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Ukraine: Widespread Use of Cluster Munitions

Government Responsible for Cluster Attacks on Donetsk
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(Berlin) – Ukrainian government forces used cluster munitions in populated areas in Donetsk city in early October 2014, Human Rights Watch said today. The use of cluster munitions in populated areas violates the laws of war due to the indiscriminate nature of the weapon and may amount to war crimes.

During a week-long investigation in eastern Ukraine, Human Rights Watch documented widespread use of cluster munitions in fighting between government forces and pro-Russian rebels in more than a dozen urban and rural locations. While it was not possible to conclusively determine responsibility for many of the attacks, the evidence points to Ukrainian government forces' responsibility for several cluster munition attacks on Donetsk. An employee of the International Committee of the Red Cross (ICRC) was killed on October 2 in an attack on Donetsk that included use of cluster munition rockets.

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“It is shocking to see a weapon that most countries have banned used so extensively in eastern Ukraine,” said Mark Hiznay, senior arms researcher at Human Rights Watch. “Ukrainian authorities should make an immediate commitment not to use cluster munitions and join the treaty to ban them.”

Cluster munitions contain dozens or hundreds of smaller munitions, called submunitions, in a container such as a rocket or a bomb. After launch, the container opens up dispersing the submunitions which are designed to explode when they hit the ground. The submunitions are spread indiscriminately over a wide area, often the size of a football field, putting anyone in the area at the time of attack, whether combatants or civilians, at risk of death or injury. In addition, many of the submunitions do not explode on contact, but remain armed, becoming de facto landmines. Any location contaminated with dud submunitions remains hazardous until cleared by deminers.

To date, 114 countries have joined the treaty that comprehensively bans cluster munitions because of the danger they pose to civilians. Ukraine has not joined the treaty.

There is particularly strong evidence that Ukrainian government forces were responsible for several cluster munition attacks on central Donetsk in early October, Human Rights Watch said. In addition to evidence at the impact site indicating that the cluster munitions came from the direction of government-controlled areas southwest of Donetsk, witnesses in that area said that they observed rockets being launched toward Donetsk on the times and days when cluster munitions struck the city. A *New York Times* journalist tracked down several rockets in that area, which appeared to have malfunctioned and fallen to the ground shortly after they were launched, clearly establishing the flight path of the rockets.

In the 12 incidents documented by Human Rights Watch, cluster munitions killed at least 6 people and injured dozens. The real casualty number from use of cluster munitions in the conflict is probably higher, Human Rights Watch said, since it has not investigated all allegations of cluster munition use. Also, in some cases, it was not possible to determine what weapon caused the death or injury because several types of explosive weapons were used at the same time in the same area.

Human Rights Watch identified the cluster munitions by the distinctive crater and fragmentation pattern that submunitions create when they explode, by remnants of the submunitions found at the impact sites, and by remnants of the rockets found in the vicinity. Several of these remnants included markings that allowed for positive identification of the weapon.

Human Rights Watch found evidence of surface-fired 220mm Uragan (Hurricane) and 300mm Smerch (Tornado) cluster munition rockets. Human Rights Watch researchers observed and photographed the remnants of the cargo sections of 16 Uragan and 6 Smerch cluster munition rockets. Altogether, these 22 rockets would have contained 912 individual fragmentation submunitions. The total number of cluster munition rockets used so far in the conflict is unknown.

The government of Ukraine has neither confirmed nor denied using cluster munitions in eastern Ukraine. It has not responded to a letter sent by the Cluster Munition Coalition in July or a letter sent by Human Rights Watch on October 13.

Ukrainian forces should immediately make a commitment to not use cluster munitions and to investigate and hold accountable any personnel responsible for firing cluster munitions into populated areas. Ukraine

should accede to the treaty banning their use, Human Rights Watch said.

While not conclusive, circumstances indicate that anti-government forces might also have been responsible for the use of cluster munitions, Human Rights Watch said.

Human Rights Watch also called on Russia to make an immediate commitment to not use cluster munitions and to accede to the cluster munitions treaty.

