# Get ready for more North Korean missiles

OPSGROUP Team
14 March, 2023

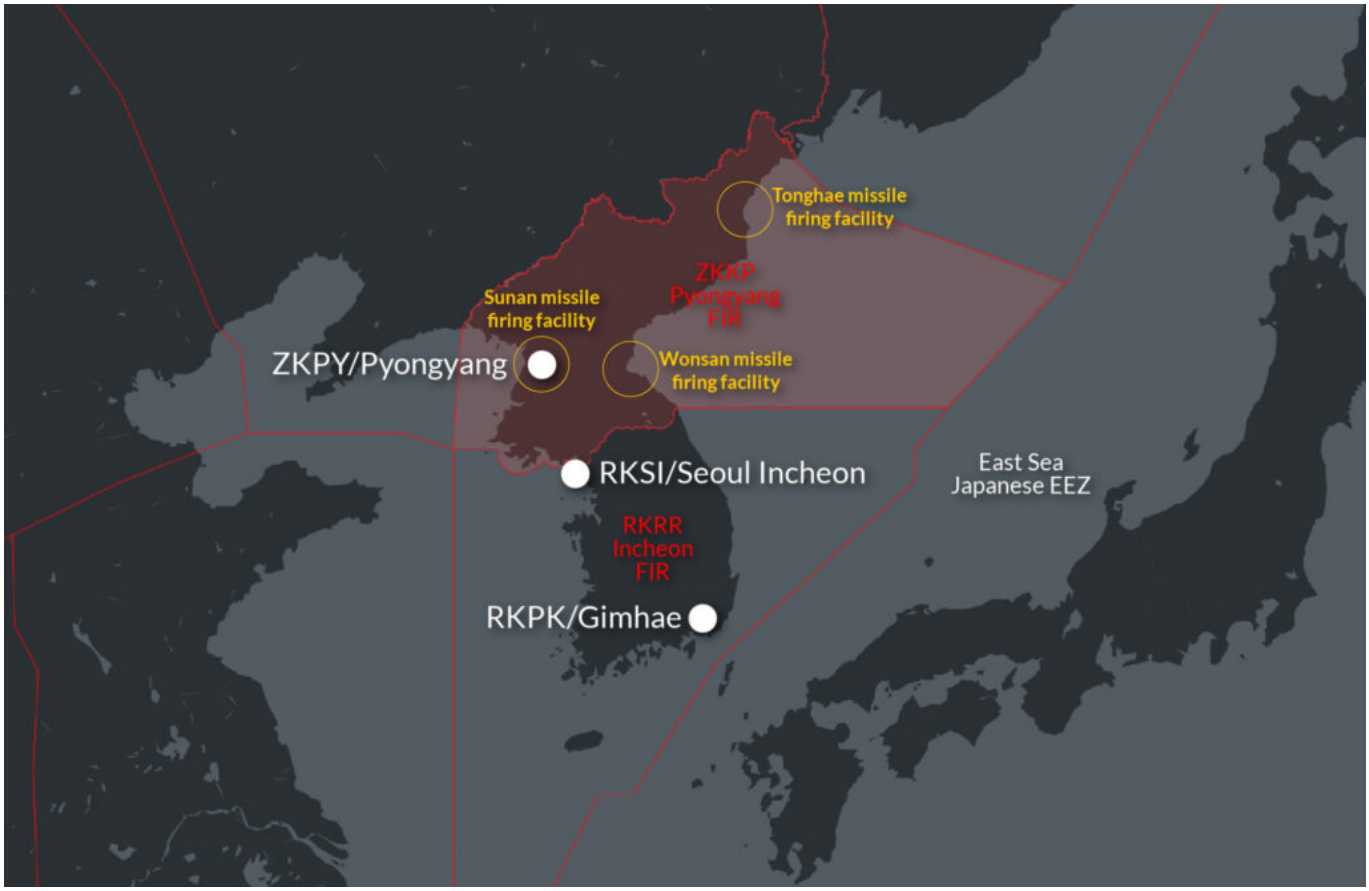
Exercise “Freedom Shield” is happening now – which means that **more North Korean missile tests are likely in the coming days.**

### What is Freedom Shield?

Freedom Shield is a **joint US-South Korean military exercise**. They run joint exercises every year, but this one is the largest in a long while and so is likely to cause more ‘retaliatory responses’ from North Korea. Particularly as South Korea is specifically **simulating responses to potential North Korean threats.**

The exercises run for **11 days from March 12th.**

It is not clear where the exercises will take place, but the general advice is stick to flight plan routes, maintain a very good listening watch on the radio, follow ATC instructions and keep a good look out.




Main missile firing sites.

### What is the risk?

North Korea tend to respond to these exercises with **significant missile activity**, which they never announce. This exercise is likely to see similar levels of response, if their 'announcement' is anything to go by…

Pyongyong is resolved to respond with **"overwhelming powerful forces"** to so-called military manoeuvres by the **"the US imperialists and the South Korean puppet forces"**. So probably a lot of missile launches.

The missiles rarely have any impact, generally falling into the East Sea (Sea of Japan) outside the EEZ. However, they do pose a threat within the Pyongyang FIR, and a higher level of activity is expected this year.

Here is an earlier post covering this is more detail.


Full overview (BBC) of military and missile sites in relation to South Korea

**While North Korea do not announce missiles, South Korea do release notams (although generally after the event).**

**As of March 14, they have fired:**

- Two strategic **cruise missiles,** from a submarine off the east coast of North Korea
- Two short-range **ballistic missiles** fired towards the East Sea, from Jangyon
- They ran their own military exercises in Feb 2023, firing several long range cruise missiles
- At the end of 2022, **180 North Korean 'warplanes**' were detected in North Korea, but did not infringe on South Korean airspace
- **5 North Korean drones** entered South Korean airspace in December 2022


Image of recent missile firing from submarine

### In other North Korean news...

Not a lot.

They have been **trialling ADS-B** in their airspace since 2009, according to Notam A0050/09

For full updates on the airspace risk in North Korea, as well as Japan and South Korean, visit Safeairspace.

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# The 45.5T Elephant in the Security Room

OPSGROUP Team
14 March, 2023

What do 9 African elephants and a G700 have in common?

*They both weigh over 45,500 kilograms.*

And that's the weight threshold you need to know about if you're planning on heading to the UK anytime soon…

### Why?

**There are some rules about security screening for heavy jets!** Here's how it works:

- **Any outbound public transport (charter, scheduled or commercial) flight on an aircraft over 10 tonnes (22,000 lbs) MTOW needs to be security screened**
- **All aircraft (including private flights) with a MTOW over 45.5 tonnes needs screening.**

And remember – the MTOW is what it says in your aircraft manual. We ain't talking the weight on the day.

### What does 'Security Screening' mean?

Here is a link to the EU regulation.

Yep, it's an EU regulation but this is basically what still applies in the UK as well.

**Why do they have this regulation?** It is all about making sure people and their stuff are protected.

So "*acts of unlawful interference with civil aircraft that jeopardise the security of civil aviation should be prevented by establishing common rules for safeguarding civil aviation. This objective should be achieved by setting common rules and common basic standards on aviation security as well as mechanisms for monitoring compliance.*"

The common rules it speaks of are the screening of luggage, people, checking nothing is hidden on the aircraft, etc.

### Why MTOW?

And why that particular MTOW? Why not something like number of seats?

No one knows (i.e. someone probably knows, but we don't know).

*If YOU know then email us at news@ops.group We can't stop wondering now.*

### Why are we talking about it?

Well, there has been some confusion at some UK airports, particularly for **Part 91 folk**. And there has been some disruption at some UK airports with **operators experiencing lengthy delays.**

One member reported having to adjust their departure date and time by nearly 4 days…

**There are actually two *things* worth highlighting:**

First of all, specifically in the UK, there are **continuing staff shortages** and this can mean delays in security screening availability. **Airline operators are always prioritised** which means you might experience delays, and you might even find flights cannot be accommodated.

**The solution?**

- **Book in advance and use a handling agent** – preferably the main FBO for an airport. They are generally very helpful folk who want to help as much as possible (and can help deal with the airport authorities).
- **Don't make last minute schedule changes** and expect them to be able to leap in and immediately do a security screening for you.
- **Head to dedicated BA/GA airports** when you can. Somewhere like EGLF/Farnborough is going to be able to accommodate you more easily than the likes of EGLL/Heathrow (although even EGLF told us requests with less than 4 hours would be difficult on busy days).
- **Avoid operating into larger airports at peak times** (when the scheduled folk are heading in and out).
- **Have a backup plan airport** – if your agent is telling you it is going to be tough to accommodate you and you know you cannot delay your departure, then fly somewhere else that can!

**UK rules aren't exactly the same as US.**

In the US the **regulation applies to Part 121, 135** etc. Not necessarily part 91 though. In the UK it applies to anyone and everyone. If your MTOW is over 45.5 tonnes (100,309 lbs) then you're going to need a security screening.

Here is a link to the NBAA's handy article about the US side of things.

### Anything else?

Here is a link to the UK Gov travel guide site.

You can find things on all topics from hand luggage restrictions to everything else on here so a good spot to head to if you want more info on the specifics (although we reckon just ask a handling agent at the airport you are heading to!).

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# Your 2023 Airshow Calendar

OPSGROUP Team
14 March, 2023

When we started this post, we didn't realise quite how many airshows there are out there in the world. So consider this more of a *'some of the big airshows that you might want to see (but that might also cause issues at airports you are likely to fly into)'* calendar. And let us know if you think you've spotted one to add!

### The UK

**The UK has loads of airshows planned for 2023.** Go here for a full (but possibly not exhaustive) list. Most of these take place at smaller (and non-international) airports. So they might cause some airspace restrictions in their general vicinity, but we won't sit and tell you about them all in turn.

- **We will mention the Bournemouth Airshow though.**

Make that an 'Air Festival' actually. And not just air – land and sea too! This is a major airshow which takes place August 31- September 3. It will probably take **EGHH/Bournemouth** out as an alternate option for the days it is on, and you can expect some airspace *things* to be aware of in the general, just below London, sort of area.


- We will also point out the **Royal Air Tattoo.**

This is the largest military airshow in the UK, held on the July 15-16 at **EGVA/RAF Fairford.** This can have some impact on flights into London, and around the southwest region of the UK with aircraft heading in from all over the UK and beyond.

- The next **Farnborough Airshow is in 2024** so no comment on that today.
- **The Coronation of King Charles** is likely to involve an Air Show, with some airspace restrictions.

It takes place on May 6. You can also expect higher traffic into the UK around this period, probably some strict security and airspace restrictions around London during it.

**Europe**

From the **19th-25th June** what is probably the biggest air show and aviation exhibition event in the world will take place – **the Paris Airshow.** The skies of Paris will be thrumming with the sound of all sort of airplane engines, and all the airports will be fairly hideously busy.


- **LFPB/Le Bourget** will be off limits for all but those actually ‘at’ the show.
- **LFPG/Paris Charles de Gaulle** is right next door but this is a major international airport and unlikely to have all that much additional space to accommodate you.
- **LFPO/Paris Orly** is the ‘other’ international airport. Also busy, but less busy the de Gaulle.

- **LFPT/Paris Pontoise-Cormeilles** Airport is up the road and worth looking into for parking. They do not have customs there though so it would be an entry somewhere else then park here job.
- Slightly further afield **LFOB/Paris Beauvais-Tille** Airport offers customs.
- **LFOK/Paris-Vatry (Chalons)** Airport is also in the vicinity. This is mostly used for cargo.

Europe is of course quite big, and each country likes to hold an Airshow now and then. Many are smaller ones and to keep the length down, I have decided to only post ones that I have heard of, which take place at big international airports (or close enough to them to impact them).

So, for a more detailed list of airshows in Europe in 2023, check here.

### Middle East

Dubai's big (trying, and might even succeed in being bigger than Paris) airshow takes place in November. Specifically November 13-17.

The airshow takes places at OMDW/Dubai World, also known Al Maktoum, which takes that out as an option for getting into the UAE, and parking your aircraft unless you've asked early enough. But worry not, one thing the UAE does well (and in quantity) is airports.

You have a whole bunch of options nearby:

- **OMDB/Dubai International**
- **OMAD/Al Bateen executive (Abu Dhabi)**
- **OMSJ/Sharjah**
- **OMAA/Abu Dhabi**
- **OMAL/Al Ain**

There are usually a fair few airspace restrictions and things to know nearer the time so keep an eye out for those.


### North America

OK, we thought the UK had a lot. Turns out (unsurprisingly, given something like 50% of the worlds airports are in the US) that they win on the airshow quantity.

We found this rather handy site listing a whole load of them. It's a good resource for checking airshow dates at some of the smaller airports you might be heading into.

- We figured it would be worth highlighting Oshkosh

This takes place at **KOSH/Wittman regiona**l airport on **July 24-30.**

- One of the biggest airshow events in the US is the Miramar Air Show which takes place over 3 days (suggested to be September 23-25 this year).

It is held in **San Diego at KNKX/Marine Corps Air Station Miramar,** and sees a huge amount of military traffic heading into the area. You can expect some restrictions at KSAN/San Diego and its airspace during this time.

- Canada's main Airshow, the Abbortsford Air Show, takes place at **CYXX/Abbotsford** on August 11-13.

Again, not at an airport you might be heading directly to, but likely to result in some airspace restrictions in the area so keep a look out.


**Around the Pacific and Asia sort of areas**

- The Pacific Airshow takes place in the Gold Coast, Australia between **August 18-20.**

This is originally a US (Huntingdon Beach) based event. In true Australia style, it takes place over a beach, but the main airport used is **YBCG/Gold Coast**. There can be impact to the airspace for **YBBN/Brisbane** as well (and you probably don't want to plan YBCG as your alternate).


- You also have the Malaysia hosted LIMA 2023 Langkawi exhibition **May 23-27**.

This isn't just an airshow. It is actually a massive conference sort of thing, but they do a lot of air displays at it (military and civilian) and these may well impact **WMKK/Kuala Lumpur and WMSA/Sultan Abdul Aziz Shah** airports.

- The Seoul ADEX (Seoul International Aerospace and Defense Exhibition) 2023 event takes place between **October 17-22.**

Although not exactly just an air show either, it does involve some large amounts of air showing so we figured we would add it in here.

- The Singapore Air Show isn't due until **February 20-25 2024** so we'll mention that more another time.

### It isn't just Air Shows...

Of course, it isn't just Air Shows specifically which limit capacity at airports and cause disruption. **Major sporting events** tend to cause them to fill up fast, busy aviation conferences see higher traffic numbers heading in, while big political stuff sees higher levels of security and often flight restrictions...

But my fingers hurt so we'll post about all of that another time 

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# Nicaragua's Silly New System For Overflight Permits

David Mumford
14 March, 2023


Nicaragua's CAA has recently implemented a silly new system for overflight permit requests.

They talk about the changes in AIC numbers 89-93. But even when translated into English, the docs are **bamboozling, and it's not really clear exactly what has changed.**

So we called on the help of Consorcio Aviation — a flight support company in the region, and our old pals — for help to understand all this, and how overflight permit requests now work.

### So, how does it work?

Before, the process would go as follows: you would make one request with all the flights you wanted to do in a month, and the CAA would reply with one unique permit number for the entire list that was requested.

The new system is different. **Now each flight must have its own permit number, and it is sent in the format of a QR code.**

### QR codes? Yuck.

Yep. You scan the QR code, and a webpage opens with your permit number – **the one that you add to your FPL.**

### Is that it?

No, it gets worse. To make things more confusing, the QR codes are not all sent at once, but in partial batches of five, two or sometimes even one at a time, depending on how many flights you're doing, further increasing the need for **constant follow-up.**

### What do these hideous QR codes look like?

Here's a sample. The QR code there is fake for confidentiality reasons, but if you scan a real one you get just a text with the permit number.

INSTITUTO NICARAGÜENSE DE AERONAUTICA CIVIL
INAC

Unidad de Atención a la Aviación General Internacional
y Vuelos Oficiales

Aprobación Solicitud de Sobrevuelo

**Fecha:** lunes, 01 mayo 2023
**Trámite:** 01234
**Operador:** OPERATOR NAME

Código IAC

**Fecha de Vuelo:** 02/05/2023

| TIPO | MATRICULA | ORIGEN | DESTINO | AEROVIA | MOTIVO |
|---|---|---|---|---|---|
| B733 FLIGHT | TAIL NO. | ORIGIN | DESTINATION | UB767 | TYPE OF |

Esta Autorización es valida para la ida y el retorno.

Watch out for the **TRAMITE number** on this doc. This is like an internal code for the CAA – it's not the permit number. If you have inquiries and need to get to the authorities, they will ask you this TRAMITE number, not the permit number itself.


### Is this QR code / permit system online?

No, they don't have an online system for the requirements. **You need to request it directly from the authorities – and easier to do this through an agent.** Although some of the authorities' staff understand English, it's easier to communicate in Spanish in case they request more information or something is not very clear to them.

### What about Nav fees? How do these get paid?

At the end of every month they send the billings to all the operators/companies that requested permits. In our case for example we usually give the options to our clients to pay directly or we pay for them. Usually they choose the second option for the reasons stated above.

### Who are you, Consorcio?

Consorcio Aviation is a leading Flight Support Company headquartered in Paraguay, with a global footprint. It provides full-service ground handling to the main airports in Latin America and the Caribbean, for both cargo and passenger flights. With over 40 years of experience in the aviation industry, Consorcio Aviation is a suitable partner to assist ground operations with world-class standards. Email us at fltops@consorcioaviation.com

### Sounds swish. Got any pics?

Yep. Here we are.


YOU MUST PLAN TO WIN,
CONSORCIO
Holding

# New FAA Airspace Warning: Mali

Chris Shieff
14 March, 2023


On Feb 23, the US FAA re-issued its warning for overflights of Mali, with one essential difference:

**It is now dangerous to overly Mali's airspace at all levels, not just below FL260.**

Here is what the new KICZ Notam says:

KICZ A0001/23 NOTAM SECURITY.. SECURITY..UNITED STATES OF AMERICA ADVISORY FOR MALI

THOSE PERSONS DESCRIBED IN PARAGRAPH A (APPLICABILITY) BELOW SHOULD EXERCISE CAUTION WHEN FLYING INTO, OUT OF, WITHIN, OR OVER THE TERRITORY AND AIRSPACE OF MALI AT ALL ALTITUDES DUE TO A WORSENING SECURITY SITUATION, INCLUDING ONGOING FIGHTING, EXTREMIST/MILITANT ACTIVITY, AN EXPANDING FOREIGN PRIVATE MILITARY PRESENCE, AND THE INTRODUCTION OF AN ADVANCED AIR DEFENSE SYSTEM.

A. APPLICABILITY. THIS NOTAM APPLIES TO: ALL U.S. AIR CARRIERS AND COMMERCIAL OPERATORS; ALL PERSONS EXERCISING THE PRIVILEGES OF AN AIRMAN CERTIFICATE ISSUED BY THE FAA, EXCEPT SUCH PERSONS OPERATING U.S.-REGISTERED AIRCRAFT FOR A FOREIGN AIR CARRIER; AND ALL OPERATORS OF CIVIL AIRCRAFT REGISTERED IN THE UNITED STATES, EXCEPT WHERE THE OPERATOR OF SUCH AIRCRAFT IS A FOREIGN AIR CARRIER.

