



Osprey Flight Solutions

A new age for aviation risk management

25 February 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 150 cruise and ballistic missiles followed by airstrikes - have been reported targeting Kyiv, Lviv, Odessa, Gostomel, Kharkiv, Dnipro, Zhytomyr, Ivano-Frankivsk, Chuhuiv, Lutsk, Ozernomu, Kulbakinomu, Melitopol, Kherson, Chornobayivtsi, Mariupol & Kramatorsk, at the very least.
- Airports, airbases and/or military installations with aviation infrastructure in many of these cities have reportedly been targeted; however, material damage information 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, east via Krasnodar-Rostov, northeast via Belgorod-Valuyki and northwest via Belarus.
- Russian naval activity has also been reported in the Black Sea and Sea of Azov over the past 48 hours.

Russia-Ukraine Situation Update

Regulatory, Risk & Key Developments

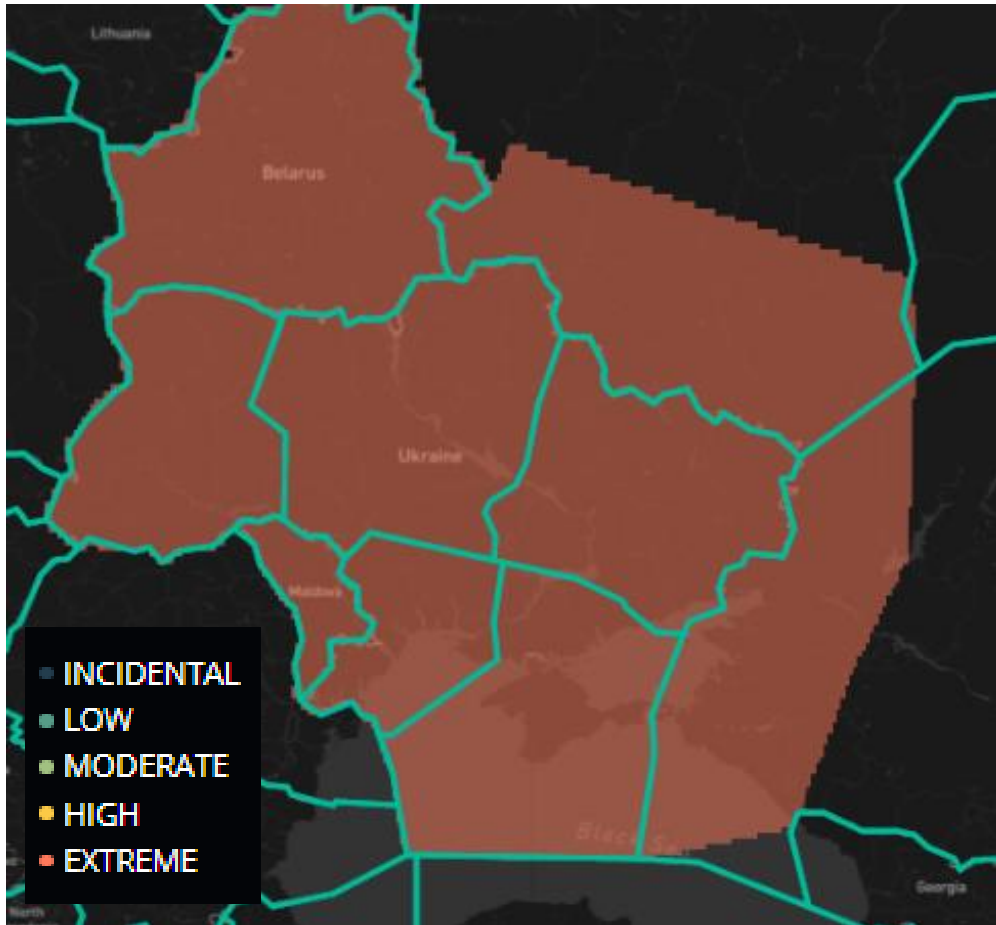


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Regulatory Information

- ✦ Ukraine has closed the entirety of its airspace as has Moldova
- ✦ Russia has closed a portion of its airspace in the southwest of the country along border of Ukraine
- ✦ Belarus has closed a portion of its airspace in the south of the country along border of Ukraine
- ✦ EASA has issued a CZIB and US, UK, France, Germany as well as Canada have issued NOTAMs
- ✦ UK has banned Russian scheduled flights from its airports & airspace – Russia has reciprocated
- ✦ For details of these notices, please access Osprey:Open via the following link: <https://open.ospreyfs.net>