“Firing cluster munitions into populated areas is utterly irresponsible and those who ordered such attacks should be held to account,” Hiznay said. “The best way for the Ukrainian authorities to demonstrate a commitment to protect civilians would be an immediate promise to stop using cluster munitions.”

Documented Cluster Munition Use

Donetsk

At least five Uragan cluster munition rockets containing submunitions struck central Donetsk in early October 2014, based on evidence Human Rights Watch gathered. The evidence overwhelmingly indicates that these rockets were fired from government-held areas near the village of Novomykhailivka, southwest of Donetsk.

At the time of the attacks rebel forces were in control of Donetsk, and government and rebel forces were officially observing a truce agreed on September 5. Nevertheless active fighting continued around the airport, approximately 6 kilometers from the cluster munition impact sites. Rebel forces were also present around various government institutions in Donetsk, and all the cluster munition attacks in Donetsk took place within one kilometer of a government institution apparently in use by rebels. Rebel fighters on guard did not allow Human Rights Watch to enter the zone around the institution building. Human Rights Watch observed a vehicle with a twin-barreled anti-aircraft cannon mounted on the back in the zone around the institution but has no evidence as to whether rebel forces were ever firing from this location.

Rebel forces, as any party to a conflict, are required by the laws of war to take all feasible precautions to avoid deploying in densely populated areas. This does not however change the indiscriminate, and unlawful, nature of the use of cluster munitions in populated areas. Violations of the laws of war by one party to the conflict do not justify violations by the other party.

Shortly after 5 p.m. on October 2, submunitions hit three areas southwest of Universitetskaya street in central Donetsk. The location of the submunitions in three separate areas indicates that they came from three different rockets. Human Rights Watch previously documented that rebel fighters were using a nearby dormitory, but did not determine whether this was still the case at the time of the attack.

One payload of submunitions struck the roof and surrounding area of a supermarket at 80A Unversitetskaya street. Human Rights Watch identified 15 impact sites on the supermarket roof and 9

impact sites adjacent to the supermarket. A larger crater on the northern corner of the supermarket was probably caused by a piece of the weapon such as the rocket motor.

Thirty-eight-year-old Laurent DuPasquier, a Swiss employee with the International Committee of the Red Cross who was standing outside the organization's office in the same building complex as the supermarket, was killed during the attack in which cluster munition rockets were used. An investigation has reached no final determination as to the exact causes of his death. Human Rights Watch documented the presence of two craters, about three meters apart, in front of the ICRC office, which appeared consistent with cluster submunition explosions. DuPasquier's body was found between the two craters. Human Rights Watch also found pre-formed fragments of a 9N210 submunition and a piece of the ring that attaches the stabilization fins to the submunition about 20 meters from the ICRC office.

At about the same time as submunitions hit the supermarket, submunitions from a second Uragan cluster munition rocket struck a paved road just southeast of the building at 94 Universitetskaya street. Human Rights Watch documented one large crater at the site and about a dozen craters nearby. The proximity of the craters indicates that the munition had malfunctioned, opening up the cargo section of the rocket later than normal and therefore spreading the submunitions over a much smaller area than normal. A *New York Times* journalist who examined the area the day following the attack photographed an unexploded submunition and numerous remnants of submunitions, including the characteristic black plastic liner that holds the 2-gram pre-formed fragments inside the 9N210 submunition.

Submunitions from a third rocket hit on and around the building at 100B Universitetskaya street. Human Rights Watch documented at least three submunition impact craters close to the building and discovered the cargo section of an Uragan cluster munition rocket, the part of the rocket that holds the submunitions before they are dispersed, lodged into the ground among bushes close to the southeastern side of the building. Local residents said that many of the submunitions had hit the roof, but Human Rights Watch was not able to access it.

Submunition impact craters close to buildings in the three sites make it unlikely that the cluster munition came from the west, north, or east. The large crater in the second location indicated that the rocket had come from the southwest. This is the only direction consistent with all the impact craters, and therefore points to use by Ukrainian forces.