B. PLANNING. THOSE PERSONS DESCRIBED IN PARAGRAPH A (APPLICABILITY) PLANNING TO FLY INTO, OUT OF, WITHIN, OR OVER THE ABOVE-NAMED AREA ARE STRONGLY REMINDED TO REVIEW CURRENT SECURITY/THREAT INFORMATION AND NOTAMS; COMPLY WITH ALL APPLICABLE FAA REGULATIONS, OPERATIONS SPECIFICATIONS, MANAGEMENT SPECIFICATIONS, AND LETTERS OF AUTHORIZATION, INCLUDING UPDATING B450; AND, TO THE MAXIMUM EXTENT POSSIBLE, PROVIDE AT LEAST 72-HOUR ADVANCE NOTICE OF PLANNED FLIGHTS TO THE FAA AT FAA-WATCH@FAA.GOV WITH SPECIFIC FLIGHT DETAILS.

C. OPERATIONS. WEAPONS COULD POSE A POTENTIAL RISK TO AIRCRAFT AT ALL ALTITUDES, INCLUDING DURING OVERFLIGHT, THE ARRIVAL AND DEPARTURE PHASES OF FLIGHT, AND/OR AIRPORTS AND AIRCRAFT ON THE GROUND. THOSE PERSONS DESCRIBED IN PARAGRAPH A (APPLICABILITY) MUST REPORT SAFETY AND/OR SECURITY INCIDENTS TO THE FAA AT +1 202-267-3333.

ADDITIONAL INFORMATION IS PROVIDED AT: HTTPS://WWW.FAA.GOV/AIR_TRAFFIC/PUBLICATIONS/US_RESTRICTIONS/

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o what's changed there, and why is the FAA so concerned?

### The Stage

Mali is a large land locked country in Central Western Africa and borders several states including Niger, Algeria, Mauritania, Guinea and Burkina Faso.

Several major **high altitude airways** run through the country facilitating traffic both north and south, and east and west. They are major thoroughfares through the heart of Africa, which is why this new warning is significant.

In the past three years Mali has suffered from continuous **political instability** after two armed coups – the first in 2020, and then again in 2021. This has been compounded by delays in holding an election.

It was dropped from ECOWAS (Economic Community Of West African States) as a result, and has faced several international sanctions.

It has a long history of **insurgent militant activity** who oppose the government, along with the intervention of foreign military to try and restore peace and stability.

Despite best efforts, insurgent militia have continued to spread and strengthen in Mali allowing well funded groups such as Al Qaeda to increase their presence there. Military operations and terrorist attacks have become more frequent.

Of special concern is the fragmented tri-border region that divides Mali, Burkina Faso and Niger. It is a hotspot for fighting that targets both the existing government, along with the foreign military presence.

### What has changed?

Hot on the heels of the new KICZ Notam, the FAA has published a new information note which raises **major red flags** to anyone considering overflights.

Historically the concern to aviation in Mali has been from militant use of MANPADs (man portable air defence system) to target low and slow flying aircraft **up to FL250.**

However as the transitional government continues to fight against insurgent militia, their emphasis has moved from the support of foreign peacekeeping forces to the use of private military. **One in particular is of major concern – the Wagner Group.**

In Spring last year, this Russian backed paramilitary group has deployed over one thousand troops in Mali near Bamako, along with an **advanced radar guided air defence system** capable of targeting aircraft as high as **FL490**. A similar system was used to shoot down MH17 in 2014.

While there may be no specific intent to target civilian traffic, the FAA suggests the Wagner Group have a sordid history of **unprofessional and heavy handed air defence activity**. This was previously evident in Libya, where US operators have been completely banned for some time.

What we're now seeing in Mali is that civilian aircraft may be at far greater risk of advanced anti-aircraft fire through **mistaken identity or mis-targeting**, which can likely reach higher than you can fly.

### The risk is now two-fold.

The existing risks are still present – militant groups continue to be active with MANPADS. They are likely to target foreign and local military forces which are often located close to international airports including **GABS/Bamako.**

At higher levels, aircraft are now at risk from radar guided air defence systems that may be used with little verification that their target is correct.

It is a dangerous brew.

**Why the FAA has only cautioned US operators, rather than ban them as is the case in Syria, Libya and Iran among others where similar weapons are also present is a question we don't have an answer for yet.**

We are actively seeking more information.

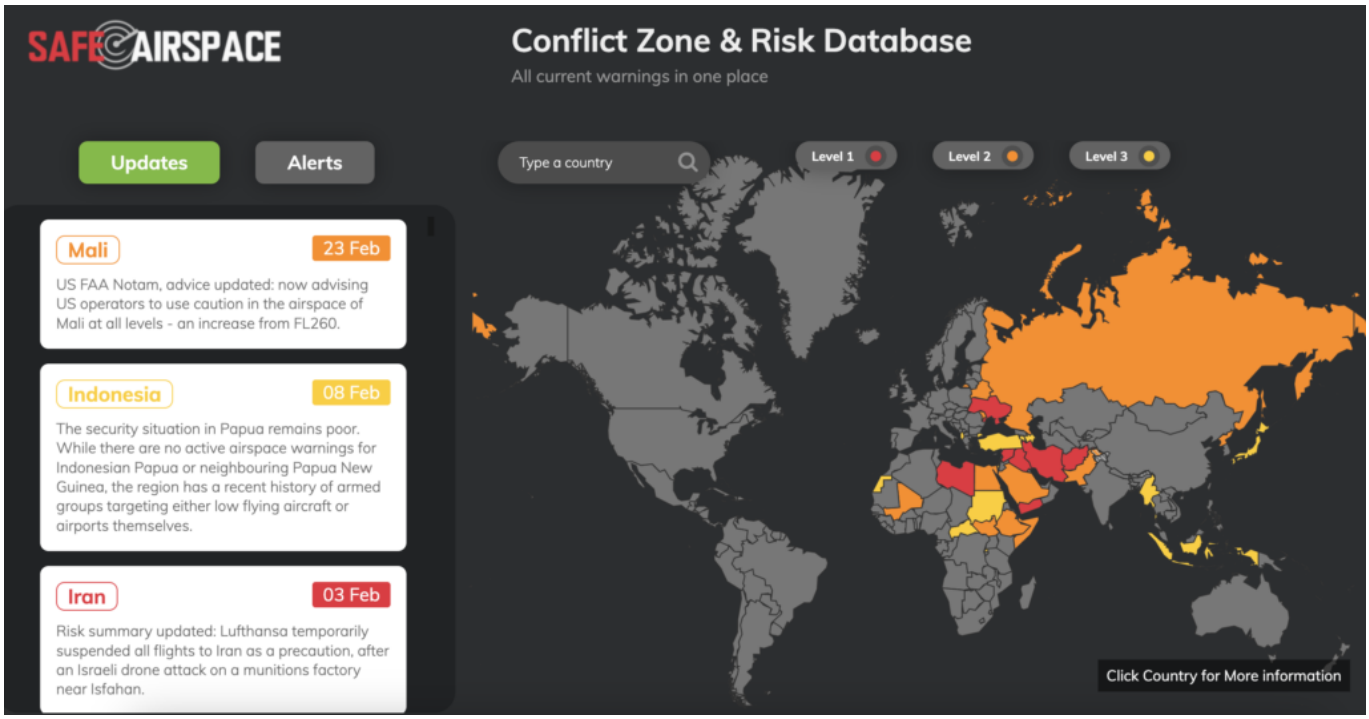
### I still want to overfly. Can I?

Yes you can, but it's dangerous at all levels. Once again, the new Notam is a **precaution**, not a ban. The new KICZ Notam allows room for you to do so, provided you:

- Take into account all current security and airspace warnings and perform your own risk assessment.
- Comply with and update your OPSPEC/LOA B450 approval to operate in internationally sensitive ares.
- Where possible, provide the FAA with at least 72 hours notice via FAA-WATCH@FAA.GOV
- Report any safety or security issues ASAP to the FAA on +1 202-267-3333.

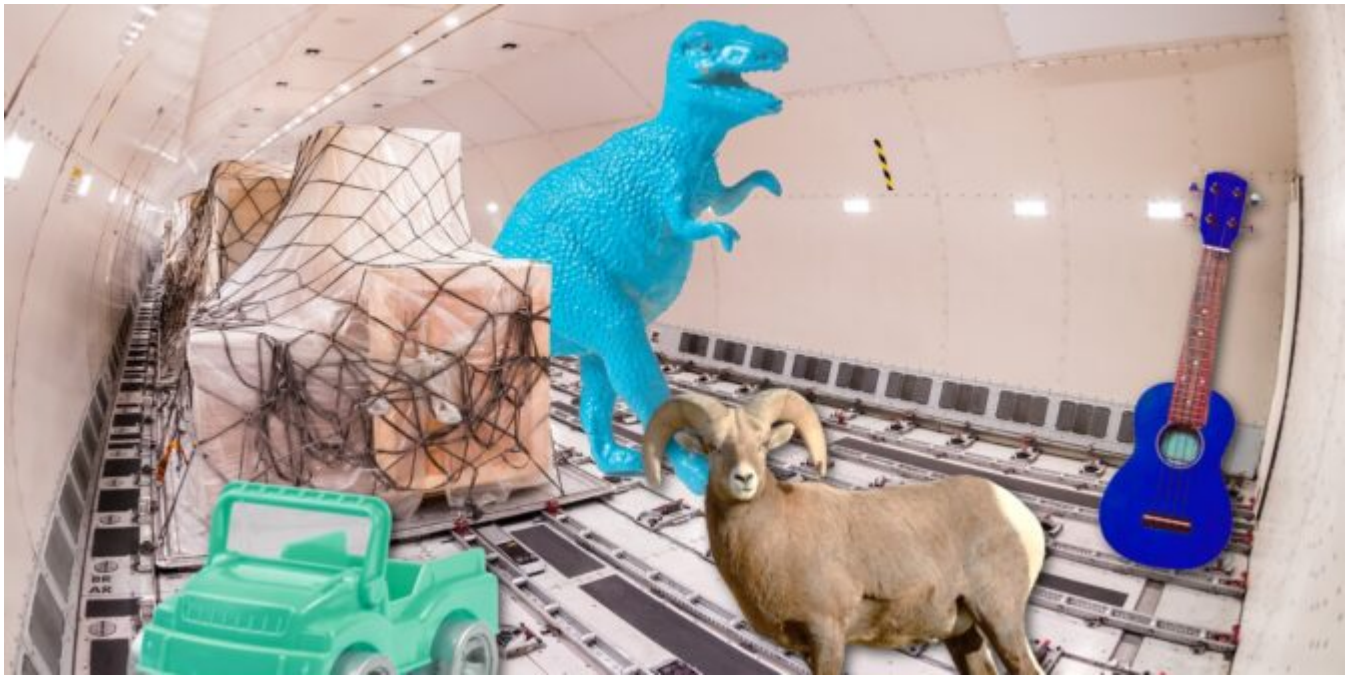
### Where to from here?

We will report on any new FAA information on the situation in Mali as it becomes available, along with any other security or risk alerts. These will be published on OPSGROUP, along with safeairspace.net – our free risk and conflict zone database.



# Mexico City says no to cargo

OPSGROUP Team
14 March, 2023



The Mexican government hinted at it in December 2022, and IATA got involved and said *"please don't do that"*, but then the government decided to do it anyway.

So here is a little summary on the *Cargo Conundrum* at MMMX/Mexico City for all those who fly cargo into Mexico. And also for anyone who flies into Mexico because we have added some other handy things in for you too.

### The Cargo Ban

**MMMX/Mexico City will no longer allow cargo operations**. This means scheduled and Ad-hoc cargo only ops.

**This doesn't apply to belly cargo on passenger flights.** You are still fine to head in.

The Presidential order came out **sometime around 18 February**, and gave airlines 90 days to shift their operations. It was then extended to 107 days because folk pointed out that 90 days would be a bit tight.

Anyway, by sometime in May/June you won't be able to operate cargo flights into MMMX/Mexico City.

Good news though – right up the road (literally about 40km) is **MMSM/Felipe Ángeles International Airport**, and they would love to handle your cargo.

### No-one likes MMSM though...

OK, that isn't entirely true. The problem is, according to IATA, that **it lacks the infrastructure** and getting the entire cargo chain to up sticks and move in 90 (or even 107) days is problematic and challenging.

Here is what IATA said about it all.

### Why do we care if we don't fly cargo?

Well, on the one hand it might be good news for you because it will mean **more capacity at MMMX/Mexico City**, and that is something it is definitely lacking.

On the other hand, it might cause issues for operators who carry belly cargo in on passengers flights in large quantities, because **cargo handling companies might not want (or be able) to maintain the capacity and standards** to handle it across both airports, and the cargo only airport is going to get priority.

For operators who fly both dedicated freighters and cargo on passenger flights it also means one more airport now having to be operated into, with all the **support, contacts, coordination** and what have you to worry about.

There are questions over whether MMMX/Mexico City will accept diversions from MMSM/Felipe Ángeles. We haven't heard no so will assume it is a yes, but it is worth considering where you will go.

### No-one likes MMSM…

It is not that they don't like it, but the airport has issues. Or at least it did.

**The main issue is to do with its proximity to MMMX/Mexico City** (only about 40km away). Back in 2022 this led to a fairly severe near miss between aircraft operating into the two airports.

That's all in here if you want a read.

### They do want your cargo though

They say on their website that they are –

*"Equipped with the most advanced security technology for the transport of national and international merchandise, this terminal has 22 bonded areas and 8 MARS positions (Multi-Aircraft Remote Stands), in an area of 345,881 m2. Its purpose is to meet the need for infrastructure for handling foreign stuff things blah exciting something about a gate nose and containers 12 meters long."*

Wonderful stuff.

We also noticed two things about the website:

- **There is no FBO contact.** We can't find any contacts except for their social media email. If you have any contact info for FBO, cargo handling or anything other useful airport contact please share it because we can't find it anywhere.
- **They are really proud of their themed toilets.** Two of the home page slide show pictures are of toilets and they have a dedicated section discussing them (fourth on the corporate Airport Services list in fact). Check out the photos!

### So, in summary

- **Don't plan on flying cargo** into MMMX/Mexico City from Mayish time.
- **Do let us know** if you have any contacts for MMSM/Felipe Ángeles.

- Do send us Airport Spy reports on both (all) Mexican airports so other pilots and operators can see what horrors/joys befell you and can plan for them.

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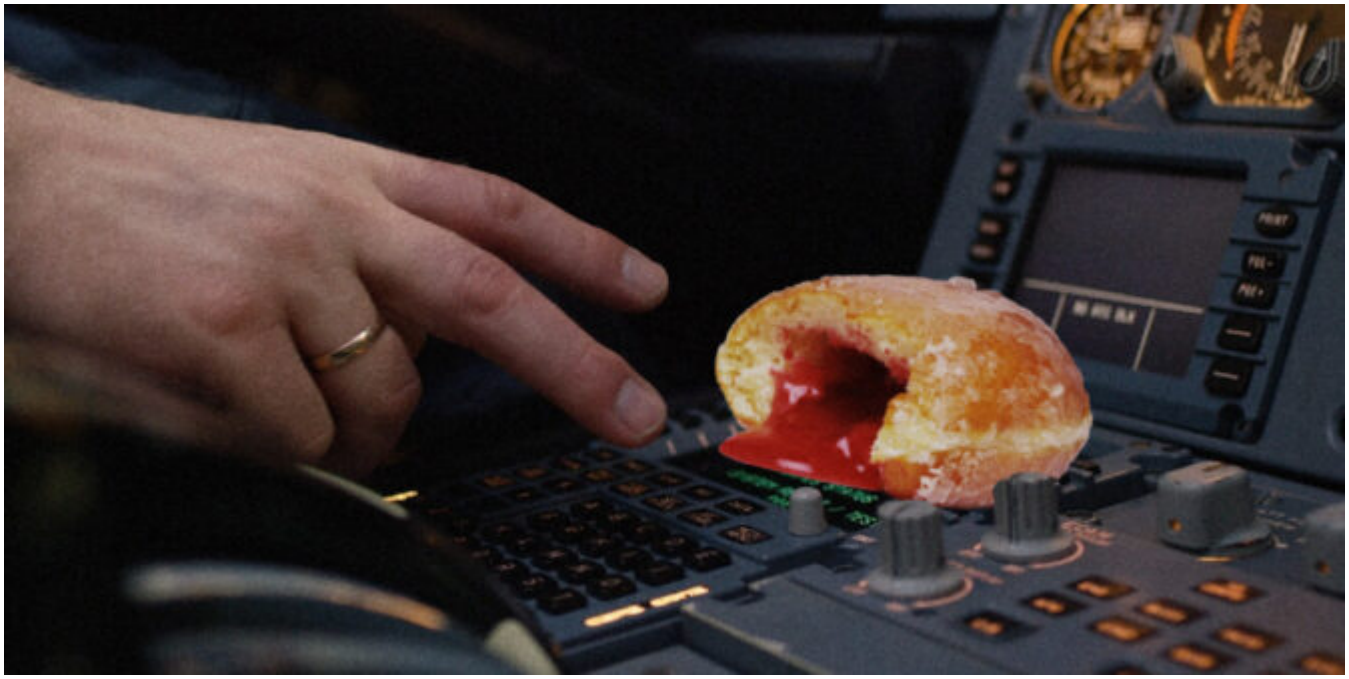
# GPS Jamming (again)

OPSGROUP Team
14 March, 2023



This whole GPS jamming thing is really starting to G-PS us off! Unfortunately, it isn't something that can be resolved at the source anytime soon.

While they can't fix it, EASA have come along with a nice new SIB to help us deal with it though.

**What's the (new) story?**

There isn't really anything new, but there is a slightly updated list of places where you can most expect to 'get jammed'.

**SIB 2022-02R1** was issued on Feb 17, and you can read it here.

It lists the most common spots that pilots are reporting jamming occurring:

- **The Black Sea area:**
  - FIR Istanbul LTBB, FIR Ankara LTAA
  - Eastern part of FIR Bucuresti LRBB, FIR Sofia LBSR
  - FIR Tbilisi UGGG, FIR Yerevan UDDD, FIR Baku UBBA

- **The southeastern Mediterranean area, Middle East:**
    - FIR Nicosia LCCC, FIR Beirut OLBB, FIR Damascus OSTT, FIR Telaviv LLLL, FIR Amman OJAC northeastern part of FIR Cairo HECC
    - Northern part of FIR Baghdad ORBB, northwestern part of FIR Tehran OIIX
    - Northern part of FIR Tripoli HLLL
- **The Baltic Sea area (FIRs surrounding FIR Kaliningrad UMKK):**
    - Western part of FIR Vilnius EYVL, northeastern part of FIR Warszawa EPWW, southwestern part of FIR Riga EVRR
- **Arctic area:**
    - Northern part of FIR Helsinki EFIN, northern part of FIR Polaris ENOR

### We made a map:

This map is quite possibly not 'anatomically' correct. It is just a 'sort of around there' map. Also, I definitely think that bit of land between Poland and Lithuania gets its fair share of jamming.

Anyway, the SIB also contains some really handy information on what to look out for **(signs you've been a-jammed)**, and what to do about it if you think you have. We aren't going to list all of that though, you're better off checking out the SIB.

### There is also a new poster

Here is it:

# DON'T GET JAMMED

## REPORT, RISK ASSESS, TAKE ACTION

### Reporting

- Report any observed interruption or degraded performance of GNSS equipment or related avionics via a special air report (AIREP) to air traffic control (ATC).
- Once you land, report full details of what happened through your organisation's occurrence reporting system.

### Risk Assess

- Depending on your route and level of reliance on GNSS based systems, asses the risk jamming might pose to your flight.
- Consider the availability of alternative, conventional arrival and approach procedures.
- Think about the impact that any operational limitations caused by dispatch the aircraft with inoperative radio navigation systems in accordance with the Minimum Equipment List.

