



Osprey Flight Solutions

# A new age for aviation risk management

14 April 2022

## Russia-Ukraine Situation Update



## Welcome

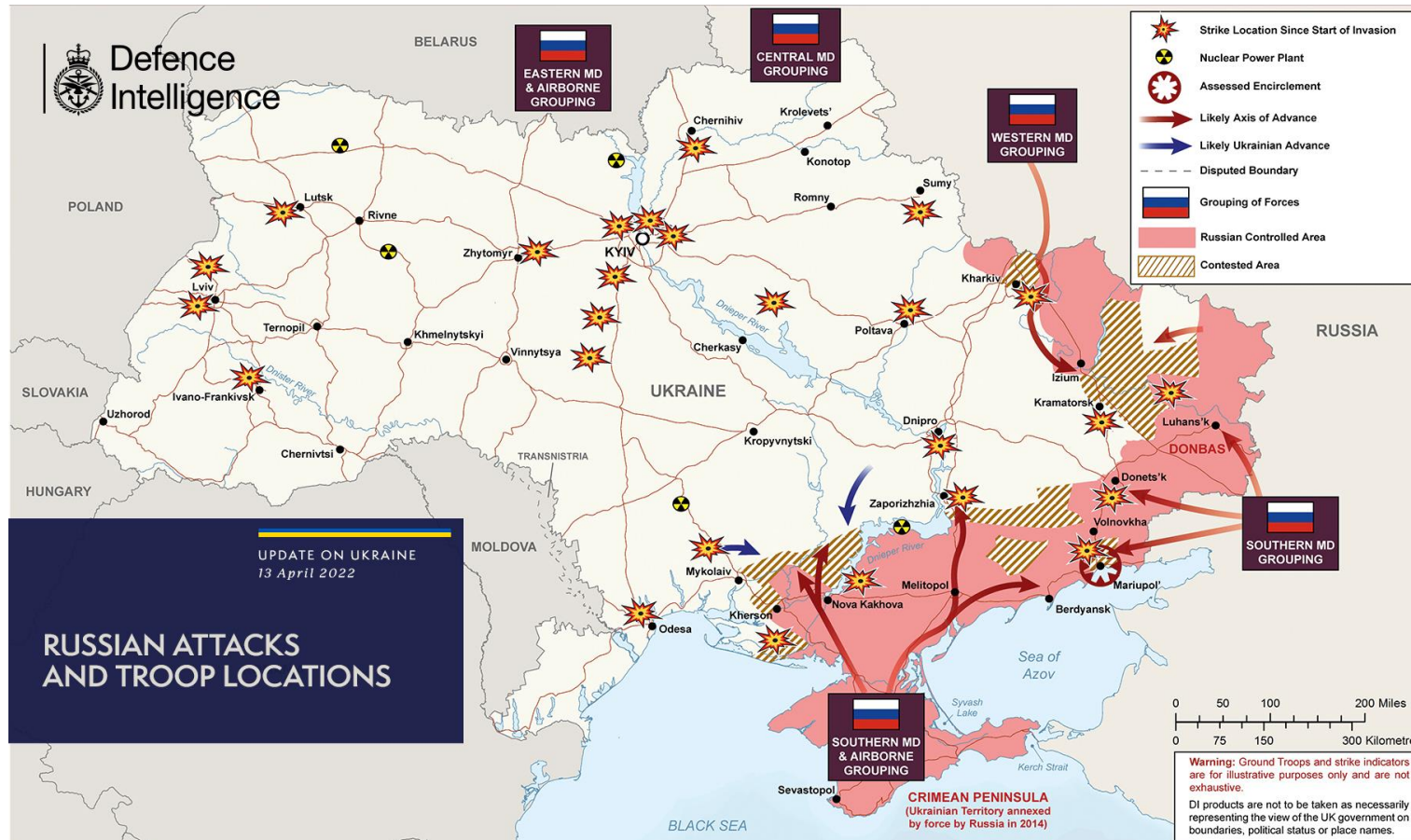
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Matthew Borie, Chief Intelligence Officer

