



Osprey Flight Solutions

A new age for aviation risk management

4 March 2022

Russia-Ukraine Situation Update



Welcome

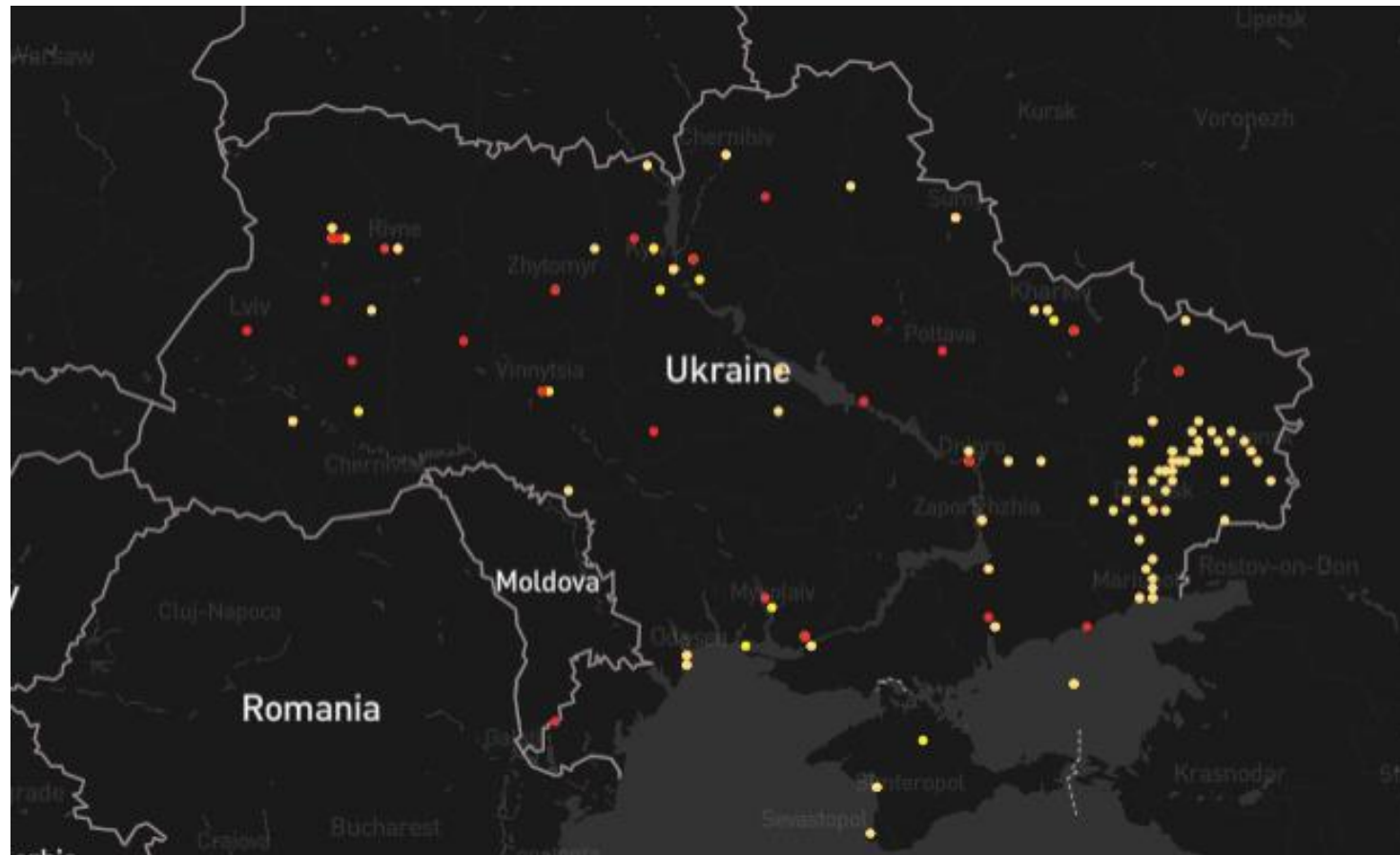
Matthew Borie, Chief Intelligence Officer

