspace in the country. All aircraft must use TCAS.

20JAN21 ICAO Letter AN 13/35-21/5 ICAO letter raising concerns about the risk to civil aircraft in the South Sudan region, below FL245, and into and out of HSSJ/Juba international airport. The letter raises concerns about ATC service disruptions and lack of qualified ATC personnel, the lack of contingencies in place, communication issues, the number of withdrawn navigation aids and above all, the lack of information being supplied to operators regarding these issues. They raise 'grave concerns' for the safety of international flights.

16JUN16 OSPGROUP Research Article Army of South Sudan will shoot down aircraft.

26AUG15 Germany AIC 07/21 Overflights should be at FL260 or above.

12JUN15 UK UK AIP ENR 1.1 (1.4.5) Risk to aircraft overflying South Sudan airspace below FL250.

Saudi Arabia

Houthi drone and missile attacks on targets in Saudi Arabia are increasing. These continue to be a persistent threat to ops to Saudi airports, and for overflights of the OEJD/Jeddah FIR. The most significant risk is in the south of the country along the border with Yemen, but OERK/Riyadh and OEJN/Jeddah airports have also been targeted.

The are several long-standing airspace warnings in place: Canada, France and Germany warn of a risk to landing anywhere in the country, but particularly along the border with Yemen in the southwest part of the OEJD/Jeddah FIR. There is definitely a risk to operations in Saudi airspace, even outside the ESCAT area.

The **primary risk** is from Houthi drone and missile attacks on airports across the country, but particularly in the south.

Major events: Throughout 2020: Ongoing Houthi drone and rocket attacks targeting OEAH/Abha and OEGN/Jizan airports along the Yemeni-Saudi Border. September 2020: Multiple Saudi airstrikes on rebels in Sana'a, several near the airport. October 2020: Riyadh briefly on high alert for Houthi cruise missile and drone attack.

Read: Saudi-Yemen Airspace Update, Oct 2020 (OPSGROUP article)

11MAR21 Canada AIC 16/21 Due to military activity, operators should not enter the southwest part of the OEJD/Jeddah FIR, and exercise caution across the rest of Saudi airspace.

11FEB21 France AIC 02/21 Exercise caution in Saudi airspace, particularly in the southwest of the FIR; and do no operate to OEAB/Abha, OEGN/Jazan, OENG/Nejran, OESH/Sharurah, OEWD/Wadi AI Dawasir and OEBH/Bisha airports.

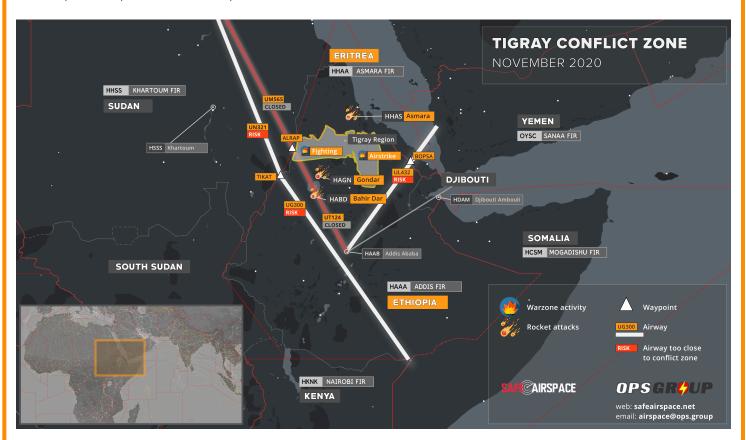
28JAN21 Saudi Arabia Notam OEJD W0120/21 ESCAT rules may be activated at any time in the south part of the OEJD/Jeddah FIR, when Saudi air defenses are repelling drone and missile attacks from Yemen. Operators will likely be given a change of route directly out of the airspace, or will be directed to land at the nearest airport.

