Turkey: New rules for GA/BA flights

David Mumford
18 February, 2021

Strange things are happening in Turkey.

Strange Thing #1

A few weeks ago we spotted a new doc issued by the Turkish CAA with guidelines for foreign registered aircraft who wish to operate **domestic legs** in Turkey – to get a permit, you now need to apply at least 15 days in advance, and you will need to **prove that you have investments in the country.**

Strange Thing # 2

Then this week, Turkey suddenly **revoked all landing permits for non-Turkish operators** unless they had "special exemptions".

No one seemed to know why this happened, what these special exemptions were, or how to go about applying for them.

So we got in touch with local Turkish handling agent Gozen Air for some urgent help to understand what's going on!

Here's what they said:

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With effect Feb 13, 2021, the Turkish CAA (TCAA) has started to apply
operational
limitations for all non-Turkish registered aircraft on general-business
aviation
operations to/from Turkey. This was just a verbal announcement by the TCAA -
they
haven't made any official announcement yet, though a change in the AIP and on
the
permit application system is expected soon.
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In the meantime, here's the lowdown:

Flights will only be considered as Private if the following criteria is met:
- Owner must be the same as the aircraft operator. i.e. the aircraft can't be leased out.
- Aircraft can only have maximum 12 passenger seats (or 19 seats if the country
of aircraft registration has a bilateral agreement with Turkey).

If flights don't match this criteria for any reason, then the flight will be considered a Commercial flight. In this case, the operator must apply for a charter landing permit, and include these docs in the application:
- AOC / Operations Specification
- Authorization Letter to your representative company in Turkey
- Handling Agreement (in case you are operating more than 4 flights to/from Turkey)
- Aircraft documents: Insurance, Registration, Noise, Airworthiness.

Regardless of whether a flight is considered Private or Commercial, foreign aircraft
with passengers onboard can only fly to Turkey from the country the operator/aircraft
is registered in.

Bottom line, the issue is that **there was previously no separation between Commercial and Private flights** among business aviation in general, and most of the business aviation flights were considered as private before. Now, the TCAA has implemented these new measures to **regulate them**, and also to **protect the local Turkish operators** in business aviation – although the roll-out of the new rules has so far been a bit uncoordinated and confusing.

Strange Thing #3

Back in December 2020, we had one report of a flight headed from Sweden to Cyprus – when on the runway about to depart, they received notification from the Turkey ACC that **overflight of Turkish airspace was not allowed**, and they would have to **route around the country**.

We had several other reports that the **United Arab Emirates CAA are now denying approvals for flights to/from Turkey** – they haven't officially published this new rule anywhere, but local permit agents have confirmed this is what's happening.

These events might be connected. Might not be. Might be to do with political tensions surrounding recent EU plans for sanctions against Turkey and naval drills off the Turkish coast. Might not be.

Whatever it is that's going on, if you've got a flight going **to or over Turkey** any time soon, **double-check your permits are all still valid**, and keep an eye on any AFTN replies you might get from Turkey once you've filed your flight plan.

If you need help with ops to Turkey, of for overflight of the LTAA/Ankara FIR, you can get in touch with local agent Gozen Air by email at: occ@gozenair.com

2019: Safety Net on the NAT

OPSGROUP Team
18 February, 2021

2019 seems so long a go. A golden age for aviation with airplanes swooshing happily through the skies, and none so happy as those crossing the NAT.

Or were they?

Well, now we can check because the NAT Systems Planning Group 2019 Annual Safety Report has just been released. 2019 might seem a fair old while ago, but the report speaks of a time before Covid when aviation was at normal levels and so offers good guidance on what's up in the NAT world normally.

What is monitored?

If you were thinking the only things you're monitored on are your competencies and KSAs in sim assessments, then think again. You are being watched all the time, and especially so in the NAT where 12 Safety Key Performance Indicators are watched like a hawk watches a juicy mouse in long grass.

Targets for reducing the number of errors in these areas are set using three year rolling data.

So, how did we all do?

Well, in 2019, six of the targets were met and there were notable improvements in these three areas:

- Percentage of long duration height deviations
- Rate of long duration height deviations where datalink was not in use
- Number of minutes spent at wrong fight level for aircraft not using datalink

So, pilots have got better at reading their altimeters and not flying at the wrong altitude.

The risk of vertical collision estimate saw an impressive 30% improvement, and they reckon with the use

of SLOP this can be reduced another 77% making it*… 30/100*77{equation stuff}#100[somethingbysomethingoversomethingelse]…* a lot less likely we will fly into each other. Good job all.

What is going less well?

Lateral collision risk estimates reduced, but there were still 80 reported lateral deviations. So we're flying at the right altitude, but sometimes in the wrong place.

Flight plan versus what ATC actually cleared pilots to do are the top of the list, making up 30% of the total. 49 of those were prevented by ATC. Not adhering to ATC clearances increased from 10% in 2018, to 13% in 2019, and weather was another biggie making up 17% of all lateral deviations.

ATC coordination errors were also in the top 5 (11%) so don't congratulate them too much. ATC were also provided with conformance monitoring tools which highlighted cleared versus selected level differences, and route assignment monitoring tools to help them intervene and prevent deviations. With these in place, the performance in the second half of 2019 did improve a lot.

Ok, congratulate them a lot, they've made it much safer for us up there.

Overall, what's the verdict?

No gold star because there were still 266 events reviewed in 2019 by the SPG. These included:

- 83 large height deviations
- 118 (actual) lateral deviations including
    - 42 GNEs
    - 44 ATC interventions where ATC prevented pilots making GNEs
- 73 prevented events where ATCOs stopped aircraft flying an uncoordinated flight profiles or entering the wrong airspace sort of things.

It isn't always pilots going wrong though. Some of these were down to equipment issues, some down to ATC not responding quick enough. Here is the full breakdown –

What else is going on up there?

Well, in 2019, when a normal number of aircraft were still flying, they were able to properly monitor the communication and surveillance side of things too, and a whopping 70% of core NAT traffic were using ADS-B. 83% of aircraft were making use of CPDLC over HF radio as well, and the use of these is a big factor in improving the safety and efficiency up there.

The report says this leads to a 'greater focus on strategic rather than tactical techniques' which sounds like 'we are now planning aircraft not to fly near each other' rather then 'when aircraft get too close we move them out of each other's way'.

As a reminder, you have until February 25 to get yourself Datalinkable – the NAT Datalink mandate comes in then.

What next?

2020 data might be a little skewed given a lot less traffic flew, (and many of those who did probably did so

after a big gap of not flying), but the overall trend is big improvements. ADS-B is an excellent thing, ATC have a bunch of tools to help them make us safer, and pilot errors are reducing.

There is also a NAT2030 vision plan which is aiming for:

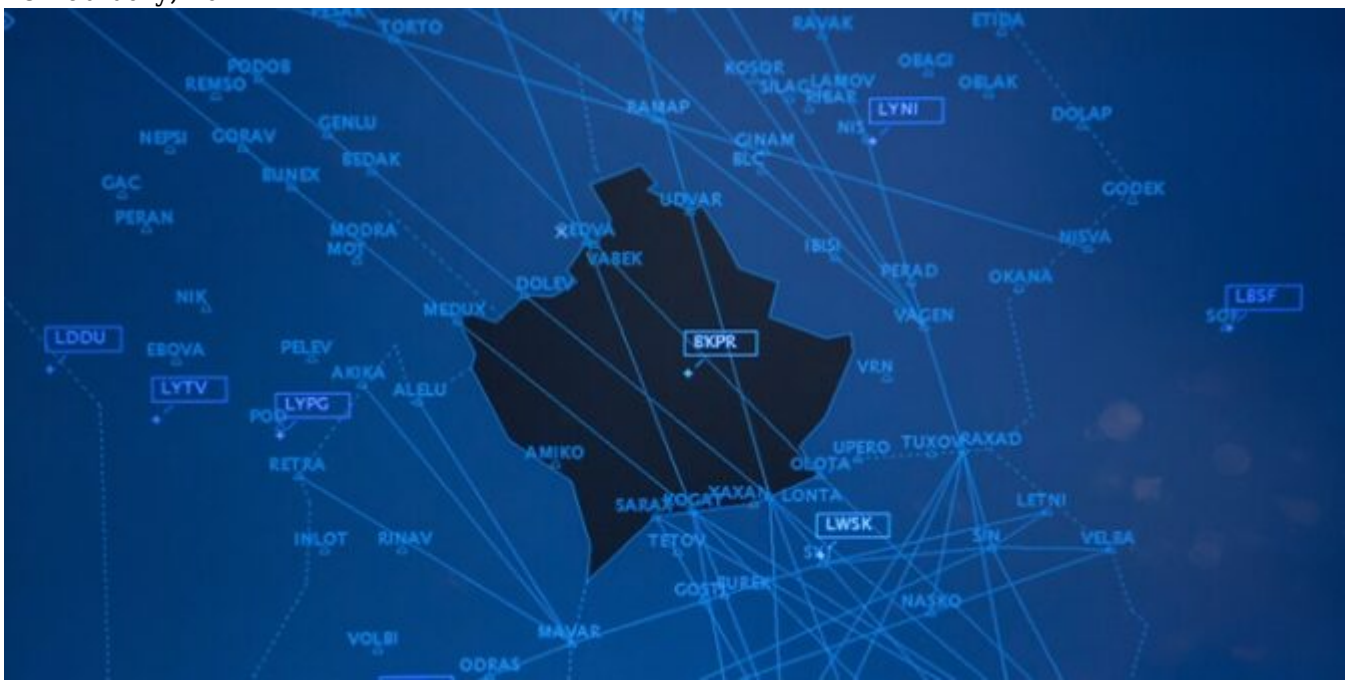
- more flexibility through ‘dynamic airborne rerouting”
- improved contingency procedures
- better comms and surveillance and new technologies
- a focus on improving the environmental impact
- and maybe even some new visitors to the region in the shape of unmanned aircraft supersonic aircraft and even balloons

Until then, get out your own balloons and have a little celebration because safety is improving on the NAT. Now put them away. There is still work to be done.

The full report can be checked out here

The Normalising of Balkan Airspace

OPSGROUP Team
18 February, 2021



The Kosovo War took place several decades ago. It was a conflict between the Serbs (former Yugoslavia) who had controlled Kosovo before the war and considered the land sacred, and the Kosovan ethnic Albanian rebel group who wanted Kosovo to have their independence (and ethnicity) from Serbia recognized.

Following the war, the usual sort of reaction from all parties involved ensued – namely Serbia refusing to

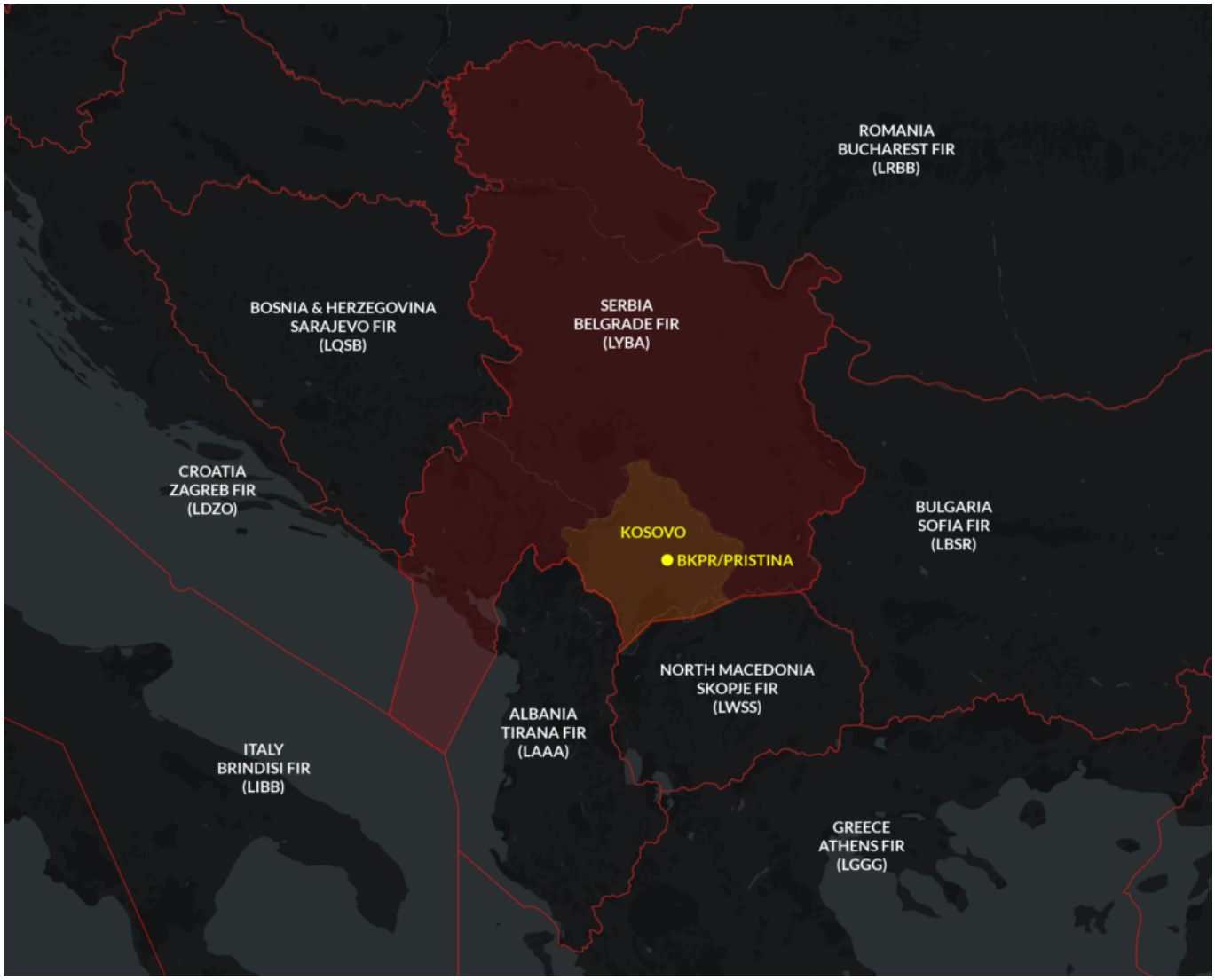
talk to their new neighbour, Kosovo. Despite the conflict having been resolved several decades ago, there has been an **ongoing impact on aviation** in the region because of the continued political tensions between the two countries.

Tell us something about Kosovo?

Kosovo is a landlocked country bordered by Serbia to the Northeast, Montenegro to the Northwest and North Macedonia and Albania on the other sides.

It only has three airports – two small domestic airports, and then **BKPR/Pristina International**.

Pristina International, also known as Adem Jashair, is a single runway airport. Runway 17/35 is 8,205' (2501m) and has a CAT II ILS onto 17 and VOR DME onto 35. They have limited maintenance facilities and JET-A1 on prior request.



What was the airspace issue?

In short, Serbia **refuses to allow Kosovan bound aircraft to route through Serbian airspace**. This included upper and lower airspace.

Since the bit where Serbia borders Kosovo makes up approximately half of Kosovo's entire border, the overflight ban resulted in **a major detour for any aircraft wanting to fly in or out Kosovo,** and control and safety was limited.

What happened next?

In 2014, Hungarocontrol (Hungarian ATC) **sorted the upper half the problem** by assuming responsibility for all the upper airspace in the region. With them **controlling all flights over FL205** (the lowest available flight level being FL210) this made it a lot easier for aircraft to route over some of Serbia. Aircraft still had to **route around to Albania and North Macedonia** in order to descend into Kosovo since SMATSA (Air Traffic Control of Serbia) continued to refuse aircraft to overfly the territory of Serbia below FL205.

The official re-opening of the upper airspace info can be found here. It is seven years old but still an interesting bit of historical Notamage.

This airspace falls under KFOR. Kosovo also has no designated RCC. Operations are under the control of the Combined Air Operations Centre Torrejón – a military (NATO) command centre in Spain. Actually, they are kinda cool. They secure the skies, respond to crisis, protect territory and populations and do a bunch of

other impressive peacekeeping stuff. So while Kosovo airspace is referred to under the Balkans airspace, it is still looked after by NATO.

But back to Kosovo – control for Pristina Airport was therefore from surface level to FL205, with Hungaro taking over from there. The only way in and out of the airport was **via the southern border with Macedonia.**

What has happened now?

Newly formed south-west air routes in the lower airspace will allow more efficient routings into Kosovo for civilian aircraft.

The new lower airspace will be **controlled by Iceland**, organized by NATO under their Balkans Airspace Normalisation program. Iceland will offer safety oversight and also help support technical solutions to allow more airlines to launch flight to and from Pristina in the future.

This is the official NATO news on this news.