- Since c.0300 UTC on 24 February, Russian military cross-border strikes into Ukraine - reportedly including the use of over 500 cruise and ballistic missiles followed by airstrikes - have been reported targeting main urban centres outside of Donetsk & Luhansk, to include: Kyiv, Kharkiv, Dnipro, Lviv, Ivano-Frankivsk, Lutsk, Odessa, Kherson, Zaporizhzhia and Mariupol, as well as over 10 additional cities at the very least
- Ukraine military drone or ballistic missile strikes have targeted Russian military airbases in Taganrog & Millerovo, both in Rostov oblast
- Airports, airbases and/or military installations with aviation infrastructure in many of these cities have reportedly been targeted; however, information on material damage at the facilities - including the status of air assets on ground - remains unclarified at this time
- Separately, Russian military forces are pressing an invasion along several avenues of approach into Ukraine - including from the south via Crimea axis, east via Donbass axis, northeast via Kharkiv axis, north-central via Kyiv axis and northwest via Belarus axis
- Russian naval activity has also been reported in the Black Sea and Sea of Azov over the last nine days



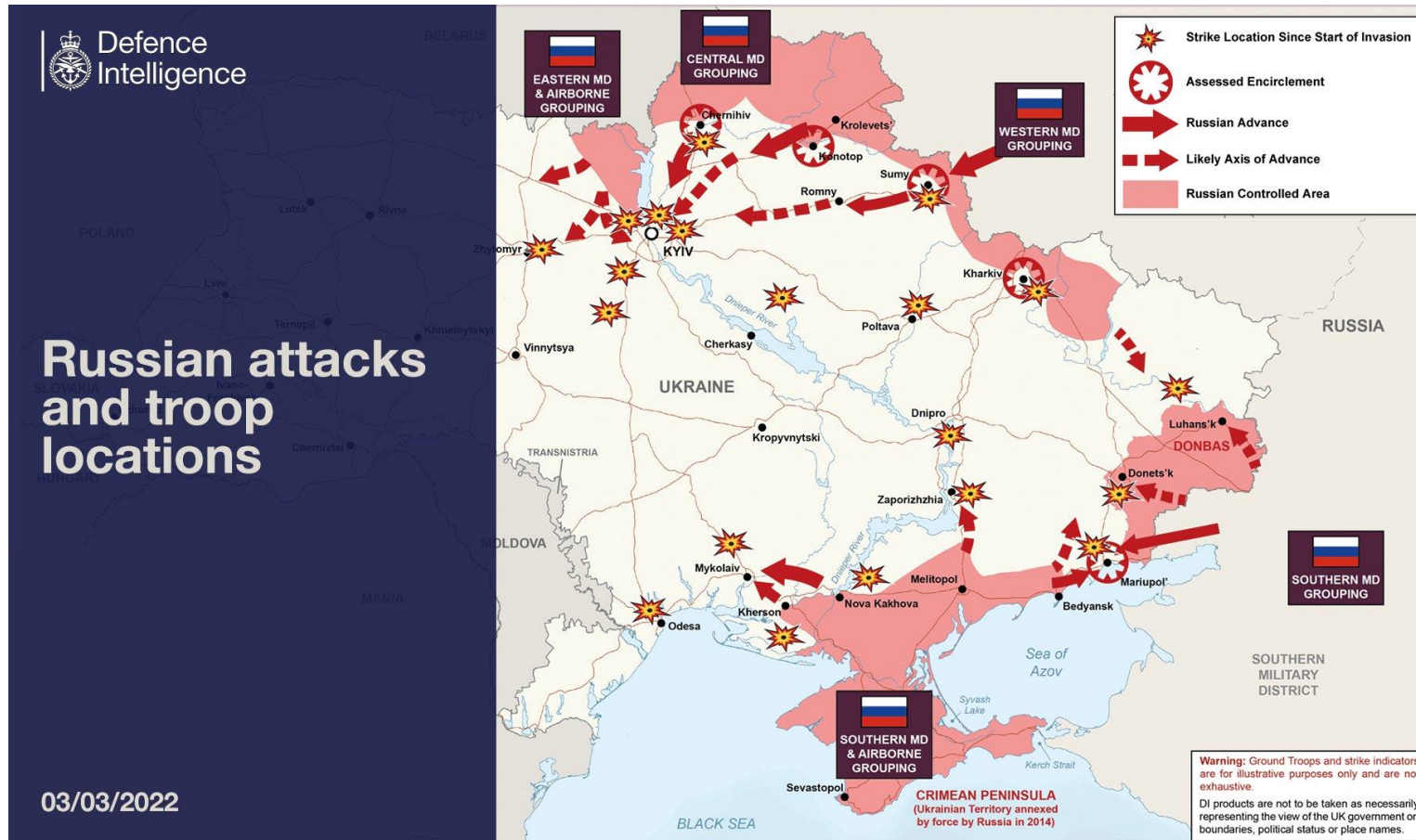
Russia-Ukraine Situation Update

Osprey:Explore – Rocket, Missile & Airport/Airbase Attacks on Ukraine Since 24 February