Two witnesses corroborated that the October 2 cluster munition rockets were fired at Donetsk from the southwest. A local resident who was driving through the village of Novomykhailivka in the late afternoon of October 2 said that he saw several rockets fired from south of the village. Shortly afterward, he said, his wife called him from the city saying that rockets had hit central Donetsk.

A local resident in Solodke, a village southwest of Novomykhailivka, told Human Rights Watch that she saw rockets fired from a position northwest of Solodke. From their different vantage points the two

witnesses appeared to describe the same launching position inside an area under the control of Ukrainian government forces.

Also on October 2, submunitions from another Uragan cluster munition rocket struck the building of the Mountain Rescue Service, at 157 Artem street in Donetsk. Human Rights Watch inspected remnants of the rocket outside the building, including one with the markings for an Uragan cluster munition rocket that delivers 9N210 submunitions, as well as several impact craters of submunitions. A part of the rocket penetrated the roof, lodging in the floor in a third-floor office.

In the morning of October 5, at least two Uragan cluster munition rockets struck the fifth subdistrict of the Kyivskiy district in central Donetsk.

Submunitions from one rocket struck the intersection between Raduzhnaya street and Zvyagil'skogo street.

Human Rights Watch documented 11 submunition impact craters on Zvyagil'skogo street and fragment patterns on nearby fences consistent with the use of Uragan cluster munition rockets. Human Rights Watch also found remnants of submunitions at the site.

The attack injured a 37-year-old man who was working in his backyard. He is still recovering from his injuries in a hospital. He told Human Rights Watch:

At first I did not even realize what happened. I heard a loud bang, my ears were blocked. I felt a jolt in the back, and was thrown forward two or three meters. I was covered with dust and earth. It was like a wave. When my hearing recovered, I began to rise slowly. And then I felt something sticky running down my back and leg. I realized that it was blood.

At the hospital, doctors discovered fragments in his leg, back, and hand. One fragment penetrated his lung. He showed Human Rights Watch an X-ray showing three identical fragments in his chest and shoulder. Human Rights Watch identified the fragments as the 2-gram pre-formed fragments of a 9N210 submunition, which are only delivered by Uragan cluster munition rockets.

A second cluster munition struck the residential area between Parkivska street and Kosiora street, about 500 meters west of the first impact site. Human Rights Watch identified several impact craters and local residents showed Human Rights Watch submunition remnants they had found after the attack. At least one civilian was injured in his leg by a fragment.

At the same time as those two attacks, there was an attack nearby on Kalmana street, setting at least two houses on fire. Human Rights Watch was not able to conclusively determine that this attack was with cluster munition rockets.

A video of a rocket remnant lodged in the ground near 22 Kosiora street indicates that the cluster munitions were fired from the southwest. Supporting this finding, a local resident in Novomykhailivka,

southwest of Donetsk, told a *New York Times* journalist that he had seen rockets launched from a position south of village in the morning of October 5.

A *New York Times* journalist tracked down a location south of Novomykhailivka where residents had discovered rocket remnants in a field. During a visit to the field, Human Rights Watch researchers and the journalist discovered the remnants of three Uragan cluster munition rockets and one Smerch rocket that had apparently malfunctioned shortly after launch. Two of the Uragan rockets still contained their payload of 9N210 submunitions. The presence of these misfired cluster munition rockets clearly establishes the flight path of the attack, confirming that the rockets were fired from a government-held area south of Novomykhailivka.

Starobesheve

On the morning on August 24, cluster munitions struck Starobesheve, a town about 35 kilometers southeast of Donetsk. At the time of the attack government forces appeared to be in control of most of the town. Employees at the town hospital, which received the injured, said that the attack had killed 3 civilians and injured 17.

Among those killed was 80-year-old Raisa Lefterova. Her husband told Human Rights Watch:

In the morning, Raisa went to the store and then the bomb fell. The bomb exploded and shattered the window. And she was standing next to the window. The fragments broke the window, which cut her carotid artery. People shouted: “Uncle Vanya! Uncle Vanya! Aunt Raya was killed!” I was thinking – that’s not possible because she was resting at home. But it turned out she went there. And was killed.