- Since c.0300 UTC on 24 February, Russian military cross-border strikes into Ukraine have been reported, **with approximately 1,800 cruise and ballistic missiles as well as guided rocket artillery** targeting main urban centres outside of Donetsk and Luhansk, including Kyiv, Kharkiv, Dnipro, Lviv, Ivano-Frankivsk, Lutsk, Odessa, Kherson, Zaporizhzhia and Mariupol. **Airports, airbases and/or military installations with aviation infrastructure in many cities have been targeted.**
- On 29 March, Russia stated the primary aim of the “Special Military Operation” is to “liberate” the Donbass (Donetsk and Luhansk), and **Russian forces have completely withdrawn from areas north of Kyiv. The vast majority of the fighting in the south spans from Mykaoliv near Crimea through to Mariupol on the Sea of Azov and into the Donbass.** However, Russian military operations in the Kharkiv region also remain ongoing at present.
- Russian naval activity has also been reported in the Black Sea and Sea of Azov since 24 February, and Russian cruise missiles have been launched from the Caspian Sea into Ukraine on multiple occasions during March – **the Russian Navy Black Sea Fleet flagship “Moskva” was severely damaged in a Ukrainian military cruise missile strike off the coast of Odessa on 14 April.**
- Ukrainian military drone or ballistic missile strikes have targeted Russian military bases in Belgorod, Taganrog and Millerovo. Russian air defences have reportedly shot down a limited number of Ukrainian ballistic missiles over Belgorod and Rostov.

# Russia-Ukraine Situation Update

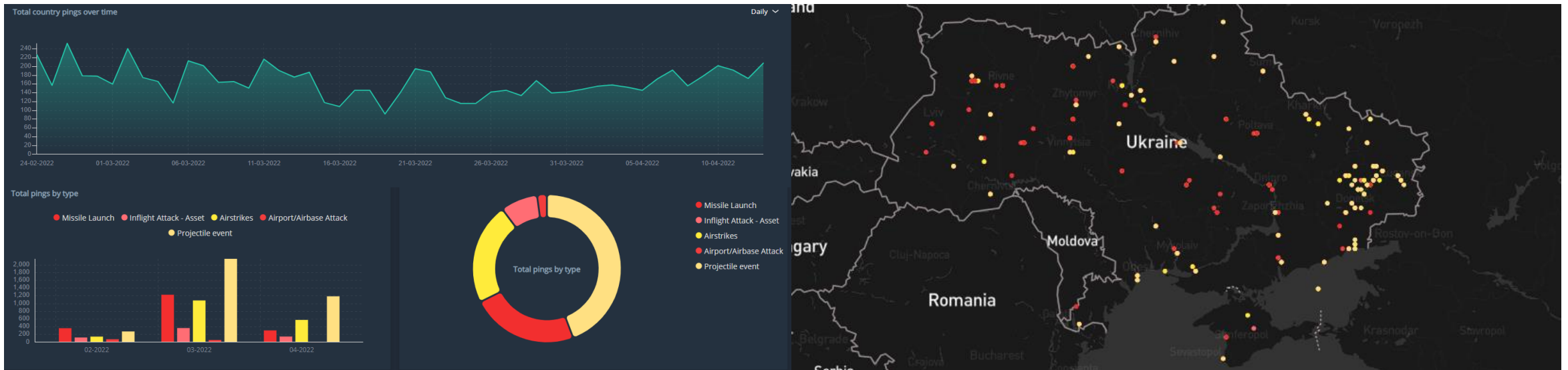
## UK Defence Intelligence Update - 13 April