### Take Action

- Be aware of possible GNSS jamming and/or spoofing.
- Verify the aircraft position by means of conventional navigation aids when flights are operated in proximity to the affected areas.
- Check that the navigation aids critical to the operation for the intended route and approach are available and;
- Be ready to revert to a conventional arrival procedure where appropriate and inform air traffic controllers if such a situation arises.

EASA
European Union Aviation Safety Agency

together 4safety

*We like it a lot. Of the man who made it, you might say that 'EASA' great sense of humour* 

**We liked it so much, we wanted to make our own one too…**

So here it is:


*Yes, we did take it way too far and realise that now.*

**We have mentioned GPS jamming before.**

That we have. You can find the previous posts here:

- GPS Jamming: All the wrong signals
- GPS Outages: The hotspots

Filled with lots of juicy, jammy information so help you become a ‘Jammin Dodger’:


# Ops in Europe vs USA: The Differences

OPSGROUP Team
14 March, 2023


Someone asked us what pilots can expect if they fly their plane to Europe compared to what they can expect in the US, and we suddenly thought to ourselves *"Good question! What are the differences?"*

So here's a quick rundown of some of the main ones.

### Altimeter Stuff

Both countries use altimeters, and they use them in feet. *Here's a question for you – why are they not called Altifeeters?* Anyway, they work the same, except for one key difference…

Europe uses millibars, which are hectopascals, sort of. They give QNH's which sound like ***"one zero one three"*** and that is in mb (or hPa, because 1 of one is the same as the other one). The US however does it in Inches of Mercury (inHg) which means theirs sounds more like ***"two niner daysimal niner two".*** So plenty of room right there to set wrong thing and for things to go wrong…

**Europe also doesn't use standard transition altitudes and levels.** They change them all over the place, and sometimes they are really low. Which means there is room (or rather no room) for things to go wrong here too, and they do. Particularly in **EINN/Shannon** which we mentioned on behalf of Shannon airport right here.

### CPDLC Stuff

CPDLC in the US is **FANS 1/A**, as it is across the NAT HLA and even into the UK. But leave those green and frosty pastures for the European Mainland and you will find yourself in a land of **ATN B1** fun.

It isn't that fun actually because your FANS equipment won't work, and there are also a lot of rules about who needs CPDLC and at what levels. You can read about it all here, and if you click on the map in the post (or here) then you will get transported straight to an **implementation table** which is very handy.

There is also a thing called a **Logon List** in Europe, which used to be called the White List, which you need to fill out in order to **register to use CPDLC in Switzerland, Germany, and Maastricht-UAC**.

The US has CPDLC but has not really mandated it. They are running trials on it though, which some BizAv aircraft might be able to join in on. We recommend reading this to find out more about that.

### Flight Planning

In the US, the FAA has different codes and we aren't sure when they will become codes for using in Europe too. So your flight plan filings might be a little different.

The codes mainly apply to new RNP type stuff and they go in Item 18 of your FPL.

### EU-LISA

No Comment.

### Fine, EU-LISA

The currently delayed EU-LISA thing is sort of like the **ESTA visa waiver stuff in the US**. It is a system to allow for better monitoring and recording of people heading into Europe.

And that is all we are going say on it.

### ADS-B

**ADS-B privacy** is a bit of a question anywhere, but in the US (in their territorial bit) you can sign up for certain stuff to make yourself less *conspicuous* – the LADD system, PIA etc. **These won't work in Europe.**

Both the US and Europe have **ADS-B mandates**, although they apply at different levels.

### MAYDAY calls

That's right, even these differ. Sort of.

In Europe you really need to say *"MAYDAY, MAYDAY!"* and when you do everyone still generally shush up, although ATC will start asking your intentions and trying to help you. You can tell them to standby if you want to.

In the US you might find you need to say *"We are declaring an emergency"* and might get a whole lot of questions straight after. They of course use ICAO calls (you can find the whole FAA info on that here) but occasionally (so we're told) that this is something *confirmed* as well.

You can listen to an example here.

Europe also uses '**Minimum Fuel'**, which you should let ATC know about if you find yourself getting low on it (but are still fine so long as nothing else changes). They'll help if they can, but will only properly be able to jump you in the queue if you call 'Mayday Fuel'.

### Strikes

I mean they have these both sides of the Atlantic, but they happen fairly regularly in Europe, particularly in **France and Italy.** If it is an airport workers type strike then your best point of call is going to be your local agent.

If it is an **ATC strike** then the Eurocontrol Network Operations Portal is going to have the info on it.

While we are talking about France and ATC, it is worth noting that **they generally speak French** here, especially at LFPG/Paris, and it can make things confusing at times.

Strikes tend to happen over major holidays so summer is a time to watch, Christmas and Easter coming in

close second and third.

### Airspace Issues

First up, Europe is the continent and **the UK is still part of Europe.** As, actually, is Russia and also Turkey, although since they border other continents they are often thought of as part of them.

EASA is the main authority for EU countries, which means the UK is not covered by them but by the UK CAA. **So where you get your permits from is different.** Emissions schemes are also separate.

Eurocontrol is the main *airspace manager* for want of a better title. Turkey and Ukraine are both member states, Israel and Morocco are sort of semi members. That doesn't mean you are going to get the same level of **ATC standards** across them all though.

Turkey has a lot of issues with **GPS jamming**, and it borders certain countries with major conflicts meaning areas of the southern border and border with Iraq are not always risk free. They also have *disputes* with Greece over certain bits of airspace which is worth knowing about because it makes the **communication and radio work more complex.**

**Ukraine's airspace is currently closed** due to the ongoing conflict with Russia. Moldova is mostly out of bounds. Poland has some safety concerns in the regions bordering Ukraine.

As far as we know, the US airspace is all considered fairly safe although there are some **local procedures** and airspaces to look out for – New York and the Florida metroplex area are two which spring to mind *(although there are probably others? Let us know!).*

Europe, because it is loads of countries not one big one, tends to see a fair old number of **military airspaces activated** so Notam and AIP SUP checks are important for info on those. Major military exercises in Europe are published through the NOP. The US of course has TFRs and other restricted and danger areas which are published here.

### Ramp Checks (and MELs because they sort of fit into it as well)

Ramp Checks are rife in Europe. We recently received intel on the main issue items in French ramp checks, but these probably apply everywhere.

One big area of difference it the **MEL vs MMEL thing**. In Europe an MMEL is not usually accepted – they want an MEL specific for your aircraft. That said, there are some exemptions.

### General 'vocab'

This might just be something only I struggle with, but I once had a humiliating experience flying into **KIAD/Washington Dulles** international where ATC asked if we *"have Dulles insight?"* I (pompously) informed him that no, we did not have 'Dallas' in sight, because we were heading for Washington.

**Not used to being asked if visual**, and not used to referring to airports by name got me good on that one.

And accents, 'colloquialisms' and of course actual differences in clearances can catch you out. **There are differences in things like your arrival and descent clearances even.**

In the US, in airports like KLAX/Los Angelas *(an example I am familiar with)* then often clear you *(and there is a chance I am getting this wrong now)* on the arrival which includes the descent clearance as per the arrival as well. I want to say *"descend via"* or maybe *'cleared via'* (it's a while since I've been there…)

Anyway, the clearance is for you to descend down to the lowest altitude on the arrival, but in Europe we

don’t tend to do so without **explicitly hearing the altitude.**

### Low Vis Stuff

*OK, someone asked me to add this and I have to go get the old manuals out and look it up. In the meantime – watch out because we do stuff like RVR differently. And TERPS.*

### Fuel Tax, Curfews and other random things

**Fuel tax** is a thing in Europe, but also a thing you can attempt to claim back. In some places anyway.

**A lot of European airports have curfews.** It is worth knowing which countries have them so you don’t get caught out.

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# What’s Suriname?

OPSGROUP Team
14 March, 2023


Hello Suriname. Tell us about yourself.

### Who are you?

Ik ben een klein land*... Translating Translating...* I am a small land in norther South America, bordering the Atlantic Ocean, and sandwich between Guyana, French Guiana and Brazil.

### Tell us an interesting fact about yourself

I am the only country outside of Europe where Dutch is the main language.

### Wow, cool, so why are we interviewing you today?

Well, folk flying over from Europe and Africa probably overfly me if they are **routing to the western side of South America**.

And I have had two big 'issues' recently that might impact them..

### Uh oh, that doesn't sound good...

No, it hasn't been.

On February 17, 2023 a load of my **ATS staff were not available** so we had to **close the airspace in SMPM/Paramaribo.** It was only from 1800z to 0100z on Feb 18, but it means contingency routes and levels were in place, and we had to coordinate with adjacent centers for everyone trying to get in and out of SMJP/Paramaribo.

We did issue a Notam on it – **A0024/23**

### Well done on the Notam. Tell us about this other issue?

Well, as it it turns out, people aren't very happy. Actually, this might have been where all my ATS staff were.

On February 17 there was a lot of **civil unrest in the capital Paramaribo**. Folk were storming about and a state of emergency was declared.

The US embassy issued a warning on **security concerns**, and advised there could be a suspension of ops at SMJP/Paramaribo if it happens again.

### What can folk do who are heading to the area?

Keep an eye out for Notams and news related to:

- **More ATC zero** events (and contingencies)
- **Suspension or disruption** at SMJP/Paramaribo (Johan Adolf Pendel) airport
- Think about **security on the ground** if you do head in
- Contact **SMJP tower** – 00597325176 / 00597325313 – if you have queries
- *Share your contact for handling agents on the ground there if you have*

### Give us some last handy tips

Alright.

If you do want to head in or overfly then **you'll need a permit** (a permit for everything!)

You need to give **three days notice** and apply direct to the authorities. *Dionne Paskald* is very helpful in the CAA. Send a fax with all of the documents, then send those same in an email. If landing you will need to provide copies of **vaccination certs for yellow fever** with the permit application for all crew members. You should also **send passenger and crew manifest** when applying for a landing permit.

**The CAA of Suriname** contact info is: +597 498 901 / +597 498 901 / d.paskald@cadsur.sr /

dca@cadsur.sr / airtran@cadsur.sr

**We told a story about Suriname in 2021**

They had an ATC zero event back in 2021 as well, and we wrote about it here with much more info on the contingency procedures (in case you need them again in the future).

**Someone told us a story about SMJP/Paramaribo ages ago (2015)**

*"We arrived on a flight from Sao Paulo Guarulhos (SBGR) from UL776. We were cleared from our last enroute fix to the Paramaribo FIR boundary fix Tirios (TIR) NDB. Communications with Amazonica Control became broken at best and unreadable most of the time. We tried contacting Paramaribo Control without handoff as we approached TIR but all the frequencies on the Hi en route chart did not work. After numerous tries back to Amazonica on last assigned frequency we finally picked up 133.3 as a good frequency for Paramaribo. We were instructed by Paramaribo to fly 080 degree heading out of TIR to intercept the YZ (VOR) 200 degree radial to YZ. Out of 6000"*

If you have a new one, file it at Airport Spy.

**Here is some other info we dug up:**

- SMJP/Paramaribo airport has **one runway (11/29)** which is 11,417′ (3480m) and has an ILS for 11 and an RNP for 29
- There us another international airport, for GA – **SMZO/Zorg en Hoop** – but its runway is only 750m long so probably not one you want to plan on using
- **SOCA/Cayenne**, French Guiana is the closest alternate (173nm)
- **SYCJ/Georgetown**, Guyana is the next closest (194nm)

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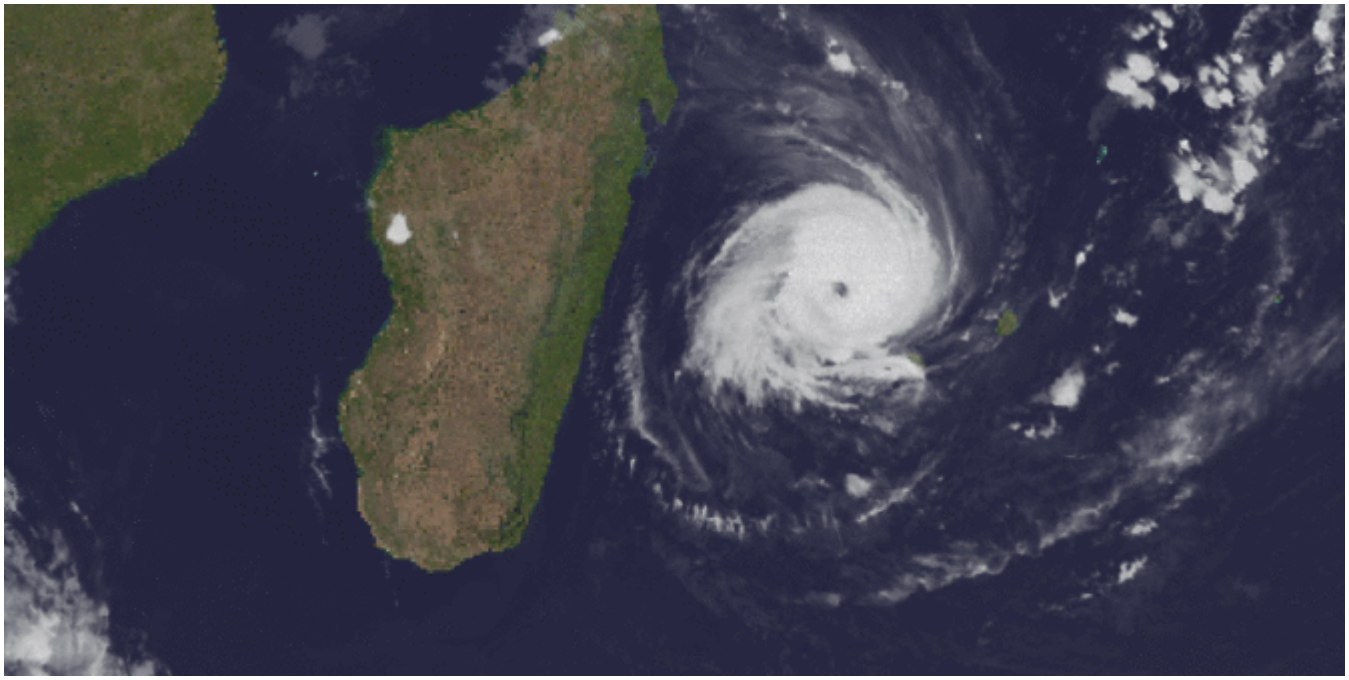
# Hurricane Freddy: Still going strong

OPSGROUP Team
14 March, 2023



**Update 7 March:** Freddy has passed over Madagascar and initially deintensified, but with the warm waters of the Mozambique Channel feeding him, he is growing again. He is expected to reach category 2 levels with winds over 90knot. Landfall over Mozambique is forecast on March 11. The west coast of Madagascar, and the coastal regions of Mozambique, including FQMA/Maputo will see some bad weather for the next few days.

**Update 21 February:** Freddy is decreasing to a category 1 hurricane with wind speeds between 80-85knots. It is due to make landfall over Madagascar in the afternoon of Feb 21.

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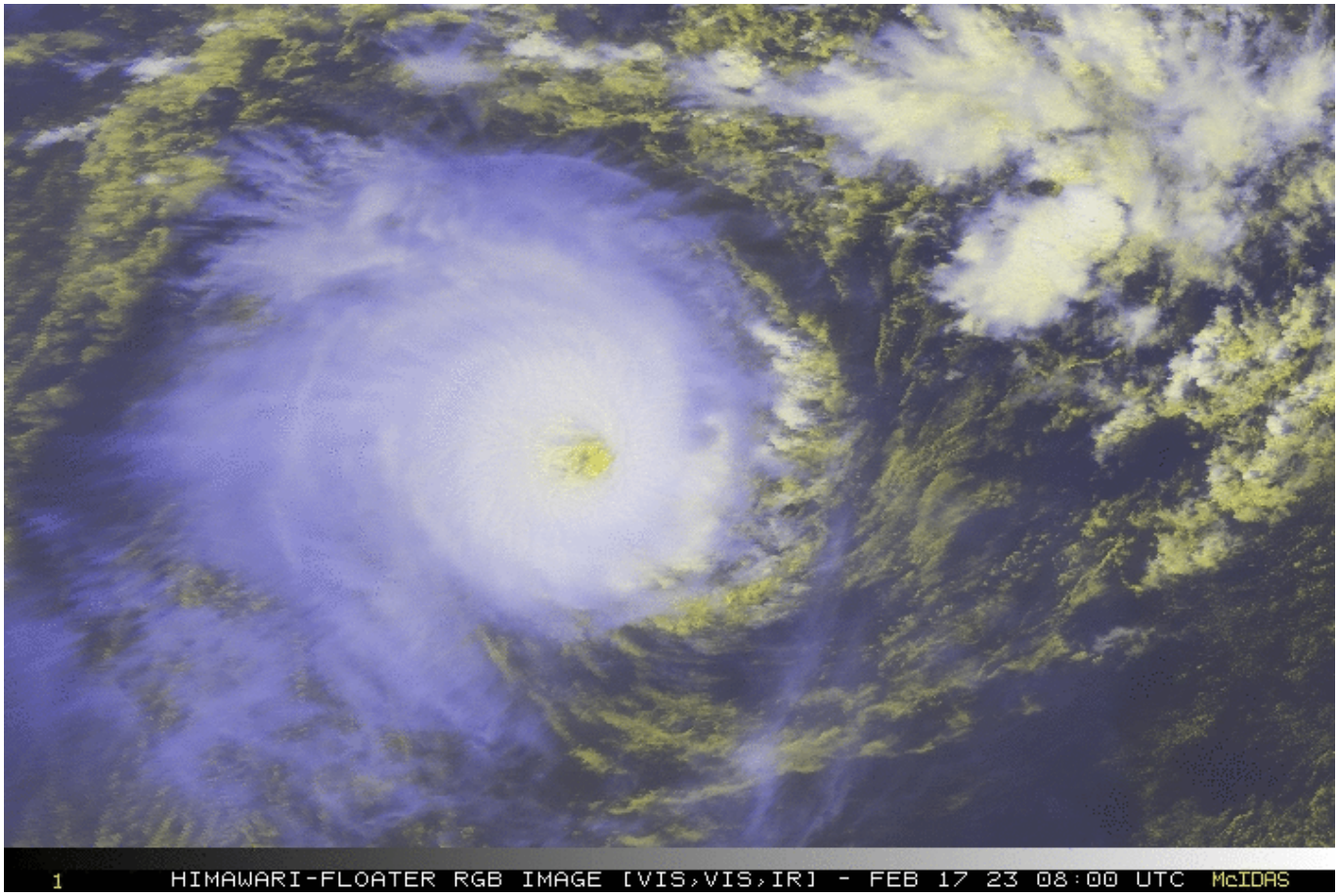
We don't often post about tropical storms unless they are monumental and expected to cause a severe level of disruption and damage.

Freddy is fairly big, and it's a Friday, so I figured I would give him his 10 minutes of fame.

### Just how big?

He is currently a **Category 4 hurricane** which means his wind speeds are topping **120 knots.** The likes of Hurricane Katrina reached Category 5 levels (although she was only a 3 when she made landfall). Hurricane Harvey was a 4 when he hit Texas in 2017.

So Freddy is big, and Freddy is bad. But Freddy is also, currently, still **swirling about the Indian Ocean** and nothing more than a blob on your SigWx chart that you might detour around slightly.