Russia-Ukraine Situation Update

UK Defence Intelligence – 3 March 2022



Russia-Ukraine Situation Update

Key Developments:

- Russia claims shoot down of 2 ballistic missiles, 11 drones, 17 aircraft & 7 helicopters; destroying 49 aircraft & 54 drones on the ground at airports/airbases
- Ukraine claims downing 33 aircraft, 37 helicopters, 4 drones & over 20 missiles
- Russian strikes have reportedly targeted Ukrainian air-defence sites & Russia claims 56 anti-aircraft systems of the Ukraine armed forces have been destroyed
- Ukraine claims to have destroyed 18 Russian military air-defence systems
- *Analyst Comment: Russia is not assessed to have achieved air superiority over Ukrainian airspace. While degraded, Ukrainian military air & air-defence operations remain ongoing. While there are no indications that Russia or Ukraine intends to kinetically target legal civil aviation flights, Osprey assesses there is a significantly increased potential for miscalculation and/or misidentification.*



Ukraine Defence Intelligence – 4 March 2022

Russia-Ukraine Situation Update

Key Developments: Regulatory, Risk & Operational



Russia-Ukraine Situation Update

Osprey scoring for the relevant Airspace Risk Areas outlined below:

- Ukraine - Donetsk & Luhansk: **EXTREME** at all altitudes
- Ukraine (non-Donbass): **EXTREME** at all altitudes (up from HIGH on 23 Feb)
- FIR Simferopol (UKFV): **EXTREME** at all altitudes (up from HIGH on 23 Feb)
- Russian Border: **EXTREME** at all altitudes (up from HIGH on 23 Feb)
- Belarus: **EXTREME** at all altitudes (up from HIGH on 23 Feb)
- Moldova: **EXTREME** at all altitudes (new on 24 Feb)