070CT19 Germany AIC 07/21 Potential risk to landing anywhere in Saudi Arabia, but particularly along the border with Yemen in the southwest part of the OEJD/Jeddah FIR.

Ethiopia

Nov 2020: Major escalation of the conflict in the Tigray region, along the Ethiopia/Eritrea border. Some airways have been closed by the Ethiopian and Sudanese CAAs. Other airways that are still open are very close to the Conflict Zone. These are frequently used by international operators on the Europe- East Africa route. In particular: UN321, UG300 and UL432. Multiple airports have been targeted by rockets. Missiles were fired across the border into Eritrea, targeting HHAS/Asmara. Within Ethiopia, HABD/Bahir Dar and HAGN/Gondar were also targeted.

Sep 2018: Risk due to hidden ATC strike. Ethiopian ATC controllers went on strike, and the ECAA and Ethiopian Airlines recruited both retired and foreign controllers to pick up the slack. Ethiopia denied several times that there was in fact a strike happening at all. The strike ended September 7th. Many were not qualified to operate in Ethiopian airspace, due to inexperience.



17NOV20 OPSGROUP Airspace Risk Warning ARW11-2020 Airspace Risk warning for Ethiopia/Eritrea - Tigray Conflict Zone. Risk to overflights on adjacent airways, and airports in region.

05NOV20 Ethiopia Notam HAAA A0378/20 A0377/20 A0376/20 Closed airspace in the north of the country due to ongoing conflict. All aircraft transiting between the HAAA/Addis Ababa and HHAA/Asmara FIRs must do so via BOPSA.

30AUG18 KACTA Letter of Concern Safety Issues in Ethiopia Kenyan ATC Controllers have listed out several major issues with safety both in Ethiopia and in the area shared with Kenyan airspace.

29AUG18 OPSGROUP Research Article Ethiopia Covering Up ATC Strike Ethiopian ATC Controllers went on strike, and ECAA and Ethiopian Airlines used foreign and retired controllers to cover, causing safety concerns.

Eritrea

HHAS/Asmara airport was targeted on 14 Nov 2020 by missiles from the Tigray TPLF, bringing Eritrea into the conflict and meaning that operations here should be avoided. See Ethiopia summary for more detail.

17NOV20 OPSGROUP Airspace Risk Warning ARW11-2020 Airspace Risk Warning for Eritrea

Somalia

Despite the ongoing conflict in Somalia the risk level is determined to be Level 2, the threats to aviation only exist below specified levels. However, our recommendation is to avoid the airspace entirely. The situation on the ground is highly unstable and there is an inherent risk to civilians and aircraft. The central government has little control of the major cities and ports with ongoing attacks from extremist militants targeting civilians. The advice from our information sources is all similar; "do not operate below a minimum of FL260 in the airspace of Somalia". (Note UR401 SIHIL-AXINA is excluded from this by one authority) "There is a high risk to overflying aircraft from anti aviation weaponry".

An Embraer EMB-120 was shot down while on approach to Bardale airstrip on May 4, 2020, killing all six people on board - an accidental shoot-down by Ethiopian forces stationed in the region.

11FEB21 France AIC 02/21 Overflights should be at FL260 or above.

09FEB21 Canada AIC 16/21 Overflights should be at FL260 or above.

11DEC19 USA SFAR 107 US operators are prohibited operating below FL260 in the airspace of Somalia.

11DEC19 USA Notam KICZ A0028/19 US operators are prohibited operating below FL260 in the airspace of Somalia.

13APR18 Somalia Notam A0035/18 Somalia themselves published a Notam in 2018 saying that armed conflict and a lack of Aeronautical information present a safety and security risk to aircraft.

04FEB16 Germany AIC 07/21 Do not operate to airports in Somalia, and do not overfly the airspace below FL260 except for UR401.

08JAN16 UK UK AIP ENR 1.1 (1.4.5) Operators should avoid overflying Somalia airspace below FL250.