Another local resident, Ivan Borlov, who was injured in the attack, said:

There was a rumbling sound. And then the bombs began to fall down – boom, boom, boom. The wave of the bombs moved across my house. We found many of them around here, unexploded. They were stuck in the ground. There were some in my neighbor’s garden. One struck the roof of my neighbor’s house.

Human Rights Watch inspected submunition impact craters at the sites where Lefterova was killed and where Borlov was injured. Human Rights Watch also found remnants from the submunitions at both sites and the tail section of a Smerch rocket near the local administration building, establishing that it was a Smerch cluster munition that struck the town.

At the time of the August 24 attack, government and rebel forces were battling for control of the town, which had been controlled by Ukrainian government forces up to that point. One local resident told Human Rights Watch that rebel forces started pushing out the government forces on August 26 and 27.

The pro-Russian rebels announced on August 26, two days after the cluster munitions attack, that they had established control of the town.

The rocket tail section stuck in the ground in front of the local administration building shows that the rocket came from the southeast. With a maximum range of 70 kilometers and the Ukraine-Russia border 30 kilometers away, the cluster munitions could have been fired from Ukrainian territory southeast of Starobesheve, which was controlled by Ukrainian government forces at the time, or from Russian territory. The press center for the Ukrainian authorities' counterterrorist operation claimed at the time that the cluster munitions had been fired from Russian territory. Human Rights Watch was not able to conclusively attribute responsibility for this attack.

At a rebel base in the town, Human Rights Watch observed seven unexploded 9N235 submunitions, the cargo section of an Uragan cluster munition rocket rocket with all the submunitions still inside, and the cargo section from another Uragan cluster munition rocket. Rebel fighters told Human Rights Watch that they had destroyed three Uragan rockets with submunitions still inside on the day Human Rights Watch visited, indicating that there had been numerous attacks with Uragan rockets in the area. "The fields are full of these weapons," one local resident said. "It is making it impossible for farmers to do their work."

Human Rights Watch was not able to establish who had fired the Uragan rockets and submunitions collected by the rebels or when they had been fired.

Makiivka

A local first responder in Makiivka, a rebel-controlled town bordering Donetsk to the east, told Human Rights Watch that they had found remnants of submunitions and rockets in at least three places.

He said that cluster munitions had killed two people on August 19 and 20 near a train station in the town and that they had found submunitions remnants there. A second cluster munition attack took place near a rebel checkpoint northeast of the town, suggesting a government attack. Human Rights Watch observed the cargo section of an Uragan cluster munition rocket at the checkpoint.

The third cluster munition attack in Makiivka took place in the village of Khanzhenkovo, which was also controlled by rebel forces at the time of the attack. Human Rights Watch visited the village and confirmed that it had been struck by cluster munitions. Local residents showed Human Rights Watch remnants of submunitions collected from the site.

Ilovaisk

Human Rights Watch documented the use of cluster munitions outside of Hruzka-Lomivka, a small village outside of Ilovaisk. The tail sections of three Uragan rockets were lodged in the ground by a road approximately two kilometers northwest of the village.

Human Rights Watch also accompanied a demining team to a field west of Ilovaisk where they destroyed an unexploded submunition that had been found by a local resident.

A *New York Times* journalist showed Human Rights Watch a photo of the tail section of a Smerch rocket lodged in a shed on the northwestern edge of Ilovaisk. Local residents said that the rocket had struck in the period between August 25 and 29, when rebel forces were wresting control of the city from government forces. The angle of the tail section indicated that it came from the northeast.

Novosvitlivka, Luhansk province

In Novosvitlivka, a village in Luhansk province south of Luhansk city, Human Rights Watch documented the use of at least six Smerch rockets and two unidentified cluster munition rockets.

Ukrainian forces entered the village on August 13, but were forced to retreat around August 28. The village suffered extensive damage from the fighting and more than 100 people from the village were killed in the fighting, according to medical personnel at the local hospital.

An employee at the agricultural college in Novosvitlivka said a cluster munition rocket struck behind the college in the morning around August 8-10. No students were there because of the summer vacation so nobody was injured. Human Rights Watch documented dozens of submunition impact craters in the ground and found multiple remnants from submunitions. Human Rights Watch also found and marked an unexploded submunition in the grass behind the college buildings.