### Where is Freddy heading?

Freddy is heading west, towards **Mauritius and Madagascar.**

He will reach the Port Louis area in the next 2 days, and is forecast to have **de-intensified to a Category 3**, with wind speeds around 110 knots. The following airports will likely experience severe weather conditions as the storm passes:

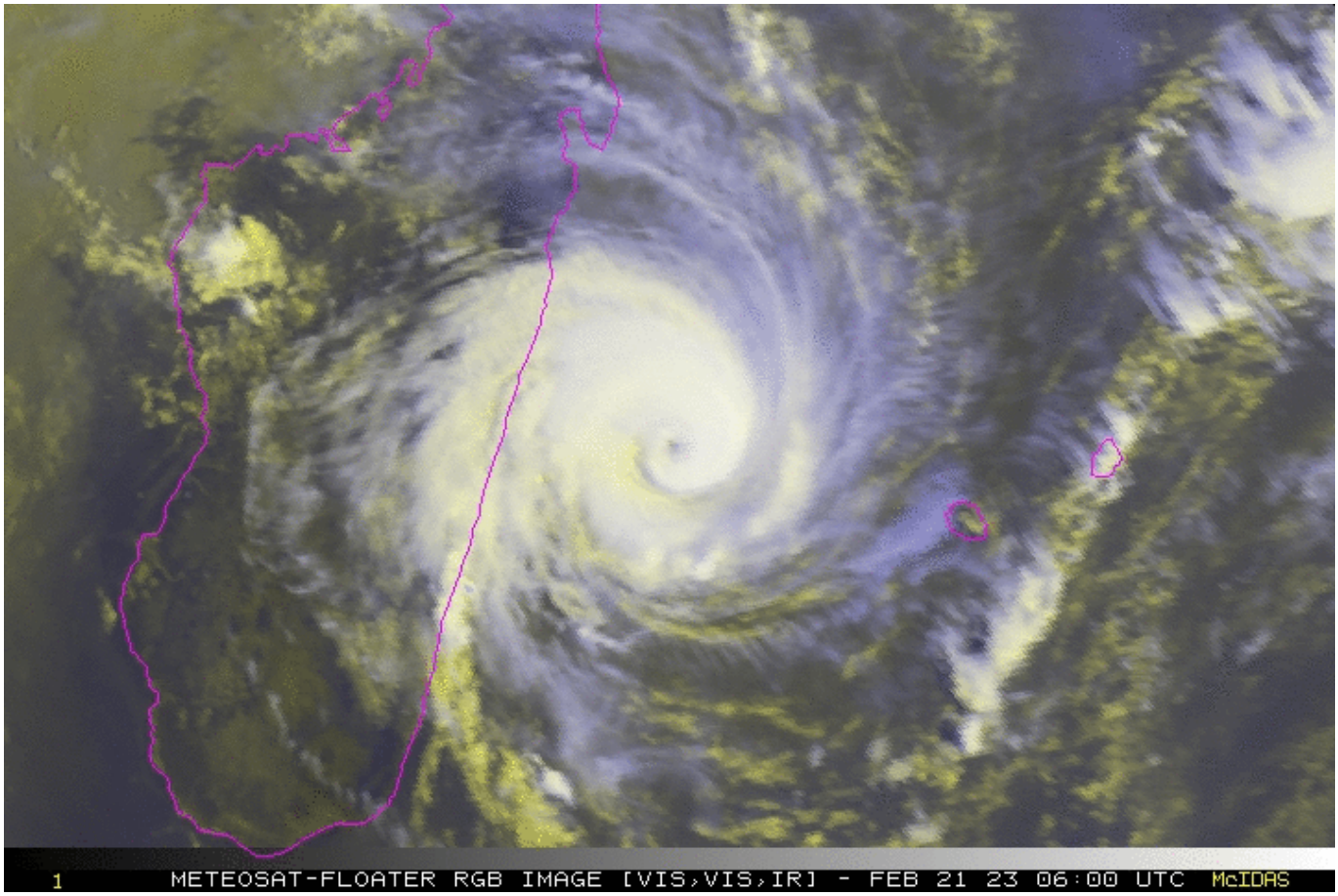
- **FIMP/Sir Seewoosaur Ramgoolam (Port Louis)**
- **FMEE/Roland Garros (Reunion)**

Landfall is forecast around Feb 22, south of **FMMI/Ivato (Antananarivo)** Madagascar.

### How much disruption is expected?

When Freddy makes landfall he is expected to have reduced to a **Category 2 hurricane**, with winds around 90 knots. However, **the region lacks good infrastructure** and damage may be increased because of this.

The airports in this area are relatively remote, island airports, with **few diversion options** (particularly if the weather is hammering them all) so plan that fuel and those alternates accordingly if you are in the region over the next few days.




**Follow Freddy**

You can track Freddy here.

We also recommend staying in contact with handling agents and confirming conditions with them prior to operating. Here are two contact suggestions in case you need:

- General Aviation Mauritius, FIMP: ops.mru@yulounge.com / +230 603 6666
- General Aviation Service, FMMI: info@gasaviation.com / +255 743 775 439

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# Cow Farts and Aviation

Chris Shieff
14 March, 2023

Did you know that **cow farts** are one of the major contributors to global warming?

Go ahead – google it. Just know that your search history will take some explaining later.

In fact they account for eighteen percent of the problem. They're flatulent creatures, and their trouser coughs contain methane gas which is almost one hundred times more powerful at trapping heat than good ol' carbon dioxide. In fact their flatulence is so strong, it can cause acid rain. Umbrella anyone?

Why are you reading this on an aviation website? Fair question.

Because regardless of where you stand on the cause of global warming, we know for a fact that the earth *is* heating up. **And aviation is poised to be one of the victims**.

Let me explain.

### Bumpy Road

As the earth warms, jet streams will become **stronger** – along with wind shear. As we hitch a ride on those long routes eastbound, **clear air turbulence** is set to become much more frequent, and much more dangerous.

They've done studies, you know – and those jet streams are already fifteen percent more sheary than they were back in the 70s. And things are **accelerating.**

The bottom line is this: scientists believe there is going to be two to three times as much severe turbulence in the next few decade thanks to cow farts (and of course all other contributing factors).

### How severe is severe?

We're not talking light chop.

There are two levels of turbulence we're most concerned with. The first is **severe** – essentially large and abrupt changes in altitude or attitude. Your aircraft may even be out of control momentarily.

Beyond that turbulence can also be **extreme**. It doesn't make for pleasant reading, but the official definition is when the aircraft is violently tossed about and almost impossible to control. You may even

take damage.

Both are nasty.

### What does this mean for ops?

Perhaps the most at risk are **flight attendants**. The NTSB reckons they are twenty-four more times more vulnerable to injury from CAT than their passengers. They account for eighty percent of all turbulence related injuries. This make sense as they are often on their feet, pushing carts that can weigh upwards of 300lbs.

Here's another startling statistic – between 2009 and 2018, in almost thirty percent of turbulence related incidents, **there was no warning.**

CAT is the enemy you cannot see, because it mostly happens in clear air. It isn't associated with storms or clouds, and weather radars need moisture to work. Our eyes are useless too.

Granted, planes aren't about to start falling from the sky. But we can expect the amount of time spent in turbulent conditions on an average flight across the Atlantic to exceed thirty minutes in the years to come. **Darn cows**.

### Great, what can we do about it?

Actually three things. Protect your crew, predict where it will happen, and care about sustainability. Let's dig a little deeper.

*Crew*

The absolute best way to protect everyone on board during CAT is to have them **seated** with their belts on. The head of a major flight attendant union is calling for changes. It is becoming increasingly dangerous for them to still be on their feet, while passengers are strapped in.

The NTSB agrees and is recommending more stringent rules when those seatbelt signs turn on – especially for crew. The notion is a seat for everyone – including infants and young children who may be sitting on an adult's lap and riding gratis.

While it may feel reassuring that all pax are safely seated, don't underestimate how at risk cabin crew are if they are still up and working.

*Spotting the stuff.*

Predicting CAT isn't an exact science, and this ain't no met class. But in a nutshell it is caused due to the difference of speed at high altitude (usually well above FL150) when flying near the boundary of two air masses.

Jet streams are typically strongest in colder months, and weaker in warmer ones.

Two things to look out for: dramatic changes in **temperature**, and dramatic changes to **wind** speed and direction.

Both are tell tale signs of CAT.

Along with that information in your flight plan, shear rates, sig wx charts and pilot reports (pireps) are also valuable sources of information.

Likewise, if you find some let ATC (and the traffic around you) know.

There are also turbulence information sharing platforms available to crew which provide real time updates on where the rough air is.

*Sustainability*

There is a lot of noise at the moment about sustainability, alternative fuels and ‘net carbon zero.’ It can all get a little dry.

But it is the operational impact of global warming that is really going to matter to us on a day to day basis, which is why we need to care. **More than numbers.**

Asides from clear air turbulence, as the jets grow stronger, westbound flights will take longer, burn more fuel and cost more. Not to mention more time away from being poolside at the Holiday Inn.

Then there’s the **sea level**. It is rising as the polar ice cubes melt. One study suggested by 2100, one hundred airports around the world will be below sea level, and close to half a thousand will be at serious risk of flooding and storm surges unless things change  – affecting up to **twenty percent of all routes.** That’s a lot of water.

### Where to from here?

The cows aren’t about to stop farting, so we need to **mitigate**. This may mean spending more time and attention on the risk that clear air turbulence poses while we flirt with the time saving benefits of the world’s jet streams on a daily basis.

We can also support the overall industry push to operate cleaner in the long run. A great no-nonsense source to keep track of these industry trends are **IATA updates** – you can view those here.

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# Beware Big Balloons

OPSGROUP Team
14 March, 2023

It started with a balloon. A rather large one, sent by the Chinese for 'purposes unknown', and rapidly removed from the skies as soon as it became safe to do so.

However, there has been a spate of further 'unidentified objects' wafting about the upper levels of the northern American atmosphere, and they are potentially something of a hazard.

### The Balloon

This was spotted over the US, working its way northwards around February 3.

There isn't much to say on this that hasn't already been said – **it was big, it came from China** and it was almost definitely not one that had just accidentally drifted of course. Politics and conspiracies aside, this did not post much of a risk for civilian aviation because of the altitude it was operating at.

**The (probably a) surveillance balloon** operated from around **80,000 to 100,000**′ – well above the levels which would impact commercial airliners.

### Object Number 2

**On February 10**, an unidentified object was spotted overflying the **northern coast of Alaska** towards the North Pole region, at around 40,000′, moving at approximately 20-40mph.

It was deemed a **"reasonable threat"** to civilian aviation due to its size and altitude, despite being quite a bit smaller than the Chinese Balloon (very big, these sort of small car sized).

Reports suggest several aircraft were diverted, with one stopping at PANC/Anchorage and another to PAOM/Nome due to airspace closures.

### Object Number 3

Another object was spotted and shot down on **February 11**. This one was routing over **Canada, approximately 100 miles from the US border**, and at around 40,000′

The airspace over the Great Lakes region was closed while the object was taken down, but a Canadian TFR is still in force in the area.

The Notams and TFRs related to this are labelled ‘active air defense operation’.

### Object Number 4

The third of the smaller UFOs (yep, I said it, but just mean unidentified flying object) occurred on **February 13**, near to **Lake Huron** which shares a border with Canada.

There are unverified reports suggesting pilots reported interference from it with their “sensors”.

The FAA temporarily shut down a chunk of airspace over Northern Wisconsin and Northern Michigan to *‘support Department of Defense activities’.* Reopened now, but the a smaller TFR remains in place.

FDC 3/4532 ZAN PART 1 OF 3 AK..AIRSPACE DEADHORSE, AK..TEMPORARY FLIGHT RESTRICTIONS. PURSUANT TO 49 USC 40103(B)(3), THE FEDERAL AVIATION ADMINISTRATION (FAA) CLASSIFIES THE AIRSPACE DEFINED IN THIS NOTAM AS 'NTL DEFENSE AIRSPACE'. PILOTS WHO DO NOT ADHERE TO THE FOLLOWING PROC MAY BE INTERCEPTED, DETAINED AND INTERVIEWED BY LAW ENFORCEMENT/ SECURITY PERSONNEL. ANY OF THE FOLLOWING ADDITIONAL ACTIONS MAY ALSO BE TAKEN AGAINST A PILOT WHO DOES NOT COMPLY WITH THE RQMNTS OR ANY SPECIAL INSTRUCTIONS OR PROC ANNOUNCED IN THIS NOTAM: A) THE FAA MAY TAKE ADMINISTRATIVE ACTION, INCLUDING IMPOSING CIVIL PENALTIES AND THE SUSPENSION OR REVOCATION OF AIRMEN CERTIFICATES; OR B) THE UNITED STATES GOVERNMENT MAY PURSUE CRIMINAL CHARGES, INCLUDING CHARGES UNDER 49 USC SECTION 46307; C) THE UNITED STATES GOVERNMENT MAY USE DEADLY FORCE AGAINST THE AIRBORNE ACFT, IF IT IS DETERMINED THAT THE ACFT POSES AN IMMINENT SECURITY THREAT; OR D) UAS OPERATORS WHO DO NOT COMPLY WITH APPLICABLE AIRSPACE RESTRICTIONS ARE WARNED THAT PURSUANT TO 10 U.S.C. SECTION 130I AND 2302101930-PERM END PART 1 OF 3 FDC 3/4532 ZAN PART 2 OF 3 AK..AIRSPACE DEADHORSE, AK..TEMPORARY FLIGHT 6 U.S.C. SECTION 124N, THE DEPARTMENT OF DEFENSE (DOD), THE DEPARTMENT OF HOMELAND SECURITY (DHS) OR THE DEPARTMENT OF JUSTICE (DOJ) MAY TAKE SECURITY ACTION THAT RESULTS IN THE INTERFERENCE, DISRUPTION, SEIZURE, DAMAGING, OR DESTRUCTION OF UNMANNED AIRCRAFT DEEMED TO POSE A CREDIBLE SAFETY OR SECURITY THREAT TO PROTECTED PERSONNEL, FACILITIES, OR ASSETS. PURSUANT TO 14 CFR 99.7, SPECIAL SECURITY INSTRUCTIONS, ALL ACFT FLT OPS ARE PROHIBITED: WI AN AREA DEFINED AS 703557N1463405W TO 702934N1465705W TO 702202N1463751W TO 702821N1461458W TO THE POINT OF ORIGIN. SFC-10,000' MSL EFFECTIVE IMMEDIATELY UNTIL FURTHER NOTICE. EXCEPTIONS: A) NATIONAL SECURITY ACFT OPS UNDER DIRECTION OF DEPARTMENT OF DEFENSE; AND B) LAW ENFORCEMENT, AIR AMBULANCE, AND 2302101930-PERM END PART 2 OF 3 FDC 3/4532 ZAN PART 3 OF 3 AK..AIRSPACE DEADHORSE, AK..TEMPORARY FLIGHT OTHER URGENT GOVERNMENTAL RESPONSE ACFT OPS WITH AUTHORIZATION FROM ATC (ATC MUST SECURE PRE-APPROVAL BY THE ON DUTY NATIONAL TACTICAL SECURITY OPERATIONS AIR TRAFFIC SECURITY COORDINATOR). ALL AIRCRAFT, WHICH ARE ALREADY AIRBORNE WITHIN THE DEFINED AIRSPACE WHEN THIS TFR BECOMES EFFECTIVE, MUST EXIT THE AREA USING THE MOST EXPEDITIOUS ROUTE CONSISTENT WITH SAFETY AND IN COORDINATION WITH ATC AS APPROPRIATE. THE ANR AOC TEL 907-552-6222 IS THE CDN FACILITY. 2302101930-PERM END PART 3 OF 3

**Risk for aviation**

The objects are generally **cruising at around 40,000**’ – well within the altitude range commercial airliners operate at. **They pose a hazard** because of their size and speed.

However, they are ‘spotted’ easily and early, and both the US and Canada are maintaining a constant watch for further objects.

Crew operating in these areas should be aware of the ongoing possibility for further hazards. **Report sightings to ATC.**

If an object is identified, expect possible re-routes around the surrounding ‘Danger’ area whilst military traffic operates to deal with it.

### It isn't just the US..

Moldova closed the LUUU/Chisinau FIR on Feb 14, reportedly because of a "balloon shaped object". And on Feb 10, they had concerns with a Russian missile reportedly crossing their airspace...

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# Storm in the Cockpit: Tales of Conflict and Clashes

OPSGROUP Team
14 March, 2023

We've said it before, and we'll say it again – the flight deck is a weird little world to work in. We lock ourselves into our button-filled booth, with one other person, and sit there for hours on end, putting ourselves through no end of challenging things.

**I am talking things like fatigue, boredom, stress and, yep, dealing with people.**

You're one, I'm one, they're one *(if they're not then you've got an even bigger problem)*. Point is, we're all people, people can be challenging. and dealing with those challenges is a big part of our jobs. But we rarely talk about it. At least not in a very *human* way.

### Well that stops now!

**We want to talk about human stuff**. The good, the bad and the ugly stuff that makes us human, and often 'not such ok' humans from time to time.

### We wrote a little book.

**It's just 3 stories.** Tales of things that happened to pilots (to us!) where there was a storm brewing, a conflict growing, a nugget of irritation and anger flowering.

You can download the PDF here.


We want pilots (people) to share *these* stories, because these are the experiences we can all learn from, think about, probably have happen to us.

So, if you have a story, share it – please – we will even add it in (anonymously if you prefer). Send it to team@dangerrr.club

### A normal day at work, as a pilot, is often anything but normal.

Just think about it for a moment – everything you do is monitored, you are strapped into a little box and expected to work away for hours on end, doing things where one little error can easily escalate, where one small slip can slide you into a catastrophe. And you can't step out if you feel off.

*You can't even step out to have a simple bathroom break with having to prioritise it, and awkwardly announce it to the other person.*

The airplane "office" is a strange spot to work in at the best of times, and then we add in a whole load of challenges that make living up to the 'ok pilot' standards even more difficult.

### What are we talking about?

All the things that make our little, puppy brains act even more strangely:

**Fatigue –** flying at crazy hours of the day and night, across timezones, and expecting our brains to go *"yeah, ok, I'm good with this! I don't need sleep."*

**Boredom –** yeah, I've said it. Sitting in the cruise in the middle of the night, monitoring monitoring *monitoring* can get tedious, and a bored brain can be a bad (or at least not as good as usual) brain.

**Stress –** The pilot job can be a tricky one. Things happen. Often they are things we don't like having happen, but we're the only two up there in that cockpit who can sort it.

**Random pressure –** it's all over the shop. At home, from the company, from the passengers, from inside your own little brain.

**And of course… People –** The behaviour, attitude, values, ideas, smell, sounds*, way they put a glove on to fly* all impacts how we act too.

Whether it's a **'Stranger Danger'** (working with someone you don't know at all, and maybe are struggling to find any common ground with) to the '**Friendly Foe'** (flying with the same person you always fly with, who you know really, really well…), and all the others in between. They all have their challenges. People do weird stuff from time to time, but we never talk about how to deal with it.

**Not really.**

I mean *really talk* about how to deal with someone doing something weird, or how to spot it in yourself when you're getting cranky, grumpy, grouchy, slouchy, slack or mad or mean.

### So, we're here to talk about it.

Now, before we do, let's have a quick chat on CRM courses. These are of course great.