# Russia-Ukraine Situation Update

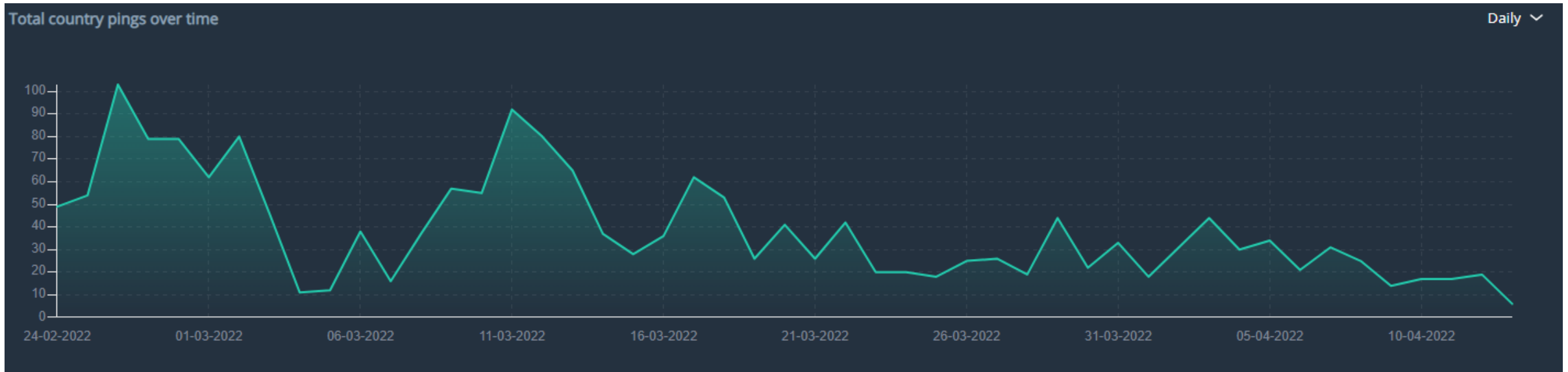
Osprey:Explore - Rocket and missile strikes, attacks on airports/airbases and aerial target engagements in Ukraine since 24 February





# Russia-Ukraine Situation Update

## Osprey:Explore – Missile launches during the Ukraine conflict

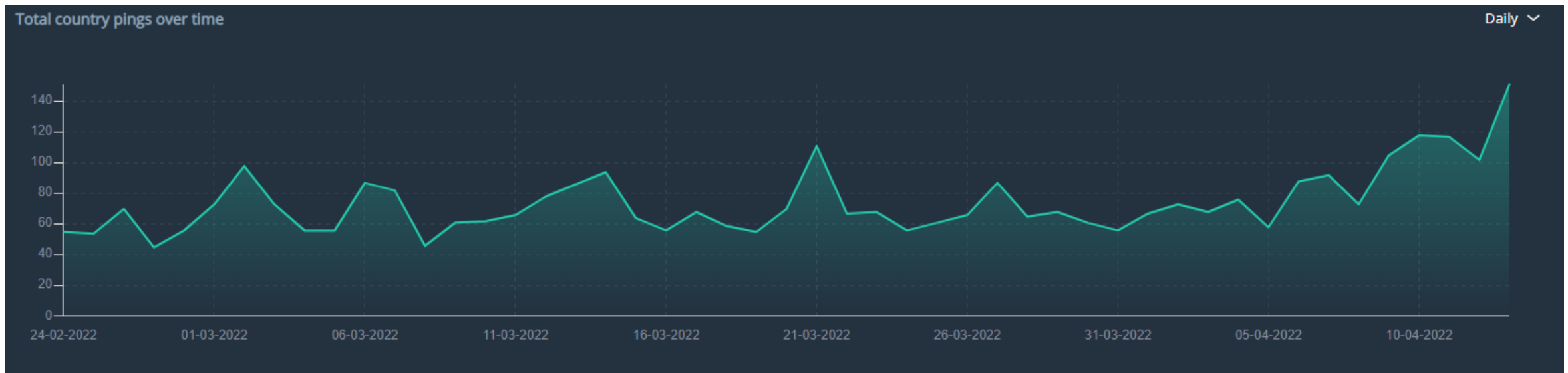


**Missile launches:** Russian cruise missile and ballistic missile launches are steadily trending downward, though they have been more precise in recent weeks, and strikes targeting Kyiv have dissipated in the past seven days.