Russia-Ukraine Situation Update



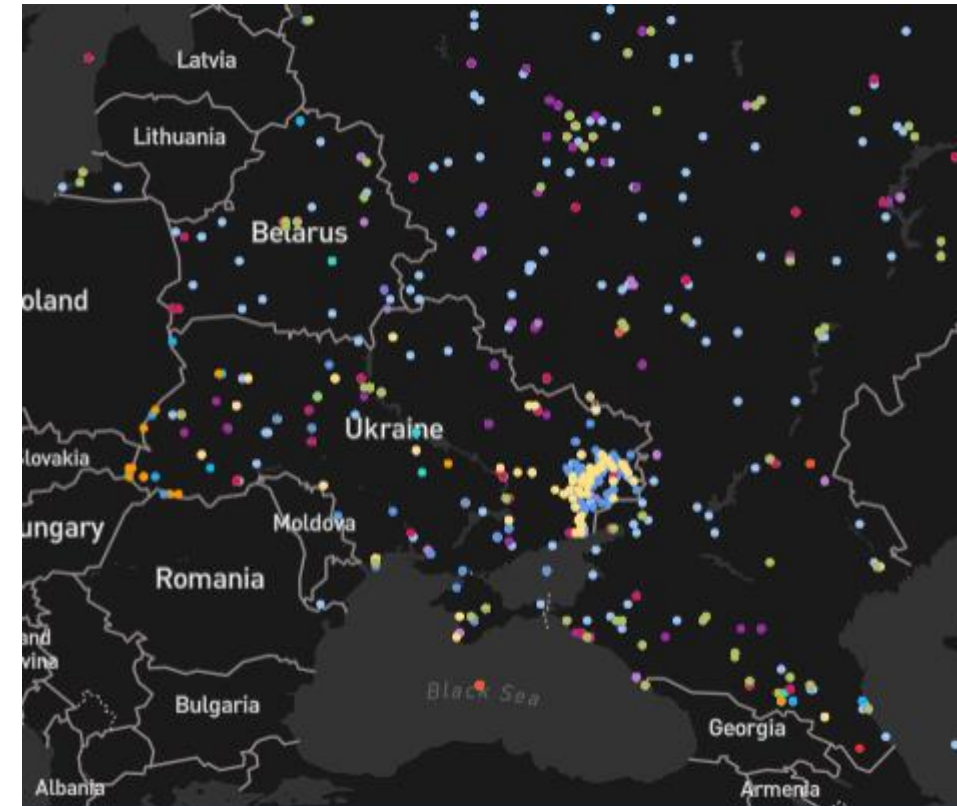
Osprey scoring for the relevant Airspace Risk Areas outlined below:

- 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)

Russia-Ukraine Situation Update

Key Developments:

- Russia claims shoot down of 4 drones, 4 aircraft & 1 helicopter
- Ukraine claims shoot down of 8 aircraft, 7 helicopters & several missiles
- Russian strikes have reportedly targeted Ukrainian air-defence sites
- *Analyst Comment: 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. Increased military air and missile operations by the Russian and Ukrainian armed forces have the potential to cause airspace congestion and impact the safety of civil aviation flights.*



Osprey:Explore Data – Russia, Ukraine & Belarus

Russia-Ukraine Situation Update

Key Developments:

- Sanctions introduced by US, EU and G7 states on Russia
- OSCE has scaled back conflict monitoring activity in Ukraine
- No negotiations at present between Russia & Ukraine
- High level diplomatic talks between Russia & the West at impasse
- Cyber attacks target both Russian and Ukrainian government sites