*Sometimes.*

Especially the ones where you have to pick which shape appeals to you most. In fact, let's do it now quickly –

### Which shape appeals to you most?

Right, so, whichever shape you have picked tells us ***so much*** about you as a person…

- **The square** is a tireless worker. Diligent, patient, methodical, neat, organised, logical. Predictable, rational, data driven.
- **The Rectangle** is a transitional shape which means this person is curious, inquisitiveness, adventurous, motivated. Always trying new things, always lively and interested.
- **The Triangle** is the shape that symbolises leadership. This person focuses on goals, analyses situations fast, is confident, thinks they're always right, assertive and argumentative. Their career gives their life meaning.
- **The Circle** is a harmonious person who loves good interpersonal relationships. They value people and wellbeing, are the glue that holds the team together. They have sympathy, and empathy, lots of emotional IQ and often super creative.
- **The Zigzag** is (not a shape!) but a symbol of creativity, imagery, conceptualism and aesthetics. They live for experience and reflection, new ideas and methods, possibilities rather than actual realisation.

I bet you fit perfectly into one, and not any others right?

**No? No! Of course you didn't!** Because we aren't defined by one shape and a couple of sentences about said shape.

We can change on a fairly daily basis *(or by the minute, if you're like me and particularly susceptible to things like hunger rage).* What's more, this does very little to actually help us establish how to work with a triangle if I'm a circle, or to deal with that flimsy whimsical zigzag while you, the square, are trying to get a basic job done.

### Human Factors has some answers though.

They do indeed have *some*.

We have (thankfully) moved a long way from **simple symbols and SHELL models** to tell us what sort of errors and mistakes, biases and behaviours can cause concerns in the cockpit. We know about our non-tech competencies, we know about those hazardous attitudes. We know that a too steep cockpit gradient might lead to an unassertive FO not speaking up, and we even know that there is a risk of the too friendly flight deck and the risk of complacency.

The thing is, we read the reports, accident investigations, and we think about how *that crew crashed.*

But what we rarely talk about is the bits that lead to that. The off day, the slight challenge, the things we see and experience all the time which never lead to the big bad accident, but which could, one day, if we don't deal with it right. **The reason we don't is… well, why would we?** Unless you bring them up yourself then they aren't in an accident investigation report, they generally aren't covered in a CRM manual, because they just aren't big enough.

Which means we are never talking about us, each other, our experiences. **We assume we all know how to deal with them, because they are everyday human things.** But in the cockpit, in that locked chamber, these are what often amplify.

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# Major Earthquake in Turkey

OPSGROUP Team
14 March, 2023

A major earthquake has disrupted operations at several airports in Turkey. Here is the current situation (Feb 9).

### Magnitude 7.8 earthquake

The main earthquake registered at **3:17am on February 6**, with the epicentre approximately 20nm west-northwest of Gaziantep. Tremors were fell through parts of Syria and Lebanon.

Several large aftershocks have been felt, with aftershocks expected to continue through February 6.

### Turkish airport closures

This website was shared with us and provides a **good resource for the current status of airports** and which are receiving flights providing **relief aid.**

Severe damage has been reported in Gaziantep, and **all civilian flights** to **LTAJ/Gaziantep** are currently suspended as the airport is being used as the primary airport for relief flights.

**LTAF/Adana** Reports suggest Adana airport closed initially but is not open for relief aid flights. It is not clear whether it is available for passenger flights. The airport always requires a **PPR due parking capacity** so confirm with an agent prior to heading there.

**LTDA/Hatay** airport, in the most southerly region, bordering Syria to the west is closed indefinitely due severe damage to the runway.

**LTCN/Kahramanmaraş** airport north of Gaziantep is also reportedly closed to civilian traffic.

**LTCS/Sanliurfa** airport has als0 been closed to civilian flights while being used as a relief airport.

Reports suggest **some airspace in Southwestern Turkey may be impacted** due power outages. Flightradar shows aircraft operating on the main airways.

The southwest region bordering Syria is considered a high risk area due to the conflict with Syria and is generally avoided due to the risk of military traffic, USA, and the proximity to airstrikes.

For further information on the airspace risk, see Safeairspace.net

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# Optimise your Descent

OPSGROUP Team
14 March, 2023

Thee FAA has ‘stepped up’ their game in reducing emissions and save fuel by reducing the number of ‘step down’ approaches into some major airports.

Here is a mini *‘what you need to know’* about CDAs, OPDs and how and where to fly them.

### What's the difference?

Seems a good question to answer first.

There are generally **three types of descent** you can expect when you head into a big, controlled airport.

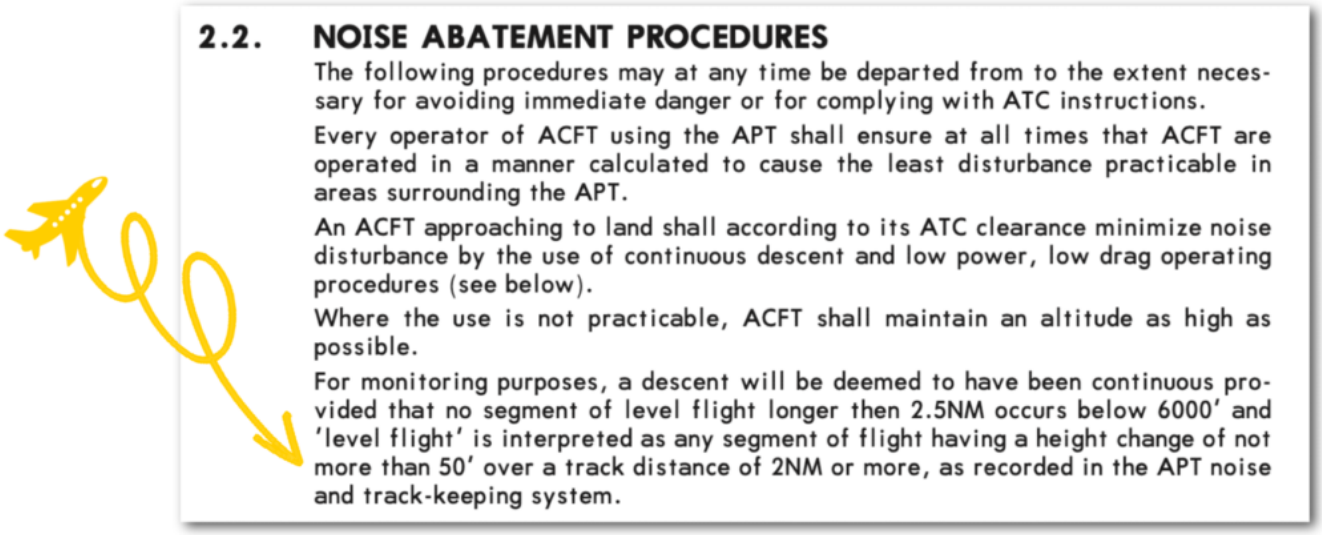
- **The Step Down**
- **A CDA**
- **An OPD**

**The Step Down** is exactly what it sounds like – you descend, level off, maintain that for a bit, then descend again, level off again, maintain it for a bit again…

This generally sucks for three reasons. One it is annoying for pilots because it means you have to do more. Two it can be a lot noisier on the ground if airplanes are roaring along low level, at lower speeds and three it is obviously **a lot less fuel efficient.**

Next up, you have **the CDA** – the constant descent approach. Again, exactly what it sounds like. (*I feel like I don't really need to explain this to pilots reading this but who knows, maybe a non-pilot has taken a random interest in it because of the excellent picture I used for the header).*

So, with a CDA ATC, or the pilot, attempts to continue descending without levelling off. This is better for the reasons already stated above, but it is not the best because a CDA can mean descending with thrust on. A good example is **EGLL/London Heathrow** who still consider it a CDA if you've descend more than 50 feet in 2nm, and don't have a level segment of more than 2.5nm below 6000′.



**2.2. NOISE ABATEMENT PROCEDURES**

The following procedures may at any time be departed from to the extent necessary for avoiding immediate danger or for complying with ATC instructions.

Every operator of ACFT using the APT shall ensure at all times that ACFT are operated in a manner calculated to cause the least disturbance practicable in areas surrounding the APT.

An ACFT approaching to land shall according to its ATC clearance minimize noise disturbance by the use of continuous descent and low power, low drag operating procedures (see below).

Where the use is not practicable, ACFT shall maintain an altitude as high as possible.

For monitoring purposes, a descent will be deemed to have been continuous provided that no segment of level flight longer then 2.5NM occurs below 6000' and 'level flight' is interpreted as any segment of flight having a height change of not more than 50' over a track distance of 2NM or more, as recorded in the APT noise and track-keeping system.

### Which brings us to the OPD.

This acronym stands for **'optimised profile descent'.** Sorry, optimized (because its an American name so I'll give it the 'z').

Not to be confused with **ODP (Obstacle Departure Procedures)**. I feel like we may have reached a point in aviation where every acronym possible has been used.

Anyway, the ODP tries to have the aircraft **descend with close to idle thrust**, meaning they will be at a more fuel efficient altitude for longer, and descend in the most fuel efficient way.

If you're still confused, then the FAA made this video explaining it, and I made this excellent visual representation of it below.

### Where in the USA are these happening?

There are **11 airports that have had OPDs implemented recently:**

- **KBCT**/Boca Raton Airport
- **KFXE**/Fort Lauderdale Executive Airport
- **KMCI**/Kansas City International Airport
- North Palm Beach County General Aviation Airport (F45)
- **KOMA**/Eppley Air Field, Nebraska
- **KOFF**/Offutt Air Force Base, Nebraska
- **KMCO**/Orlando International Airport
- **KLNA**/Palm Beach County Park Airport
- **KPBI**/Palm Beach International Airport
- **KPMP**/Pompano Beach Airpark
- **KRNO**/Reno Tahoe International Airport

But wait! These are not the only ones. There are in fact others which got them in 2021:

- **KDFW**/Dallas-Ft. Worth International Airport
- **KFLL**/Fort. Lauderdale-Hollywood International Airport
- **KLAS**/Harry Reid International Airport
- **KNEL**/Lakehurst Maxfield Field
- **KDAL**/Dallas Love Field
- **KMIA**/Miami International Airport
- **KVGT**/North Las Vegas Airport
- **KMCO**/Orlando International Airport
- **KCMH**/Port Columbus International Airport
- **KPDX**/Portland International Jetport
- *Numerous other mid-size airports*

**There might even be more.** This isn't really a new thing and any US based folk reading this are probably thinking "*why did we read this?*" But we figured some of the non-US based folk might find it useful or vaguely interesting.

Especially as **it can make things trickier** – check out the likes of **KRNO/Reno Tahoe.** If you are flying *All the Way to Reno* then *You're Gonna be (flying) a STAR* and it might involve an OPD. This airport is at a nice high elevation of 4415′, and has some decent terrain around it (the MSA is 12,000′) so there ain't much room to mess up if you mess up your OPD.

### Where else in the world can I expect these?

Eurocontrol have a whole task force dedicated to this. You can read their action plan here.

They refer to them as CCO and CDOs (constant climb or descent operations), and I'm not sure specifically which airports use them, but I'm thinking a fair old few.

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# OPSGROUP is coming to AIROPS23!

David Mumford
14 March, 2023

**AirOps is an event for business aviation flight ops people**, put on by the European Business Aviation Association, where ground handlers, airports and FBOs meet with trip-planners and operators. And this year, we're going to be there too!

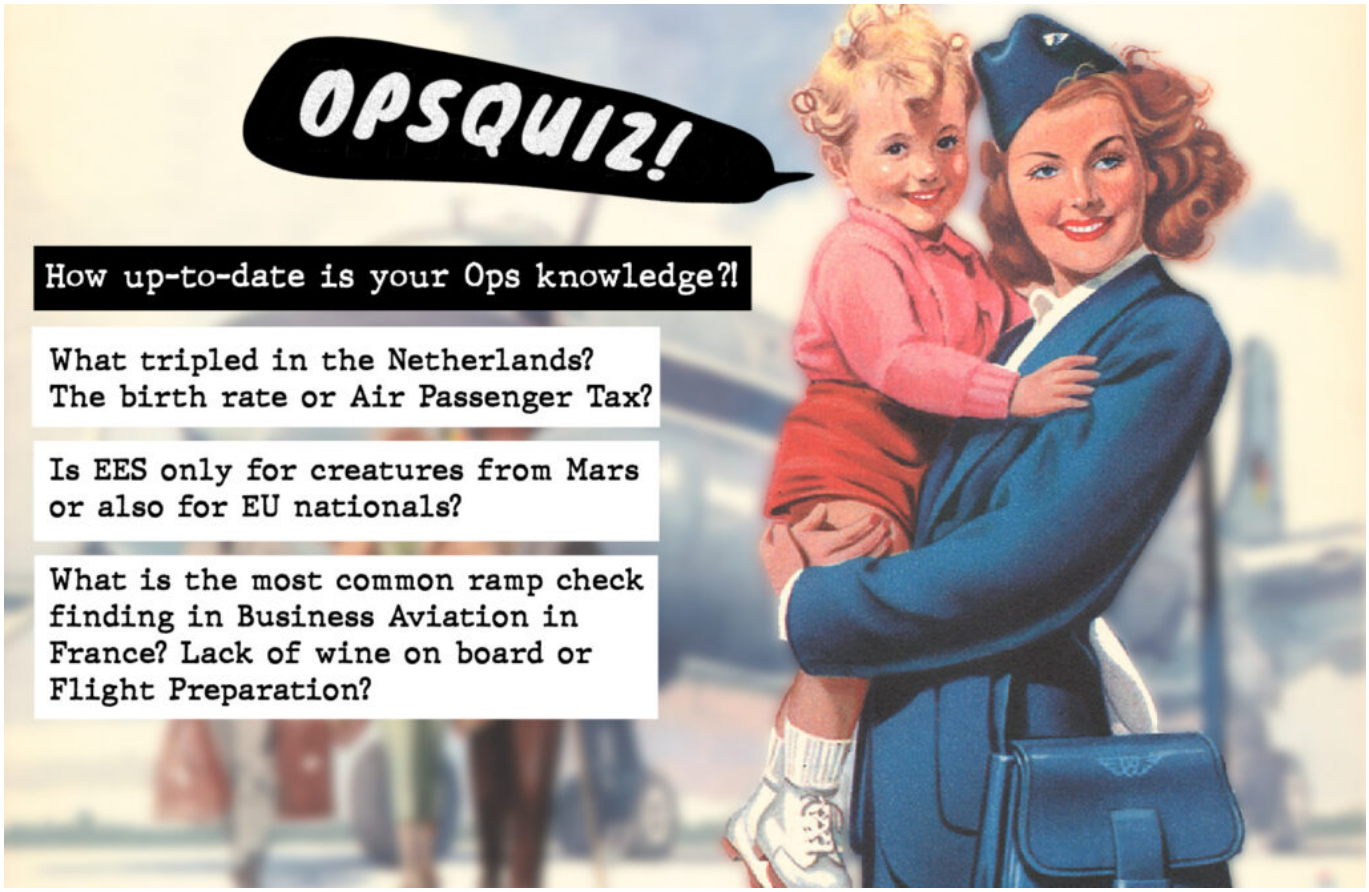
### When and where?

The Event Lounge in **Brussels, Belgium.** It's a three-day event, from **Feb 13-15**, featuring an exhibition, along with training and flight ops info sessions.

For more info on **what to expect** and **who's going to be there**, check the AirOps23 page here. (And to see some snaps of the last event in 2020, click here).

### Come see us!

We'll be running our world famous **Ops Quiz** at the end of Day 2. Test your ops knowledge with questions like these ⬇, pit your wits against other teams, and ease into the evening with a fun, interactive session. (And yes, there will be prizes for the winning teams!)




If you're able to make it, we'd love to see you! Come meet OPSGROUP's Rebecca and Dave in person, share your knowledge, swap stories, and discover some recent ops updates you might have missed.

**OPSGROUP members can take advantage of discounted rates** – just enter the code **AIROPS2023_OPS_GROUP** in the 'coupon' section when registering. See you there!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# Africa Airspace Risk: Jet Shot in Rwanda

Chris Shieff
14 March, 2023

On Jan 24, the Rwandan military shot at a fighter jet from the Democratic Republic of Congo which they claimed had busted Rwandan airspace near Goma.

This has captured our attention for three major reasons:

- **There are no active airspace warnings for either the FZZA/Kinshasa or HRYR/Kigali FIRs.**
- **The incident occurred at low level, but in an area of open airways.**
- **The aircraft was hit in close proximity to an international airport**.

This was a major escalation following months of conflict between the two countries – so much so that the DRC announced the shooting as an 'act of war.'

Here's a look at exactly what happened and what this might mean for risk to civil aviation operating into, or overflying the Central African region.

### The January 24 Incident

During daylight hours, a Sukhoi-25 military jet operated by the Democratic Republic of Congo reportedly violated Rwandan airspace between Goma and Gisenyi, without a clearance.

There are several unverified videos circulating of the jet being struck at low level by a **surface-to-air missile**, fired from a MANPAD. These are small, light, shoulder launched anti-aircraft weapons

The jet landed safely but sustained heavy damage. The incident raises concerns because there are **contradictory accounts** of how the situation unfolded, debate over which side is responsible, and so a lack of reliable information over what the safety implications might be for civil aircraft.

### Escalating Conflict

This is the latest escalation of a conflict that has been worsening for months, and a strong indication that it may be putting overflying aircraft at risk as it grows – especially near the shared border.

In late 2021 heavy tensions erupted between the Democratic Republic of the Congo and Rwanda. An armed insurgency is underway in the DRC by a recently re-emerged militant group known as the March 23 Movement (or just M23 for short).

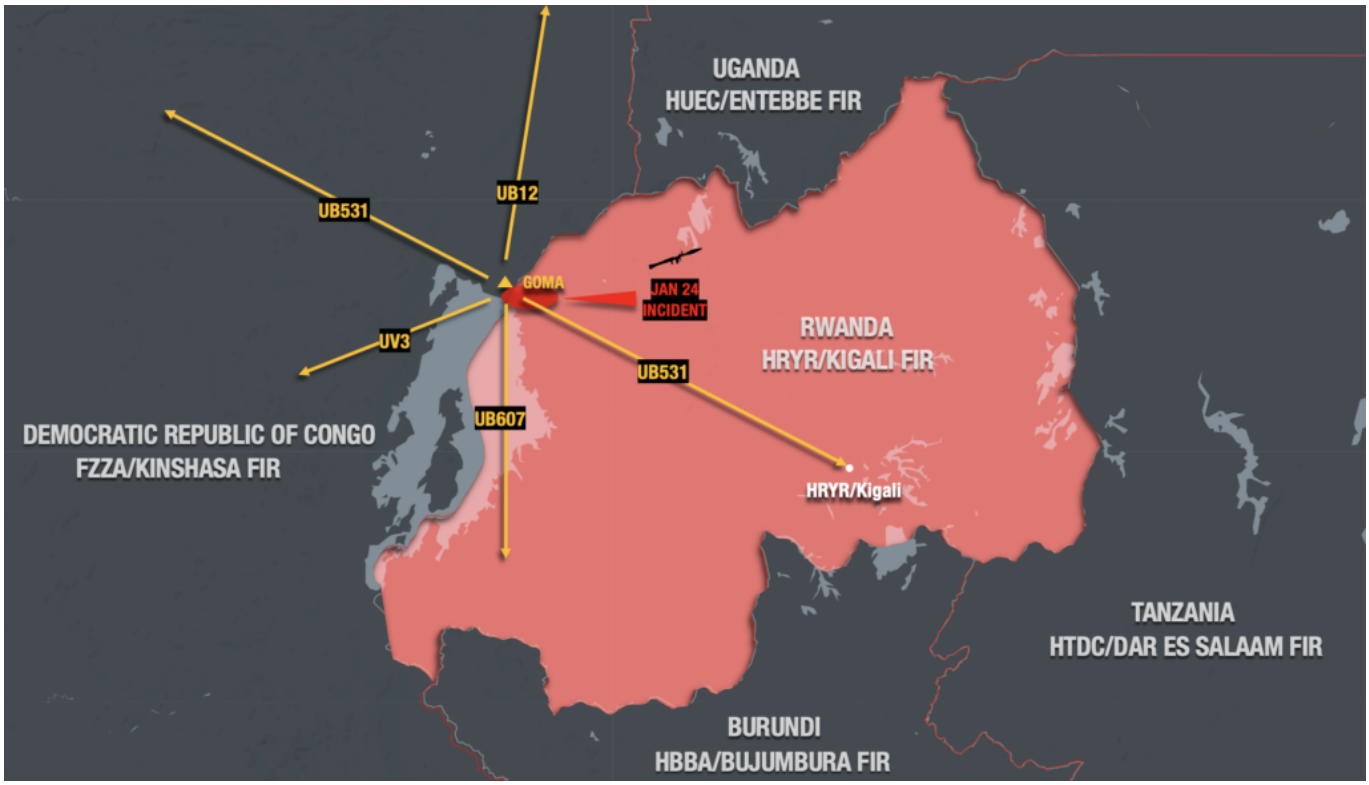
The DRC (along with the US and UN) have accused Rwanda of supporting M23, and in some cases even fighting alongside them. Although this hasn't been proven.