Sudan

Only one international warning exists, that of France, recommending overflight above FL200 in the far southern and western edges of the country (west of the 27°E and south of 13°N) near to the border with South Sudan, Central African Republic, and Chad. Sudan temporarily closed its airspace all day on 11 April 2019 following a military coup which ousted the country's longtime President Omar al-Bashir from power. This came after months of on-and-off protests against his rule. The security situation in Khartoum has been steadily improving since then, and in Sept 2019, the US downgraded its travel advisory for Sudan from "Level 4: Do Not Travel" to "Level 3: Reconsider Travel". HSSS/Khartoum airport was closed for five hours late on 14 Jan 2020 following gunfire on the streets of the capital, including in areas close to the airport. The clashes were between the army and former security agents who revolted over severance pay. The airport reopened the next day, with the government saying the violence was over and the situation was under control.

11FEB21 France AIC 02/21 Maintain FL260 or higher in the HSSS/Sudan FIR along its southern edge (where Sudan borders with South Sudan) and western edge (where Sudan borders with Central African Republic and Chad).

Egypt

Since the Arab Spring, Egypt's stability and security situation as a state has declined.

- -July 2019: British Airways suspends Cairo operations for one week due to security concerns
- -In February 2017 an an SA-7 anti-aircraft missile tube was found less than a mile from HECA/Cairo airport.
- -In October 2015 a Russian A321 was brought down over the Sinai peninsula by a bomb loaded at HESH/Sharm El Sheikh. The group claimed the IED was placed aboard the aircraft prior to departing HESH, raising concerns of potential insider threats at the airport.

There remains a threat from terrorism in Egypt, particularly in the Sinai Peninsular - most countries advise against operating to airports in this region, as well as overflights below FL260.

30MAR21 USA Notam KICZ A0010/21 Avoid overflying the Sinai Peninsula below FL260.

20MAY20 Germany AIC 07/21 Entire Sinai Peninsula presents a risk below FL260 for overflights and landings, with a particular focus on the northern part.

30MAR20 USA US FAA Background Notice Avoid overflying the Sinai Peninsula below FL260

04MAR20 Ireland Notam B0152/20 Avoid overflying the Sinai Peninsula below FL260

25MAR19 Egypt Notam A0266/18 Do not plan RNAV approaches at Cairo.

080CT15 UK UK AIP ENR 1.1 (1.4.5) Risk to aircraft overfly Egypt's Northern Sinai region at less than FL250.

18/26

Venezuela

Ongoing political and social crisis in Venezuela. On 1st May 2019, the US FAA issued a new Do Not Fly instruction to US operators, barring all operations into or over Venezuela, unless operating at or above FL260, and giving a window of 48 hours to leave the country. The order comes on a day of an information battle waged between Maduro and Guaidó, and although the coup status is uncertain, one thing is clear: taking your aircraft to Venezuela is not a good idea.

01MAY19 USA Notam KICZ A0013/19 Flights are prohibited below FL260

North Korea

Following talks with the U.S. in early 2018, North Korea agreed with ICAO that it would provide adequate warning of all "activity hazardous to aviation" within its airspace.

However, in May 2019 North Korea resumed launching missiles into the Sea of Japan, without providing any warning by Notam.

The US continues to prohibit flights across all North Korean airspace, including the oceanic part of the ZKKP/Pyongyang FIR over the Sea of Japan. Several other countries have airspace warnings in place which advise caution due to the risk posed by unannounced rocket launches.

11FEB21 France AIC 02/21 Caution advised for all North Korea overflights, especially in the maritime part over the Sea of Japan (due to unannounced rocket launches)

09FEB21 Canada AIC 16/21 Exercise caution in the airspace of North Korea due to risk posed by unannounced rocket launches.

07SEP20 USA SFAR 79 Flights are prohibited in all North Korean airspace, including the oceanic part of the ZKKP/Pyongyang FIR over the Sea of Japan, due to the threat posed by unannounced North Korean missile launches and air defense weapons systems.