Osprey Airspace Risk Areas



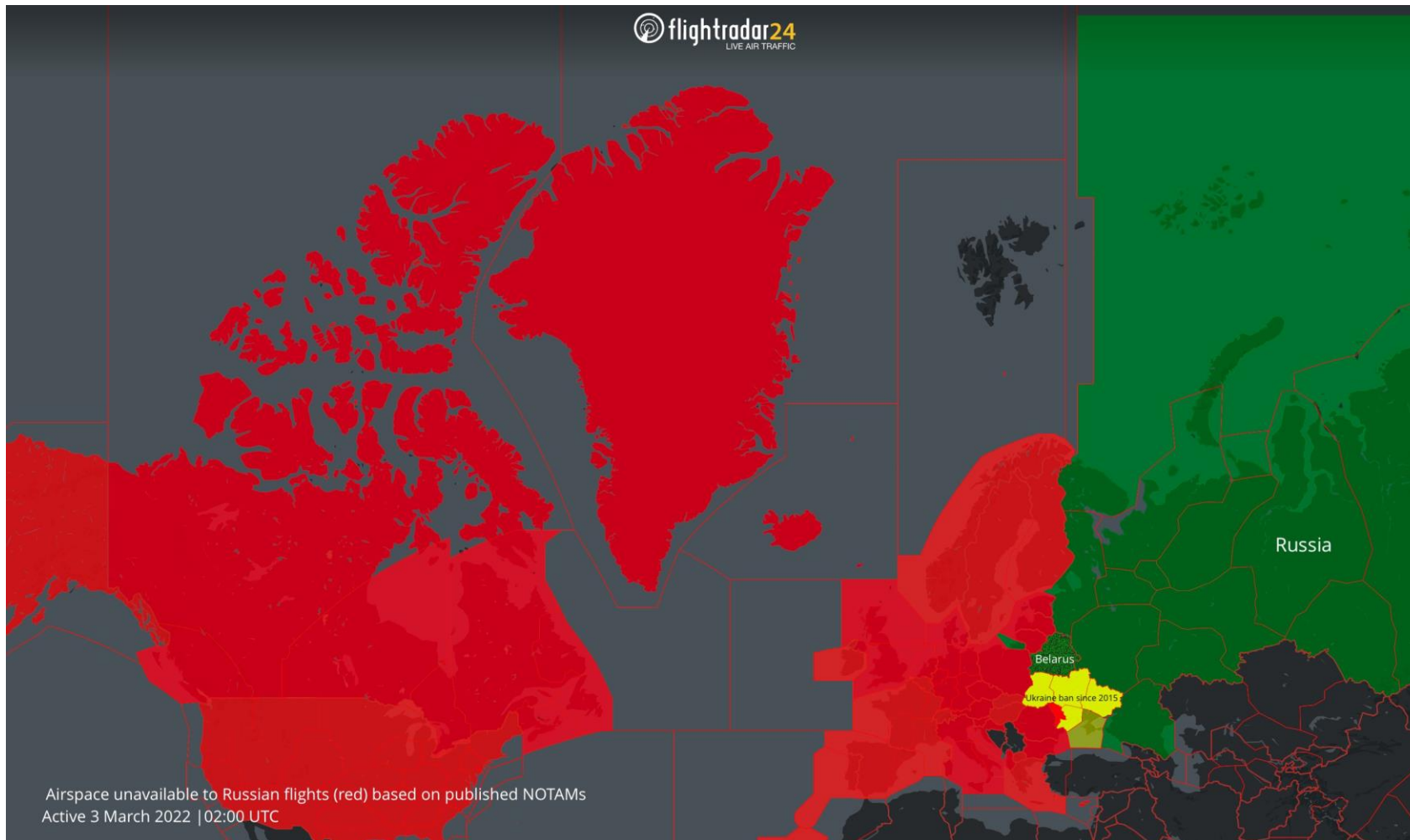
Russia-Ukraine Situation Update

Regulatory Information

- ✦ **Ukraine** has closed its airspace, currently through 23 March (UKBV A0583/22). **Moldova** has also closed its airspace except for repositioning, cargo, humanitarian, repatriation & medical emergency flights with permission/coordination of the CAA and using Chisinau Airport only, until 25 April (LUUU A0046/22).
- ✦ **Belarus** has restricted the southern part of its airspace until 24 March (UMMV O0177/22); **Russia** has issued NOTAMs closing a large portion of its airspace in the SW of the country, also covering Ukrainian airspace and a large part of Belarusian airspace, as well as closing numerous ATS route segments in its SW airspace, through 8 March (URRV/UUWV/URFV U0223/22 & U0237/22). **Poland** has flight planning restrictions in the eastern half of the country (EPWW C0217/22).
- ✦ Major regulatory bodies – including EASA, the UK, the US, Canada, France & Germany – have issued & revised conflict zone notices for airspace in Ukraine and neighbouring countries to varying extents, most with 'buffer zones' around Ukrainian airspace ranging up to 200NM.
- ✦ The EU, the US, the UK, Canada, almost all non-EU European nations and British Overseas Territories have banned Russian-linked aviation entities from using their airspace; Russia has reciprocated, or is expected to, in almost all cases.
- ✦ For more details of these notices, please access Osprey:Open via the following link: <https://open.ospreyfs.net>
- ✦ Eurocontrol compiled NOTAMs related to Russia-Ukraine: <https://www.public.nm.eurocontrol.int/PUBPORTAL/gateway/spec/>