The ethnic and political background to the conflict run deep and are beyond the scope of this article, but the bottom line is **frequent skirmishes** by both Congolese and Rwandan forces in each other's territory.

### Airways

The January incident happened near Goma – a city that lies on the DRC side of the border, and straddles the boundary between the **FZZA/Kinshasa** and **HRYR/Kigali FIRs.**

Several international airways run through the same airspace where the incident occurred.




Also use caution on airways UM216, UA618 and UL442 away from Goma but which skirt the shared border where skirmishes have been occurring.

### Is this a high or low-level threat?

Short answer, low – but there's more to it than that.

Militaries from both sides, along with the M23 rebels, are all known to have **anti-aircraft weaponry.**

The most common is the MANPAD. They are easy to use, portable and require little if any training. They are unfortunately prolific throughout Africa in both legitimate and illegitimate hands – Rwanda and DRC are **no exception**. And the intent to use them is now clear.

They typically target aircraft flying low, and slow. Which means aircraft taking-off and landing are most at risk. However publicly available information indicates MANPADs can reach aircraft **as high as FL250.**

Anti-aircraft guns along with ballistic weapons such as rockets and other artillery are also known to be

present, and are potentially dangerous to aircraft, once again at low level.

**Neither side has shown any intent to actively target civilian aircraft.** But there are several risk factors at play.

The DRC/Rwandan border is an **active conflict zone**, where military activity and the transport of troops and equipment is common. Aircraft surveillance in the area is rudimentary, and the conflict has become territorial not just on the ground, but **now in the air** too.

**All the warning signs are there, only with no actual warnings.**

Once again, mistaken identity has become the number one threat.

With this in mind, overflying jet traffic at higher flight levels are not at risk – if ops are normal.

The problem becomes if you need to descend or divert. And aircraft operating into the region's airports are especially exposed. Extra caution needs to be taken at **FZNA/Goma** – the site of the January incident.

**Official Warnings**

There are none.

History has taught us that we need to be more responsive to airspace threats – a danger may exist or develop before states publish official airspace warnings or restrictions. All of that takes time. And if your flight is today, you need to know now.

We'll continue to report on changes in Rwanda and DRC as they happen over at safeairspace.net – our conflict zone and risk database.

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# NAT Doc 006/008 Changes 2023

OPSGROUP Team
14 March, 2023


**Read all about it! ICAO are changing up the NAT docs!**

Here, for you, is our summary of the *_exciting_ amendments to our *_favourite_ documents.

*They aren't that exciting. Also aren't our favourites, clearly that is 007.

### First up, Doc 008

NAT Doc 008 *'Application of Separation Minima North Atlantic Region'* contains exactly what the title suggests: info on the application of separation minima. The standards that it doth contain apply to aircraft in the NAT Region who are **communicating via a radio station or via CPDLC and also when in 'Direct Controller Pilot VHF voice Communication'.**

Excellent. We saw an amendment notification and we headed over to see what the change was. With baited breath we clickethed upon the link. Fingers tapping as it slowly downloaded itself and opened. We scrolled with frantic enthusiasm to the 'amendments' table. *What would the change be? Is it big? Is it exciting?*

It is not.

**They have just amended paragraph 3.4.2.D** to say that longitudinal separation is '*10 minutes between aircraft on same/intersecting tracks, whether in level, climbing or descending flight, provided the aircraft have ADS-C periodic contracts with a maximum reporting interval of 20 minutes or are being tracked by an ATS surveillance system.'*

*'or are being tracked by an ATS surveillance system'* appears to be the only change, at least that we can see anyway.

### Doc 006

This one looks more interesting. First up, a review of what Doc 006 is.

In case you aren't familiar with this one, it used to be:

- Part I – Contingency Situations Affecting ATC Facilities
- Part II – Contingency Situations Affecting Multiple FIRs
- **Now it has Part III** – Contingency Situations Caused By Space Weather Events, which '*considers events which are likely to affect one or more than one facility within the NAT region, specifically the contingency processes applied to minimize operational impacts of space weather events.'*

You can find the updated Doc 006 parts here.

### Part I of Doc 006 – Air Traffic Management Operation Contingency Plan.

The only change in this bit is the insertion of some text onto Page 1 about Part III – The Space Weather Contingencies.

There is also this **newly amended table** which, while grey and joyless, is actually very handy indeed. This covers general loss of ATC which could be space weather related, but could also not be space weather related.

### Doc 006 Part III

I've given it a section of its own. This is the Space Weather bit, but, there is **an actual document – Doc 10100 – which talks about space weather.** 10100 can be found here and this is where you should go for *all your space weather knowledge needs.

*Not all, but a good start.*

Doc 006 Part II is all (only) about the contingencies in the event of issues with ATC, navigation, systems etc because of space weather.

**A little bit of space weather info before we dive all the way in:**

Space weather can play havoc on our GNSS systems, satellite stuff, HF, RF, power grids, even our microwaves (*microwave links whatever they be*). It can also have effects beyond just one FIR, or even the whole NAT region. So it's a great thing that we now have a document to help.

**Space Weather peaks around every 11 years**, but we've seen a load of pretty decent (but not severe) space weather stuff of late. Things like:

- **Disruptions and even total unexpected loss** of HF, SATVOICE, CPDLC etc
- Issues with GNSS (that impacts out **ADS-B and C**)
- Weird and **random reboots** of electronic stuff onboard
- Passengers and crew growing **extra limbs/glowing green** etc

### The Contingency Phases

They've broken the actions down into a few phases.

**Initial Action (Reactive Phase):**

What is happening during this phase is some space weather is whizzing its way over and an ANSP has become aware of it and so they start telling everyone about it, putting contingency plans into action, getting in touch with other ANSPs for support etc.

If you're an airplane that is not yet in the NAT region then the general plan is to warn you about what might be awaiting you, and possibly (if it is really bad) re-route you.

If you are already in the NAT then you should do what you would normally do if you lose comms, or have some technical issue and that's follow the published contingency procedures.

**Subsequent Action (Proactive Phase):**

What is happening in this phase depends on the severity of the situation, but basically a whole load of communication (about the severity of the situation) and stuff to help manage it.

**Long term contingency plans:**

This is for the really bad stuff that knocks out comms or satellites of what have you for really long amounts of time.

### That… wasn't very helpful

Doc 006 is really just more of an outline of what ATC will do (and so what the pilots can expect).

So, refer to the nice table, refer to the AIPs, go read your actual contingency procedures, and use this Doc 006 Part III as a helpful guide on what to expect.

# NAT Doc 007 Changes 2023

OPSGROUP Team
14 March, 2023

We knew it would happen! We predicted it would happen! And now it has happened! The annual late Christmas present from ICAO that always seems to get lost in the post and then turns up in January – **an updated version of the NAT Doc 007.**

NAT Doc 007 is the main go-to guidance doc for ops over the North Atlantic. All the specifics about how to operate your aircraft safely through the complex airspace of the region are here. **The updated version is valid from Jan 2023.** You can download it from ICAO at the source here, or click on the image below:

### The summary of changes by ICAO

They always post a little summary at the start, so here is a screenshot of it for you.

### The summary of changes by us

Hideous indeed. So here is a less hideous (but possibly less informative) summary of the changes we spotted as we scrolled through the 174 pages of Nat Doc 007 V.2023-1. We decided to go chapter by chapter so you can head on in and read the full info direct from the NAT Doc 007 itself if it interests you to.

### Chapter 1: Operational Approval & Aircraft System Requirements for Flight in the NAT HLA

**Something about Target Levels of Safety**

This is probably of interest if you're a huge fan on the *"Where you all went wrong this year"* updates from the NAT HLA. They set the 'maxima' to 5×10-9  fatal accidents per flight hour, which I think means one in every 500 millionth or something.

OK, moving on.

**Equipment related stuff**

This is all stuff you probably know already, but they have updated and edited it so we figured we would recap on the important bits as well.

**RVSM:** Two handy links have been added in providing you info on **RVSM equipment requirements.**

This one from the FAA.

And this one from Skybrary

Along with a reminder that **because the NAT HLA is RVSM, you need to be RVSM approved** to fly in it.

**Clocks:** Make sure yours is accurate and synchronised to an 'acceptable' UTC time signal before heading off. A lot of aircraft have clocks that can only be updated on the ground so check before you fly.

**LRNS:** Do you fly an aircraft with only 1 LRNS (and it's a GPS)? Then its got to be approved in accordance with **FAA TSO-C129** or whatever the EASA equivalent is (it is ETSO-C129a).

**CPDLC:** Don't have FANS 1/A "or equivalent"? *(we still aren't totally sure what "or equivalent" really means!)* Then you can still request to climb or descend through the NAT DLM airspace, and there are some exceptions for specific flights where you might even get let in –

- Scientific research type flights (probably not any of you)
- If your equipment fails on you post take off then you might be ok, talk to ATC
- If you're in the NAT DLM and your equipment fails then you might be re-cleared (to move you out of the way of less dysfunctional folk), but they aim is to try and keep you on the plan you were already on

**They have also clarified three specific areas where datalink is not required.** This one has been bugging us for a long time with previous NAT Doc updates! Datalink exempt areas have always been these three:

1. *Airspace north of 80° North*
2. *New York Oceanic East flight information region (FIR);*
3. *Airspace where an ATS surveillance service is provided by means of radar, multilateration and/or ADS-B, coupled with VHF voice communications as depicted in State Aeronautical Information Publications (AIP), provided the aircraft is suitably equipped (transponder/ADSB extended squitter transmitter).*

**We've never understood what number 3 means – until now.** The new NAT Doc now specifically lists where these areas are: a chunk of airspace over Iceland/Greenland, one over the Azores, and another in Bodo. They have even provided some maps and coordinates too.

***Update 3 APR 2023: There have been some changes to the boundaries of the datalink exempt airspace in the northern bit of the North Atlantic. This used to extend down south to SAVRY, but now only goes as far as EMBOK. So now you need datalink in the NAT oceanic airspace over Greenland controlled by Gander. Check this post for more info.***

### Chapter 2: The OTS

More reminders on things you know rather than any major new stuff.

- If you want to fly on the half-spaced **PBCS Nat Tracks**, you need RNP 4 approval but also RCP240/RSP180 equipment (and a state approval). That's been the case for a while.
- You will also get messages saying **"SET MAX UPLINK DELAY VALUE TO 300 SEC"**. Do it.
- **Nat Tracks are now from FL340 to FL400** inclusive. (Remember, Nat Tracks at FL330 and below were removed back in March 2022).
- If there is a particularly strong westerly jetstream then Shanwick will post a **split westbound structure** which means you might see two adjacent landfall and exit points at the Eastern NAT boundary for the daytime eastbound flow to use.

### Chapter 3: Routes, Route Structure, Transition areas

They have updated the maps and info on the bits adjacent to the NAT HLA (your NOTA, BOTA, SOTA and GOTAs).

### Chapter 4: Flight Planning

Doc 7030 is the main reference for flight planning in the NAT (and state AIPs). There are little bitty edits here but nothing new.

### Chapter 5: Oceanic Clearances

A cruise climb can be requested if you're fat and heavy and want to climb little more flexibly as your drop weight (burn fuel). ATC will do their best to accommodate this.

### Chapter 6: Comms and Position Reporting Procedures

The "When Able Higher" report is no longer mandatory in the New York OCA. The only place it's still required is **when entering the Santa Maria OCA.**

There's also an update in this section about **where the VHF stations are.** Remember, when you're on VHF you might not be talking direct with an ATSU. You can request a direct patch-through on HF or GP/VHF if you need it (and are on Iceland Radio or Shanwick Radio).

They've updated the big pink blob map to show where you should be able to get VHF coverage. Here it is.

***INTERESTING SIDE-NOTE:*** *Now, DON'T PANIC, they haven't put this in the updated Doc, but we saw it in the 'proposed changes that might one day come in' document... You currently need 2 LRCS and one of them must be HF (generally). This isn't changing, but if you lose HF then you might (when they make the change) be able to enter so long as you have two other LRCS systems that are appropriate for the route. Exciting...*

### Chapter 7: Application of Mach Number Technique

**Don't get confused between RNP10 and RNAV 10.** Not the same thing, but they can't be bothered to correct everyone all the time on it so they've added a note saying this.

**Also, don't make Gross Navigation Errors.** They ain't good and will be investigated. Here's the tip: if you're on a random route, a single digit error in latitude could put you pretty darn near another aircraft so be careful!

### Chapter 8: Flight Ops & Navigation Procedures

They have provided a very helpful Checklist. This chapter goes into full detail on it, and Attachment 4 has it nicely summarised.

### Chapter 9: RVSM

FAA AC 91-85 has all your info on state approvals.

### Chapter 10: ATS Surveillance Services

This is the ATS Surveillance Services chapter. They've updated the guidance on your squawking.

When you've been in the NAT HLA for 30 minutes you should **set your squawk to 2000** (the domestic controller on the other side might not want you to use the same one). **But there are some exceptions this:**

- While in the Reykjavik ACC stick with your assigned code because you're in radar control (in the south eastern part) and they don't want you to change it until you're told to.
- All eastbound flights routing Reykjavik – Shanwick – Scottish should squawk 2000 after 10 minutes.
- Routing on T9 squawk 2000 10 minutes after passing BEGAS (northbound) or LASNO (southbound).
- Routing on T290 squawk 2000 10 minutes after ADVAT or GELPO

**ADS-B** is only mandated on T9 and T290.

### Chapter 11: Monitoring of Aircraft Systems & Flight Crew Performance

This chapter has a nice list of **things to report/things ATC will report:**

- Erosions of longitudinal separation between aircraft, within the NAT HLA, of 3 minutes or more (so if you find yourself getting to close).
- Anytime you have to do something to prevent a GNE.
- Lateral deviations from cleared route of less than 25 NM.
- Discrepancies of 3 minutes or more between an ETA/ATA at a waypoint.
- Occasions when an operator is suspected of not being in possession of an NAT HLA/RVSM approval.
- Diversions or turnbacks, noting in particular whether the appropriate published contingency procedure was correctly adopted.
- ACAS RAs.
- Wake turbulence reports.
- Incorrect application of the SLOP (e.g. a left offset).

### Chapter 12: Procedures in Event of Navigation System Degradation or Failure

No noteworthy newness (none that we could find, at least).

### Chapter 13: Special Procedures for In-flight Contingencies

This covers all your **loss or sudden withdrawal of ATC services.** So it is basically a mini summary of Doc 006 and also covers the *'What to do it?'* situations.

They have also updated the contact info for SATVOICE. So here you go –

| Oceanic Centre | Telephone Number | SATVOICE Short Code |
|---|---|---|
| New York | +1 631 468 1413 | 436623 |
| Gander | +1 709 651 5207 | 431613 |
| Reykjavik, via Iceland Radio | +354 568 4600 | 425105 |
| Bodø | +47 755 42900 | 425702 |
| Ballygirreen (Shanwick Radio) | +353 61 368241 Ground/Air Ops | 425002 |
| Santa Maria | +351 296 820 438<br>+351 296 886 042 (satellite link) | 426305 |

### Chapter 14: Guarding Against Common Errors

Updated to list recent ones.

### Chapter 15: The Prevention of Lateral Deviations from Track

No newbies.

### Chapter 16: Guidance for Dispatchers

There is some updated info on planning codes. Take a look.

### Chapter 17: Flight Operations below the NAT HLA

So this stuff all applies for flights FL280 and below. Actually an interesting read! There aren't any massive changes here though. Mainly these one:

- Reminder the SLOP should be **right of track.**
- They re-iterate that they still haven't managed to get a decent map of **VHF coverage** of the North Atlantic. If we want one, we should go scratching around in State AIPs *(where we still won't find any – we've looked)*.
- If you're in trouble, you don't just have VHF 121.5 to turn to. Also try 123.450, SATVOICE, or "any other communication device you may have".

### End of the Doc: All the attachments

Mostly forms and stuff, but **Attachment 4** is that handy sample checklist we mentioned and **Attachment 9** is an equally handy checklist for dispatchers covering equipment and what have you.

**Phew, done!**

Another year, another NAT Doc. Well, let's hope so – they do sometimes release a sneaky Version 2 update some time around July/August. But for now, we can relax.

**Did you spot any big updates in this new NAT Doc?** Haven't read it yet and don't want to scroll to the top of the page to find the link again? No worries, just click here. If you do spot anything significant that we missed, please let us know! You can email us at news@ops.group

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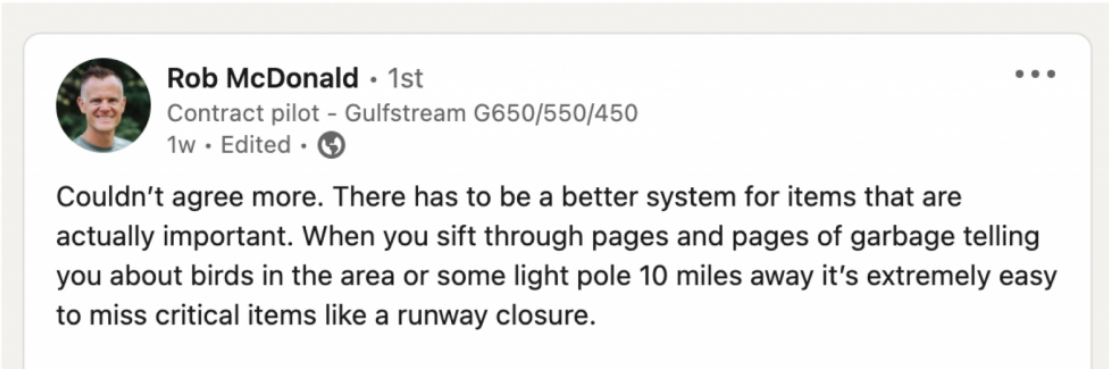
# Taking the Trash Out: Let's fix NOTAMs

Mark Zee
14 March, 2023


**After a hiatus of a year or so, we're back working on NOTAMs**. In 2021 we ran a campaign with ICAO (and IFALPA, and IFAIMA) to improve NOTAMs. We focused on "Old" NOTAMs, ones that sit in the system for no good reason, sometimes for as long as 20 years. They are mostly gone – including the Albanian NOTAM about the Y2K problem.

That's good, but the NOTAM problem isn't fixed. Rob, below, summed it up nice and simply last week.