Airspace up to FL205 over Kosovo forms the Pristina ANSP. Everything in the CTR and CTA is Class D. Outride of that is Class G. General Air Traffic are not allowed in the Class G bits without prior permission (keep this in mind if you need to make weather deviations – it all has to be cleared by ATC unless a proper emergency).

General Aviation Traffic have the following routes available to them:

- From North Macedonia, you can plan to route inbound by XAXAN and out via SARAX.
- From Albania, you can route in via ARBER and then expect a direct to Pristina airport. Outbound will be via KUKAD.
- From Montenegro the waypoint is MEDUX – but this is for *Military only.*
- From Serbia flights along the L680/M867 routes (KUKES/JAKOV waypoints) are *Military only.*

Although this does not mean a major change for routings, the “normalisation” of control and airspace (high and low) is a step forward.

What next?

Well, that’s about it for now. There was apparently an agreement signed in 2020 between Serbia and Kosovo to **start allowing flights between BKPR/Pristina and LYBE/Belgrade**, but so far no sign anyone is planning on starting up this route.

The Kosovan CAA page is here (although much of it does not work). There are some old AIPS published so keep an eye out for the new ones showing the shiny new ATS routes.

Some planning info

If you are looking to fly into Kosovo then you are going to need a slot. You can email occpm@imakkosovo.aero, or call +383 38 501 502 2222

They want at least 3 days notice.

All the forms for requesting slots, and all the information on this can be found document entitled “Regulations for aircraft operating as General Air Traffic in the Balkans’ v4.0” which we have provided right here for you.

Dry Ice: The Silent Danger of Hauling Vaccines

Chris Shieff
18 February, 2021

We are on the verge of the largest airlift in history. The Covid vaccine rollout has begun and the world is turning to aviation to make it happen at breakneck speed.

Just how big?

Huge. IATA think the equivalent of about **8,000 fully loaded 747 freighters** will be needed to get the vaccine out to everybody. Over five billion doses of just the main ones will be produced this year alone – enough to jab nearly **half the people on earth.**

It's a gargantuan logistical challenge for the industry and it means crew will be carrying large quantities of vaccines throughout the world packed with volumes of dry ice we have never seen before.

The problem is that **dry ice is dangerous.** Put it in a confined space like an airplane and it can be really dangerous. The FAA were sufficiently concerned about it to issue a safety alert back in December, while EASA have come up with their own guidelines.

So, why is it so dangerous?

Dry ice is carbon dioxide but in solid form. It goes that way when you make it really cold. The issue is the minute it begins to warm up again, it turns straight back into gas – 'sublimates' if you want to get technical. While this is great news for the dance floor of your favourite night club, in airplanes it means you have a hazard that is constantly trying to fill your cargo hold or cabin with **a toxic gas**.

You can't see it, smell it or taste it but CO_2 displaces the oxygen in your body causing you to gradually asphyxiate. **It is not the same thing as hypoxia**, and you can't rely on the symptoms you were taught back in flight school. Early signs of CO_2 poisoning include drowsiness, headache and difficulty breathing.

Very quickly this can turn into dizziness and confusion. Left unchecked seizures and unconsciousness will soon follow.

The more you are carrying, the bigger the risk. Which is why there are strict limits set by manufacturers and operators on how much you can carry. The problem is that these limits were never designed with the global rollout of a vaccine in mind. Operators now need to find new ways to manage the dangers of hauling much more if it.

What's wrong with room temperature?

A little about vaccines. There are two approved in the US – Pfizer and Moderna, and they both work in similar ways. They use RNA (DNA's lesser known cousin) to tell your body's cells to produce a spike protein – those pokey out bits you see in all the Covid pictures. This triggers an immune response and hey presto, no more Covid.

Well, there's more to it than that. But the point is that RNA is fragile stuff – it starts to break down if you don't keep it cold. **Like really cold.** The Pfizer vaccine has to be kept at -70 deg Celsius while Moderna must be kept at a comparatively tropical -20 deg Celsius. That's where the dry ice comes in.

The vaccines are generally being shipped in special thermal containers – basically big coolers with layers of dry ice used to control the temperature inside.

So how much dry ice is too much?

That depends. There are lots of factors at play including the rate the dry ice is releasing gas, the size of your aircraft, how efficient your ventilation system is and your **appetite for risk**. Aircraft manufacturers publish guidelines, and it is up to aircraft operators to carry out a risk assessment to find a safe answer.

If you're looking for a starting point, the FAA have published a formula. It's a bit dry (no pun intended) but with a little number crunching you can come up a conservative idea of how much is safe to carry. Whatever happens, the concentration of CO2 in the air of your aircraft **can never exceed 0.5%** – the FAA's hard limit for transport category aircraft and the maximum level for humans flying aeroplanes.

How do we stay safe out on the line?

Keep that air flowin.' The most important precaution is enough **ventilation** when carrying dry ice. Make sure you are maximising flow throughout the aircraft.

Watch those MEL's – defects that affect your ability to ventilate are major red flags when you see dry ice on your NOTOC. This may include bleed/pack problems. Also look out for issues with your fixed oxygen system – you may just need it.

Keep things cool. The colder your cargo hold, the slower the dry ice will release gas. This includes on the ground – try and limit the amount of time the hold is open, especially in hot climates.

Use CO2 detectors. These can be carried in an aircraft or worn by crew members – don't confuse them with carbon monoxide (CO) detectors found in smaller piston aircraft.

Get some training and have a plan if you experience symptoms or an alert is triggered. This may include getting on oxygen, declaring an emergency and diverting. Chances are the problem will get worse before it gets better.

Beware of smoke/fumes removal procedures. Every aircraft is different but in most cases they involve depressurising the aircraft. In the case of dry ice this may make the problem worse – an increase in cabin altitude has been shown to increase the rate of release and draw more CO2 from the shipments.

Keep an eye on ground staff too – high concentrations of CO2 can hang around cargo holds for minutes after opening. They may not realise the danger.

It's not just ice. There are other risks too.

Vaccines are being shipped with **lithium battery** powered trackers. Manufacturers want to know that the vaccines are kept cold enough and being delivered where they are supposed to be. Which means operators have to keep following the rules for lithium batteries too. You can find more info on those here.

Watch your security. Vaccines are big business. In the initial stages of the rollout, demand is through the roof and there isn't enough to go around. Unfortunately, there are concerns that this has attracted **criminal interests** who may try to target large shipments of vaccines. INTERPOL have issued a warning about this very threat.

Get Priority

Some shipments of vaccines are time critical. The US, Canada and much of Europe have a **new procedure** to let ATC know you fall under this category. Essentially by including 'STS/ATFMX' and 'RMK/VACCINE' in Item 18 of your flight plan, ATC will do their best to keep delays to a minimum.

Those links again...

- The Safety Alert published recently by the FAA on how to safely carry dry ice.
- EASA's own guidance.
- The FAA's magic formula.

SNOWTAMS slip into a new style

OPSGROUP Team
18 February, 2021

ICAO will be **updating the format of SNOWTAMs** later this year – the special issue Notams that deal with surface condition reports and contaminated runways. They have published updated guidance on how SNOWTAMs should be issued when the changes take effect on November 4, 2021.

Here's a summary of what's changing, what the new style SNOWTAM will look like, plus a handy chart to help you decode them…

The Friction Task Force

There is such a thing, and we can only assume they wear skintight suits and body surf down runways to measure the friction. Anyway, they make recommendations on global reporting formats and also how to assess runway surface conditions.

It is quite a big thing. A lot of accidents happen because **runway friction is not reported correctly**. Or rather, pilots don't understand it/choose to ignore it. Just ask (several) crews flying into UEEE/Yakutsk about it.

But if you check out the RCAM (Runway Condition Assessment Matrix) below, you will notice that offering a **braking action** is the preferred method nowadays. **Friction coefficients** are not so useful.

What is a SNOWTAM?

It is a special series Notam that provides a surface condition report to let pilots know what is on the runway, how much of that is on the runway, and what they can expect their airplane to do (braking wise) on said runway.

So, it is something that basically **tells the pilot: "Watch out, slippery!"** in a rather complicated sort of way.

SNOWTAMS use metric units, and a bunch of codes for deciphering. More about that later on.

What are ICAO changing?

As of 4 November 2021, the **maximum validity of a SNOWTAM will be 8 hours**. Currently they are 24 hours and a lot can change in that time meaning you have to try and discover what is still valid and relevant and what is not.

With the new ones, if they don't say anything different after 8 hours then you can assume the runway surface condition is good and normal again. If anything changes, they will release a new one which will automatically replace the old one.

Each SNOWTAM will get its own serial number for identifying it.

What else is in the Guidance?

TTAAiiii CCCC MMYYGGgg (BBB)

Yep, that is written in it. It is an abbreviated heading demonstrating how certain things should be written. For example:

GG EADBZQZX EADNZQZX EADSZQZX

170540 EADDYNYX

SWEA0154 EADD 02170535

(SNOWTAM 0154

EADD
02170535 09L 6/6/6 NR/NR/NR NR/NR/NR DRY/DRY/DRY 02170515 09R 5/2/2 100/50/75 NR/06/06 WET/SLUSH/SLUSH 02170500 09C 2/2/2 75/75/50 06/12/12 SLUSH/SLUSH/SLUSH 40

DRIFTING SNOW. RWY 09R CHEMICALLY TREATED. RWY 09C CHEMICALLY TREATED.)

This is an example of how the **new style SNOWTAM will look**. Not a huge difference to the old ones, but here is a decode for you anyway.

- **GG EAD** etc etc is who produced it. Not super relevant for pilots.
- Snowtam **0154** is the serial number of the Snowtam
- **EADD** is where we get interested. That is the airport identifier. Issued on the 17th February at 0535
- Runway 09L
- It then gives the runway condition code for each runway third, as determined by the **RCAM** (runway condition assessment matrix). 6/6/6/ means dry/dry/dry.
- Next up is the percentage coverage. **NR** means less than 10% or dry. Hence the many NRs
- This SNOWTAM then moves onto 09R because frankly 09L was quite boring and dry.
- 09R is 5/2/2 (good, medium-poor, medium-poor according to RCAM). 100% covered, 50% covered, 50% covered) and NR/06/06 is the depth – dry/ 6mm/6mm of wet/Slush/Slush
- Then it moves onto another runway…. blah blah blah

The last bit is another change – this gives you **"Situational Awareness"** – a free text (i.e. real human language) section reporting other important stuff you might want to know.

A decoding device

We aren't going to be there to decode for you, so here is a decoding device we made earlier (by copying the ICAO one and adding some nice colours).

You might also want to download something like the **SNOWTAM app** on your smartphone (just make sure whatever you use is correct against your company manuals).

DECODING A SNOWTAM - WHERE IT IS TALKING ABOUT	
ITEM A	**RBCA -** THE 4 LETTER ICAO IDENTIFIER FOR THE AIRPORT. Rebecca International
ITEM B	**12161300 -** THE DATE AND TIME. December (12) the 16th (16) at 1300z
ITEM C	**09L -** THE RUNWAY. They always use the lower number. So you aren't going to see a 27R as well. This is the SNOWTAM way.

DECODING A SNOWTAM - WHAT IT IS TELLING YOU	
ITEM D	**3/2/6 -** THE RUNWAY CONDITION FOR EACH THIRD. Check out RCAM below.

RUNWAY CONDITION CODE	RUNWAY SURFACE DESCRIPTION	AIRPLANE DECELERATION OR DIRECTINAL CONTROL OBSERVATION	PILOT REPORT OF BRAKING ACTION
6	DRY		
5	FROST WET - visible dampness or moisture up to and including 3mm *Up to and including 3mm: SLUSH / DRY SNOW / WET SNOW*	*Braking deceleration normal for wheel braking effort applied AND directional control is normal*	**GOOD**
4	*OAT -15degC and lower:* COMPACTED SNOW	*Braking deceleration OR directional control is between Good and Medium*	**GOOD TO MEDIUM**
3	WET (slippery when wet) DRY/WET SNOW ON TOP OF COMPACTED SNOW (any depth) *More than 3mm: DRY SNOW / WET SNOW* *OAT higher than -15degC: COMPACTED SNOW*	*Braking deceleration is noticeably reduced for the wheel braking effort OR directional control is noticeably reduced*	**MEDIUM**
2	*More than 3mm: STANDING WATER / SLUSH*	*Braking deceleration OR directional control is between Medium and Poor*	**MEDIUM TO POOR**
1	ICE	*Braking deceleration OR directional control is significantly reduced*	**POOR**
0	WET ICE / WATER ON COMP SNOW DRY/WET SNOW ON ICE	*Braking deceleration OR directional control is minimum or uncertain*	**LESS THAN POOR**

DECODING A SNOWTAM - MORE WHAT IT IS TELLING YOU	
ITEM E	**NR/25/75 -** PERCENT COVERAGE. NR (<10% or dry), 25 (10-25%), 50 (26-50%), 75 (51-75%), 100 (76-100%)
ITEM F	**05/115/195 -** DEPTH OF CONTAMINANT - 2 OR 3 DIGITS. 05 for 5mm. 115 for 115mm etc
ITEM G	**SLUSH/SNOW/ICE -** TYPE OF CONTAMINANT. For each third.

DECODING A SNOWTAM - SITUATIONAL AWARENESS STUFF	
ITEM H	**35 -** RUNWAY WIDTH CONTAMINATED (if less than published width)
ITEM I	**RWY 09L REDUCED TO 2000 -** Info on runway length reduction will be written
ITEMS J-O	Other need to know info on the horrible weather conditions
ITEMS P-R	Conditions of other movement areas - Aprons and Taxiway
ITEM T	Some plain language remarks

Why these changes?

Well, in order to **make SNOWTAMS better**, because they are fairly important. You might get some frosty toes if you step in a puddle of slushy snow, but you're going to get more than cold feet if you go skidding off the end of a runway.

SNOWTAMs are there to **make winter weather safer**. They give **critical information about the state of the runway**, and this should be plugged into whatever performance calculating device your airplane needs you to use so that you can see whether you will stop before, or after, the end of the runway.

Rumbles Over Riyadh: A New Threat?

Chris Shieff
18 February, 2021

You might have seen the headlines a week or so ago. On January 23, Saudi Arabia's capital Riyadh was attacked by a 'hostile air target' – likely an **explosive 'kamikaze' drone**. Saudi air defences destroyed it, causing a loud explosion over the city and flight disruptions at OERK/Riyadh.

Then a few days later it happened again. Another big bang in the skies of Riyadh and more flight disruptions. Plenty of people caught it on camera. But the silence from official channels was **deafening**.

So what? Isn't there is always stuff in the news about drones over there?

Yes. They're sporadically sent over the border from Yemen by the Houthi – the folk who overthrew the Yemeni government back in 2014. Southern regions are usually the worst hit and occasionally **Jeddah** and **Riyadh** are targeted just to remind Saudi Arabia that they can.

But here's the kicker: **this time it probably wasn't them.**

How Do You Know?

Firstly, the Houthi have adamantly denied they were to blame. They've actually gone out of their way to distance themselves from the attack. So why should we believe them? Because of the status quo – **they want to make headlines**. Their attacks on Saudi Arabia are a demonstration of their firepower and willingness to target anywhere in the country. They're even known to claim responsibility for attacks that weren't theirs.

Secondly, someone else has already put their hand up for the attack – a group of **militants in Iraq** called the Alwiya Waad al Haq. The Who? The 'Brigades of the Righteous Promise'. It's a fancy name but the takeaway is this: **someone new is apparently taking shots at Saudi Arabia from Iraq.**

Here's why

Saudi Arabia and Iran don't get along. The reasons are long and complicated and you can read more about them here. But in a nutshell, religious differences and a desire for regional dominance are the cause of the ongoing conflict. The attacks on Riyadh are a worry because they may reflect a changing way that Iran asserts its dominance throughout the Persian Gulf – **by proxy**.

Proxy conflicts are a thing. It means when someone is doing the hands-on fighting for somebody else. Remember those Brigades of the Righteous Promise people? It is alleged that **Iran may have put have put them up to it**, and supplied the firepower to do it.

There's no shortage of independent militia in Iraq. They're difficult to trace and new ones emerge seemingly from nowhere – so much so that they're sometimes known as '**shadow militia**.' In reality, they are usually a cover for larger and much more well-known groups. In this case, possibly the Hezbollah – one of Iran's largest proxies. By hiding behind different names they can cause confusion, unpredictability and can divert blame away from the prime suspects.

It is possible that Iran may now start using these proxies more often for **attacks on its regional adversaries**.

So why is this an aviation issue?

We get twitchy when anyone is firing things into the sky. This way of fighting is unpredictable and the weapons being used are getting more sophisticated and can cover large distances.