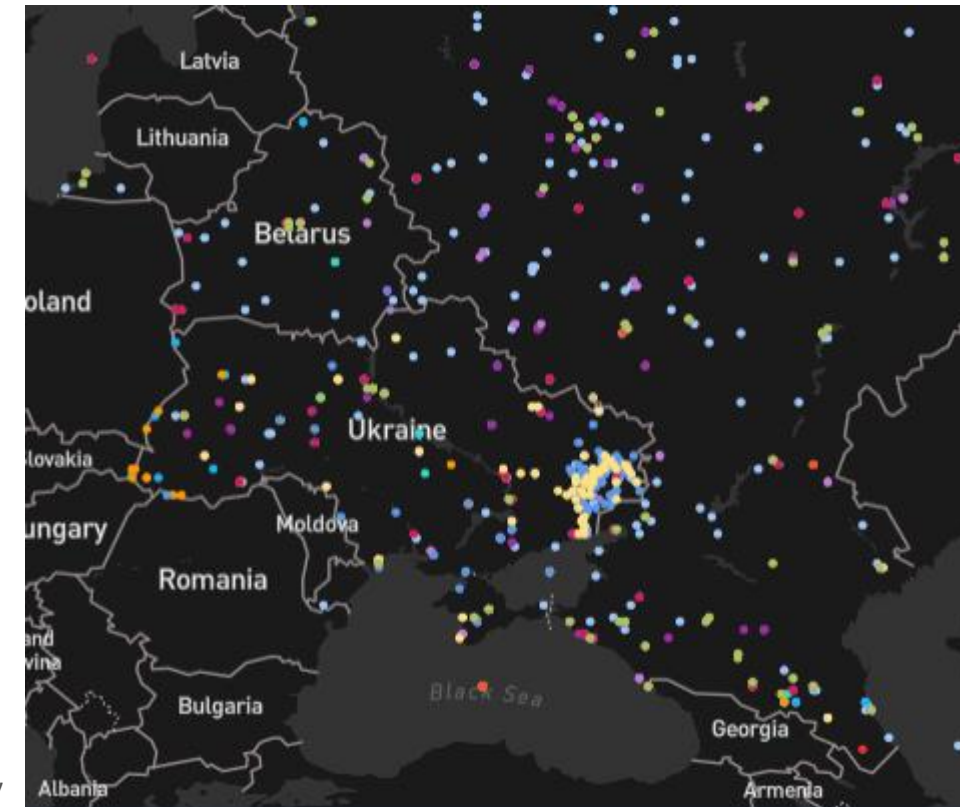
Russia-Ukraine Situation Update



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Key Operational Developments:

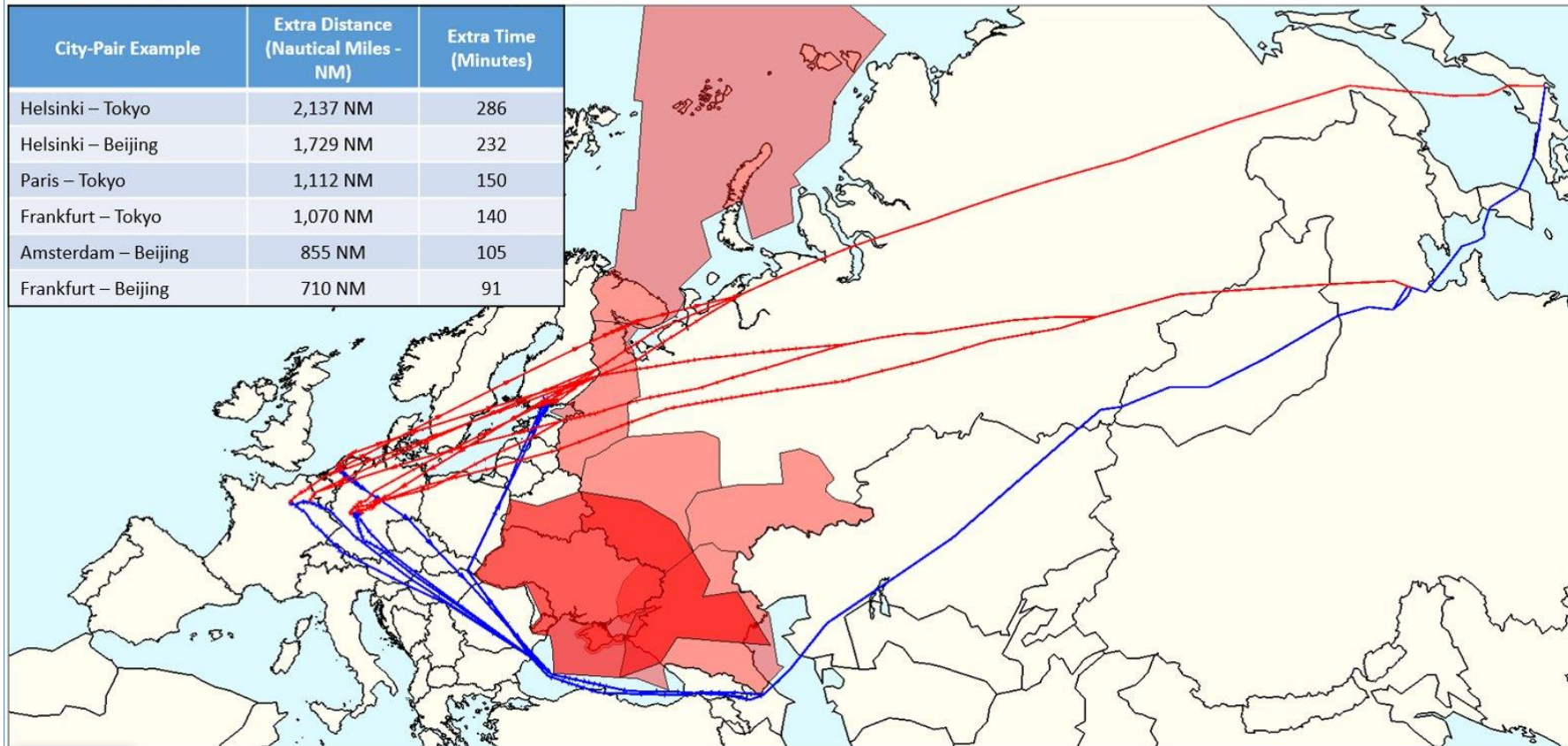
- Several foreign aircraft were stranded at airports in Ukraine & Moldova when the airspace was closed; Moldova has since allowed those stuck at Chisinau Airport to leave
- Airline risk assessments and actual/anticipated reciprocal bans on using Russian airspace for transit have led numerous leading international commercial operators to alter flight routings and cancel services
- Routings via Caucasus and Central Asia being used to south/southeast Asia and via North America to East Asia; also further south via ME, Gulf, Saudi Arabia, Iraq and Iran – although this would be subject to limitations posed by regulatory notices and other conflict zone activity in certain countries
- Russian carriers are limited to over-water routings to the Americas routings, and are now limited to roundabout route through airspace over neutral waters of Baltic Sea to access Kaliningrad