19DEC19 Germany AIC 07/21 There is a potential risk to overflights of North Korean airspace (ZKKP FIR) due to launching of test missiles without prior notice.

18SEP18 USA Notam KICZ A0018/18 This is just a pointer Notam, directing people to read the SFAR which contains complete information about the US restrictions on North Korean airspace.

08OCT15 UK UK AIP ENR 1.1 (1.4.5) There is a risk to aircraft overflying ZKKP/Pyongyang FIR, and the Sea of lapan (due to unannounced rocket launches).

Pakistan

Couple of issues: Conflict with India in the Kashmir region in the northeastern corner of Pakistan, and concentration of terrorist group representation in the country. Military activity by Pakistan and India in the disputed Kashmir region poses a potential inadvertent risk to aviation at all altitudes, particularly in the OPLR/Lahore FIR. The consensus among foreign authorities is to cross the OPLR/Lahore and OPKR/Karachi FIRs at higher flight levels. Diversion/Landing in Pakistan is recommended against. Avoid operating to OPPS/Peshawar and OPQT/Quetta airports - both are near the border with Afghanistan. OPKC/Karachi Airport was attacked in 2014.

11FEB21 France AIC 02/21 Overflights should be at FL260 or above.

01JAN21 USA Notam KICZ A0001/21 Exercise caution flying into or over Pakistan, particularly at low altitudes, due to the risk posed by small-arms fire, attacks against airports, indirect weapons fire and anti-aircraft fire by extremist/militant elements operating in the country.

260CT20 Germany AIC 07/21 Overflights should be at FL260 and above; potential risk of attacks at all airports in Pakistan.

30DEC19 USA US FAA Background Notice Exercise caution flying into or over Pakistan.

08OCT15 UK UK AIP ENR 1.1 (1.4.5) Risk to aircraft overflying OPKC/Karachi and OPLR/Lahore FIRs below FL250.

LEVEL 3: Caution

Caution applies to countries that do not have multiple current airspace warnings, but we consider worthy of a security review before operating into or over

Belarus

Several countries and aviation organisations have urged airlines and operators to avoid the airspace of Belarus, following the country's interception of an international flight bound for Lithuania and forced to land in Minsk on May 23, 2021.

EASA has said that both EU and Third Country Operators should avoid the UMMV/Minsk FIR. The US has urged operators to "exercise extreme caution" until the FAA can better assess Belarus' actions. The UK, France, and Canada have all published Notams advising operators not to overfly the airspace of Belarus.

The forced landing of this flight was politically motivated, and the crew were misled into believing that there was a credible security threat against the aircraft. Understandably, this is of major concern to civil aviation.

However, we view this as a one-off incident, that is not likely to recur. **We do not consider there to be additional risk to aircraft flying through the Minsk FIR**. The warnings and advisories listed here are for reference only.

28MAY21 USA Notam KICZ A0017/21 Operators should "exercise extreme caution" in the UMMV/Minsk FIR until the FAA can better assess Belarus' actions surrounding the May 23 interception and diversion of a passenger jet and the potential for Belarus to repeat similar actions in the future.

25MAY21 Canada Notam CZUL H1380/21 Canadian operators are advised to avoid the UMMV/Minsk FIR.

25MAY21 UK Notam EGTT V0009/21 Operators are advised to avoid the UMMV/Minsk FIR.

25MAY21 France Notam LFFF F0784/21 French operators are requested to avoid the UMMV/Minsk FIR.

25MAY21 EASA SIB 2021-10 EU and Third Country Operators should avoid the UMMV/Minsk FIR. However, EASA does not believe the situation is serious enough to warrant a Safety Directive which would force airlines to comply.

Turkey

The **primary risk** is misidentification by local militia who infrequently target Turkish military aircraft with MANPADS and weaponsied drones. Operations to LTAJ/Gaziantep should be carefully reviewed given its proximity to the Syrian border.