Case in point. Back to the Brigade guys – since their alleged attack on Riyadh they have since threatened to attack the Burj Khalifa in **Dubai**, and also **Abu Dhabi airport**. Whether or not their threats can be taken seriously remains to be seen – but if the attack on Riyadh is anything to go by, they might have the weapons and intent to do it.

For aircraft, there are a few threats to be aware of:

- Misidentification by sophisticated air defence systems.
- Being caught in the cross fire.
- Simply being in the wrong place at the wrong time. Airports are often a prime target.

What can we do about it?

Continue to monitor Safeairspace.net for airspace warnings – it is our database of airspace risk and we update it all the time. Head over there and take a look – there are multiple warnings for the Persian Gulf region including four 'no fly' countries: **Syria, Iraq, Iran and Yemen.**

Understand **ESCAT** rules. Or you might know them as SCATANA. Either way they are a protocol for getting you out of dangerous airspace and fast. **ATC may divert you clear of an FIR or ask you to land.** They're in use in Southern Saudi Arabia – but can be applied at short notice to any airspace where the risk is high. ESCAT procedures are published in GEN 1.6 of Saudi Arabia's AIP. If you don't have a login, you can see the relevant section here.

Lastly, carry out your own risk assessment and know what's going on down there. Just because airspace is

open **doesn't mean that it's safe.**

In the Know-se: Current Covid Crew Requirements

OPSGROUP Team
18 February, 2021

Covid has been around for nearly a year, and we have seen countries closed, reopen, close again, slightly close, close to some, not to others… It has been an **endless jumble of restrictions**, sticks up your snout, and "are you or aren't you allowed" confusion.

So, we thought we would provide a quick summary of the current **Covid Air Crew restrictions**, because, after all, these are what you probably want to know.

AmeriCan if you're crew

The US want proof of a negative Covid test for passengers – that's a PCR or antigen test, and it needs to have been taken a maximum 72 hours before travel. This covers all flights. That means private flights, GA flights, chartered balloons, even people who find a way to ride in on giant pigeons…

However, **ACTIVE** crew are exempt.

So for crew travelling to the US – you don't need to get a Covid test in advance as long as you're "active crew" – i.e. you're **operating the flight** or travelling in an assigned **deadhead status** (i.e. positioning crew into the US). You also have to follow the health and safety rules set out in the FAA's SAFO 20009.

We've had some reports of issues when positioning crew into the US, with gate staff requiring they show proof of a Covid test. To be clear: deadheading/positioning crew are officially exempt from this requirement, as per the CDC guidance found here.

Try to connect with the carrier being used in support of deadheading crew to verify their processes and documentation requirements. **One thing to try:** the NBAA has developed a template letter for deadheading/positioning crew to use for these situations. Print it out, fill it in, and send it in advance to the carrier you're flying in with, and ask for written confirmation back from them to mitigate against any last-minute issues at the gate.

Maintenance personnel and contractors are also exempted if their travel is for the purpose of operating the aircraft, or ensuring the safety of flight ops.

Canadargghhh

Canada recently changed their entry restrictions for all, and they are only allowing passenger flights to fly into CYUL/Montreal, CYYC/Calgary, CYYZ/Toronto or CYVR/Vancouver.

Despite the clampdown, crew are still exempt provided they are on duty.

Annex G contains the Template Letter for Crew confirming they are on active duty which you should make sure your crew have with them. The exemption covers quarantine and Covid testing.

Chi-not the place to go

Aside from locally based Chinese crew being asked to wear nappies, the information for air crew is tough to pin down for China. We think it is this – **every airport is different.**

The China Airlines Immigration page has the most useful information, and where it refers to C Visa, this is the bit you want to look at because that's what crew will have.

Generally, you seem to be able to enter and stay overnight in a crew rest hotel without 14 days of quarantine, but your best bet is to confirm with a local airport agent (operations@groundexpress.aero have been really helpful).

The goings on in Hong Kong

From January 23, any air crew who have visited somewhere deemed Extremely High Risk will have to self-isolate in a designated quarantine hotel for 21 days… we think this might just apply to local crew though, because it goes on to say –

All non-local based crew *[who have been to Extremely High Risk areas]* must have a negative PCR taken with 48 hours, and must undergo another test on arrival and remain in isolation until a negative result is received. They call this their **Test and Hold** procedure.

If the crew were not in an extremely high risk place up to 21 days before going to Hong Kong then you still need the PCR test taken 48 hours before, and the arrival test, but you can stay at your airline-organized hotel instead.

The official website is here.

Are U(o)K?

The UK has seen a lot of changes to their entry restrictions over the year. After they discovered a right royal variant of their own, they *locked down* (and pretty much every other country in the world *locked them out*). Then the cases of other mutant variants starting popping up all over the world so the UK closed their borders to a whole bunch of countries.

What does this mean for crew though?

It means that if you are foreign flight crew and have been in (or even transited through) a banned country in the last 10 days then you will **not be granted access to the UK.** If you are a UK citizen or resident then you can enter, but will have to self-isolate for 10 days. The list of banned countries is here.

This is the bit we are talking about – the Travel Exemptions list, which lists **jobs exempt from restrictions**. The top message is pretty conclusive we think – even exempted jobs are not exempt if they are coming from/ have recently been to a country currently banned.

Europtions…

Europe has a lot of countries in it and all of them have their own regulations and restrictions. Here are the "big" ones.

France is getting a bit more restrictive with passengers of late, and borders are closing to a lot of higher risk countries – and to anyone who doesn't have legitimate and essential reasons to be travelling there. The UK and non-EU countries are pretty much banned at this point.

For the crew, the requirements haven't changed (as of February 3). You need to fill out a Passenger Locator Form, but are exempt from all the other isolation requirements (isolation and tests).

Swissport in LFMN/Nice keep a great little table regularly updated with all the latest rules in France for pax and crew, depending on where they're flying in from.

Germany are closing their borders to all places where mutated viruses can be found as well. That means the UK, Ireland, South Africa, Portugal, Brazil, Lesotho and Eswatini so far.

Watch out here – crew need a Covid test in advance if you've been in certain countries within the past 10 days (EDWW mega-Notam B0123 carries that announcement).

Germany classifies other countries into four groups: No Risk Areas, Risk Areas, High Incidence Areas, and Areas of Variant Concern (this government page has the latest details on which countries fall into each of these groups). Crew who have been in *Areas of Variant Concern* within the past 10 days must have a Covid test taken within 48 hours, and pre-register electronically. Crew who have been in *High Incidence Areas* within the past 10 days are only exempt from these requirements if they're staying in Germany for less than 72 hours.

Austrailing behind…

Australia remain very restrictive on how many international travellers they let into their country, and there are a lot of restrictions and requirements in place for entry. Luckily, for air crew, you are exempt. You do need to stay in your hotel during the layover though. Here is their official page on this.

Say Dubai-bye to restrictions

Dubai have remained fairly lax on their restrictions and lockdown measures, and as a result people who have been through Dubai are now being classified as high risk when they go to other places.

But for crew heading to Dubai, it is fairly straightforward – no Covid test required on arrival but if you want to move freely around Dubai during your layover then you can either bring a negative test result with you (taken 72 hours before), or get one on arrival (takes about 24 hours) and wait in your hotel until the results are received.

In and out of India

India have a general ban on scheduled international flights, except under special approval or existing

bubbles. This ban does not mention charter flights and local agents have confirmed that GA/BA can come in, but just need prior approval.

For crew on these flights, you are going to need a valid visa, but no test is required. However, if you don't have one, then you are only able to stay in transit hotels in VIDP/Delhi and VABB/Mumbai.

Where else in the World is there?

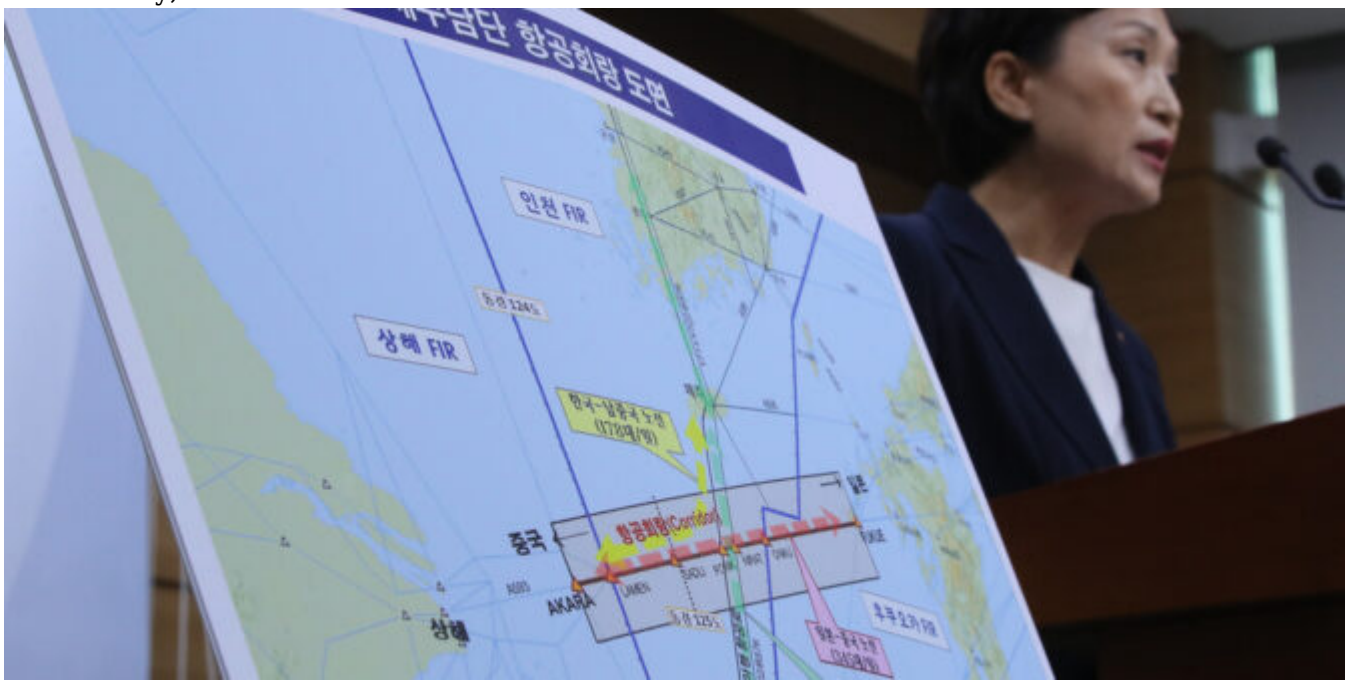
Lots of places, obvs! And with restrictions changing almost daily, it's tough to keep up.

Pre-departure Covid tests are fast becoming the new thing, with more and more countries around the world starting to make this a **mandatory requirement.** For a quick check of each country's rules for passengers, go here.

Often the **crew requirements** are not published alongside the passenger ones, so we will keep digging for this information, and the alerts we publish will try to give you the main passenger changes, and the crew requirements where we can.

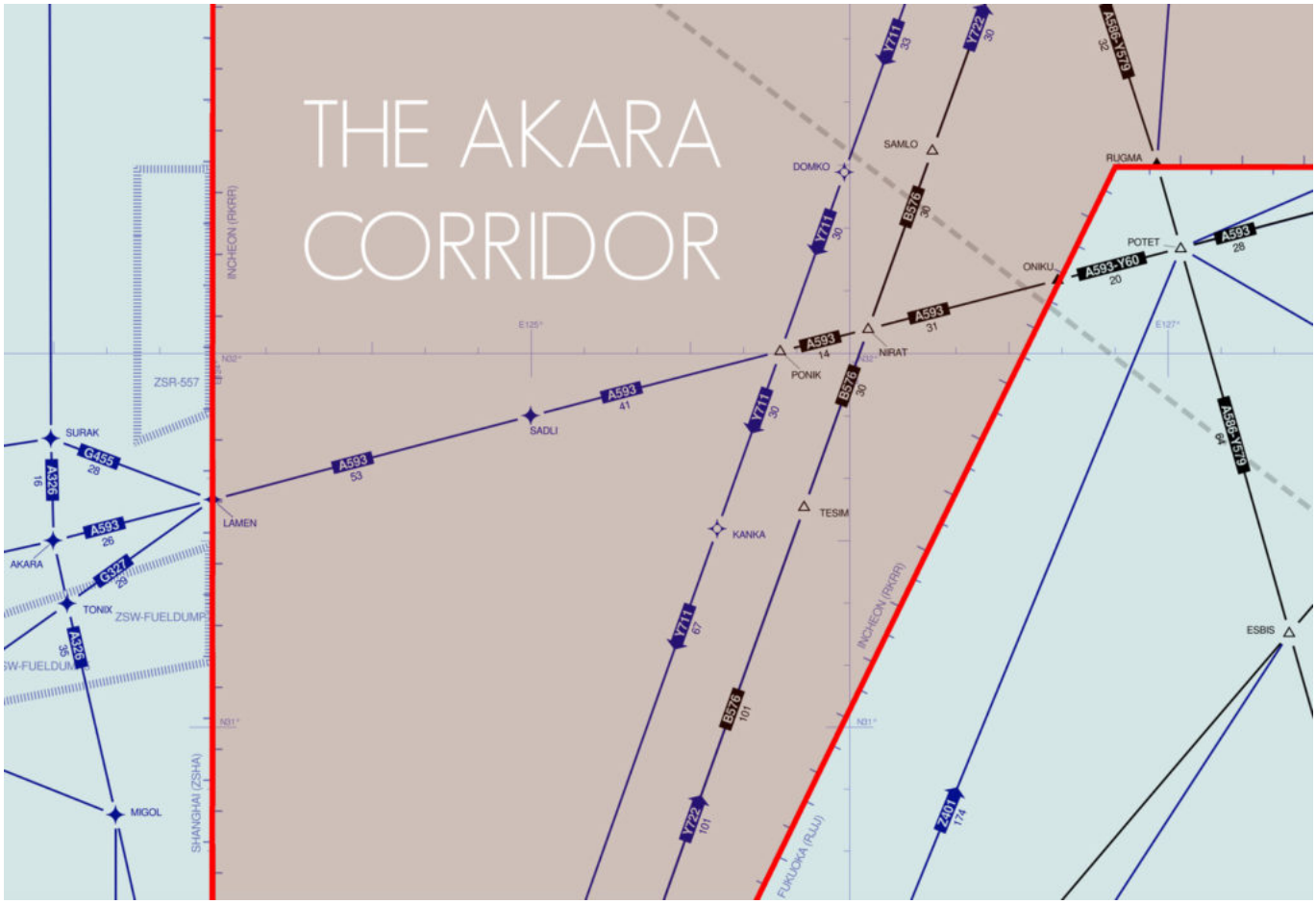
Navigating the AKARA Corridor

David Mumford
18 February, 2021



Some big improvements are on the way for the AKARA Corridor – a piece of airspace 100nm off the coast of Shanghai that connects **China** and **Japan**.

In effect the airspace is being simplified. Currently, South Korea's Incheon ACC controls North/South routes, while Japan's Fukuoka ACC controls East/West. The two operate on different frequencies – **a cause for concern for emergency descents** while heavy aircraft out of ZPSD/Shanghai are often penalised with inefficient levels.



This area has always been unusual in that more than one center has had responsibility for controlling aircraft at different waypoints.

But on 11 Jan, 2021, ATC authorities in Japan, China and South Korea agreed to implement a proposal from ICAO regarding ATC management in this area – **so from 25 March 2021, South Korea will control all flights in this area.**

There will also be a new East/West route in addition to airway A593 to further improve efficiency. You can read all about the changes in more detail here.

Mothballs & Maintenance: The Risks of Long Term Storage

OPSGROUP Team
18 February, 2021

It’s a strange time for aviation right now: closed countries, fewer passengers, and a lot of aircraft being moved into hangars – not to see the sky again for some time. The long-term storage of aircraft is leading to some unforeseen issues…

We reported on some these before, but we thought now might be a good time to give another quick summary because **aircraft are starting to fly again** – in particular the 737 Max which is back in the skies of Canada, the US, and soon Europe as well.

The Dangers of Long-Term Storage…

There have been a lot of incidents attributed to aircraft coming out of long-term storage. Wizzair fell foul of some bugs in 2020, an Aeroflot had a bit of a mishap after it was only partially ready to go back flying…

Both the US and EASA safety regulators have **raised concerns about certain issues for aircraft coming out of long-term storage**, so in case your airplane is currently stashed away, read on.

Nesting Nasties

We mentioned this one before, but with Covid dragging on, we figured it might be worth a reminder.

It sounds nightmarish, but insects have been known to build lairs deep inside aircraft probes, where even the most eagle-eyed walk-around check might not spot them.

And these critters have led to an alarming trend of **airspeed problems for aircraft new out of storage**.

Check out our earlier article on the risks of this here, and be sure to do an **in-depth check** of your aircraft’s nook and crannies before taking to the skies again.