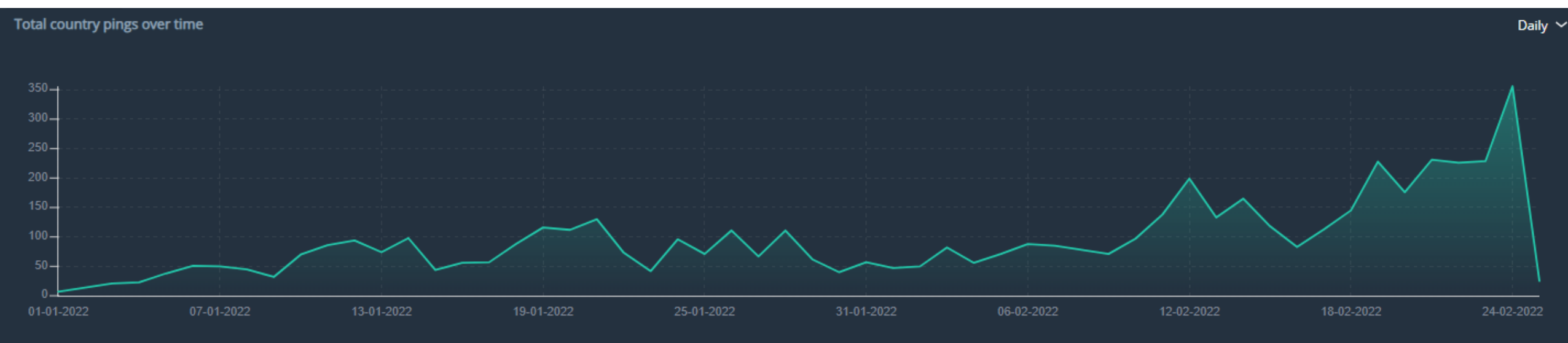
Russia-Ukraine Situation Update

- Visualisations & Mapping
- Osprey System Data Analytics



Russia-Ukraine Situation Update

Ukraine: Conventional Military & Conflict Zone Activity

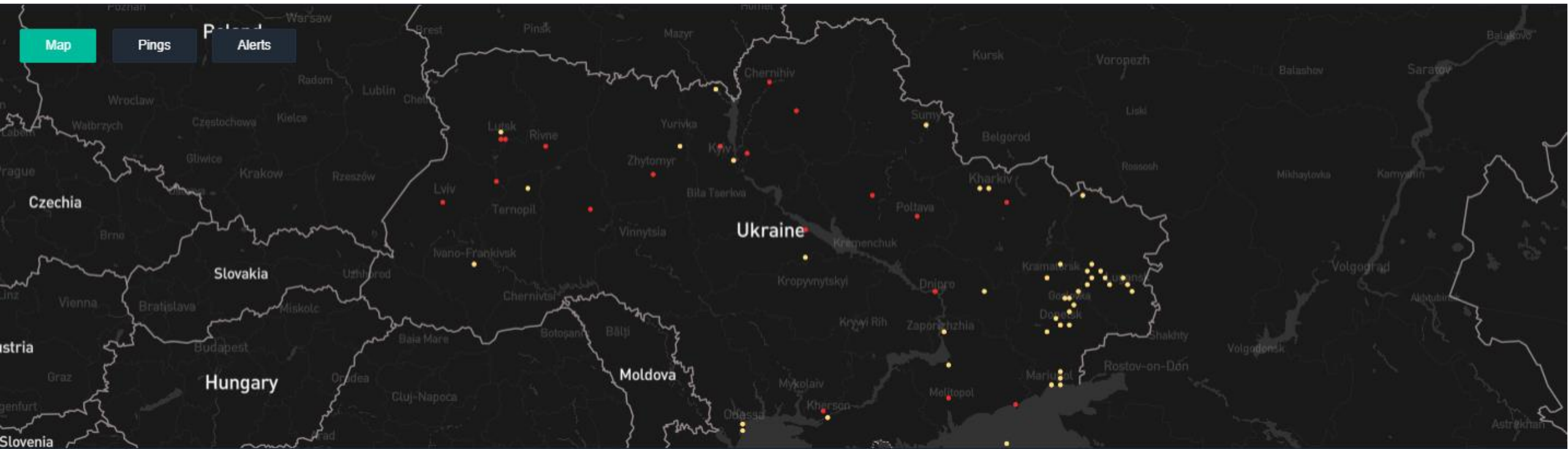


The above graph shows conventional military activity within Ukraine over the past 30 days. The data shows that there has been a transition from a significant level of activity to a full-fledged conflict.



Russia-Ukraine Situation Update

Ukraine: Rocket, Missile & Airport/Airbase Attacks



The map above shows locations of rocket, missile and airport/airbase attacks in Ukraine since 24 February.

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Assessment, Indicators & Takeaways



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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. 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 mid March, at least. Increased military air and missile operations by the Russian and Ukrainian armed forces have the potential to cause airspace congestion and 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.

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) 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 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.



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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
- Widespread telecommunications disruption an/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-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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