In the village, Human Rights Watch found a cargo section from an Uragan cluster munition rocket and multiple submunition impact craters, as well as a stabilization fin from a submunition. The apparent angle of impact of both the Uragan rocket cargo section and two of the submunition impact craters indicate that the attack originated from the northwest.

Human Rights Watch documented remnants of at least six Smerch rockets that had landed in a field southeast of Novosvitlivka. Two unexploded 9N235 submunitions were nearby. The tail sections stuck in the ground showed that the rockets had come from the northwest, but Human Rights Watch was not able to determine who fired the rockets because both government and rebel forces were within the minimum and maximum range of the rockets.

Methodology

At each location suspected to have been attacked with cluster munition rockets, Human Rights Watch researchers conducted a detailed surface search of the impacted area. Researchers located remnants of the weapons, collected remnants of submunitions, and interviewed numerous residents including those present at the time of attack. A journalist from Vice News accompanied Human Rights Watch to several sites in Ilovaisk and Starobesheve and her assistance contributed to the findings from these places. Researchers also took directional readings with a compass where they found intact remnants of the weapon to determine the apparent direction from which the attack originated. Researchers took photographs and made video recordings at each site, especially of the individual submunition impact points. They also took GPS coordinates at each strike location.

At each submunition impact point, there is a distinctive small crater and “splatter” pattern in the ground where the submunition detonated – this pattern is quite distinctive on asphalt surfaces where many of the impact points were found. There is also a discernible fragment impact pattern on surfaces like metal doors, trees, and walls that are perpendicular to the detonation of the submunition.

At nearly all of the locations examined where submunitions impacted and detonated, Human Rights Watch researchers collected submunition debris such as the rectangular black stabilization fins, the metal parts of ring that attach these fins to the submunition body, and the metal pre-formed fragments (including .5 gram, 2 gram, and 4.5 gram fragments), either in the ground at the point of detonation or on surfaces perpendicular to the impact location. Researchers also collected two pieces of the black plastic fragmentation liner, both with pre-formed 2.0 gram fragments still suspended in it, and an intact metal ring that is present where the impact fuze and submunition body meet. The only way to distinguish between the impact of an 9N210 and an 9N235 submunition is by the size of the pre-formed fragments, as all other components are common to both.

Technical Background

Both the Uragan and Smerch rockets are “designed to engage manpower and soft-skinned materiel in concentration areas,” according to its manufacturer, Splav SPRA, based in Tula, Russia. The Uragan rocket delivers 9N210 and 9N235 submunitions to a minimum range of 10 kilometers and a maximum range of 35 kilometers; the Smerch rocket delivers 9N235 submunitions to a minimum range of 20 kilometers and a maximum range of 70 kilometers, according to its manufacturer.

The 9N210 and 9N235 submunitions contained in these rockets are identical in size, shape, and color. Each submunition has six rectangular black metal pop-up stabilization fins at the end opposite its impact fuze.

The 9N210 submunition is only delivered by the 9M27K Uragan cluster munition rocket and contains 370 cylindrical pre-formed metal fragments each weighing 2 grams. These fragments are suspended in a matrix of a thick black plastic material that lines the inside of the cylindrical body of the submunition and are dispersed in all directions upon impact and detonation. A total of 30 9N210 submunitions are in each 9M27K rocket and they are designed to self-destruct after one minute after being ejected from the rocket.

The 9N235 submunition, delivered by a variant of Uragan and all Smerch cluster munition rockets, contains 95 pre-formed metal fragments, each weighing 4.5 grams, and 300 fragments each weighing .5 grams. These fragments are contained in a similar black plastic liner as that of the 9N210 submunition. A total of 30 9N235 submunitions are delivered by a 9M27K1 Uragan rocket, and 72 9N235 submunitions are contained in 9M55K Smerch rockets. The 9N235 submunition is designed to self-destruct two minutes after being ejected from the rocket.

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- Ukraine

Topic

- Arms
- Cluster Munitions

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