Batteries Not Included

Aircraft with **Nickel-Cadmium batteries** (which is most of them, unless they have newer lithium ion ones) are suffering from **premature power loss**.

Embarrassing for the batteries, and dangerous for the pilots.

When disconnected, these batteries can lose their capacity, and when they are plugged back in again, they might not regain it – leading to **a lot less time of usefulness** that you think you have.

A battery not providing the performance you are expecting on that already bad day when you drop down to emergency power levels, is going to make it a really, really bad day…

What can you do? Well, EASA recommend that aircraft approval holders work with battery manufactures to check out this new found phenomenon, but in the meantime – if you are waking your airplane up from a long term hibernation, make sure its ticker is ticking properly with **a full maintenance check**, before you head out for a spin.

Clean as a Whistle

Disinfecting is big right now, what with this old pandemic thing. But a lot of the cleaning agents that can kill Covid, can also **damage your airplane**.

Damage to screens, fogging and misting from liquid pooling in out of sights areas, and some alcohol based substances 'crazing' up windows (alcohol crazes most of us up, but on windows it can cause fine cracks, and permanent damage) are all risks of using the **wrong cleaning fluids**.

There is also a chance long-term use of certain cleaning agents might start to corrode parts and **increase the flammability of the interior**, and even cause some shorting of the circuitry.

So, the FAA and EASA have issued guidance suggesting you **check which disinfectants are suitable for your aircraft type**. That seems sensible. Their recommendations on how to clean are here, and you can find links to anti-Covid approved cleaning agents that you can check with your aircraft manufacturer before spritzing your plane.

Check your flappers

Back in July 2020, the FAA issued an airworthiness directive for 737 Classics and NGs because, when stored for just 7 days, they can start to suffer from **corrosion on the Bleed Air 5th stage check valve**.

What's the risk here? Only a little case of **double engine failure**, according to the directive. Thankfully, they also recommend a fairly straight forward check to confirm your valve and its flapper plate are flapping as they should.

What else can you do?

EASA recommend operators carry out **extra checks when bringing an aircraft back into service**. These include engine runs, flight control manoeuvrability and brake checks.

To be safe, they suggest you do it on **20% of your fleet**, and to be extra safe, they suggest you consider flight checks on **the first 10% returning to the skies**. Don't rush these checks. It takes 3-5 days to ready an aircraft for long term storage, so it probably takes the same to bring them out again.

And don't forget about your pilots! Pilots don't fare much better in long term storage either. Like their aircraft, they need consistent use, and without it, you're going to have to spend a bit longer getting them airworthy again. (We would suggest you let them clean themselves though, and it's probably best not to ask how their flapper valve is functioning)

Some other stuff to read

- IATA Operations Info

- FlightGlobal Airworthiness concerns

Contrails, Chemtrails and Climate Change

OPSGROUP Team
18 February, 2021

Putting ‘climate change’ in the title of a post on an aviation page probably isn’t the best way to draw in the readers. But this is not a lecture. Promise.

So, what is it about?

It isn’t about **chemtrails**. They aren’t a real thing.

It is about **contrails**. The wispy bits of whatever that your airplane engines fart out as you fly, or the ‘engine plumes’ if prefer to imagine your airplane resembling something like a peacock.

Contrails are basically water vapour. They form when the exhaust gases from the engine starts to cool and mix with the air around them. The humidity rises, the water cools and condensation occurs.

A small, small proportion of what is burped out of the engine is not water though, but impurities from inside the engine.

Things like sulphur particles. It only makes up about 0.05%, but these tiny particles give the water something to freeze onto and they cause tiny ice crystals to form.

So why do we care about this?

They are quite a useful indicator of **possible wake turbulence** for us, but aside from that (and unless you are one of the pilots who likes to draw amusing pictures in the sky with them) then we don’t really care that much.

But maybe we should care a bit, because some contrails loiter up there for ages – these are known as *homomutatus* contrails. Frankly, anything which sounds a little like 'mutant' should cause concern, and these definitely do, because they are responsible for the word we shall not utter.

Ok, we will, just to be clear – **global warming.**

Not here to lecture though! Promise!

A little bit of science (still not a lecture)

So, the airplane burps out the water, it turns into contrails which then hang up there in the stratosphere. Aviation causes only about 5% of the water present in the stratosphere, so it isn't a terrible culprit.

Unfortunately, though, those homomutatus contrails, plus the extra water, plus the ice particles – all that stuff left up there by airplanes – causes terrestrial radiation to backscatter. It also stores up some of the radiation coming in and the result is something they call **'radiative forcing'**.

Basically, extra heating-up happens.

So, airplanes are spitting out C02 and contrails, and the contrails are thought to be responsible for something between 20% to about 40% of all the radiative forcing aviation causes to occur (they don't really know how much, but they reckon about that amount).

So… why are we actually telling you if this isn't a lecture?

We're getting there, stay attentive!

Free Route Airspace (a big open area between 2 waypoints where you are routed in a straight-line between them) has already helped reduce fuel burn and C02 emissions. They reckon it saved about 40 tonnes of fuel a day, and reduced the C02 by about 150 tonnes a day.

So, the helping-the-environment plans are already helping you because it means **less fuel burn**.

ICAO and Eurocontrol, in conjunction with EDYY/Maastricht have now set up a project called the **Contrail Prevention Trial**.

The Contrail Prevention Trial will initially only take place in Maastricht and the plan is to sometimes **re-route aircraft** around atmospheric conditions that are most conducive to contrails.

The Contrail Prevention Trial

If you are routing through Maastricht airspace **you might find you are given a re-route**. It won't be huge, it might mean a little bit of an **increase in fuel burn**, but it will hopefully mean a **decrease in the contrails** your aircraft produces.

You won't really know, but some clever science person down on the ground hopefully will.

So, a little bit of science, no lecture, and some info on why, if you are routing through Maastricht sometime in 2021, you might be given a tactical diversion. Now you know why

Here is the **official announcement** on it, found on the Eurocontrol homepage:

CONTRAIL PREVENTION TRIAL – MAASTRICHT UAC (EDYY) AIRSPACE
==========
IN AN EFFORT TO MINIMISE THE IMPACT OF AVIATION ON THE

ENVIROMNENT, MUAC WILL BE RUNNING A CONTRAIL PREVENTION TRIAL FROM 18TH JANUARY 2021 UNTIL 31ST DECEMBER 2021 BETWEEN 1500-0500UTC WINTER (1400-0400UTC SUMMER).

FLIGHTS MAY BE TACTICALLY REQUESTED TO DEVIATE FROM THE PLANNED/REQUESTED FLIGHT LEVEL BY THE SECTOR CONTROLLER.

ANY FLIGHT FLYING VIA MAASTRICHT UAC SECTORS BETWEEN THESE TIMES MAY BE CHOSEN. THE TRIAL WILL GO AHEAD DEPENDENT ON THE WEATHER CONDITIONS.

MUAC AO HOTLINE +31 43 366 1428

NMOC ON BEHALF OF MAASTRICHT (EDYY) FMP
==========

Greece-ing the Turkey: The Aegean Dispute

OPSGROUP Team
18 February, 2021

The dispute between Turkey and Greece is one we have mentioned before. Not because it was having a particularly big impact on aviation operations, but because of the vaguely amusing Notam battle they have been waging against each other for the last few years.

But what appears to be a rather silly conflict actually has a more serious side to it, so we thought we would take a little look at what is going on.

What are they arguing over?

This dispute is about what disputes always seem to be about – who owns some bit of land, or in this case, a Continental Shelf (so a bit of land that is submerged under several miles of Eastern Mediterranean Sea).

Turkey want it because it is a treasure chest of energy resources, while Greece want it because, well, they reckon it was always theirs.

The dispute goes a bit “higher” than the continental shelf though. Like those annoying neighbours who keep pushing their fence backwards into your garden, so **Greece have decided that their airspace extends not the usual 6nm** (based off territorial waters), but 10nm. Turkey refuse to recognise those extra 4nm as Greek. Nor do ICAO who have a 1948 statute saying airspace must coincide with territorial water boundaries.

So we would say that’s one:nil to Turkey, except for Greece’s point that they actually laid claim to those extra 4nm way back in 1931 before ICAO came along with their statute. Plus, this isn’t the only area Turkey has had disputes over, so maybe Greece have a bit of a point.

But do we care, or can we just let them keep bickering?

Well, the permanent Notam battle can be ignored with a simple filter that removes the likes of these from your Notam package:

However, that is not the only repercussion. Actually, all this makes for some messy airspace controlling because it impacts FIRs and with that, who controls military flight activity. This has led to a bunch of provocations from both sides, with them regularly sending military aircraft into the 4nm disputed bit just to annoy the other side. And this is a problem, because it often escalates with retaliations. In 1996, **Turkey claimed one of their aircraft had been shot down by a Greek fighter jet,** and in 2014 the number of Turkish incursions into Greek airspace rose to nearly 1,500.

Tensions flared up again in 2020 when Turkey finalised their purchase of Russian S-400 mobile surface-to-air missile system. Now, this wasn’t specifically aimed at Greece, but it did go against NATO and US orders, resulting in big sanctions against Turkey.

Greece spent 2020 developing stronger defensive ties with their neighbouring countries, and at the start of this year, placed an order for 18 French Rafale fighter jets to pad out their Air Force.

A bit of a jam

Deliberate GPS Jamming is also a major issue in the Eastern Mediterranean and across Turkish airspace, adding to the list of threats commercial aircraft have to consider.

So is this a conflict to watch?

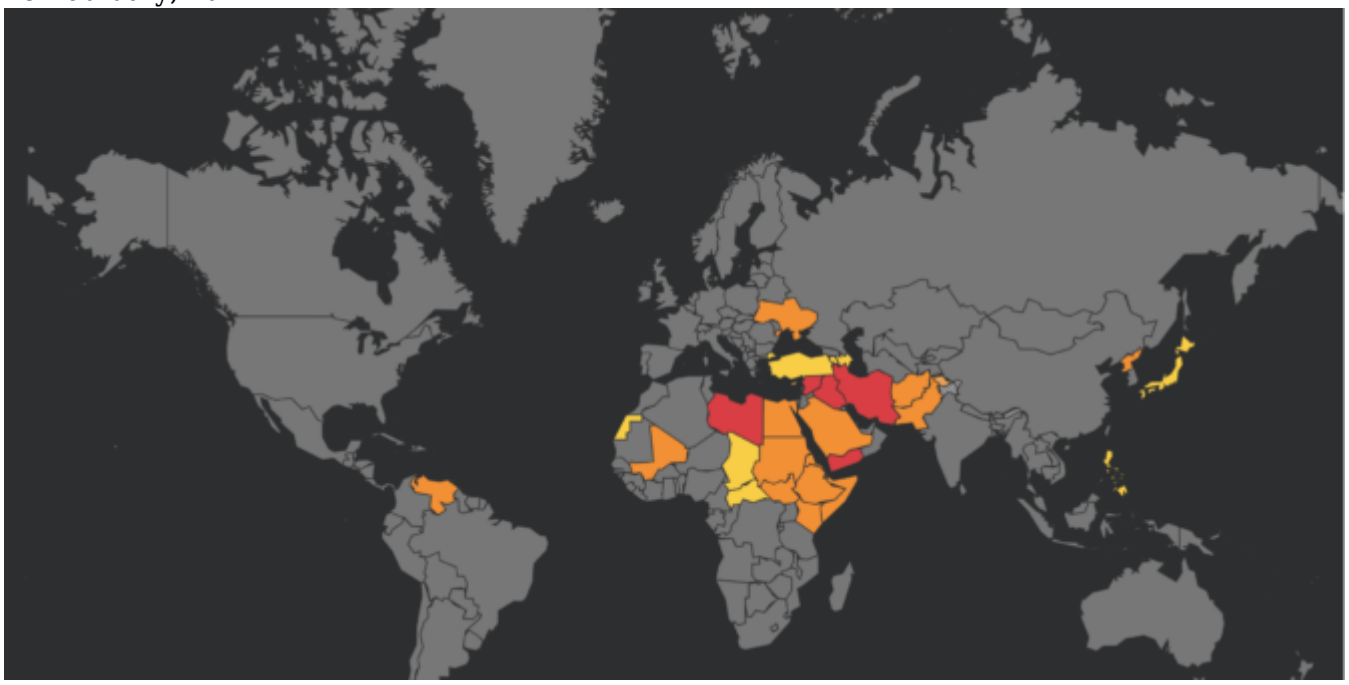
2020 was a tense year between the two nations, and 2021 seems unlikely to see much de-escalation. While direct conflict between the two will likely be prevented by neighbouring countries and the EU and NATO, the dispute is still simmering away.

For commercial flight operations, **the impact remains primarily in the Notam world**, but attention does need to be paid to **any temporary prohibited or restricted airspaces which might pop up** because of increased military activity in the region.

Additionally, Turkey is a large country and their airspace provides a major overflight route between Asia, the Middle East and Western Europe. Having **an awareness of the political tensions between the two countries is important**, particularly if routing to or from Greece, or carrying Greek nationals onboard, since this might compound your problems if you have to divert into a Turkish airport.

SafeAirspace: 2021 Update

Chris Shieff
18 February, 2021



2020 was a heck of a ride. But therein lies the risk – **what else might you have missed amongst all the Covid-related noise?** Sadly, conflicts and their risks to civil aviation have not taken a break during the pandemic.

As it's a new year, we thought **a summary of Airspace Risk** was called for. Here's what's making headlines at the moment:

Saudi Arabia & Yemen

Houthi rebels in Yemen are regularly firing **explosive drones and rockets** across the border into Saudi Arabia, and these usually target airports in the south such as **OEAH/Abha** and **OEGN/Jizan**. Their latest attack was on **OYAA/Aden** airport in late December which resulted in mass casualties.

Saudi Arabia continues to retaliate with airstrikes. The latest was in the capital **Sanaa** just weeks ago, where multiple munitions landed near the airport.

The risk to aviation is that **overflying aircraft may get caught in the crossfire** or might be **misidentified by Saudi air defences**. Active terrorist groups in Yemen may also use anti-aircraft weaponry to target foreign interests.

The FAA prohibit all US operators from entering most of the OYSC/Sanaa FIR at any level. Only two airways are allowed, and they are well off the coast – **UT702** and **M999**.

There are no restrictions on Saudi Arabia but **use caution in the southern regions.** France and Germany have issued their own warnings.

*SafeAirspace **Yemen** page – click here.*
*SafeAirspace **Saudi Arabia** page – click here.*

Iraq

Rocket attacks on military interests at airports have become a common occurrence. They are generally fired by local militia without warning. **ORBI/Baghdad** is frequently targeted, along with other airports including **ORER/Erbil.** There is a clear risk to aircraft at low levels.

US relations were further strained through 2020 with multiple attacks on the US embassy in Baghdad. The tensions escalated to a point where the US considering closing it.

Foreign aircraft continue to be at risk from **armed militia who have access to portable anti-aircraft weaponry**, while **misidentification by the air defence systems** of multiple foreign forces in the country is also possible.

The FAA has extended its ban on US operators entering the Baghdad FIR **at any level**. Even though the SFAR says you can enter above FL320, the long-running Notam KICZ A0036/30 says otherwise.

*SafeAirspace **Iraq** page – click here.*

Syria

There have been several recent **Israeli airstrikes on targets throughout Syria.** In late December there are reports that Israeli fighters transited Lebanese airspace at low level causing alarm in Beirut before attacking targets in Western Syria. Just weeks ago, several sites around Damascus were targeted by Israeli missiles.

The primary risk is that aircraft may be **misidentified by Syrian air defence systems** which are regularly activated. Civil operators may get **caught in the crossfire** as missiles may erroneously lock on to the wrong aircraft.

The FAA are taking no chances – the ban on US operators entering the OSTT/Damascus FIR at any level has been extended a full three years to 2023.

*SafeAirspace **Syria** page – click here.*

South Sudan

Just this week ICAO issued a concerning warning about the risk to aircraft operating below FL245 in the **HSSX/Khartoum FIR over South Sudan,** or flying in and out of **HSSJ/Juba**. They are 'gravely' concerned about ATC disruptions, a lack of contingencies, inadequate training of controllers, limited info about equipment outages and a lack of co-ordination with other ATS units.

*SafeAirspace **South Sudan** page – click here.*

Emerging Conflict Zones

2020 saw **three new conflict zones** emerge, here is what is happening with them now.

Ethiopia

A civil conflict erupted in October last year in the **Tigray region of Northern Ethiopia**. The government went to war with the TPLF – a regional force seeking independence.

The region's airports were closed and TPLF showed an intent to internationalise the conflict by attacking aviation interests. They fired rockets into Eritrea targeting **HHAS/Asmara**, and also attacked multiple airports to the South of the Tigray region.