# Russia-Ukraine Situation Update

## Osprey:Explore – Unguided rocket, artillery and mortar barrages during the Ukraine conflict

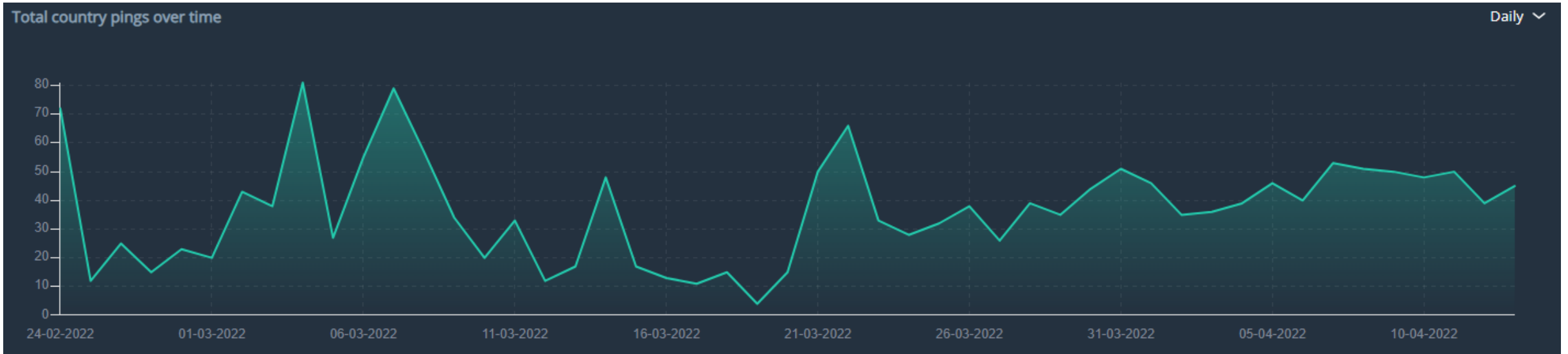


**Rocket/artillery barrages (unguided munitions):** Use of these weapons has been steady during the conflict but have increased notably in intensity in the past seven days amid the Mariupol siege and as Russia advances on Donbass and continues shelling Kharkiv. However, strikes targeting Kyiv have dissipated in the past week.



# Russia-Ukraine Situation Update

## Osprey:Explore – Airstrikes during the Ukraine conflict

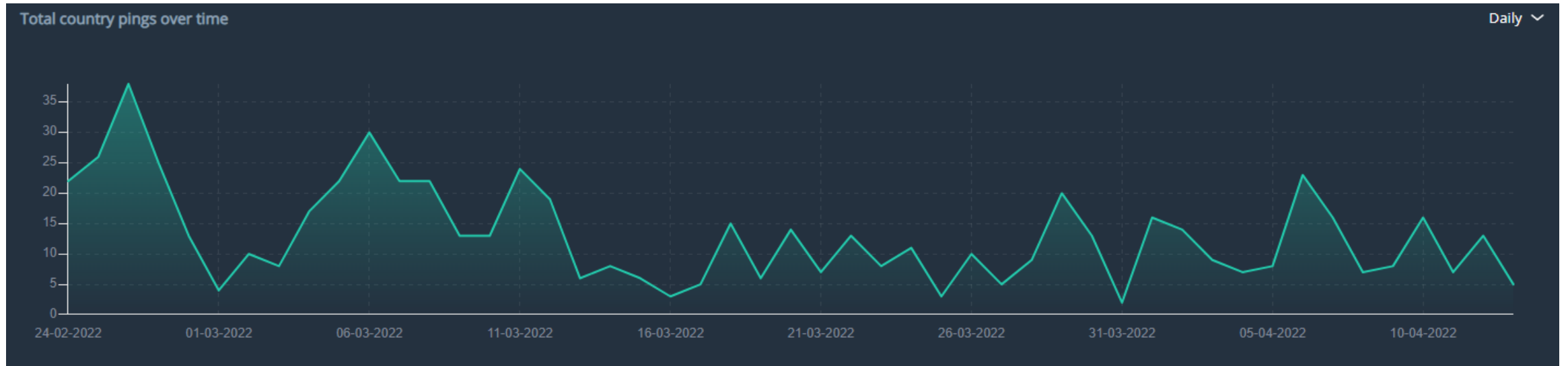


**Airstrikes:** Russian Air Force performance during the conflict has been inconsistent from day to day, though airstrike totals have stabilised in recent weeks. However, strikes targeting Kyiv have dissipated in the past seven days.