Osprey:Explore Data – Russia, Ukraine & Belarus

Russia-Ukraine Situation Update

Impact of Russian Airspace Closure on EU Operators – Sample Route/time extensions



Russia-Ukraine Situation Update

Impact of European Airspace Closures on Russian Operators - Routings on 28 Feb 2022



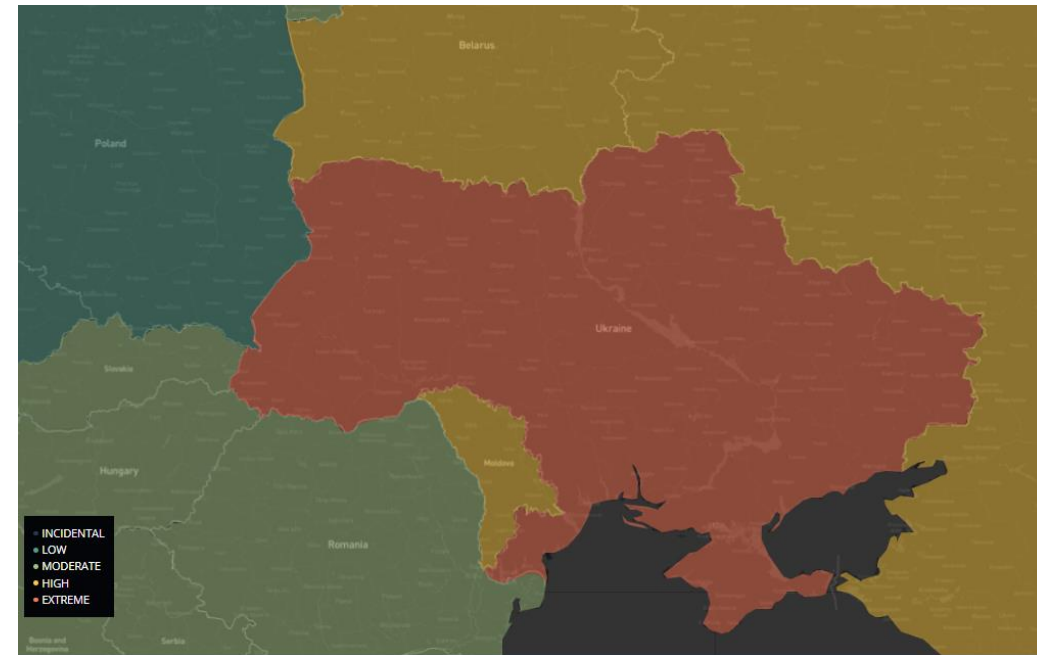
Russia-Ukraine Situation Update

Assessment, Indicators & Takeaways

Russia-Ukraine Situation Update

Key Geopolitical Developments:

