



Contamination in Eastern UKRAINE

Observations by OSCE SMM

by Edward Crowther [OSCE]

ICRC-installed sign warning of amphibious mines in the Azov Sea, Donetsk region.
Image courtesy of OSCE/Edward Crowther.

Since fighting began in 2014, significant areas of the Donetsk and Luhansk regions in eastern Ukraine have been contaminated by landmines and unexploded ordnance (UXO). This article will briefly cover the origin of the OSCE Special Monitoring Mission to Ukraine (SMM) and its mandate, before turning to the types of contamination observed by the SMM in eastern Ukraine. On 21 March 2014, the 57 participating States of the Organization for Security and Co-operation in Europe (OSCE) made a consensus decision to deploy the SMM, and the SMM's mandate has been extended each year since. The SMM establishes facts and reports on the security situation across Ukraine, monitors and supports respect for human rights and fundamental freedoms, and facilitates dialogue.

The SMM has around 600 unarmed civilian monitors in eastern Ukraine who patrol accessible areas in the Donetsk and Luhansk regions. The presence of explosive remnants of war (ERW) forms a major impediment to the SMM's freedom of movement across these regions, a fact tragically highlighted by a fatal incident on 23 April 2017 near Pryshyb, after which the SMM's patrols have been limited to asphalt and concrete surfaces only.¹

In terms of mine action, in signing the Minsk memorandum in September 2014, the sides have already agreed to remove all mines and not to install or lay mines in the security zone.² There is an urgent need to clear contaminated residential areas, and items of ERW pose a serious danger to civilians crossing the area between the forward positions of the Ukrainian Armed Forces and those of the armed formations.³



An unexploded PG-7L grenade lies by the side of the road in the area separating the armed parties. The bottles were placed there by locals to alert drivers to the presence of the UXO as emergency services are not able to operate in the zone, 7 March 2017.
Photo courtesy of OSCE/Edward Crowther.



TM-62P3 mine, Donetsk region.
Image courtesy of OSCE/Edward Crowther.



TM-83 off-route mine, Donetsk region.
Image courtesy of OSCE/Jacek Hajdukiewicz.

Lack of Information

One of the key problems from a mine action perspective is the lack of comprehensive non-technical surveys (NTS) in the Donetsk and Luhansk regions, owing—among other factors—to a lack of access to large areas of the **contact line** as the conflict remains active.^{4,5} Many important NTS have been done, in particular in government-controlled areas, but the international and government organizations that undertake surveys are mostly unable to work in the contact line area for obvious reasons, and no known form of NTS has been undertaken in the non-government-controlled areas.

This lack of information is a key impediment to the SMM, as it undertakes its work in the Donetsk and Luhansk regions and directly affects the safety of SMM patrol teams. For this reason, as well as overall monitoring of commitment to the Minsk memorandum, the SMM—while not a mine action organization—takes a keen interest in the presence of ERW, reporting on these in its daily reports. This information comes not just from SMM patrol teams on the ground—which have unique access to many areas on both sides of the contact line—but also via the use of unmanned aerial vehicles (UAV), which help the SMM to overcome some of the freedom of movement restrictions imposed by the presence of ERW.

Anti-tank and Anti-vehicle mines (ATM/AVM).⁶ By far, AVMs comprise the most prevalent type of mine contamination observed in the Donetsk and Luhansk regions. The most common AVM type is the TM-62M, with the plastic-bodied TM-62P3 also being observed in fewer numbers. An unusual feature of the mine contamination

observed by the OSCE SMM, compared to comparable minefields in other contemporary conflicts, is the prevalence of surface-laid AVM minefields. These range from small minefields across tarmac roads that comprise only a few mines to surface-laid minefields across large open fields. An SMM UAV recently identified a surface-laid linear minefield, most probably laid by a mechanical minelayer, which was 2.7 km (1.7 mi) in length and contained an estimated 900 AVM.⁷

The TM-83 off-route AVM has also been observed in small numbers in the Donetsk region, seen for the first time by the SMM in 2019.⁸ Additionally, parts of the coast in the Donetsk region are known to be contaminated by PDM-1M amphibious mines. SMM monitors observed some of this mine laying taking place, and the same event was widely reported in open source media.⁹

Anti-personnel mines (APM). Prior to the start of hostilities, the government of Ukraine had declared that no APM were emplaced on Ukrainian territory. With the subsequent emplacement of such mines, Ukraine in 2018 requested an extension of its deadline under the *Anti-Personnel Mine Ban Convention* (APMBC) to remove them. The Meeting of States Parties to the APMBC granted the extension, until 1 June 2021, at its 17th meeting in November 2018.¹⁰ The SMM has observed a number of APM types across the Donetsk and Luhansk regions.

The OZM-72 bounding APM have been observed across the conflict area, and has been reported on by the SMM on numerous occasions.¹¹ Other AP mine types observed include the MON-series directional APM and the POM-2 APM.¹² The SMM has also observed



POM-2 APM in close proximity to the Donetsk water filtration station, Donetsk region.
Image courtesy of OSCE/Edward Crowther.

other evidence of APM use, such as the presence of the plastic cruciform-shaped tripwire launchers from POM-2 APMs scattered across tarmac roads in close proximity to the Donetsk water filtration station. OSCE monitors have been present during the demolition of PMN-2 APMs by the Ukrainian Armed Forces.^{13,14}

Unexploded ordnance (UXO). The SMM has observed and reported on thousands of items of UXO on both sides of the line of contact. These range from small-arms ammunition all the way up to unexploded 300 mm Multiple Launch Rocket System (MLRS) rockets. An exhaustive list of all types of explosive hazards is beyond the scope of this article.

Explosive ordnance disposal (EOD) teams conduct spot tasks on both sides of the contact line, and the SMM has enjoyed some success in reporting items of UXO to the respective sides and advocating for their removal.¹⁵ However, an area of difficulty is the area between the forward positions of the Ukrainian Armed Forces and those of the armed formations, where neither side is able or willing to risk their personnel in clearing items of ERW left behind by shooting.^{2,3}


On several occasions, the SMM has observed items of ERW lying at the entry-exit checkpoints between the two sides.² These entry-exit checkpoints are already dangerous places for civilians, who are exposed to long queues in areas that lack adequate shelter, water, or proper sanitary resources, and who sometimes come under fire. The presence of ERW in close proximity, sometimes only a few meters away from queueing pedestrians or vehicles, only adds to these risks.

As an example, a PG-7L round was observed on 7 March 2017, lying on the H15 highway in the area between the forward positions of the Ukrainian Armed Forces and those of the armed formations.^{3,16} This entry-exit checkpoint is one of the busiest and is used by thousands of civilians a day. Owing to the lack of EOD capacity able to work in the area between the forward positions, the round remained

on the highway for several days, indicated with informal marking, before disappearing, probably removed by a civilian.

Another issue of particular note is the presence of high-explosive bullets across the conflict area. The 12.7 mm MDZ **snap action incendiary round** has a small, high-explosive charge. A number of civilian casualties have been attributed to this round, with some occurring to young children who have picked them up. Painted bright red, they are often mistaken for standard incendiary rounds, and people are usually unaware of the dangers associated with them.

Conclusion

The lack of information on the mine contamination situation in the Donetsk and Luhansk regions of Ukraine remains one of the key dangers to civilians in eastern Ukraine, as well as being one of the main impediments to the SMM's freedom of movement in the area. Forwarding information about facts on the ground, including the risks posed to civilians by ERW, is one way that the SMM makes a contribution toward a safer, more secure environment for civilians. 

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