# Russia-Ukraine Situation Update

## Osprey:Explore – Actual or attempted downings of aircraft, helicopters, drones & missiles over Ukraine



**Attacks on aerial targets:** A high number of aircraft, drones and missiles were shot at or shot down in the first two weeks. However, totals are now declining due to attrition and changes in tactics. Surface-to-air fire events in the Kyiv area have also dissipated in the past seven days.



## Key Developments:

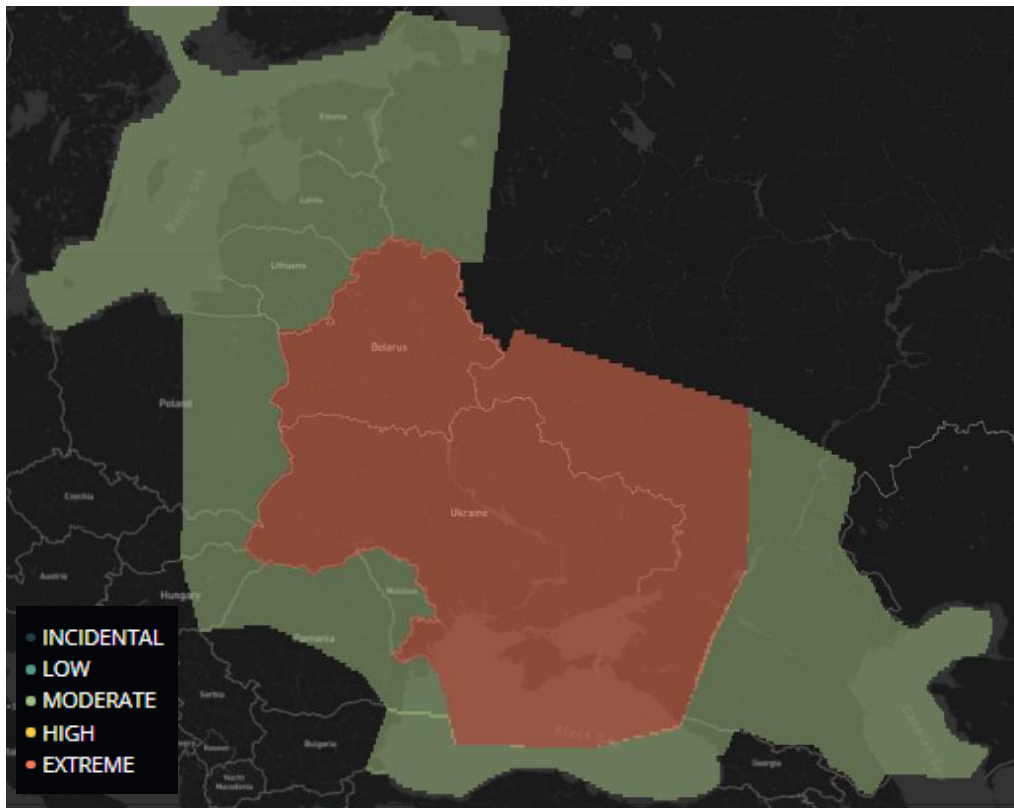
- Verified losses of Ukrainian military air assets: 16 aircraft, 3 helicopters & 14 drones
- Verified losses of Russian military air assets: 20 aircraft, 37 helicopters & 30 drones
- Verified losses of Ukrainian armed forces air-defence assets: 62 components
- Verified losses of Russian armed forces air-defence assets: 149 components
- **Analyst Comment:** Russia is not assessed to have achieved air superiority over Ukrainian airspace. While degraded, Ukrainian military air and air-defence operations remain ongoing. Ukraine is assessed to be conducting approximately 10 jet air sorties per day as the airspace remains contested. Russia is assessed to be conducting approximately 150-200 air sorties per day, though a notable portion are likely occurring in Russian airspace and not over Ukraine due to the persistent threat posed by Ukrainian air defences at all altitudes.