- 27 February – 3 March: reports that Ukrainian & Russian officials met at the Belarusian border for talks; no breakthrough towards a ceasefire agreement expected in the near term
- Some foreign governments - including the US, France & Germany - are advising their nationals to defer travel to Russia or depart the country
- EU plans to finance the purchase and delivery of weapons to Ukraine – the first time it has done this. Several NATO countries - on an individual basis and not at the direction of the alliance - continue to provide military armaments to Ukraine
 - NATO first-ever activation of the Response Force within the alliance
 - Multinational battlegroup for air defence in Slovakia, with both Germany and the Netherlands deploying US-made MIM-104 Patriot systems
 - NATO Baltic & Black Sea air-policing missions ongoing



Osprey Country Risk Areas



Russia-Ukraine Situation Update

Osprey Assessment

The strikes are occurring in the wake of the Russian president stating on 24 February that Russia's armed forces had initiated a "special military operation" against Ukraine to "protect the Donbass" and to "demilitarize" Ukraine. Osprey assesses that significant Russian military operations - likely including the use of cruise and ballistic missiles targeting Ukrainian armed forces bases and critical infrastructure sites in Ukraine, including airports/airbases - are expected to persist through at least mid March. Ukraine may continue to conduct a limited number of drone, missile and/or rocket launches into Russian territory, though such attacks are likely to occur within 160km (100 miles) of the border.

Increased military air and multi-type/variant missile (air-defence, cruise and/or ballistic) operations by the Russian and Ukrainian armed forces have the potential to cause airspace congestion and would impact the safety of civil aviation flights. The significant increase in the amount of air and missile operations in southwest Russia, Ukraine and the Black Sea are expected to disrupt availability of airports/airbases along with access to airspace in these areas indefinitely. While there are no indications that Russia or Ukraine intends to kinetically target legal civil aviation flights, Osprey assesses there is an increasing potential for miscalculation and/or misidentification.

Rerouting of civil aviation over additional portions of Belarus's FIR Minsk (UMMV) as well as Russia's FIR Moscow (UUWV), FIR Samara (UWWW) and/or FIR Rostov (URRV) along with the eastern portion of Poland's FIR Warsaw (EPWW) is a significant concern going forward, either by further regulatory action and/or changes in insurance coverage. More restrictive measures could be enacted at short notice by Poland, Russia and/or Belarus as well as other leading civil aviation governing bodies, including additional partial restrictions of airspace in the above FIRs. While Ukraine and Moldova have closed their airspace, leading civil aviation governing bodies may issue further notices to their operators in addition to those detailed above regarding Ukrainian and neighbouring airspace.



Russia-Ukraine Situation Update

Key Indicators of Escalation

- ✦ Intensification of Russian strikes on main urban centres, military sites and critical infrastructure in Ukraine
- ✦ Significant Russian movement of forces deep into Ukrainian territory and control of main urban centres
- ✦ Additional deployment of further Russian military forces to Belarus or the areas bordering Ukraine
- ✦ Widespread telecommunications disruption and/or cyber attacks crippling critical infrastructure functionality

Key Indicators of De-escalation

- ✦ Russian willingness to engage in ceasefire negotiations
- ✦ Russian strikes being confined to a specific geographic area
- ✦ Russian troop movements confined to specific avenue of approach
- ✦ Russia-NATO council engagements on deconfliction



Russia-Ukraine Situation Update

Key Takeaways

- ✎ Ukraine is an active conflict zone and the airspace is closed – some neighbouring states restricting airspace as well
- ✎ Both Russia & NATO are conducting increased levels of military air patrols over the Black Sea & Baltic Sea
- ✎ GPS jamming & other forms of EMI remain present in the region, including the Black Sea & Baltic Sea
- ✎ Possible short-notice issuance of regulatory NOTAMs, circulars, publications, restrictions and/or bulletins
- ✎ Potential change in insurance coverage and/or access to such services for flights related to Ukraine conflict



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