Two airways were closed (T124, and M308) with **no explanation of the risk**. Other airways remained open but uncomfortably close to the fight – especially UG300, UN321 and UL432. **No airspace warnings** were issued despite the dangers.

What's the latest?

In late November Ethiopian forces captured the region's capital **Mekelle** and regained control. Remaining TPLF forces have retreated leaving behind a humanitarian disaster and a vow to continue the fight. Since then, the **airway closures have been removed** and things have gone quiet, **but an airspace risk remains** – armed militia continue to be active in Northern regions and may be looking to make a statement. **Be wary of operating in the area.**

Western Sahara

Late last year the region's independence movement (the Polisario) declared war on Morocco for breaching a ceasefire agreement. The FAA published a warning that the Polisario **might have access to anti-aircraft weaponry** left over from previous conflicts.

What's the latest?

It is still an **active conflict zone**. The fight has reached the international stage after the US declared their support for Morocco. The Polisario have indicated they are willing to at least talk, but so far have not put down their weapons. So, it is a wait-and-see type deal.

The risk to overflying aircraft remains. The GCCC/Canarias FIR keep extending a Notam advising operators to **not fly below FL200** on the following airways: **UY601, UN728 and UT975.** However, the reason is still missing: because of the **risk of anti-aircraft fire.** The GOOO/Dakar FIR haven't issued any warnings despite the threat. Take care if operating in the area.

Armenia-Azerbaijan

In September last year, an ethnic conflict erupted over a disputed territory in Western Azerbaijan – **Nagorno-Karabakh.** The fight was between Azerbaijan and Armenia.

As a major air corridor for en-route traffic, there were **significant flight disruptions**. Azerbaijan swiftly closed all but one west/eastbound airway and routed traffic via Georgia. Armenia asked aircraft to take extra fuel and expect re-routes. The conflict was short but intense, with heavy artillery fire from both sides. The conflict eventually spread beyond the contested regions with longer range weapons. The entire border region posed a **risk for civil aircraft.**

What's the latest?

For once the news is good. In November a ceasefire agreement was signed with the help of Russia. Armenia effectively lost and withdrew from the region and **the conflict was officially over.** Armenia removed its airspace warning, while Azerbaijan re-opened the affected airways and a large section of airspace near the border.

With the conflict now over, and no new reports of significant fighting since the peace agreement in November, direct crossing traffic between the two countries is now technically possible again. However, **most East-West flights are currently still electing to go further north** instead, connecting between Azerbaijan and Georgia's airspace, avoiding Armenia.

What about Safeairspace.net?

Our conflict zone and risk database is **updated constantly**. We assess risk with official sources and build

a simple picture for you of those need-to know-places.

There are currently 5 regions which are assessed as a **Level 1 Risk – No Fly.** These are: **Iraq, Iran, Yemen, Libya, and Syria.**

Head over to SafeAirspace.net and take a look. With a single click you can download a **risk briefing** of the entire world in just a few pages of nice simple English.

The mission of SafeAirspace is this: to provide a single, independent, and eternally free resource for all airspace risk warnings, so that airlines and aircraft operators can easily see the current risk picture for unfamiliar airspace. If you know of a risk not listed on the site, or you have anything else to add, please get in touch with us at news@ops.group

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US to require Covid tests for all international passengers

David Mumford
18 February, 2021

From January 26, **all international passengers need a negative Covid test** that is less than 72 hours old to board a flight to the US.

The US CDC has published the **full details of the requirements here,** and they've done a good job too – it includes a pretty thorough Q&A section split into separate sections for passengers and crew.

Here's a summary of the main points:

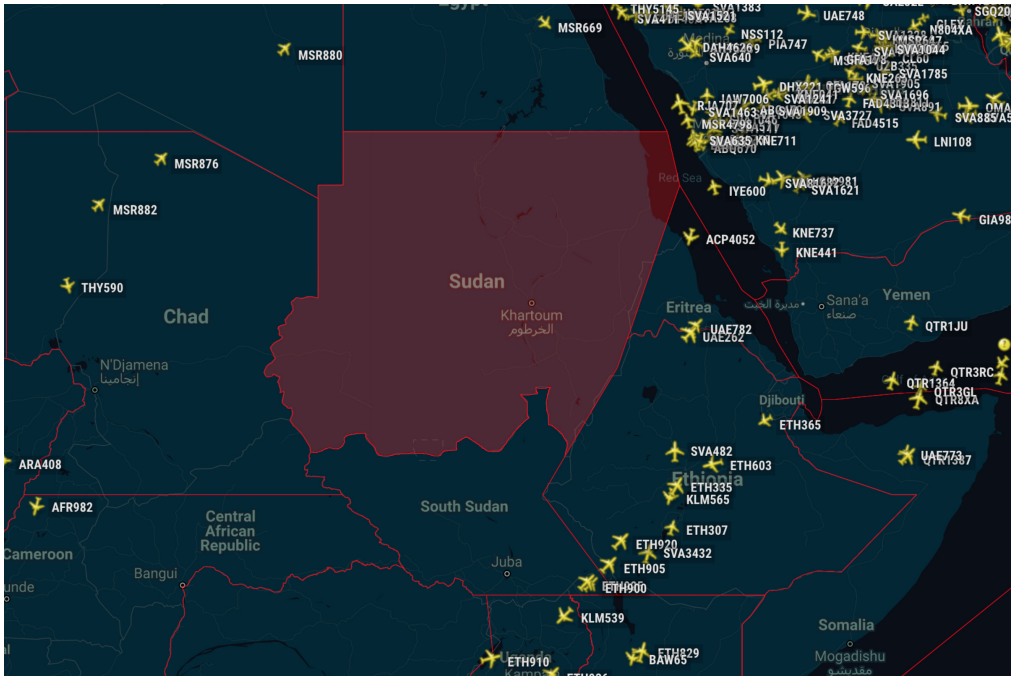
- All international travellers aged two years or older need a test, including citizens and foreigners.
- Applies to all flights, including private and charter flights.

- Applies only to international flights – from “anywhere that is not a state, territory, or possession of the United States”. Therefore, passengers do not need a test if coming from: American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the US Virgin Islands.
- It needs to be a “viral test” (NAAT or antigen test) – antibody tests will not be accepted. The PCR test is a type of NAAT test (Nucleic Acid Amplification Test), so those are accepted. You can read more about the different types of tests here.
- The test must be done within three calendar days of departure to the US. If passengers have one or more connecting flights to the US, it gets a bit more complicated.
- Airlines and operators will need to check that their passengers meet the requirements prior to travel.
- **For crew travelling to the US:** you don’t need to get a Covid test in advance as long as you’re “active crew” – i.e. you’re operating the flight or travelling in an assigned deadhead status. You also have to follow the health and safety rules set out in the FAA’s SAFO 20009. However, we’ve had several reports saying that if you are positioning crew into the US via an airline for any reason, the reality is that you will likely be asked to show proof of a Covid test. More guidance on the definition of “active crew”, check out the CDC’s dedicated webpage.
- If crew/pax can prove they have already had Covid, have recovered from it, and can provide documentation to this effect, they don’t need to get a test.
- Operators must distribute and collect Passenger Attestation Forms prior to embarkation, and keep copies of these for 2 years. Operators do not need to keep copies of passenger test results.
- If you’re heading out of the US, and plan to return within 72hrs, you will still need a test. You can get this done in the US before you leave. But if you end up staying out of the US for more than 72hrs, you will need to be retested before your return flight.
- **Quarantine rules:** Technically, all pax inbound to the US now have to quarantine for 10 days upon arrival, as per the Executive Order that went into effect on Jan 26. However, it looks like the CDC will not actually be enforcing this – at least for now.

Important to note: the old rules banning certain pax from entry still stands: with specific exemptions, foreign nationals who have been present within the past 14 days in the European Schengen area, the UK and Ireland, mainland China, Iran, and Brazil will still be barred from entry – with or without a negative test. The ‘specific exemptions’ part basically means this: US residents and family members, and flight crew traveling to the United States on C, D or C1/D visas. For more details on this rule, check the US Government webpage here.

Sudan Airspace Update: A New Risk

OPSGROUP Team
18 February, 2021



Generally, our SafeAirspace risk assessments focus on risk due to conflict, and the anti-aircraft weaponry that is often a result of said conflicts. But today a new risk alert popped up for **South Sudan.**

So this is a brief summary on the history of airspace safety concerns for Sudan and South Sudan, and the new risk that has been highlighted specifically for South Sudan.

Where are we talking about?

South Sudan is a landlocked country in East-Central Africa, bordered by Sudan, Ethiopia, the DRC, the CAR, Uganda and Kenya. The main airport for **South Sudan is HSSJ/Juba.**

So it's South Sudan, not just Sudan?

Yep, there are two Sudan's – Sudan and South Sudan. South Sudan is officially known as the Republic of South Sudan, whilst Sudan (North Sudan) is 'just' Sudan.

Sudan's primary airport is HSSS/Khartoum

They were the same country until 2011 when they separated following decades of civil war. South Sudan became the world's newest nation.

Two separate Sudans, three separate issues

Following five years of civil war in South Sudan, a ceasefire has largely held since Sept 2018. Though there has been a significant reduction in violence since then, the political and security situation remains volatile.

Sudan, on the other hand, (which borders South Sudan, the Central African Republic and Chad), has had its own conflict. In 2019 they temporarily closed all their airspace following a military coup which ousted their longtime president Omar al-Bashir from power. This came after months of protests against his rule.

Clashes between the army and former security agents resulted in violence and gunfire in the streets, and the temporary closure of HSSS/Khartoum airport in 2020, but this was brought under control relatively quickly.

There are also issues in bordering Ethiopia and Eritrea, in the Tigray region, which resulted in the closure of some airspace and airways by the Ethiopian and Sudanese CAA.

What warnings are in place due to conflict?

South Sudan – Although the situation has improved since Sept 2018, several countries (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.

Sudan – Only has one official warning in place, from the French authorities. This recommends against overflights below FL260 in the far Southern and Western regions.

But there is a new warning for South Sudan?

Yes, there is. And it isn't conflict related.

ICAO released a letter on January 20th regarding the safety of Civil aircraft in the Khartoum FIR over South Sudan.

The raised **'grave concerns' for the safety of International air traffic operating below FL245**, and operating into and out of HSSJ/Juba international airport.

The concerns relate to the disruption of air traffic services and the lack of contingency arraignments in place. They warn about the lack of suitably qualified air traffic control personnel, the lack of information being shared on unserviceable or withdrawn navigation equipment, and inadequate air-ground communications.

A quick search on Notams for Khartoum FIR and Juba airport only brought up info on the opening of airspace following Covid restrictions.

The full warning from ICAO can be read here.

In summary

- Both Sudan and South Sudan are considered **Level 2: Danger Exists regions** because of ongoing conflicts.
- South Sudan now poses a **separate risk due lack of aviation infrastructure** and lack of information being promulgated (through Notams) on this.
- **Caution recommended** if operating below FL245 in South Sudanese airspace, or if you are operating into HSSJ/Juba airport.

Gulf routings set to ease up as Qatar blockade comes to an end

Diogene De Souza
18 February, 2021

After three and a half years of political stalemate, **the Gulf blockade against Qatar by Saudi Arabia, the UAE, Egypt, and Bahrain, is coming to an end.** These countries have restored diplomatic relations and opened their borders and airspace to Qatar – with Egypt also expected to follow suit shortly.

What does this mean for operators?

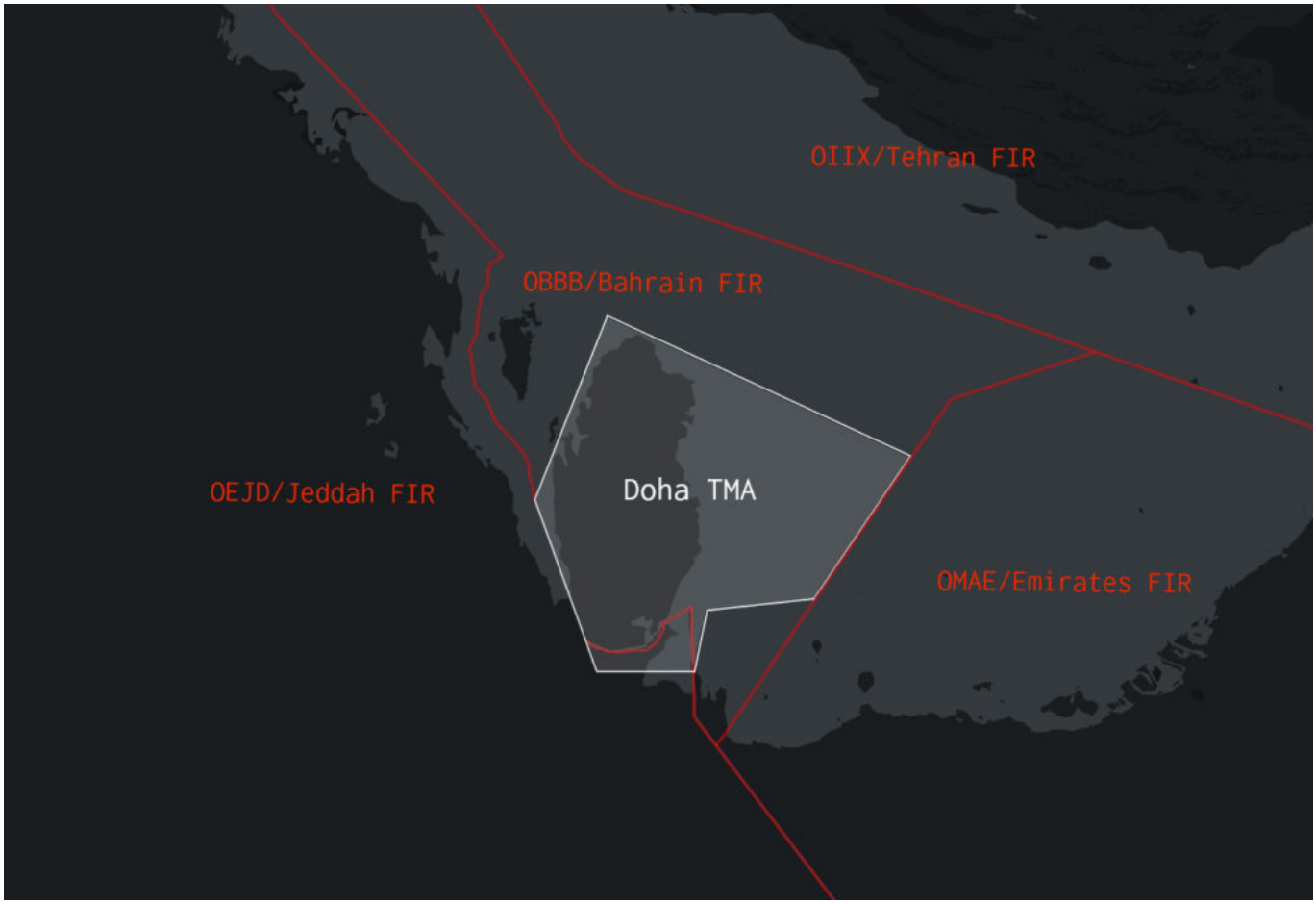
The biggest change seen will be for **aircraft registered in Qatar (A7-)** which will now be allowed to route via OEJD/Jeddah FIR and OMAE/Emirates FIR, and gain more efficient use of OBBB/Bahrain FIR – in addition to reinstated landing rights in those countries. This is as opposed to routing via OIIX/Tehran FIR, which incurs time and fuel penalties and in the worst cases requires a tech stop.

But this is also good news for **foreign operators.** For the past three years, foreign operators had been faced with various different restrictions if trying to fly to/from Qatar – they needed special permission from Saudi Arabia, Bahrain and the UAE if planning to overfly any of those countries, and Bahrain had banned direct flights from Qatar completely.

This has now changed. With Saudi Arabia, Bahrain and the UAE lifting their blockade against Qatar, they have cancelled a bunch of Notams which effectively means there are no longer any special requirements for foreign-registered aircraft flying to Qatar via Saudi/Bahrain/UAE airspace. In short, **more efficient routings are now available** if you are operating into, out of, and through the Arabian Gulf region.

Here is the current state of play as of **20 January 2021:**

Remember: Qatar does not have its own FIR, and is nested completely under the OBBB/Bahrain FIR – any Qatar Notams are therefore published under OBBB. The Doha TMA extends SFC to FL245, above which is the Bahrain UIR.



If you have a question or have information to share, use our Slack channels! We are a community based on sharing information and resources to help each other – jump in!

Testing Times: More than just a stick up the nose

Chris Shieff
18 February, 2021

In the last few weeks, several major countries have announced that **pre-departure Covid testing** of all international passengers is now compulsory. And it is up to the operators to make sure that this happens.

