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2022 Russia–Ukraine tornado outbreak

On 18 September 2022, a small but significant and fatal tornado outbreak began in Eastern Ukraine and moved into Russia, producing at least 8 tornadoes, including an intense F3 tornado and three possible, unconfirmed tornadoes. On September 19, a significant tornado occurred in Russia, with another possible, unconfirmed tornado and severe straight-line thunderstorm wind damage. Through the event, 3 people were killed and at least 8 others were injured.[1]

Meteorological history

On September 18, thunderstorms developed over northwest Ukraine. The environment the storms began to move into had strong low-level wind shear, which is needed for severe wind gusts and tornadoes.[2] On September 19, Tomas Pucik, a researcher for the European Severe Storms Laboratory, noted the environment on the 18th was “very conductive” for tornadoes.[3]

Tornadoes

Confirmed tornadoes by Fujita rating

FU	F0	F1	F2	F3	F4	F5	Total
1	0	3	3	1	0	0	8+

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Damage in Buryn, Sumy Oblast, Ukraine from a F3 tornado on 18 September 2022.

Meteorological history	
Duration	18–19 September 2022
Tornado outbreak	
Tornadoes	8+
Maximum rating	F3 tornado
Overall effects	
Fatalities	3
Injuries	8
Damage	Unknown
Areas affected	Eastern Ukraine, Western and Central Russia

Part of the **tornado outbreaks of 2022**

List of confirmed tornadoes

F#/T#	Location	Oblast/Subregion	Country	Start Coord.	Time (UTC)	Path length	Max width	Summary
September 18								
FU	Donskoye	Kaliningrad Oblast	Russia	Unknown	07:30 ± 30 min	Unknown	Unknown	A rope tornado was sighted and caught on video in the Donskoye area. No known damage occurred.[1]
F3	Buryn'	Sumy Oblast	Ukraine	51.20°N 33.85°E	13:30 ± 15 min	15.6 km (9.7 mi)	250 m (270 yd)	1 death — The tornado caused significant damage to the city of Buryn, where many homes and apartment buildings sustained major structural damage. Many residential buildings had their roofs torn off, and several had destroyed exterior walls. One fatality occurred when a wall fell onto a person. Many trees were snapped and stripped of limbs, cars were tossed, and metal pylons were toppled along a set of railroad tracks. A gas station was also damaged, and debris was scattered throughout the damage path. About 10,000 customers were left without electricity, and eight injuries occurred from this tornado. The European Severe Storms Laboratory initially rated this tornado F2, though it was upgraded to F3 on September 21, based on severe structural damage to well-built brick buildings.[1][4][5][6]
F2	Zinovo	Sumy Oblast	Ukraine	Unknown	13:45 ± 30 min	Unknown	Unknown	Homes and other buildings were damaged, some of which had roofs torn off. Numerous large trees were snapped or uprooted in wooded areas, and large power line pylons were bent.[1]
F1	Shurovo	Sumy Oblast	Ukraine	51.23°N 33.98°E	13:45 ± 30 min	Unknown	Unknown	The tornado damaged or destroyed power and telecommunication lines. Homes sustained major damage to their roofs, and many trees were snapped or uprooted.[1][7]
F1	Ol'govka	Kursk Oblast	Russia	51.40°N 35.02°E	15:05 ± 15 min	Unknown	Unknown	A high-end F1 tornado caused major damage to structures in the village of Ol'govka. Numerous residential buildings were damaged, most of which were poorly-built homes.[1][8][9][10]
F2/T5	L'gov, Prigorodnaya Slobodka	Kursk Oblast	Russia	51.69°N 35.30°E	15:30 ± 30 min	Unknown	Unknown	Over 200 structures were damaged or destroyed as a result of this strong wedge tornado. Many residential structures had roofs torn off, and some sustained collapse of their exterior walls, but most of these structures were poorly built homes. Numerous trees were downed, and high-voltage power lines were also damaged or destroyed.[1][11][12][13][14][15][16]

F1	Kursk	Kursk Oblast	Russia	51.67°N 36.08°E	17:00 ± 30 min	Unknown	Unknown	2 deaths — This high-end F1 tornado impacted an automotive technical college in the city, causing significant damage as the roof of a dormitory building was torn off. Other buildings suffered roof damage, cars were damaged by flying debris and falling trees, and streets were left strewn with debris. A student was killed after being struck in the abdomen by a piece of roof, which entered through a nearby window. The student was reportedly filming the tornado during that time. Another victim was found under a downed tree near the college.[1][17][18][19][20][21]
September 19								
F2	Svecha	Kirov Oblast	Russia	58.28°N 47.33°E	14:20 ± 15 min	Unknown	200 m (220 yd)	A strong tornado occurred in a forest, flattening a swath of trees. Large branches were broken, large trees were snapped or uprooted, and roads were left closed and impassible.[1][22][23][24][25][26][27]

Possible tornadoes

Around 13:00 ± 30 minutes UTC on September 18, severe wind damage occurred in the town of Sulimy and minutes later in the town of Konovaly, Ukraine. Power lines were damaged or destroyed, the roofs of 25 homes were damaged or destroyed, and trees sustained damage or were snapped or uprooted. The European Severe Storms Laboratory (ESSL) noted these events may have been tornadoes. As such, both were given a rating of F1 on the Fujita scale. However, a tornado was not confirmed in either event.[1][28]

Just over an hour later, around 14:20 ± 30 minutes UTC, at least 13 households (6 in particular) were damaged in Tyazhino, Kursk, Russia after the passage of a thunderstorm. The structures suffered mostly damage to roofs with a few roofs being completely destroyed. The European Severe Storms Laboratory noted this event may have been a tornado. As such, it was given a rating of at least F1/T3, however a tornado was not confirmed with this event.[1][29][30]

Around 15:15 ± 5 minutes UTC on September 19, wind damage to roofs in particular, was reported in Khokhlovshchina, Kirov, Russia, after the passage of a thunderstorm. The European Severe Storms Laboratory noted this event may have been a tornado. As such, ESSL gave a rating of F1 to the damage, however, a tornado was not confirmed with this event.[1][31]

See also

- Weather of 2022
- Tornadoes of 2022
- 1984 Soviet Union tornado outbreak
- 2009 Krasnozavodsk tornado
- 1904 Moscow tornado
- List of European tornadoes and tornado outbreaks

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- Tornado Outbreak Hits Ukraine & Russia - Sept. 18/19, 2022 смерч торнадо (https://www.youtube.com/watch?v=j59p963OZQ0)

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