# Russia-Ukraine Situation Update

Key Developments: Regulatory, Risk & Operational

# Russia-Ukraine Situation Update



Osprey Airspace Risk Areas

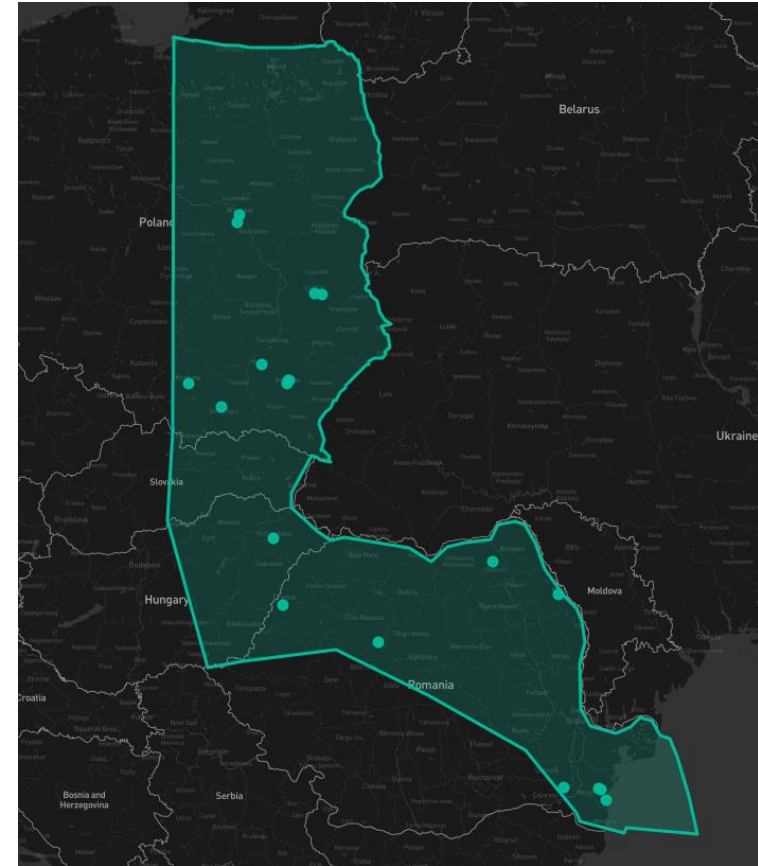
Osprey scoring for the relevant airspace risk areas outlined below:

- 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: **MODERATE** at all altitudes (down from EXTREME on 24 Mar)
- South Black Sea, Southern Russia & North Caspian Sea: **MODERATE** at all altitudes (new on 25 Mar)
- Eastern Europe Border Areas & Baltic Sea: **MODERATE** at all altitudes (new on 25 Mar)

# Russia-Ukraine Situation Update

## Expansion of Osprey airspace risk areas

- **Baltic Sea:** Increased NATO and Russian military air activity as well as global positioning system (GPS)/global navigation satellite system (GNSS) jamming and electromagnetic interference (EMI)
- **Eastern Europe Border Areas:** Increased NATO air activity and air-defence system deployments coupled with spillover by drones from Russia-Ukraine conflict
- **Southern Black Sea:** Increased NATO and Russian military air activity as well as presence of GPS/GNSS jamming and EMI
- **Northern Caspian Sea:** Russian military air and naval activity, including cruise missile launches into Ukraine without prior notices issued