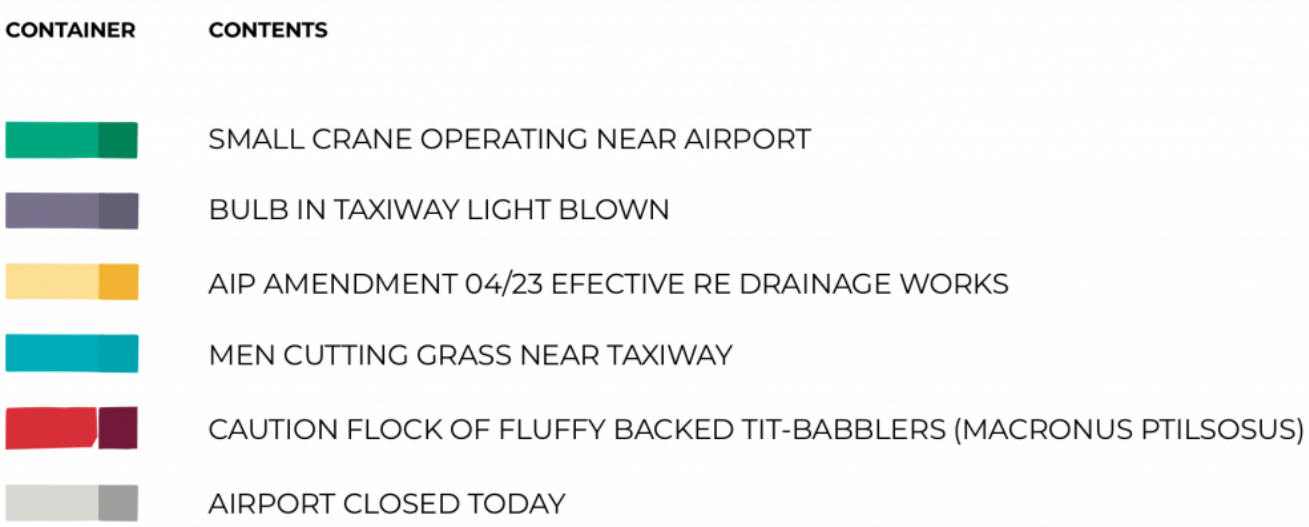


So, let’s continue the work. Why do we have a system that makes it **extremely easy to miss critical items**? And how do we fix it? Let’s visualize the problem.

## NOTAMs are like containers on a ship

Imagine you’re the pilot of a Boeing 787 about to sit down at a briefing table to review NOTAMs for your flight from Copenhagen to Bangkok today. You will get a folder containing a printout of NOTAMs for your route. Here they come.


Each container is a NOTAM. Unlike actual containers on actual ships, there is no manifest. **We don’t know what’s in the container until we open it and take a look**. That means that we can’t automatically sort them out beforehand, and we can’t put them in any order of importance. Therefore, the pilot gets a random list of NOTAMs, and it’s up to them to make sense of it.




If you only had six NOTAMs to take a look at, no big deal. You'll spot that the airport is closed today. But we usually have somewhere between 100 and 1,000. The result? **A system that makes it extremely easy to miss critical information**.

## Finding the simple fix

This is a simplified version of the problem, but not by much.

Question, then: **How do we improve the NOTAM system so we can sort and filter them?**

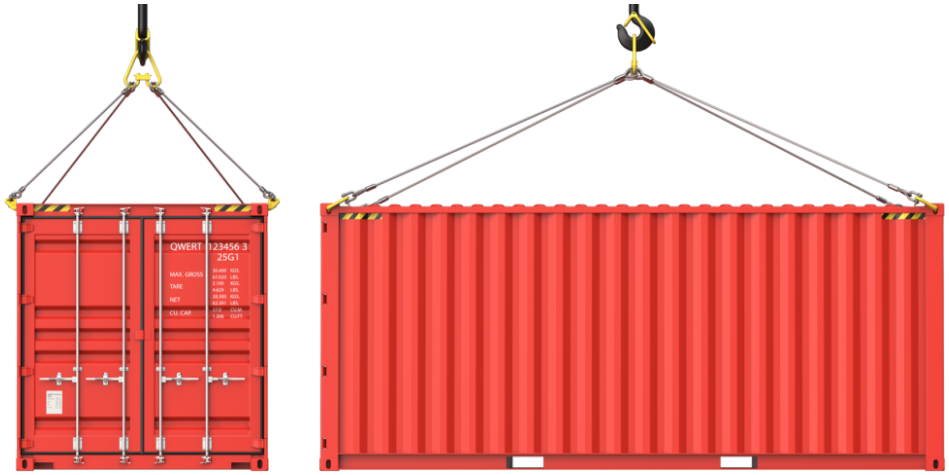
Let's get a technical for a moment, since we're going to need some smart people that understand the system architecture. Here are some basics that are important.

1. **There isn't really an international "NOTAM system"**. Each country issues NOTAMs for their airspace, and keeps a local list of them for pilots in that country. Other countries can query that list (done via the AFTN, with an RQL message), and get a copy of new NOTAMs (by sending an RQN message). Not every country does this, but if they do, they'll then have a **limited database of NOTAMs** from selected other countries. A tiny handful of countries, regions, and organizations do this for every country, which makes for a fairly reliable **international database of NOTAMs**. Examples of this are the FAA (NOTAM Search), US DoD (DINS), and Europe (EAD). These databases form the source data used by pilots and operators, often via service providers like Jeppesen, LIDO, Foreflight etc. who may apply some final processing to attempt to sort and filter them for their customers.
2. Since there isn't an international NOTAM system, then logically, **nobody is in charge of it**. **ICAO** sets the standards for when a country should issue a NOTAM (Annex 15), how they are formatted (Doc 10066), and what codes to use (Doc 8400). **Eurocontrol** publishes a guidance manual (called OPADD). That's about it. Nobody has the job of monitoring all international NOTAMs for quality or quantity.
3. **The NOTAM structure is very limited**. It uses a limited character set called ITA2, which pre-dates ASCII. This limits messages to UPPER CASE. The format is set in Doc 10066, giving a NOTAM 7 sub-parts from A to G, preceded by a Qualifier called the "**Q-code**". In theory, the Q-code tells the reader what the NOTAM is about (magically solving the container problem

above), but in practice, it doesn't work. Why? There are too many choices, and therefore they are often applied incorrectly, or not at all. The Q-code categories were dreamed up in 1950, and there are **13,783 possible Q-codes.** 20% of NOTAMS don't have a Q-code at all (The NOTAM office often enters XX or XXXX, meaning "not sure").

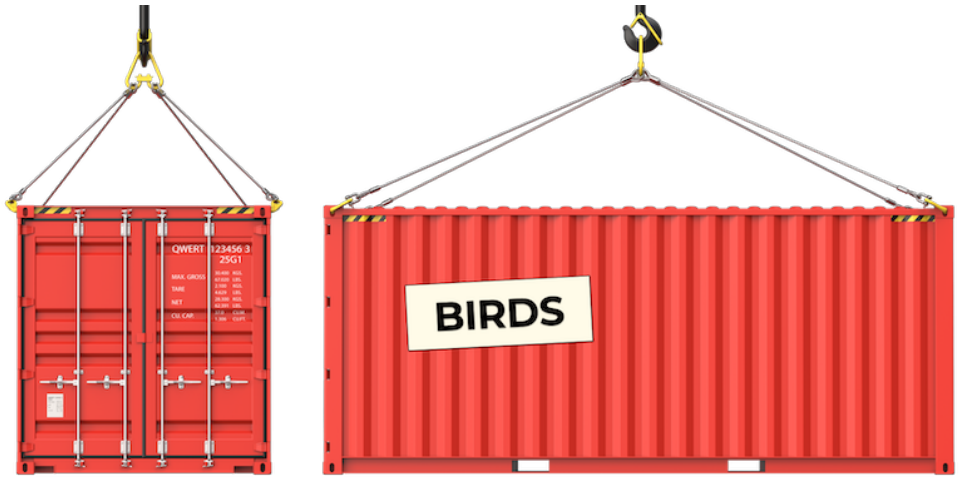
## What's in the NOTAM container?

Let's get back to the yard, and lower down one NOTAM container and take a look.




We know it came in on the NOTAM ship so it relates in some way to our route today, but **we don't know what's in it**. Therefore, we can't sort it or filter it out. It just joins all the other NOTAMs that we load up into the pilot's briefing, and leave it to them to make sense of.

But if the shipper (the originating NOTAM Office) puts a label on it saying "**BIRDS**", then we immediately know what to do with it.




Pretty quickly we can start organizing the containers. Each operator can figure out the order they want to put them in, and which ones to leave at the back of the yard.


By knowing what the NOTAM is about, in advance, we can set up some basic processing rules. Each aircraft operator is different: Airlines don't care about broken obstacle lights 5 miles from the airport, but a Police helicopter does. Perhaps someone cares about birds, most pilots don't. It doesn't matter; **let the operator decide for themselves how important each label is**, and what order to put them in (or discard).

## Sounds easy, but is it?

In a huge list of NOTAMs, the ability to **sort** and **filter** them is the key to making them manageable. If they are sorted and filtered, then it's unlikely a pilot will miss the big ones. Back to ***what Rob said*** (⬆) **–** the problem is that it's **extremely easy to miss critical items**, and that's what we want to change.

We have some limitations:

1. **It must be a simple change**. There are 193 countries that are ICAO members, each one ultimately resistant to a system-wide change that will cost money and require infrastructure investment. It would be lovely to start from scratch with a new system, but it's not feasible. We need a simple change to the format with big impact. Conversely, if you think even that is impossible, just remember that Snowtams changed format in 2021.
2. **We can't use *Item E***. To be able to sort and filter, a computer has to be able to know what the NOTAM is about, without having to read the content text. It can't make sense of the text in *Item E* (the text of the NOTAM) – we tried this some years ago with machine learning, and after 2 millions passes, AI wasn't able to formulate an algorithim that worked. There are just too many countries with different ways of writing NOTAMs to use *Item E*. So we must have a label of some kind.
3. **We must change the back end**, not the front end. This must be a change available to everyone. Sure, Foreflight does good stuff, especially with US domestic NOTAMs. There's a bunch of software and apps that can help to make NOTAMs more digestible. Some can be displayed graphically, but not many. Big airlines have back-office staff to organize and even

rewrite some NOTAMs. But they all do it differently, and not many of them solve much of the big problem. We're still getting dozens, even hundreds, of pages of NOTAMs to read.

That's where the work begins. We don't have all the answers, and we need some smart NOTAM-folk to help. It's not the intention here to present a vague solution and say "This is it" – this article is intended to generate some critical thought and discussion on what the "Big Fix" looks like. Labelling them in some way seems the way to go, but we're not sure.

## Remember this …

There's nothing like saying "*NOTAMs, what do you think?*" to generate a slew of pilot complaints, jokes (some great memes after the January outage!), and things that need to be fixed. We've been working on this here for a couple of years, but efforts to fix the b*rds date back **almost 60 years**. With that in mind, addressing the most common talking points may help.

1. **NOTAMs suck**. We know. We're just a bunch of pilots and dispatchers that really don't like them, and we're doing our best to make change happen. But if we want to solve them, we have to find **the one thing that fixes most of the big problem in one hit**. UPPER CASE is tough to read, but that's not the big problem. Abbreviations are annoying, but that's still not the big problem. **The Big Problem is that we can't see the critical stuff** because we have to read hundreds of them before flight in no particular order. If we can sort and filter them, that means we'll see the important stuff first, and don't have to read such a long list.
2. General ranting at the FAA, ICAO, IATA, or even the government doesn't help. Instead, help us to help find a sensible solution, draw it out, think it out, test it, and we can then present it to those that can help implement it.
3. **Digital Notams**. Sometimes this comes up as a solution that's on the horizon, and will fix everything. That conversation has been happening for at least 20 years, and while a lot of good people are working on this, it doesn't fix the problem we have right now. In a perfect world, SWIM and Digital Notams will come online in 2028 (five years from now), and start to solve some of the issues. Problem is, we live in an imperfect world, and the chances that this will solve our woes as they exist today are slim.
4. **Hey, I made a thing that solves NOTAMs**. Like we said above, yes, there are some really great apps, graphical tools, and software that help make some sense of NOTAMs. Foreflight is a favourite amongst us pilots. But despite some of the advances, the originating NOTAM is still a brutalist remnant of the early 20th century, and the vast majority of pilots still get giant chunks of NOTAM text to plod through. **We want to fix the problem at source**. At the same time, it's likely that the smart people that made these things can also be the smart people to solve the source problem!

## So, what now?

We want to hear from you! Write to us at team@fixingnotams.org. We can only solve this as a community group, and we're working on a few events to get people together for some discussion. We'll set up a few group chats on Zoom to get the discussion started and some ideas flowing.

Ultimately, the plan is to start funnelling some ideas along the pipeline until we reach one that really

seems to work, and take that to the organizations that can implement it. So, it's up to you. **Want to get involved? You're awesome! Please reach out to us.**

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# Super Bowl 2023: Special Procedures in Phoenix

Chris Shieff
14 March, 2023

It's time to stock up on chicken wings – Super Bowl LVII is just around the corner.

This year, kick-off will be in **Glendale, Arizona on February 12.**

Airports within the area will be **extremely busy** – not just in Arizona, but across the state line in Nevada too.

The FAA are onto it, and have published their safety plan for the event. If you're flying into (or near) the game, here's what you need to know.

### Parking

**A ramp reservation program** is already open (including for drop-and-goes) for airports in the Phoenix area from **Feb 8 – 14,** along with those in Las Vegas. Essentially, you have to **reserve a parking spot** in advance during this period.

This includes the following airports:

**Arizona**

- KPHX/Phoenix Sky Harbor

- KSDL/Scottsdale
- KDVT/Phoenix Deer Valley
- KGEU/Glendale
- KGYR/Goodyear
- KCHD/Chandler
- KFFZ/Falcon Field
- KIWA/Williams Gateway

**Nevada**

- KLAS/Las Vegas
- KVGT/North Las Vegas
- KHND/Henderson

### Who to talk to for your reservation

Talk to your **FBO** (sooner rather than later). They are the ones with the slot allocations and will be able to keep you updated on any changes nearer the time. No FBO? You can also get in touch with the **airport authority** directly.

### There will be Special Air Traffic Procedures

Expect traffic jams and hold ups. To help keep things flowin', ATC will implement the usual culprits including ground delay programs, holding, reroutes, miles-in-trail and other restrictions.

Your best defence will be to avoid arriving and departing at **peak periods.**

These are expected to be between: ***07:00am to 19:00pm local (14 – 00z) daily between Feb 8 – 13.***

A head's up that it can also be extremely busy for departures on game day well into the wee small hours of the morning too. Last year over one hundred and fifty jets had already left the LA Basin area within five hours of the game ending.

Also beware that ATC will not allow aircraft to pick up IFR clearances airborne, or change destinations within 200nm of Phoenix Terminal airspace.

### Security

Two **TFRs** will be established on February 12, centred around State Farm Stadium in Glendale, approx. 7nm northwest of downtown Phoenix.

Those details will be published via the **FDC Notams,** usually 3-5 days before kick-off. But you can expect standard stuff – a very restrictive 10nm inner ring, and a less restrictive one out to 30nm.

There should be minor impact for IFR aircraft but expect additional communication requirements and discrete transponder operations.

### Getting in and out

There are **preferred routes** for all IFR turbojet aircraft arriving and departing the Phoenix area from **17z Feb 10 until 23z Feb 12.** You can view those here.

The FAA has also summarised tower hours for major airports near the event, many of which will be extended.

For real time info on delays, airport status and other flow related issues, the FAA NASS website is the place to check.

### Other stuff to think about

**Consider your alternates.** Options are going to be limited and restricted because of the high traffic levels. Unless you have a bona fide emergency, you'll need to plan ahead.

**Gas Up.** With all the traffic management programs in place, there could be **lengthy delays**. Consider extra holding and taxi fuel.

**Check your documents.** Make sure you have everything you need onboard, including crew licences, medicals, aircraft docs and confirmation of all reservations and confirmations. Increased security measures may involve ramp checks, searches, or other TSA requirements.

### One last thing…..chicken.

It's just not Super Bowl weekend without **wings**. Looking for the best ones in Phoenix? This article may help.

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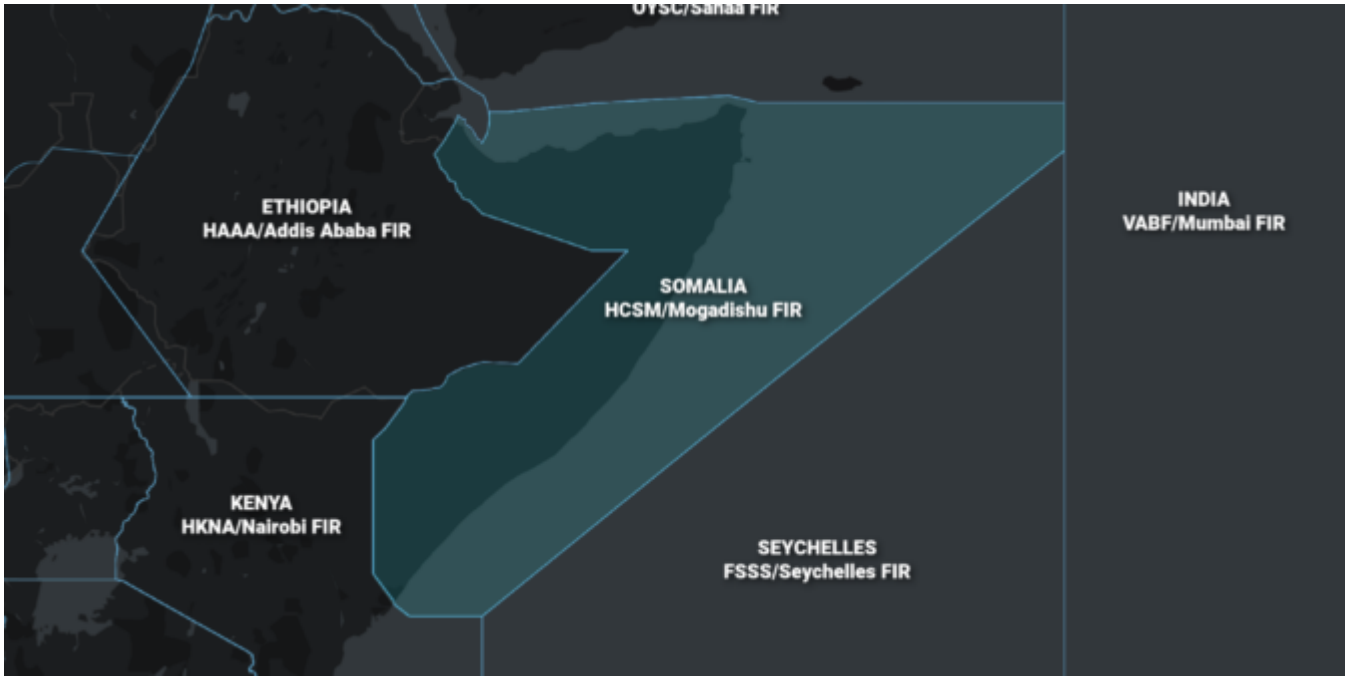
# Mogadishu Wishes You a Class A New Year

OPSGROUP Team
14 March, 2023




The Mogadishu FIR is that chunk of Somalian airspace which you have probably flown through if you regularly route from the Middle East to southern Africa.

Since 2022 they have been trialling the return of controlled airspace, and we have an update on that for you.