The **secondary risk** is from GPS jamming. There are frequent reports from crews of GPS signal interference in Turkish airspace - with some as far away as abeam Baghdad. GPS jamming is common through the LTAA/Ankara FIR, and especially on the border between the ORBB/Baghdad and OIIX/Tehran FIRs.

Major events:

May 2021: Attempted drone attack by local militia on LTCC/Diyabakir airport in South Eastern Turkey. Jan 2019: Turkish security forces intercepted three weaponised drones during attempted attacks against sites in southern Turkey.

19MAY21 USA FAA Information Note Turkey Drone attack this week on LTCC/Diyabakir airport in South Eastern Turkey. Local militia targeting military interests are thought to be responsible. While no threats have been made against civil aviation, the militia are known to have access to portable anti-aircraft weaponry which may pose a low-level risk through misidentification.

06JAN21 Turkey Notam LTAA A3618/20 Expect GPS interference in Turkish Airspace.

Israel

Rocket attacks on Israel and Israeli air strikes on Gaza could present a risk to civil aircraft operating in the region.

The **primary risks** are: misidentification or miscalculation by air defence systems, falling debris from air defence activities, ballistic impact while on the ground, and short notice airspace closures.

Major Events:

May 2021: Ongoing rocket attacks on Israel and Israeli air strikes on Gaza. LLBG/Tel Aviv Airport has been forced to close on several occasions, as air defence systems have been activated around the country to repel incoming rocket attacks.

July 2014: Major rocket fire from Gaza against Tel Aviv during the Gaza War. The US FAA responded by imposing restrictions at LLBG/Tel Aviv airport for a two day period, and EASA advised that operators suspend flights, which ultimately resulted in 30 airlines cancelling flights.

14MAY21 Israel Notam LLLL A0819/21 Israel has now removed its Notam advising caution to operators in the LLLL/Tel Aviv FIR. We are keeping it listed here in the short-term for reference.

12MAY21 EASA Advisory EASA Advisory for the LLLL/Tel Aviv FIR, following this week's rocket attacks. Operators should continue to monitor the situation closely and abide by several new airspace restrictions that have been published for the FIR by Notam. Both overflying aircraft and those operating in and out of LLBG/Tel Aviv are affected. As the situation may change rapidly, extreme care should be taken in Israeli airspace.

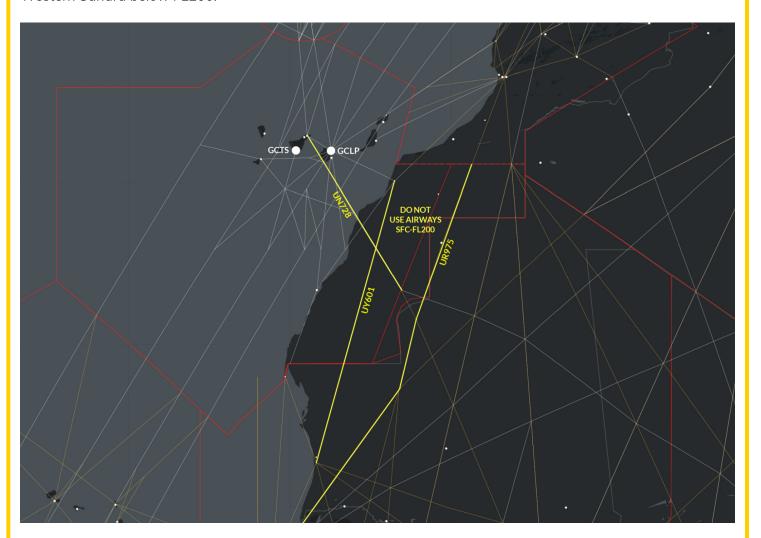
23JUL14 EASA SIB 2014-22 EASA Service Information Bulletin advising operators to avoid LLBG/Tel Aviv Airport until further notice. The SIB was withdrawn on July 24, 2014.