It is now mandatory for anyone travelling to **the UK, Australia and Canada** from anywhere. **The US** will follow suit from January 26.

Covid testing is set to become a common part of our aviation landscape for the foreseeable future. Until a vaccine has had time to work, people will need to be tested to move around the world freely.

But what type of Covid test do I need?

Just google 'Covid test' and **prepare for confusion**. There are **different types of test** out there, and to make matters worse, there are **multiple confusing names for the same test**. Ask a passenger and the chances are that many will not understand why a rapid test at the airport isn't enough to board their flight.

So here is a super basic breakdown of the types of tests out there and how they work…

Covid Test 101

Covid tests can do two things:

1. They can tell you've had it in the past by looking at your blood (**Antibody test**), or –
2. They can detect if you actively have the virus by looking at your mucus or saliva (**Diagnostic test**).

Antibody tests = Cannot tell if you are actively sick and contagious. So for travel, they are pretty much useless.

Diagnostic tests = There are a bunch of highly technical names floating around out there but the good news is that there are only a couple of types – **Molecular tests (PCR)** and **Antigen Tests.** (The bad news is you're getting a stick up the nose either way.)

- **Molecular tests (PCR).** The gold standard in testing. These tests are super accurate and work by detecting the nucleic acid left behind by the virus. This is what most countries

require. The downside is the results take much longer and it is difficult to test a whole bunch of people quickly. There are home kits available but most of the time you'll need a lab to test you.

- **Antigen Tests.** When people say 'Rapid Test' this what they mean. These tests are quick, cheap and work by looking for a piece of coating on the virus. You still get swabbed but the results come back far quicker. They are what you see in airports. So what's the issue? They're not as accurate and can return false negatives. In most cases borders just won't accept them.

So what's the issue with antibody tests?

All they do is look for anti-bodies in your blood and your body has to build up those defences. It can take up to 14 days after you first catch the virus before they can be detected. You can be sick and contagious before the test will even detect them. To make matters worse there is no evidence you can't catch Covid again even if you have already had it. So what's the point of them? They help authorities work out just how far the virus has gone out there.

Moving Forward...

With rapidly changing testing rules around the world it will become super important to make sure you and your passengers get **the right kind of test**. Most of the time the one you will need is a **PCR test**. Rapid testing at airports is convenient and looks the same but in most cases just won't cut the mustard.

Brexit is here: What's the impact to ops?

OPSGROUP Team
18 February, 2021

The UK officially left the EU on Jan 1st, 2021. Although it's **still a part of Europe** (the continent), it's **no longer part of the European Union** (the trade and political bit). Whereas before, the UK fell under EASA and all their rules and regulations, **the UK CAA is now in charge** of all things aviation in the UK...

So, what does that mean?

It means a **raft of changes to the rules for operators flying between the UK and EU states**. A new agreement has been drafted which applies from Jan 1. Here are the main changes:

- Essentially UK operators will **no longer be considered as EU carriers**, and will instead be 'third country' carriers, meaning they will lose their special treatment. Flights between the UK and EU will continue, but **passenger cabotage flights will no longer be allowed**. Or in more human terms, UK operators will not be able to carry fare paying pax between two EU states (and vice versa). **Cargo cabotage will still be okay** as long as the two countries involved have an agreement.
- Both sides will still have **the right to overfly each other's territory**, make technical stops, and to operate third- and fourth-freedom passenger and cargo flights between any point in the UK and any point in the EU. The fifth-freedom rights beyond the EU will continue, but only for a five-month period and with a new capacity cap.
- UK and EU airlines can also **continue codesharing**, and UK airlines can continue providing wet-leasing operations.
- There are other changes coming too, which EBAA cover here.

But what about laws, licences, rules and regulations?

All existing EASA certs, approvals and licences valid for UK registered aircraft **will be good for another two years**. For UK operators of EU-registered aircraft things are more complicated. The UK CAA have set up a useful website to help you get your head around what you need to do to stay compliant elsewhere in Europe, and it's a great place to start. There is also a helpful flow chart to keep things simple.

With Brexit complete, the UK CAA is now in charge of setting the rules, but they've basically said that they'll be sticking to pretty much all of the aviation law, rights and obligations that were in place before. You can read that statement, and a bit more, on the UK CAA's main regulations site.

The heads-up for passengers

Things may get complicated. UK citizens will likely lose their special EU travel privileges which means it may become harder to move around Europe thanks to everyone's favourite elephant in the room, Covid.

As a general rule, pax from the UK to Europe will need to **make sure their passport has at least six months validity** in it if they want to visit any EU country, Iceland, Liechtenstein, Norway or Switzerland. They will also need to **check their health cover** – the EHICs (European Health Insurance Cards) are still valid if issued before January 1.

If they are entering as a tourist, they can stay for **90 days** – and they can do that twice a year. But if they are entering for business purposes, they might need a visa.

All of this is on the UK Gov website if you want to take a look.

The Question of Covid

Not being part of the EU anymore means that flights from the UK to the EU will **no longer have the same Covid entry restrictions applied**. "Luckily" no-one was really letting UK flights in anyway, what with their virus mutation running rampant, so right now, any change for flights originating in the UK (and passengers for that matter) is not really relevant.

The entry rules for UK nationals in the rest of Europe are changing fast, and every country is different but in most cases **it will be harder for UK travellers to avoid Covid related rules for non-essential travel**. Don't know where to start? We don't blame you. The best place is the UK FCO website which has the most up to date entry requirements for UK nationals for every country around the world.

CO2 much?

One extra little snippet of info to know about Brexit is that the amount of emissions small, non-commercial operators can produce as "improved". If you already have an EU-ETS (emissions trading scheme) exemption then your allowance has now been doubled.

Instead of 1,000t CO2, you can now produce 2,000t CO2 – half in the EU and half in the UK.

Don't think you can get away with puffing about and no-one watching though. The UK are setting up their own scheme, and France will be monitoring the EU bit of it (apparently they won the task because UK operators tend to spend more time there than anywhere else in Europe).

If you are trying to work out what 1,000t of CO2 coming out your aircraft looks like, then there is a handy calculator you can use (but its roughly 103,400 gallons or 391,500 litres of JET A1 burned).

The news for N-reg'ers

Well, to be honest, not a lot at this point. The main thing to know is that the UK no longer falls under EU (EASA) rules and law, so if you have any problems **you'll now be dealing direct with the UK CAA**... but currently their laws aren't actually any different to what they were at the end of December.

If you are carrying passengers from Europe to the UK (or vice versa) then there will be **different passport and entry procedures** for them now.

That's about it.

So, the really important bit... can you bring food?

Always one of the big questions for crew who want to stock up on all things delicious. Basically, no meat, milk, or dairy stuff into the EU from the UK. The UK is a bit more chilled, but you do need to declare things, and a suitcase filled with Camembert and wine probably won't go down very well.

Of course, the real good news is all those juicy **duty free goods** which travellers between the UK and EU will now be able to buy!

A is for Airplane: The OPSGROUP 2020 Wallchart

David Mumford
18 February, 2021

2020 was a long, sometimes challenging, sometimes exciting, sometimes sad… and always very Covid filled year!

We wanted to take a quick look back at some of the things which really stood out to us over the past twelve months.

So we wrote a **list…**

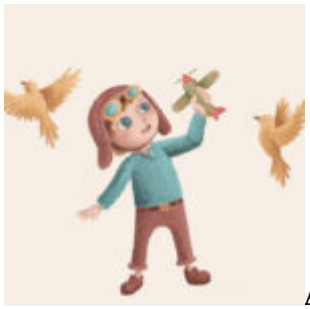
The list became a **little poem…**

And then, as a logical next step, the poem turned into an **ABC wall chart!**

Here it is in all its glory!

You can download a nice hi-res version by clicking on it. Print it out, stick it on your wall, send it to a friend – whatever you like.

The OPSGROUP 2020 Wallchart was designed by our wonderfully talented artist friend, Cecilia La Rosa, and you can see more of her amazing work here.



A is for Airplane, flying high as a bird

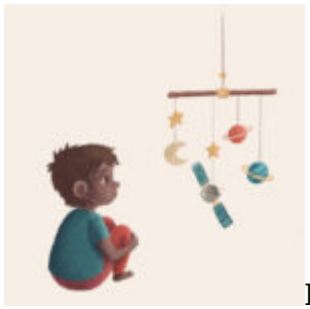
As always, airplanes were on our mind. The safety of them, the places they are going, and the people flying in them.

B is for Bureaucracy and unreadable words

Messy Notams, changes to charts, new regulations, old documents – we tried to keep you updated you on changes you needed to know about, mainly by writing things in an easier-to-read way.

C is for Covid not going away

No 2020 wall chart would be complete without a mention of Covid. Traffic across the world fell by almost two thirds. Then it started to improve, then it got a bit worse again, and then the vaccine came out – unfortunately, shortly followed by a new strain of the virus… Here’s hoping 2021 sees the end of it.



D is for Datalink on the NAT HLA

The Great North Atlantic Datalink Mandate. It went into the final phase on 30 Jan 2020, and if you want to fly between FL290-FL410 you must be equipped with CPDLC and ADS-C… But then due to Covid this got delayed a number of times, with Shanwick saying it will remain suspended until 25 Feb 2021.

E is for Errors of the Gross Nav variety

The FAA changed their definition of Gross Navigation Errors to mean anything more than 10nm. You used to have 25nm before you got into trouble (except for on the NAT HLA which was always 10nm).

F is for OpsFox, a secret society

Business at the Lucky Star Chicken restaurant was up in 2020. Goat Curry (number 64 on the menu) proved to be a popular favourite. Join the secret society and submit your reports.

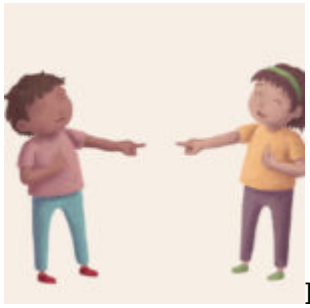
G is for Guy Gribble, gone too soon

Our friend and colleague Guy Gribble passed away on 26th October 2020.

Guy joined OPSGROUP on Day 1 (some four and a half years ago), and was an ever-present contributor, collaborator, mentor and friend to us. If you've ever sent us an email with a difficult question and received a good answer, the chances are that Guy Gribble was the man behind the scenes who helped us figure it out for you. We lost count of the number of times Guy would post replies on Slack giving people advice and guidance.

The NBAA will have an award named after Guy for "Outstanding Contribution" – which tells you all you need to know about the impact he had on the industry.

Thank you Guy and Rest in Peace – your legacy continues.



H is for Humans, me and you

Our mission is to make aviation human-friendly for us all.

I is for Israel overflight clearance

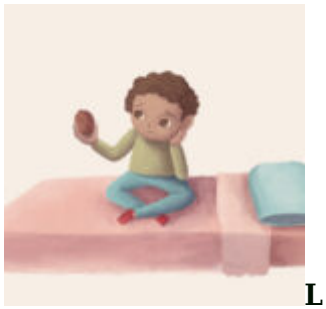
Big news from the end of 2020 as Israel rebuilt relationships with the UAE, and for the first time in decades we saw a flight between the two nations. Israel then opened their airspace for overflights, and Jordan allowed Israeli bound flights to pass through their airspace as well. The overflights mean shorter, more efficient routings, and it's a highlight of the year that friendships are being rebuilt between Israel and neighbouring regions.

J is for Jamming and GPS interference

GPS Jamming remained an issue, particular across Eastern Mediterranean, Middle East and Caucasus, with thousands of reports of jams through the year. The story is bigger than just the equipment issue though, it is a political and conflict related one too. We wrote this article on it to help give a bit more info on the issue.

K is for Kiwis showing us what to do

New Zealand led the way on how to deal with the Covid situation, managing to go nearly a month with no cases. They slowly started to reopen a travel corridor with Australia, but remain strict on their entry requirements.

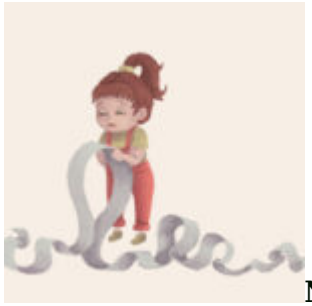


L is for Lockdown, no kiwi for you

Lockdown was (and still is) a big part of 2020. For some it was a difficult time away from family, but for others it allowed time for new skills to be learned, hobbies to be enjoyed, and a fair few Zoom quizzes to take place. We will keep reporting on the big Covid changes but are definitely looking forward to a day when no Covid alerts are required anymore.

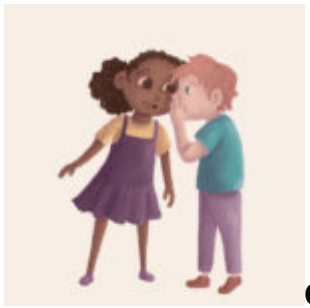
M is for Members, colleagues and friends

We’re grateful to everyone in the group for showing up, trading stories, experiences, and information, having regular chats, and in turn keeping us all safe and up to date.



N is the Notam problem again

The Notam problem hasn’t gone away, but we are getting there…



O is for OPSGROUP, share what you know

OPSGROUP is more than just the team working here – it's all the members and the knowledge and information you all share.

P is for Pilots flying us home

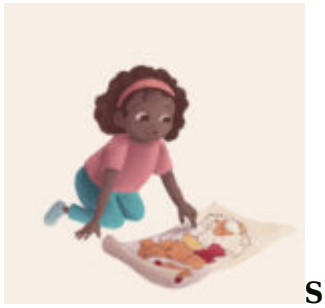
2020 was a tough year on pilots, and we think they deserve a big Thank You for continuing to fly our families and cargo safely around… but we also thank the cabin crew who looked after us onboard, the ATC controllers who kept the skies safe, the engineers who fixed the airplanes, the dispatchers and planners, handlers and airport workers, and everyone else affected by Covid and who kept working hard. So P is really for People.

Q is for Quarantine in a government compound

Quarantine can be tough. Trying to work out a country's Covid-related entry rules is one thing, but where you get locked up and how long for is quite another. So Q is for quarantine questions, queuries about Covid-cancelled flights, and all the queues of people who want to go flying again. Let's hope 2021 is far Quieter on all things Covid.

R is for Relief Air Wing, eyes on the ground

When a hurricane hits, the world responds. But before anyone can fly in to help, they need to know what things look like on the ground. After Hurricane Dorian devastated the Bahamas in September 2019, no information was available for several days. Relief aircraft were waiting, but critical information was missing. What airports are open? Is there fuel available? Is there ATC? Where is help best directed? Learning from the lessons of Hurricane Dorian, the mission of Relief Air Wing is to get that critical information, provide it to the first responders, and help to coordinate the aviation relief effort.

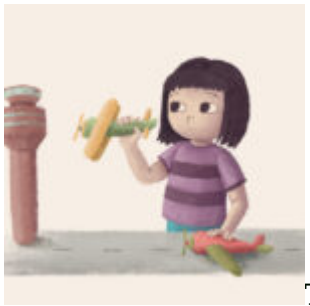


S is for SafeAirspace, where not to fly

On 9th January 2020, we saw the tragic shoot-down of Ukraine Int Airlines flight 752 over Tehran by Iranian Armed Forces, having mistaken the aircraft radar return for an inbound missile. And just a month later, a passenger plane almost got shot down over Syria, after coming under fire from Syrian air defences.

Throughout the year we've seen new conflict zones emerge, posing risks to overflying aircraft – from Saudi Arabia and Yemen, to Armenia and Azerbaijan, to Ethiopia and Eritrea.

Our sense of mission with Safeairspace.net is stronger than ever – to provide a single, independent, and eternally free resource for all airspace risk warnings, so that airlines and aircraft operators can easily see the current risk picture for unfamiliar airspace.



T is for Towers, controlling the skies

Towers (and the ATC folk in them) controlled the skies splendidly this year. We also looked into what happens during "ATC Zero" events, particularly over the NAT HLA after we saw Gander East close briefly in December.

U is for Unreliable speeds on aircraft stored too long

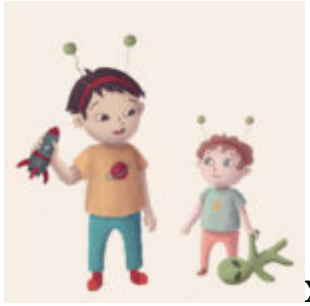
Unreliable airspeed incidents increased after bugs and beetles made nests in airplane probes – an unexpected consequence from Covid. And unreliable airspeed was not the only thing to look out for with long term storage.

V is for going Viral when you do something wrong

From men on jet packs, to pilots drawing pictures in the sky, we laughed at some of the stories we saw this year. And not all were bad – the Don’t Rush challenge went viral as aviation communities from all over created their own Don’t Rush movies.