### First up though, why are we interested in this FIR?

Somalia and its direct neighbours are all **fairly high risk regions in terms of airspace safety**. Yemen is a no fly zone, Eritrea and Djibouti are both fairly unstable, Somalia has issues with Al-Shabab, and the Tigray region in Ethiopia has an ongoing conflict to contend with.

So if we want to head from the Middle East into Africa or from Asia to Africa, we have to **make a fairly large detour** around these spots, or **risk overflying areas considered unsafe** and which also have limited diversion options due to safety and security concerns on the ground.

Having part of the Mogadishu FIR available doesn't help fix the safety and security on the ground (or lack of diversion options) issue, but there are **airways which keep you over the oceanic region here**, which means the overflight safety risk is reduced, which means we don't have to detour as far.

So the HCSM/Mogadishu FIR offers a direct connection from the Mumbai FIR, and from Omani (Muscat) airspace into Africa.

### But it has issues of its own?

That it does.

**The situation on the ground in Somalia is highly unstable.** The central government has little control of the major cities and ports, with ongoing attacks from extremist militants targeting civilians who continue to show an intent to target aviation interests. **The primary risk** is to overflying aircraft at the lower flight levels, which may be targeted by anti-aircraft-capable weapons.

### What warnings should I know about?

- **The US prohibits flights across Somalia's airspace below FL260** (except for flights transiting the overwater portion of the airspace going to/from HDAM/Djibouti airport across the border in Ethiopia).
- Several other countries have issued airspace **warnings advising against operating below FL260** (Note UR401 SIHIL-AXINA is excluded from this by one authority).

There is also a **secondary risk** related to a lack of ATC service for overflights of the HCSM/Mogadishu FIR. The airspace was **Class G uncontrolled airspace** for sometime, requiring IFBP and HF comms (and a fair amount of looking out) for crew.

However, from 11 May 2022 they started trialling Class A airspace again, from FL245 each day from 0300-1800z.

### Tell us more about this airspace then!

We wrote about the trials here.

From November 2022, they extended the **Class A operating hours to H24.**

From **26 Jan 2023** it will become full operational, fixed, permanent, sorted and set via AIP SUP 01/23 (no, we aren't sure where you can access that directly!).

HCSM/Mogadishu FIR Notam A0012/23 is the one with the info. It looks like this:

```
A0012/23 - TRIGGER NOTAM AIRAC AIP SUP 01/23 WEF 00:01 UTC 26 JAN 2023.
OPERATIONAL IMPLEMENTATION OF CLASS ''A'' AIRSPACE WITHIN THE MOGADISHU
FLIGHT INFORMATION REGION AT AND ABOVE FL245. 26 JAN 00:01 2023 UNTIL
08 FEB 23:59 2023. CREATED: 19 JAN 07:45 2023
```

It is worth noting they are still training ATC. This takes place from 0300-1800z, so go easy on the trainees if you're flying during those times.

The *"upgrading"* of the airspace is down to the Somalia Airspace Special Coordination Team (SASCT), comprising of the Somali CAA, IATA, ICAO, adjacent FIRs, and core RCG (Regional Coordination Group) airline team members. *Thanks folks!* They are going to monitor the progress and performance over the next 6 months so send in your feedback to IATA_AME@IATA.ORG

### Tell us some comms stuff.

You have **VHF 132.5 within 240nm of MOGDU.** In case you can't find it, that's a point over **HCMM/Aden Adde** airport.

There are a whole bunch of **HF frequencies** as well:

- **Day 11300**/8879/13288
- **Night 5517**/11300/3467

They have **CPDLC** for FANS1 equipped folk. **Logon: HCSM.**

And they have a whole load of **SATCOM numbers** you can try if you get really stuck:

- +252 61 335 0046
- +252 62 3350047
- +252 1857390
- +252 1857391
- +252 1857392
- +252 1857393

### What else do I need to know?

That is about it. There are **contingency procedures**, and fairly standard equipment and all that which you can read about in full in here.

We also say check your weather, check your fuel, check your alternates because there are not many options nearby if routing this way. You can find more information on airspace safety here.

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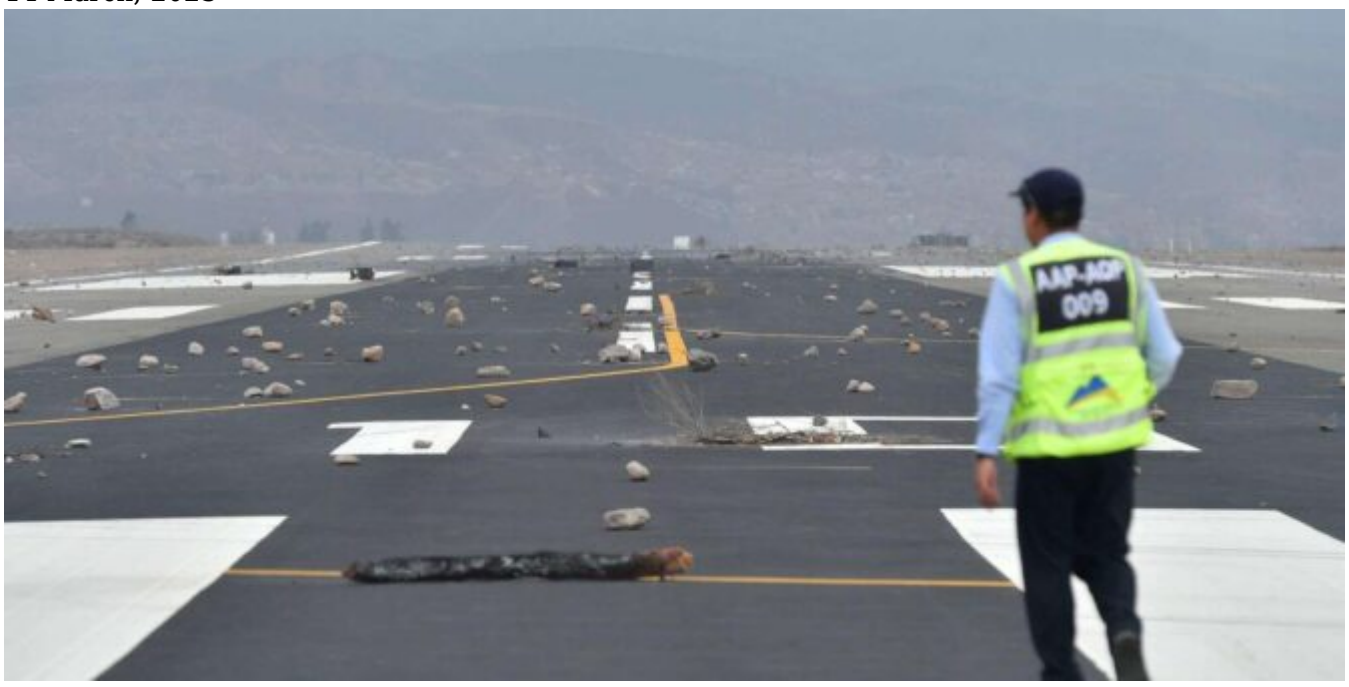
# Peru: Airport Closures due to Civil Unrest

OPSGROUP Team
14 March, 2023




Ongoing unrest across Peru has led to the closure of **SPZO/Cusco** and **SPQU/Arequipa** airports on Jan 20. **SPJL/Juliaca** remains closed since Jan 11.

All three airports closed following clashes between security forces and protestors. At SPQU/Arequipa, reports indicate that there has been damage to the runway, ATC office, perimeter fences, safety signs, and more.

There were widespread demonstrations in Lima on Jan 19. So far, **SPJC/Lima** airport has remained open and operational, but security forces are only allowing ticketed passengers to enter.

Peru has declared a 30-day **state of emergency** in several parts of the country, including Lima, which essentially allows military forces to assist local police in maintaining law and order. Protests have been ongoing since early December, and the security situation may change without warning.

**Advice for crew**

- Any crew overnighting in Lima are advised to **stay close to the airport** and not travel in the city.
- **Avoid making any comments** about the government or the situation.
- Operations may be impacted if protestors **block access roads**, and security is likely to be much higher leading to some delays and disruption.
- The US advice is to **reconsider travel to Peru** at this time. The UK government issued the following information.

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# RNP-AR: New Arrival Procedures at Toronto

OPSGROUP Team
14 March, 2023


Everyone loves an aviation acronym, don't they? So this post is about an acronym that causes a lot of

confusion. **Is an RNP-AR the same as an RNAV, and what if you add GNSS on the end?**

It is also about **CYYZ/Toronto Pearson** airport because they have just implemented the **'biggest' deployment of ICAO E0R standard** at any major international airport in the world.

### OK, so what *exactly* have they done?

If you haven't heard the term EoR before, then it just means ***"Established on RNP-AR"*** and means they can use reduced separation standards.

So in simple terms, they've started using RNP-AR approaches. Which is great because **reduced separation standards** means reduced track miles for you, which means reduced fuel costs and time and all that joylessness at the end of a long and tiring flight.

**So, RNP-AR approaches are way better.**

Nav Canada says this – *"The EoR separation standard allows aircraft to be considered established on final as soon as they're on the RNP-AR procedure, which is now in use for both ends of Toronto Pearson's north runway (05-23). As a result, some aircraft approaching from the south will have the opportunity to fly up to 1,000 feet higher when aircraft to the north are established on an RNP-AR procedure, thereby providing aircraft with the opportunity to reduce their noise over communities located south and downwind of the airport."*

And here's a little video to learn even more about the project.

But before you disappear, here are some of Toronto's charts and a little discussion on these approaches in case you're seeing them for the first time ever.

### The Charts.

### General RNP-AR Info.

Because a lot of folk find the RNP, RNAV, RNAV RNP, RNAV GNSS, RNP AR terminology just a little confusing (it is!), here is a link to a post talking all about it.

A mini summary:

- **RNAV is the original name**. The system doesn't require alerting (when you go outside the required tolerance)
- **RNP is the new name**, and the system requires alerting
- In the US they call RNAV approaches **GPS approaches**, and RNAV (RNP) when they need authorisation
- **RNAV/RNP (GNSS) requires GPS.** If it doesn't, it might use something like DME/DME to back-up accuracy
- **AR means authorisation required**, which means you need training and approval to fly them
- **They all come under PBN** which stands for Performance Based Navigation

### CYYC/Calgary

Calgary is next in line to get them (probably).

There is a ‘period of public comment’ open now until Feb 3rd 2023, so get your voice heard if you have comments on these plans.

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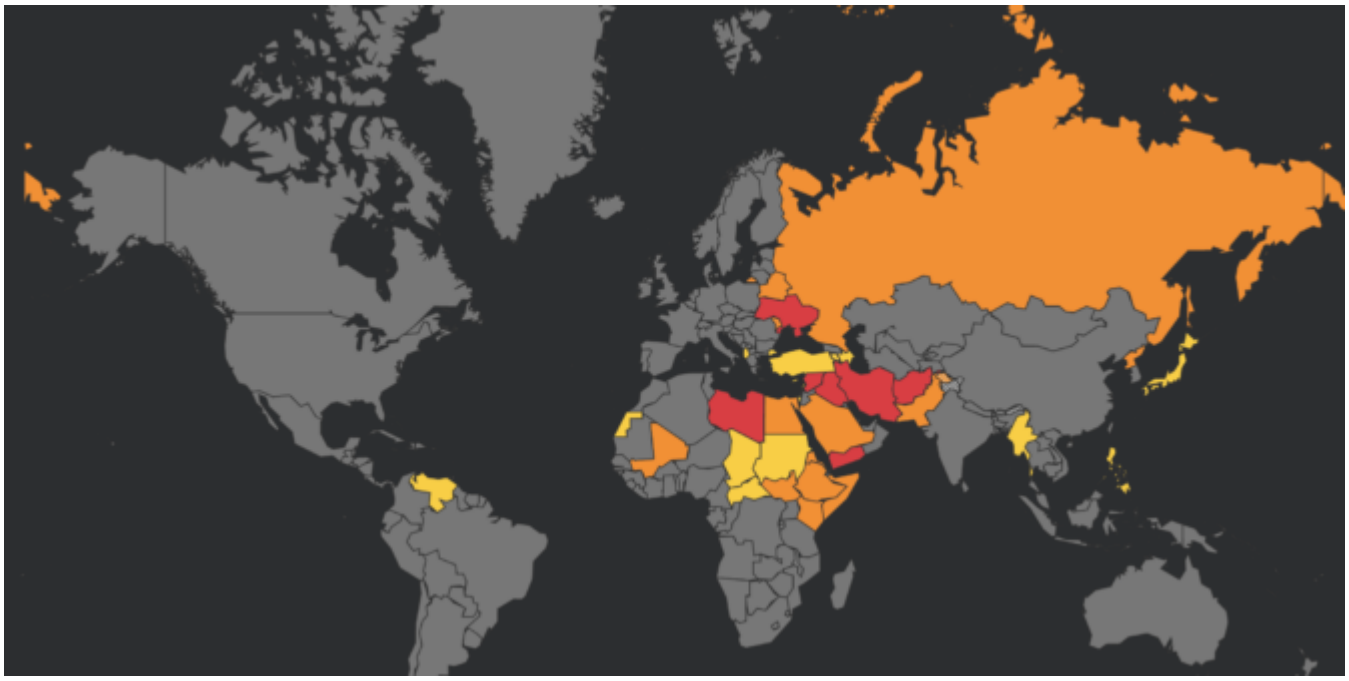
# Airspace Risk: Conflict Zones and Security in 2023

OPSGROUP Team
14 March, 2023



Over the past twelve months we have reported changes to a number of conflict zones which have the potential to affect airspace risk, along with other security concerns.

With the arrival of 2023, here’s another look at these regions which have had the biggest impact on civil aviation safety.

### Active conflict zones

We cover all the current conflict zones, with information on the context and details of current notams and warnings, on safeairspace.net

There are a number of conflict zones which remain active, but which have seen little change to the situation or risk rating. The following mentions refer to those which have seen **substantial change over the last year only.**

**Ukraine/Russia**

The war has continued since February last year with significant impact on airspace in Europe. **Ukrainian airspace remains closed at all levels** due to ongoing and intensive military activity. Russia has also persisted with **flight disruptions at ten airports** in Southwestern Russia, and another in Russian-annexed Crimea.

They include:

- URKA/Anapa
- UUOB/Belgorod
- UUBP/Bryansk
- URWI/Elista
- URKG/Gelendzhik
- URKK/Krasnodar
- UUOK/Kursk Vostochny
- UUOL/Lipetsk
- URRP/Rostov-on-Don
- UUOO/Voronezh
- UKFF/Simferopol  (Crimea)

Ukrainian airspace remains **extremely dangerous** due to military activity. Those risks have also been shown to spill over into open airspace that borders it. Special care needs to be taken when operating anywhere near the conflict zone.

*Official Advice*

Major authorities continue to recommend avoiding Russian airspace, and prohibit against operations in Ukrainian airspace. They also advise to use caution for operations within 200nm of the Ukrainian border.

On Jan 14, debris from a Russian rocket was found in Northeastern Moldova near the Ukrainian border. It is the third such report since October last year. Spill over risks from the war in Ukraine are a known threat to civil aircraft in the **LUUU/Chisinau FIR**, which is mostly off limits. AIP Sup 01/23 allows flights in and out of **LUKK/Chisinau** under certain conditions only.

## Iran/Iraq

The end of 2022 saw an **increase in activity** between Iran and Iraq, with multiple rocket attacks reported in the **ORER/Erbil region**. In September, Iran closed a section of airspace in the north of the country along the border with Iraq, and is using the area to launch missile and drone attacks at targets near ORER/Erbil Airport. Iran is warning their own operators against flying in Iraqi airspace.

Ongoing political turmoil, militant activities, and military operations in Iraq poses an elevated risk to aviation and airspace safety. In recent months, militants have fired rockets in Baghdad’s Green Zone, causing flight disruptions at nearby ORBI/Baghdad airport; Iran continues to target northern Iraq with missile and drone attacks; and Turkey has been launching attacks along Iraq’s northern border.

*Official Advice*

The airways in the vicinity of the border should be operated on with caution.

Towards the end of 2022, the US FAA extended their restrictions on Iran and Iraq by two years – US operators are prohibited from the ORBB/Baghdad FIR below FL320, and completely prohibited from OIIX/Tehran FIR. Other major authorities caution against operations below certain flight levels.

## Potential Risk & Conflict Zones

### North Korea

North Korea test fired an unprecedented number of missiles in 2022, all without prior notice. Things escalated late last year to **coincide with South Korean military exercises.** A large number of the missiles landed in the Sea of Japan, with one splashing down just 30nm off the coast of South Korea. Another **overflew Japanese territory.**

From December 26, there were further disruptions. Several **North Korean drones flew across the demilitarised zone** and entered the RKRR Incheon FIR, resulting in military jets being scrambled. **Ops at RKSI/Seoul and RKSS/Gimpo** were briefly suspended. We wrote about that here.

The South Korean president has gone public announcing that any further incidents could threaten a military pact between the two countries, which has **potential to greatly increase overflight risk**.

*Official Advice*

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

The **primary risk** remains from debris from missile re-entries striking aircraft overflying the oceanic part of the ZKKP/Pyongyang FIR over the Sea of Japan. However, the escalation in tensions between North and South Korea, and the incursions on the Japanese EEZ raise the caution level within both Japanese and South Korean airspace.

### China/Taiwan

In mid-2022, the US reported an increase in what they consider *'unsafe, unprofessional or non-standard intercepts'* by Chinese military aircraft in the South China Sea region. The China Sea Dispute is a growing concern.

China has also **increased political pressure on Taiwan**. Various military exercises by the Chinese took place throughout 2022. In August, China designated six areas of airspace as danger zones for a "military exercise," effectively barricading the country's airspace.

*Official Advice*

There are no reports of intercepts impacting civilian aircraft, but extra caution is advised because of a growing amount of military traffic active in the area.

Aircraft operating in Taiwan's ADIZ need to pay close attention to proper procedures – effectively squawk a discrete code and remain in contact with ATC at all times.

### Turkey

Turkey has seen an increase in spillover effects from **Syrian and Iranian conflicts.** Reports say shelling and rocket strikes have occurred near a town in southern Turkey, near the border with Syria. Turkey has been carrying out airstrikes on Syria and Kurdish regions of Iraq since an earlier attack on Istanbul. The escalation in airstrikes, and risk in southern Turkish airspace from Syrian insurgents poses an **ongoing threat to civil aircraft.**

*Official Advice*

More caution should be taken if operating in southern regions of Turkey, along the border with Syria. **GPS**

**jamming** within border areas can be expected.

### Civil Unrest and Crime

Economic pressures around the world over the past twelve months seem to have escalated instances of widespread civil unrest that have directly impacted aviation.

**Peru is the latest.** It has been experiencing political turmoil since late last year which led to protests and riots. Demonstrators blocked access to several airports. The situation is still developing.

We also reported on similar issues in **Sri Lanka when a state of emergency was declared** back in July, 2022. Fortunately, in this case the situation was resolved.

**Mexico** has seen a **rise in civil unrest** since the start of January 2023, in response to the arrest of a primary member of a cartel. The unrest has been limited to the Sinoloa region, but has seen three airports impacted significantly.

Bouts of civil unrest can occur without warning and have potential to close down airports, and put crew on the ground at risk. The US Department of State is our best source of travel advisories and warnings. For operations to less developed countries in particular, it is important to monitor the political and security situation before visiting unfamiliar spots *(and if you have, please share with us at team@ops.group or via Airport Spy).*

2022 also saw a notable number of less common security issues, including bomb threats, the use of fake airline IDs and even imprisonment of crew without charge. A keyword search on your Member's Dashboard will help you find more information on all these things.