22JUL14 USA Notam KFDC 4/3630 On July 22, 2014, US operators were prohibited from flying to or from LLBG/Tel Aviv Airport for a period of up to 24 hours. The notice was issued in response to a rocket strike which landed approximately one mile from the airport that morning.

Western Sahara

A new conflict zone is emerging in Western Sahara. The country is split down the middle - Morocco controls the west, and the region's independence movement, the Polisario, controls the east. The Polisario have declared war on Morocco.

The **primary risk** is from anti-aircraft fire from the conflict. The FAA has published a note warning that the Polisario likely have access to anti-aircraft weaponry which may pose an inadvertent risk to civil aircraft up to FL120. The GCCC/Canarias FIR has issued a Notam warning operators to avoid using the airways over Western Sahara below FL200.



The **secondary risk** is from lack of continuous ATC coverage. Western Sahara does not control its own airspace - it falls within both the GCCC/Canarias and the GOOO/Dakar FIRs, which may complicate airspace management should the conflict escalate. The FAA advise aircraft operating in the region to stay in touch with ATC and be prepared for possible airspace restrictions and reroutes.

04MAY21 Spain Notam GCCC B3323/21 Operators should avoid the airspace over Western Sahara below FL200.

19NOV20 USA FAA Information Note Morocco/Western Sahara Potential new conflict zone in Western Sahara, including anti-aircraft weaponry which may pose an inadvertent risk to civil aircraft up to FL120.

Russia

There is an active conflict zone in eastern Ukraine along the border with Russia. The main hotspot is the Line of Contact which runs north-south through the UKDV/Dnipropetrovsk FIR. Escalating tensions here as of April 2021, with a large military build-up and an increase in ceasefire violations. Essentially, similar conditions to those prior to the shoot-down of MH17 in 2014. The US warns operators to exercise extreme caution within 100nm of the entire Russia-Ukraine border, and bans US operators from overflying the eastern part of the UKDV FIR.

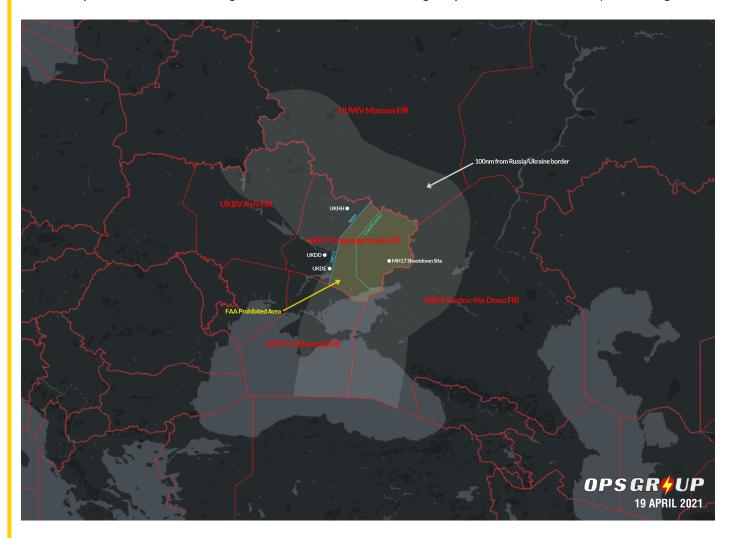
The **primary risk** is for operations near the Russia-Ukraine border and Line of Contact in the UKDV/Dnipropetrovsk FIR. Should hostilities escalate here, the airspace on both sides could be exposed to potential weapons activity posing a risk to civil aircraft from misidentification or miscalculation.

Major events:

Apr 2021: US FAA warns of escalating tensions along the Ukraine/Russia border.

Oct 2020: US operators now allowed to overfly Crimea again (UKFV/Simeropol FIR). Ops in the eastern half of the UKDV/Dnipro FIR remain prohibited.

July 2014: Malaysia Airlines Flight 17 flying over Ukraine at FL330 just west of the Russian border was mistakenly shot down after being misidentified as a hostile target by Russian-backed troops on the ground.