Eastern Europe Border Areas



# Russia-Ukraine Situation Update

## Regulatory Information

- **Ukraine** has closed its airspace. **Moldova's** airspace remains closed, except for a portion extending from the Romanian border, allowing flights to use Chisinau Airport.
- **Belarus** has extended the restriction for its southern airspace; **Russia** has closed much of its southwest airspace as well as numerous ATS route segments.
- **Poland, Slovakia, Hungary and Romania** have all issued NOTAMs regarding flight planning restrictions and Ukraine-related military activity in their airspace, primarily near their borders with Ukraine and Moldova. **Germany** has issued an updated NOTAM warning of reroutings and delays in its airspace due to Ukraine-related military activity.
- Major regulatory bodies – including **EASA, the UK, the US, Canada, France & Germany** – have issued conflict zone notices for airspace in Ukraine and neighbouring countries, most with 'buffer zones' around Ukrainian airspace ranging up to 200NM. EASA's CZIB was updated on 24 March to reflect the reopening of a portion of Moldovan airspace, and Canada's NOTAM was amended on 29 March to extend their prohibition to the entirety of the Minsk, Chisinau and Rostov FIRs.
- 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 in almost all cases. Canada added **Belarusian-linked flights** to its ban on 16 March; most European nations have banned Belarusian flights since the May 2021 Ryanair incident.
- Eurocontrol compiled NOTAMs related to Russia-Ukraine: <https://www.public.nm.eurocontrol.int/PUBPORTAL/gateway/spec/>
- For more details of these notices, please access Osprey:Open via the following link: <https://www.ospreyfs.net/login>

# Russia-Ukraine Situation Update

Regional Impacts of the Conflict



# Russia-Ukraine Situation Update

## Regional impacts from Russia-Ukraine conflict:

- ✦ **Hungary:** Following several scrambles by Hungarian combat jets in response to incidents in the east of the country earlier in March, further cases have been reported by the country's armed forces. Hungary is a North Atlantic Treaty Organization (NATO) member.
- ✦ **Romania:** On 13 March, Romanian media reporting stated that a resident of Bistrita-Nasaud county in the north of the country, near the Ukrainian border, found a Russian-made Orlan-10 drone that had crashed. Romania is a NATO member.
- ✦ **Croatia:** On 10 March, a drone crashed in the southwest of the Croatian capital, Zagreb. It was subsequently identified as a Soviet-era Tu-141 military drone; these are known to be operated by the Russian and Ukrainian military. Croatia is a NATO member.
- ✦ **Poland:** On 14 March, the Ukrainian military claimed that a Russian military drone crossed into Polish airspace before returning to western Ukrainian airspace, where it was shot down by Ukrainian air defences. Poland is a NATO member.