W is for Winter Ops, cold weather tips

Winter is here – at least in the Northern Hemisphere. Here are 5 golden rules that could help you stay out of trouble during these colder months. Here’s a quick lowdown on freezing fuel problems as well.



X is for Space X, launching their ships

We reported on a fair few temporary danger airspace areas through 2020, many of which were down to Space X and other rocket launches. The operational impact for earth flights kept us reporting, but we're also a little excited at the developments in space flight. OPSGROUP GALACTIC might be a new idea for 2021…

Y is for a big Yes to 2021

2020 has been tough – but we have faith that 2021 will be better. We hope borders open, vaccines roll out, Notams improve, airplanes get better, airspace gets safer, and aviation becomes more human!

Z is for Zoom calls – sometimes they're fun!

Our OpsChats were a big part of our year and we loved our *2-timezones-in-1-day* Zoom call.

We look forward to seeing you all again in 2021!

ALL WE HEAR IS: RADIO BA DA, RADIO BODØ, RADIO BA DA

OPSGROUP Team
18 February, 2021

Wave at the ATC tower, and you might find there is no-one in to wave back. But that does not mean air traffic controllers are not watching us anymore, they just might be doing it from somewhere a little more remote.

The rise of the remote controller

In 2021, LEMH/Menorca airport will no longer have air traffic controllers in their tower. Instead, they will have a network of 360 degree panoramic and pan-tilt zoom cameras which will feed high resolution images to a single, mighty control tower in Bodø, Norway.

Kongsberg (possibly a reference to King Kong who liked climbing up towers, but more likely just named after the town in Norway where it was founded), is working with various airports on a program called Ninox. The plan is to eventually have advanced Remote Tower Systems across 15 different airports.

The plan is to eventually have advanced Remote Tower Systems across 15 different airports. Two systems are already fully operational, and the overall result of the project will be an ATC service that brings “new capabilities to air traffic operations, enabling safe operation at reduced costs.”

They had me at “new capabilities”.

Is there anybody up there?

Rather than having controllers at the airport, able to look out the window, this system feeds images to a remote control tower. The cameras are incredibly high resolution and can zoom in on the smallest details, detecting movements from birds and drones. They also can have infra-red settings making it possible to see in the dark.

The tools provide greater contingency as well as vision enhancement, and there are options for automated

object detection, virtual safety nets, and augmented reality features to be installed.

The real big advantage is that multiple towers can be managed with one all powerful air traffic controller so even the smallest airports providing only AFIS will potentially be able to sign up and have a “controller” over-seeing their traffic – increasing their services without a mega increase in costs.

What if the big ‘what if’ happens

A big “what if?” for this system is “what if the feed fails?”

This isn’t a problem though – each tower is connected to the Remote Towers Centre via networks with huge amounts of redundancy. If one network fails, another can be used to connect again. It also means if one controller gets stuck in traffic, another controller can control from a different spot on the network.

Rapunzel, Rapunzel, let down your air… craft

So far only Norwegian airports have been set up on the Bodø master network. Røst airport has been operating under remote tower conditions since October 2019, with 3 more coming online through October and November of this year.

But actually…

The concept is already used across Europe, and there are multiple projects around the world.

EDDR/Saarbrücken Airport in Germany has had a remote tower since 2018. With 15,000 flight movements a year it is one of the largest airports to have its operations controlled remotely.

They have projects worldwide including Brazil and New Zealand, and both civilian and military. EGJJ/Jersey Airport in the UK has implemented a contingency system, Iceland is testing the technology for severe weather conditions and LOWW/Vienna is already using their vision enhancement system.

EHAM/Amsterdam Schiphol Airport has also been involved in trials, in conjunction with the Single European Sky ATM Research (SESAR) project and Air Traffic Control the Netherlands (LVNL). The trials tested how controllers would use the cameras, as well as the screens for radar, weather and flight planing which were integrated into their stations, and the results were pretty good.

And then there is AIMEE

AIMEE is an AI developed by the company Searidge, and NATS and NAV Canada are pretty excited about it.

It receives inputs from different sensors, sources and scenarios, and uses an algorithm that learns patterns and so can predict problems, and offer solutions quicker than a human brain can.

AIMEE is being trialled at EGLL/London Heathrow to see if it can improve capacity by as much as 20%. The system will use ground level cameras to monitor aircraft positions in rubbish weather, and will be able to see when aircraft have exited runways much quicker than people eyeballs through fog can.

AIMEE is also being installed at airports like KORD/Chicago O’Hare and CYYC/Calgary where its AI eyeballs will monitor de-icing bays and provide a spacial marshalling system. In KFLL/Fort Lauderdale the system is used on gates for remote apron management.

So the future is remote

People-less control towers are not a thing of the future, they are happening now. Anytime you fly across London, you are probably being controlled by controllers in Swanwick.

For pilots, there is no change in procedures – they will still talk to personnel on the radio, but the actual people looking after you are squirrelled away in their remote tower in Norway.

Are we going to have a Matrix type AI computers taking over situation?

No, don't worry, it won't.

All this technology is there to supplement real people brains because it can process stuff faster. But it is unable to make the decisions human ATC currently make, so we are more likely to get pilot-less airplanes before we see entirely people-less control towers.

US pilots and air traffic controllers can now take the Pfizer vaccine

David Mumford
18 February, 2021

US pilots and air traffic controllers are now **allowed to take the new Pfizer Covid vaccine**. On Dec 12, the US FAA issued a statement authorizing this, which means aviation professionals can take the vaccine **without risking losing their medical certificates**. You can read the FAA's official statement here.

> The FAA has reviewed the @pfizer COVID-19 vaccine for use by FAA-certificated pilots and air traffic controllers, with a required 48-hour waiting period after vaccination. Read more at https://t.co/iIQAKB3id6. pic.twitter.com/tFC29Qkkex
>
> — The FAA ✈ (@FAANews) December 12, 2020

The vaccine needs two doses, three weeks apart. The FAA say you will need to **wait 48 hours after each**

dose before you can operate.

All future vaccines will need a **separate approval** – the Pfizer one is the only one you can take at this stage.

Now that the Pfizer vaccine has been approved by the FDA, a huge supply chain effort is underway to get the vaccine ready for use as soon as possible. With crew likely to be carrying shipments of the vaccine, the FAA has issued a new safety alert for the **carriage of dry ice**. In big quantities this can be hazardous to crew and cause carbon dioxide poisoning if things aren't handled properly. It is also important to be aware of manufacturer limits on how much you can carry. The new SAFO provides guidance on the risks, and how operators can better protect themselves.

TCAS Trouble: Why We're Getting It Wrong

Chris Shieff
18 February, 2021

Earlier this year Eurocontrol published a report on TCAS Resolution Advisories, and the results weren't pretty…

Over a 12-month period, over the heart of Europe, only 38% of RAs were flown correctly and **34% of aircraft even manoeuvred in the wrong direction.**

In other words, **nearly half of crew for one reason or another didn't follow the RA** – a last-resort safety net proven to save lives. So concerned are Eurocontrol, they rank the issue as its **second highest air traffic threat** – it's a big deal.

Here's the issue in a nutshell

ICAO say that no matter what, unless the safety of your aircraft is compromised by something more

dangerous (think terrain or stall etc.) if you get an RA, **you have to follow it**.

TCAS, ACAS or whatever you want to call it has been around for a long time. Development started back in the 50s, and it has been mandated in the US for larger aircraft since the 80s. It has become incredibly reliable.

So, if it's that black and white, the question remains, **why does this keep on happening?** Turns out there are a bunch of reasons, and so it is worth taking a look at exactly what is going wrong up there.

The Elephant in the Room

We may as well address it first – when crew choose to second guess an RA. The good news is that this isn't happening very often. Most of the time there are other factors at play. But while we're here, a little note on TAs and RAs.

Traffic Advisories (TA) **prevent**. You haven't lost separation yet, but you might. They're a warning for us to go heads up and do something about it – make visual contact, talk to ATC, level off, you name it. This is the time for us to go to work and make decisions.

Resolution Advisories (RA) **mitigate**. There is no more time to prevent – **that ship has sailed.** RA's typically trigger when you are within 25 seconds of a collision threat with the other aircraft. But here's the kicker – you are expected to respond to it within 5 seconds. In other words, there is not much time for us to make effective decisions. Safest course of action? You guessed it – **follow the RA.**

So, what else is going on then?

Numero Uno – The number 1 biggest reason why RAs aren't followed? Because we think **we can see the threat out the window.** Unfortunately, you can't assume that the aircraft you can see is the one who triggered the RA. We're also not very good at assessing threats visually, especially at altitude and it does not give us any info about what the other aircraft is intending to do.

Startle Factor – Put us in a stressful situation and we react in different ways. RA's are a rare event, and they're **not always preceded with a TA.** In other words, without warning they can emerge with significant 'pucker factor'. A large number of mis-flown RAs in the EUROCONTOL report lasted for less than 8 seconds. Beware of the **'knee jerk' reaction** – our instinct is to act but surprise can get in the way of procedure.

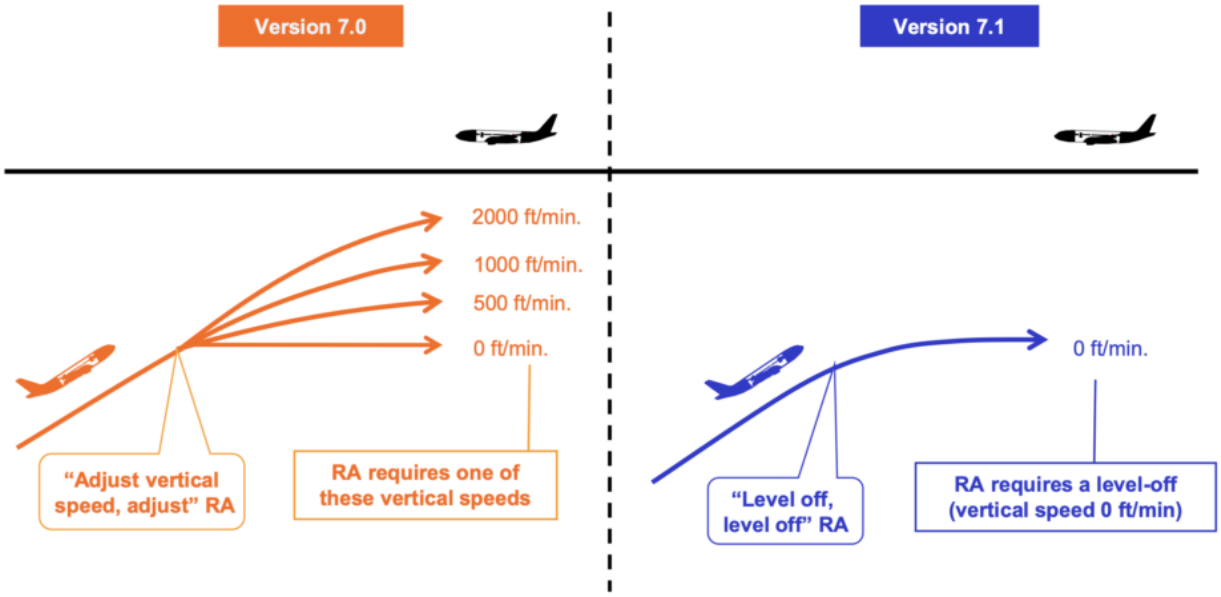
Beware of Contradictions – It's not ATC's fault, but it's important to understand. They don't know what your TCAS is telling you to do and they will be working hard to help. The issue is when **ATC instructions contradict your RA**. In 2002, a Tupolev passenger jet collided with a 757 over Germany – one crew followed the RA and the other ATC. The industry learnt an important lesson: **always follow the RA**. Use the phrase "TCAS RA" on the radio and ATC will understand you are following one.

Performance – RA's are often not followed as the crew are **worried about performance.** This usually happens when they're heavy and high or near their service ceiling and get a climbing RA. So, what should you actually do? The official word is this: **do your best to follow it**, even if your response is weak. Even if it means maintaining your level. In most cases an RA will only result in a level change of less than 500 feet. The biggest threat by far is opposing the RA, which will put your aircraft in far more danger.

Training – That old chestnut. But the reality is it is really important to practice these things in the sim. Weird ones. Unexpected ones. Ugly ones. Ones with multiple threats. Because this is usually what we're up against in **the real world.** Also keep your finger on the pulse for changes. Some modern aircraft can now fly RA's automatically, but the sims you train in may not have had the same update.

Older Versions – watch out for them. The latest one (7.1) has a number of major safety updates including

clearer instructions and ‘reversals’ – a fancy term for knowing when the other aircraft isn’t doing what it is supposed to do. Older versions of TCAS are more likely to be misunderstood by crew. One phrase in particular is especially bad – “Adjust Vertical Speed, Adjust.” In many cases crew have increased their vertical speed rather than reduce it. If you’re using older versions it is important to be aware of its limitations.



TCAS is an awesome piece of kit that has made huge advances in preventing completely avoidable accidents. But it is only as reliable as the humans who respond to it. That’s why it is so important we learn about what we we’re getting wrong so it can do its job – keeping us safe up there.

Other Useful Things

- Eurocontrol’s recent report on RA non-compliance
- The FAA’s Guide to TCAS 7.1 (the latest version)

The November Mega OpsChat – All the Links…

OPSGROUP Team
18 February, 2021

The November 24th "East/West-One-Day-Two-Calls" **OpsChat Bonanza** was great! Thank you to all who joined us, and those who shared some useful intel with the group.

Boy, did we cover a lot! The good news is if you missed the show, you can **re-watch the recording here:**

During the chat, we provided a **bunch of links** for each topic covered. If you weren't quick enough to catch them at the time (we don't blame you), here's a little summary….

November Updates…

Greenland

What? Baffling Notam issued declaring Greenland's airports were closed.

What else? Panic not, a better one was then reissued, saying that you could still use Greenland's airports for ETOPS and diversion alternates. We called them and they said that tech-stops and ferry flights are also allowed (although not listed in the Notam). They've basically just banned passenger flights, and don't want people staying overnight.

More Info:
– Greenland Closes Its Airports To (Nearly) All Passenger Flights – Opsgroup Blog Post
– Official Word from The Danish Civil Aviation

Israel

What? You can now overfly Israel (as well as Jordan, Saudi Arabia and Bahrain).

What else? You need a local sponsor, should depart from an approved airport (but they do make exceptions) and need a permit.

More Info:
– Israel overflights now allowed – Opsgroup Blog Post

Hong Kong

What? Strange ILS behaviour, especially on Runway 07R/25L. Pretty much down to antennas, terrain and Boeing AFDS…

What else? They have also updated their Covid entry restrictions for crew – it's now slightly harder to get in.

More info:
– The Thing About the ILS
– Hong Kong Entry Rules for Flight Crew – OpsGroup Blog Post
– The Official Word

CENEMAR (Central America)

What? There are some new flight planning requirements you need to know about.

What else? You can flight plan direct above FL200, and must include the new AFTN address MHFPZYZX when filing your flight plan.

More info:
– CENEMAR: New Flight Planning Requirements – Opsgroup Blog Post

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Other big updates from 2020…

November 5th ICAO changes

When? Er… November 5th!

What? We are talking changes to wake turbulence categories, NAT Contingency Procedrues, SLOP and Gross Navigation Errors.

More info:
– The 511 on Nov 5th Changes – Opsgroup Blog Post
– Hopefully a Link to the New 4444

Other overflights that are now ok

What? FAA SFAR updates – where US operators can't go!

Where?
– Ukraine: UKFV/Simferopol FIR is ok, UKDV/Dnipro FIR is not ok.
– Iran: Not ok, but the Gulf of Oman and Persian Gulf are – Emirates, Kuwait, Bahrain and Muscat FIRs.

More info:
– Safeairspace
– Overflying Crimea – Opsgroup Blog Post

Russian Me-trics

What? Russia are moving to feet (referenced to QNH) below transition through their airspace, starting with major airports.

When? From December 3rd.

More info:
– Russia are still playing me-trics on us – Opsgroup Blog Post
– The Russian AIP (don't worry, it is in english too)

ADS-B

What? When will you get in trouble for not having it.

Where?
– Europe: ADS-B is required from June 2023, but have your retrofit plan in by December 7 (unless your AoC is before 1995).
– US: ADS-B is required anywhere Mode C, or in the picture below.
– Rest of World: Above FL290, pretty much.

More info:
– European ADS-B Mandate – Opsgroup Blog Post
– The FAA FAQs on ADS-B

North Atlantic Datalink Mandate

What? The North Atlantic Datalink Mandate (NAT DLM) is the thing that came into effect in Jan 2020, which meant that CPDLC was then required between FL290-FL410 throughout the entire NAT region. Simply put, you must be equipped with CPDLC and ADS-C if you want to fly between these flight levels.