17APR21 USA Notam KICZ A0012/21 Operators should exercise extreme caution within 100nm of the entire Russia-Ukraine border due to the risk of misidentification or miscalculation from potential weapons activity.

13APR21 USA FAA Information Note Russia/Ukraine Escalating tensions in the east of Ukraine along the border with Russia. Large military buildup and recent increase in ceasefire violations. Several new reports of GPS jamming in the area, along with known surveillance of civil flights by military systems. Similar conditions to those prior to the shoot-down of MH17 in 2014. Should hostilities escalate, the airspace on both sides of the border could be exposed to potential weapons activity posing a risk to civil aircraft from misidentification or misperception.

Albania

Pilots should exercise extreme caution while operating in Albanian airspace (the LAAA/Tirana FIR) due to a heightened risk of degraded ATC services.

On April 8, Albanian airspace (the LAAA/Tirana FIR) along with LATI/Tirana Airport was forced to close, after a number of local air traffic controllers declared themselves temporarily unfit to work.

Local air traffic controllers are working under significant duress and high stress, having been threatened with dismissal (or worse - being arrested and jailed) if they do not declare themselves fit for duty. In addition, a number of foreign controllers have reportedly been brought in despite not being trained or rated on any of the local positions.

Several international associations have published warnings, including IFALPA and IFATCA.

13APR21 IFALPA Safety Bulletin Pilots should exercise extreme caution while operating in Albanian airspace (the LAAA/Tirana FIR) due to a heightened risk of degraded ATC services.

10APR21 IFATCA Press Release Pilots should exercise extreme caution while operating in Albanian airspace (the LAAA/Tirana FIR) due to a heightened risk of degraded ATC services.

Japan

In August 2017 it became apparent that North Korea missiles were landing with regularity in the Sea of Japan. In 2018, after North Korea's change in stance on Missile testing, coupled with a warmer relationship with the US, previously issued warnings started to be removed. The Isat such warning, US Notam A0010/18 expired on May 27, 2019, and has not been renewed.

27MAY18 USA Notam KICZ A0010/18 There is risk to aircraft flying in the RJJJ/Fukuoka FIR, and over The Sea of Japan.

United Arab Emirates

Missiles fired by Yemeni rebels (Houthis) have reached Saudi Arabia multiple times, and they have threatened to fire at the UAE. In April 2019 a spokesman for the Houthis said - "Our missiles are capable of reaching Riyadh and beyond Riyadh, to Dubai and Abu Dhabi."

16FEB21 United Arab Emirates Notam OMAE A0404/21 Risk from Houthi weapons targeting UAE territory

Chad

N'Djamena in the past was a popular fuel stop in central Africa, but multiple travel warnings now advise against travel here. No official state Notams have been issued, but danger remains high. A state of emergency remains in place for the Lake Chad region. High threat for terrorism. Avoid landings.

Cyprus

Reports of GPS Interference began in March 2018 in the Nicosia FIR. In April 2018, the Nicosia FIR was being used as military staging for possible strikes in Syria, prompting EASA to issue a warning, and lead to avoidance of the FIR by many airlines.

30MAR18 Cyprus Notam 0356/18 Expect GPS interference in Cyprus Airspace.

22MAR18 Cyprus Notam N0068/18 GPS Outages have been reported in the Ercan Advisory Airspace.

Philippines

There has been a high volume of crew reports of GPS Interference in the Philippines, leading to GPS/ADS-B dropouts, especially in the vicinity of RPLL/Manila.

08MAY17 Philippines Notam B1584/17 Reports of GPS interference affecting RPLL/Manila Airport.

Central African Republic

The situation on the ground in the Central African Republic is volatile and as of June 2017 has been deteriorating rapidly. There have been numerous attacks on Civilians and peacekeeping troops. Bangui FEFF is operating under UN control, it is subject to regular power outages and is also acting as a refugee camp. Avoid landings.