# Russia-Ukraine Situation Update

## Regional impacts from Russia-Ukraine conflict:

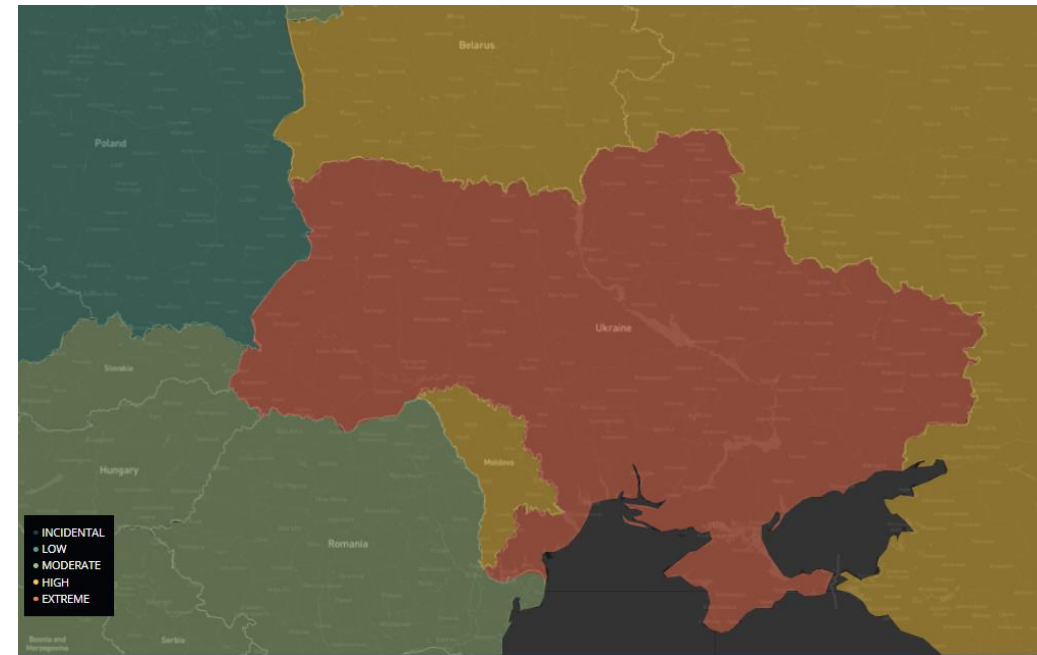
- ✦ **Baltic Sea:** NATO Baltic Sea air policing mission fighter jets have been scrambled 76 times to escort Russian military aircraft over the Baltic Sea since the start of 2022; 65 of these have occurred since the start of March. Such activity only occurred on 74 occasions in all of 2021.
- ✦ **Black Sea:** Romania has claimed that NATO Black Sea air policing fighter jets have been scrambled four times in the past month in response to Russian military aircraft. NATO fighter jets are also deployed to Bulgaria to conduct Black Sea air policing missions.
- ✦ **Finland:** A Russian state passenger aircraft reportedly violated Finnish airspace on 8 April. Finland has also stated that GPS interference has been reported in the Baltic Sea area; the French DGAC corroborated this on 2 April. Finland is not a NATO member. [EASA issued a SIB](#) on this topic, which includes the Baltic Sea area.
- ✦ **Sweden:** Russian military aircraft reportedly violated Swedish airspace in the Baltic Sea area on 2 March. Sweden is not a NATO member.



# Russia-Ukraine Situation Update

## Key Geopolitical Developments:

- Between 27 February and 14 April, Ukrainian and Russian officials met for several rounds of talks; however, **no breakthrough regarding a ceasefire agreement is expected in the near term**, and humanitarian corridors have been largely ineffective.
- The 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:
  - Slovakia provided S-300 conventional surface-to-air missile (SAM) systems to Ukraine;
  - Russia stated it will take measures to defend against weapons shipments to Ukraine, in particular, any provision of high-altitude air-defence systems and/or aircraft;
  - NATO activated the Response Force within the alliance for the first time;
  - A multinational battlegroup for air defence was set up in Slovakia, with US, Germany and the Netherlands deploying Patriot air-defence systems;
  - US deployed Patriot air-defence systems to Poland, and the UK Sky Sabre will also be deployed to Poland. NATO Baltic Sea/Black Sea air-policing missions remain ongoing



Osprey Country Risk Areas

# Russia-Ukraine Situation Update

## NATO Eastern Flank Deployments



# Russia-Ukraine Situation Update

Assessment, Indicators & Takeaways



# Russia-Ukraine Situation Update

## Osprey Assessment

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 mid May.** 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 intend 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 portions of Moldovan, German, Polish, Hungarian, Slovakian and/or Romanian airspace 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 these countries as well as other leading civil aviation governing bodies, including additional partial restrictions of airspace in the above FIRs or additional airspace areas over the Czech Republic or Croatia, for example. While Ukraine has closed its airspace, leading civil aviation governing bodies may issue further notices to operators in addition to those 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 a 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. Neighbouring states are also restricting airspace.
- ✦ Both Russia and NATO are conducting increased levels of military air patrols over the Black Sea and Baltic Sea.
- ✦ GPS jamming and other forms of EMI continue to occur in the region, including over the Black Sea and Baltic Sea.
- ✦ Regulatory NOTAMs, circulars, publications, restrictions and/or bulletins continue to be issued with short notice.
- ✦ Potential changes to insurance coverage and/or access to such services for flights related to Ukraine conflict.



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