And then what happened? Then Covid happened. Because of the resulting reduction in traffic they suspended this mandate, and it looks set to stay this way until the end of Feb 2021. Bottom line, aircraft which do not have CPDLC and ADS-C can continue to operate across the North Atlantic between FL290-410 until then.

More info:
– North Atlantic Datalink Mandate – Opsgroup Blog Post

SafeAirspace Update…

Ethiopia

What? Escalating conflict – Danger to overflying aircraft – beware of open airways!!

Where? Ethiopia – the Tigray region bordering Eritrea

More info:
– Safeairspace – Ethiopia
– Airspace Risk Warning: Eritrea and Ethiopia – Opsgroup Blog Post

Saudi Arabia

What? Drone and ballistic missile strikes continue from Yemen, no end in sight.

Where? Southern Saudi Arabia particularly, but Jeddah and Riyadh have also been attacked.

More info:

– Safeairspace

Armenia/Azerbaijan

What? The conflict is ‘officially’ over, but the airspace remains dangerous!

Where? The airspace between Azerbaijan’s UBBA/Baku FIR and Armenia’s UDDD/Yerevan FIR.

More info:
– Safeairspace

Western Sahara

What? An emerging conflict zone, with the threat of anti-aircraft weaponry. Little info or warnings, that may well affect aircraft operating into the Canarias.

Where? Northwestern Africa – a area region between Morocco and the Polisario.

More info:
– Safeairspace

Stay tuned for our next Ops Chat coming up in January 2021!

Hong Kong revised entry rules for flight crew

David Mumford
18 February, 2021

Hong Kong has published **extensive guidance on its entry rules** via its dedicated Covid website, but in a bizarre twist, it’s actually the Notams which make it clearer to quickly work out exactly what’s allowed

here:

A1199/20 – IN VIEW OF THE LATEST SITUATION OF COVID-19, THE HONG KONG SPECIAL ADMINISTRATIVE REGION GOVERNMENT IS IMPLEMENTING THE FOLLOWING MEASURES:
1. ALL NON-HONG KONG RESIDENTS COMING FROM OVERSEAS COUNTRIES AND REGIONS BY PLANE WILL BE DENIED ENTRY TO HONG KONG.
2. NON-HONG KONG RESIDENTS COMING FROM THE MAINLAND, MACAO AND TAIWAN WILL BE DENIED ENTRY TO HONG KONG IF THEY HAVE BEEN TO ANY OVERSEAS COUNTRIES AND REGIONS IN THE PAST 14 DAYS.
3. ALL TRAVELLERS COMING FROM MACAO AND TAIWAN, INCLUDING HONG KONG AND NON-HONG KONG RESIDENTS, WILL BE SUBJECT TO A 14-DAY COMPULSORY QUARANTINE, WHICH IS THE SAME AS THE ARRANGEMENTS FOR PEOPLE ENTERING HONG KONG FROM THE MAINLAND.
4. HONG KONG RESIDENTS ARRIVING IN HONG KONG WHO HAVE BEEN TO ANY OVERSEAS COUNTRIES AND REGIONS IN THE PAST 14 DAYS WILL BE SUBJECT TO A 14-DAY COMPULSORY QUARANTINE.
5. AIR CREWS ARE EXEMPTED SUBJECT TO CONDITIONS. DETAILS CAN BE FOUND IN HTTPS://WWW.CORONAVIRUS.GOV.HK/ENG/INBOUND-TRAVEL.HTML
29 SEP 07:39 2020 UNTIL 29 DEC 15:59 2020 ESTIMATED. CREATED: 29 SEP 07:39 2020

Ok, still not actually that clear. Big block of text, all upper case, an assault on the eyes…

So, to make that even clearer, between now and Dec 29:

- Non-residents may only enter if coming from China, Macao or Taiwan, but not if they have travelled to any other country within the past 14 days.
- All inbound pax, including Hong Kong residents, are subject to a 14-day quarantine.
- There are **special rules for flight crew**…

Rules for Flight Crew

On Nov 24, Health authorities in Hong Kong published a document with the revised entry rules for flight crew. There are basically slightly different rules depending on whether crew have been in “very high risk places” in the past 14 days. Either way, all crew should have a negative PCR Covid test taken within 48 hours of operating, along with a letter from their airline/company that certifies an accredited laboratory was used. On arrival, all crew get tested again and must isolate until departure.

Rules for Positioning Crew

You have to go through all the same health checks, but there’s a way to get around the 14-day quarantine on arrival. You need to prepare a letter in advance (see below). As positioning crew, you’re required to self-isolate at a hotel for medical surveillance whilst you’re waiting for your outbound flight. You’ll have to wear a mask and get your temperature checked daily for reporting to the authorities. If you have a residence in HK, you should be allowed to go there instead.

To apply for the **exemption from the 14-day quarantine for positioning crew**, you have to send a letter to HKBAC, who will charge you HKD500 (around $65 USD). Here’s how it works, and the info you need to include:

1. *Flight Operator issues the letter with company letter head describing travel purpose and duty of the concerned crew*
2. *The Operator sends email to HKBAC to get verification endorsement on the letter. After verification, a scanned copy of the letter would be sent to the Operator by email.*

3. *The Operator provides that letter with verification by HKBAC to its concerned crew.*
4. *The concerned crew brings along the letter when travelling as passengers on commercial flight*
5. *Upon landing in Hong Kong, the crew approaches Crew Channel to obtain exemption from the Duty Immigration Officer before going through Immigration as passenger*

Remarks:

1. *HKBAC's checking is only for the identity verification based on the information provided by the Operator. HKBAC does not hold any liability on the exemption approval process.*
2. *Administration fee at HKD500 per endorsement would be applied and will be charged to the Operator which requests for the crew exemption letter.*
3. *Validity of the letter for crew exemption will be 7 days from the commercial flight date.*
4. *Although air crew can be exempted from the compulsory quarantine, the Department of Health (DH) will arrange Medical Surveillance for persons under the exempted categories of persons during their stay in Hong Kong. Exempted persons are subject to the temperature check and health declaration procedures carried out by DH.*
5. *In order to avoid your crew members being denied check in or boarding the commercial flights, please contact the commercial airlines that the crew would be travelling in in advance to ensure they are aware of the exemption.*
6. *Please be advised there is no guarantee that HK Health accepts the air crew letter for inbound positioning crew.*

Hong Kong has always been a tricky place to fly to, unless you're an airline with landing rights secured for the next two decades. As the world's third busiest airport, with only two runways, it goes without saying that **congestion is a big issue here!**

Things have gotten slightly easier this year due to the **downturn in traffic** caused by the Covid pandemic, with airport authorities now allowing airlines to keep their slots even if they don't use them. So, good news for them, but also good news for GA/BA operators, as the overall reduction in traffic means that **a lot more slots are available right now – daytime ones too!** So if need to go to Hong Kong and can navigate the entry rules, slots and parking should not be a problem.

Have you flown to Hong Kong recently? How did it go? Send us an email and let us know, or even better – file a report on **Airport Spy** and it will automatically go out to everyone in the group!

Greenland closes its airports to (nearly) all

passenger flights

OPSGROUP Team
18 February, 2021

Greenland have closed (nearly) ALL their airports to international passenger flights.

Well, apart from ones that come from Denmark. But don't go thinking you can make a quick stop off there first, they've even specified those are not allowed.

There is a provision for you to get special permission if you are transporting someone particularly important to the Greenland economy, but beyond that, no pax.

Here is the NOTAM:

BGGL SONDRESTROM FIR/FIC
A0621/20 – COVID-19: FLIGHT RESTRICTIONS.
ALL CIVIL FLIGHTS FROM OUTSIDE BGGL FIR, ARE BANNED FROM LANDING AT AERODROMES WITHIN BGGL FIR. FOLLOWING EXEMPTIONS APPLY:

1. FLIGHTS FROM AERODROMES IN DENMARK

1A. FLIGHTS ORIGINATING IN OTHER COUNTRIES THAN DENMARK, WITH INTERMEDIATE STOP IN DENMARK BEFORE CONTINUING TO GREENLAND, ARE NOT EXEMPTED FROM THE BAN.

2. FLIGHTS TO BGTL. SPECIAL PERMISSION MAY BE OBTAINED FROM THE DANISH TRANSPORT-, HOUSING- AND CONSTRUCTION AUTHORITY FOR THE PURPOSE OF TRANSPORT OF PERSONS WITH PARTICULAR IMPORTANCE TO THE ECONOMY OF SOCIETY. FURTHER INFORMATION ABOUT RESTRICTIONS AND PROCEDURE FOR THE APPLICATION FOR SPECIAL PERMISSION CAN BE OBTAINED VIA THE FOLLOWING LINK: HTTPS://TBST.DK/EN/CIVIL-AVIATION. THE FLIGHT RESTRICTIONS DO NOT IMPACT THE USE OF AERODROMES AS ETOPS ALTERNATE OR FOR EMERGENCIES.

Still confused? Fear not, the government have now published a full clarification of the rules here – in **plain language** (which we like very much).

Can I do a tech stop?

Yes! Ferry flights and tech stops (gas and go) can continue – but you'll need to remain onboard.

Overnight tech stops are not allowed without special permission.

Can I pick up passengers in Greenland?

Yes! You are allowed to ferry an empty aircraft to collect passengers. You just can't bring them in.

What about ETOPS? Polar Alternates?

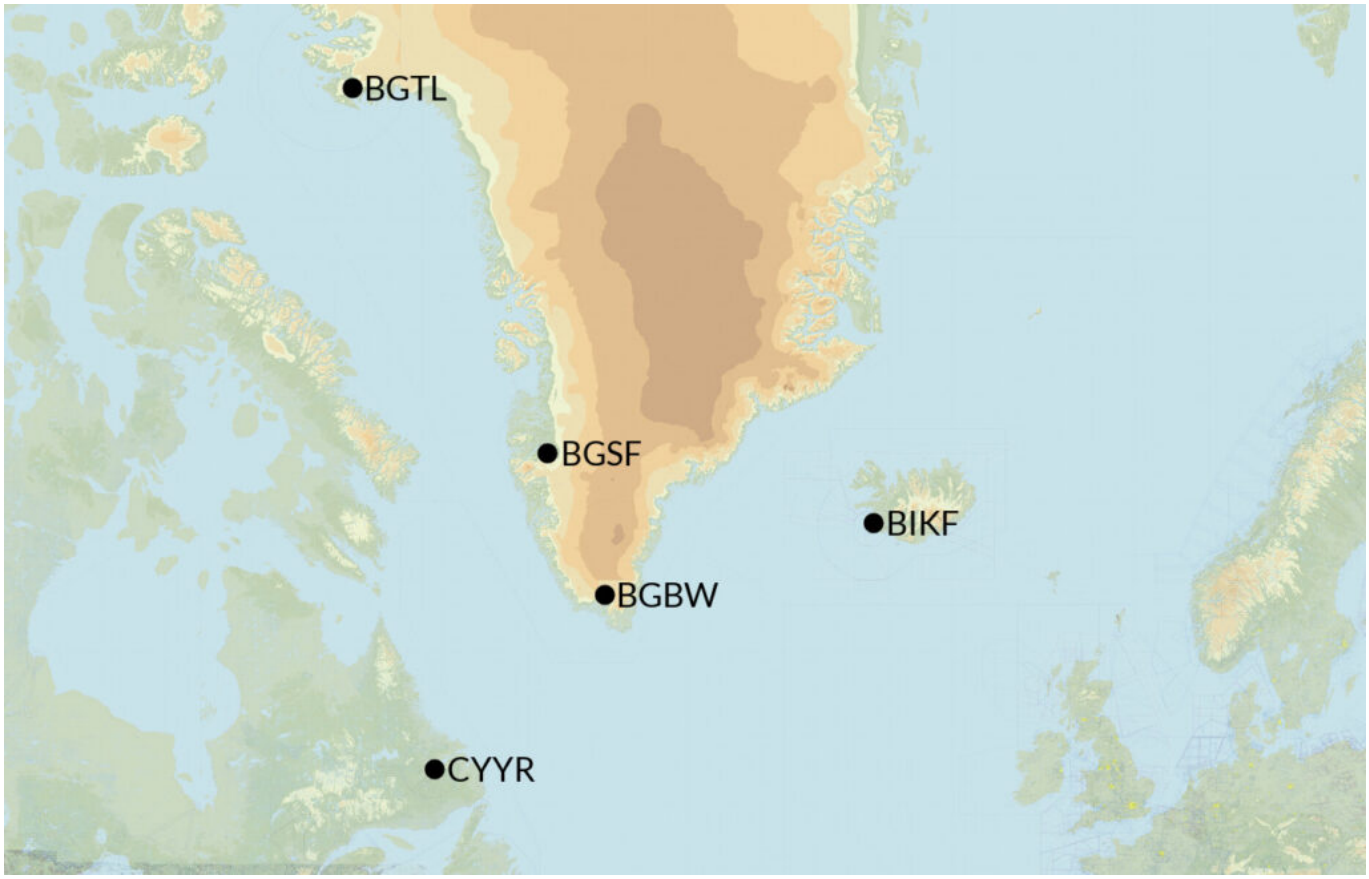
Yes! These are still permitted at BGBW/Narsarsuaq and BGSF/Kangerlussuaq. But watch out for extra charges if filing one of these airports on your flight plan as an alternate.

BGTL/Thule is only open to emergency diverts – not as a planning alternate because it's a military airfield which has no passenger facilities.

Who is this going to impact?

Mainly anyone who wants to bring in passengers for entry to Greenland. If you want to do it, you will need to apply for a special exemption at least 48 hours in advance. And you'll need a really good excuse.

Greenland serves as an important spot for ETOPS aircraft, and for an en-route alternate for polar operations – to repeat, you can still use BGBW and BGSF as ETOPS alternates.



So far they think the rule will remain in place until the end of January next year. Given the current mutated mink situation Denmark have found themselves in, we don't expect it to reopen sooner.

Has Russia stopped playing me-trics on us?

OPSGROUP Team
18 February, 2021

Russia have never been in much of a rush to join (most) of the rest of the world in how they measure stuff, but they are slowly getting there…

No longer playing me-trics on us?

Way back in 2011, they decided they would start using Feet instead of Meters above the transition level. So traffic cruising on through did not have to worry about sudden changes to metric levels, but any descending down into Russian airports still needed to whip out the old conversion tables once they went below transition.

Then in 2017, they started a trial at ULLI/St Petersburg to see if the whole Foot thing might work for them.

It turns out it went ok, because as of 3rd December 2020 they will be **implementing this across Russian airspace** – check out AIC 08/19 for the official announcement.

It's not all smooth sailing yet though…

The AIC seems to suggest that changes will occur in all airspace from Dec 3, but this requires lots of chart updates – in reality it's more likely that the big international airports will get updated first, and then the rest will follow.

At the end of November, European Regulators issued a **caution to operators** because some of the chart and database folk are struggling to update everything in time. We are talking en-route charts, SID and STAR charts, updates to prohibited and danger areas, updates to sector boundaries…

In their Safety Information Bulletin, EASA say if you are heading to Russia, check your charts to ensure they are in date, and keep an eye out to see what the changes are and if they have been implemented where you are heading.

What has changed?

- En-route stays the same: Flight Levels in feet, and metres if you are in a Russian aircraft.
- Below transition you will now also receive clearances in Feet (QNH).
- Pressure will be reported in hPa, unless you are a Russian aircraft then you can request in mmHg.

Last time we checked **188 out of 193 ICAO member states are using feet and QNH**, instead of meters and QFE. The only countries still working in Meters are China, Mongolia, North Korea, and Russia and Tajikistan (in lower airspace).

Here is a picture of UUWW airport showing the change:

Transition Levels

Initially, we had information that the transition altitude was going to be fixed at 10,000 feet across Russian airspace. **Not so, it turns out**. Each airport will have their own transition altitude and associated transition levels, **so be sure to check the approach plates**.

It looks as if Moscow is standardising it across their airspace with a transition altitude of 10,000′, and transition levels based on the pressure

- FL110 when QNH is 1012hPa or above
- FL120 when QNH is 977hPa or above
- FL130 when the QNH is less than 977hPA

And there is more

- All ATS routes have changed to RNAV5.
- A lot of TMA structures, and airspace areas around airports have changed which means a lot of arrivals and departures for airfields in the Moscow TMA airfields will also have changed.
- UUDD/Moscow Domodedovo and UUEE/Moscow Sheremetyevo airports now have independent simultaneous arrivals on their parallel runways.

References:

- You can access the Russian AIP here
- You can read up on Metric Altitude Reference info here
- Read our article from 2017 when ULLI/St Petersburg made the switch to feet and QNH

Thanks to Igor Nikolin, Deputy Head of the Air Navigation Support Service UTair Airlines for assistance with this post.