

ARTICLE 5 DEADLINE: 1 DECEMBER 2023
EXTENSION REQUESTED TO 1 DECEMBER 2023

KEY DATA

ANTI-PERSONNEL (AP) MINE CONTAMINATION: UNKNOWN, BUT MASSIVE

AP MINE CLEARANCE IN 2022

0.17 km²

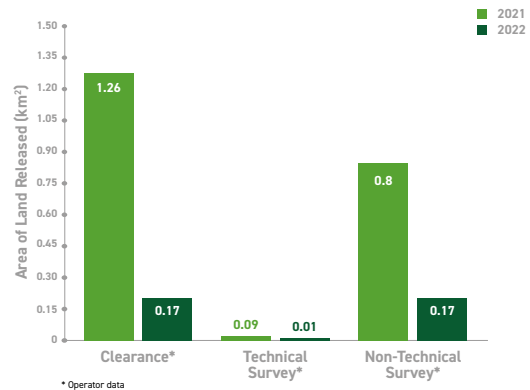
(OPERATOR DATA)

AP MINES DESTROYED IN 2022

59

(ALL DESTROYED DURING SPOT TASKS, OPERATOR DATA)

LAND RELEASE OUTPUT



CURRENT LIKELIHOOD OF MEETING 2025 CLEARANCE TARGET (as per the Oslo Action Plan commitment): NONE

KEY DEVELOPMENTS

From the outset of its attack against Ukraine that began in late February 2022, Russia's armed forces have extensively used anti-personnel (AP) mines on Ukrainian territory. At least 13 different types of AP mines have been used by Russia since the beginning of its attack, including a recently developed variant with a sensor fuze that is exceedingly difficult to clear safely. Russian forces have also emplaced mines of an improvised nature as they have retreated from their early positions in the war.

In serious violation of its obligations to the Anti-Personnel Mine Ban Convention (APMBC), Ukraine used AP mines in 2022 in the city of Izium while it was under Russian control. Ukraine did not directly refute the allegations use of AP mines. Both Russian and Ukrainian forces have also used at least 13 types of anti-vehicle mines. The Ukrainian authorities have been clearing some contamination soon after use, and by the end of 2022, had disposed of several thousand items of explosive ordnance, including landmines.

Ukraine's National Mine Action Authority (NMAA) assumed its full responsibilities in 2022. The two national mine action centres, one operating under the Ministry of Defence (MoD) and other under the Ministry of Interior (MoI), became fully operational in 2022. New international operators started operations in 2022: DanChurchAid (DCA), Humanity & Inclusion (HI), Mines Advisory Group (MAG). Norwegian People's Aid (NPA) received its accreditation in 2023.

Ukraine was not on track to meet its extended APMBC Article 5 deadline of 1 December 2023 even before the renewed use of AP mines. In June 2023, Ukraine requested a new ten-year extension to its current APMBC Article 5 deadline. The new contamination and ongoing hostilities mean that Ukraine will face many years (or potentially decades) of clearance in order to fulfil its treaty obligations.

RECOMMENDATIONS FOR ACTION

- Ukraine should immediately halt the use of AP mines.
- Ukraine should investigate the use of AP mines by its armed forces and report back to the States Parties to the APMBC in all transparency.

- Ukraine should simplify its mine action coordination and management structures in order to allow an efficient and effective demining response.
- Ukraine should develop a mine action strategy in line with government and local authorities assessment and needs.
- Given the increasing number of mine action actors, organisations, and commercial companies, Ukraine should improve coordination of the work of the numerous operators.
- Ukraine should unknit its administrative processes and grant operators the permissions to use explosives in clearance and destruction operations as well as subsequent accreditation to conduct explosive ordnance disposal (EOD).
- Ukraine should continue exploring of the use of drones as means to increase the efficiency of non-technical survey (NTS), and to the extent possible, deploy them on areas suspected of contamination immediately after it regains control over its territories.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2022)	Score (2021)	Performance Commentary
UNDERSTANDING OF CONTAMINATION (20% of overall score)	5	4	The extent of AP mine contamination in Ukraine is not known but has certainly increased since the 2022 conflict. Ukraine estimates that approximately 174,000km ² of its territory needs to be surveyed for contamination. As at March 2023, about 50km ² of all of Ukraine's potentially contaminated territories had been identified as minefields or areas contaminated with explosive ordnance.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	6	6	Ukraine's NMAA assumed its full responsibilities in 2022. The two National Mine Action Centres under the MoD and MoI, respectively, were accredited and became fully operational in 2022. In 2023, an inter-ministerial Committee on Humanitarian Demining was established to oversee mine action. The exact roles and responsibilities of this committee are not yet fully understood, but it certainly adds to an already complex mine action structure.
GENDER AND DIVERSITY (10% of overall score)	2	2	Ukraine does not have a gender policy for mine action and does not report on whether gender and diversity is mainstreamed within its programmes. No reference was made to gender or diversity in Ukraine's Article 7 report covering 2022 and only limited reference in additional information provided in its 2023 Article 5 deadline extension request.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	5	5	Ukraine uses the International Management Systems for Mine Action (IMSMA) Core database. The database was previously housed in two separate services, one owned by the State Emergency Service of Ukraine (SESU) and the other by the MoD. In 2023, IMSMA became fully cloud-based, with access rights and permissions to different datasets granted according to the requirements of the national authorities partners. Despite extensive international support, Ukraine's reporting on contamination and land release continues to be of poor quality, lacking detail and not complying to the International Mine Action Standards (IMAS). For example, Ukraine's contamination and land release data are not disaggregated by type of hazardous area or contamination, or by land release method.
PLANNING AND TASKING (10% of overall score)	3	3	Ukraine does not have a national mine action strategy, nor are there standardised criteria at national level for task prioritisation. Ukraine's previous position, which saw the full cessation of hostilities as a prerequisite to the development of any strategy, appears to be shifting. The newly created Committee on Humanitarian Demining should prioritise the strategic direction for the mine action programme in Ukraine. It was planning to elaborate a mine action strategy by the end of 2023.
LAND RELEASE SYSTEM (20% of overall score)	5	5	National mine action standards (NMAAS) were published in 2019 but were not fully applied in practice. NMAAS revision was initiated in March 2023, with the scope to focus on land release, mechanical demining, terminology, mine detection dogs (MDDs), and quality management (QM) standards. International operators consider that the current NMAAS in Ukraine require further development before they can be considered to be fit for purpose.
LAND RELEASE OUTPUTS AND ARTICLE 5 COMPLIANCE (20% of overall score)	5	5	Ukraine will not meet its Article 5 deadline of 1 December 2023, and in March 2023, requested a ten-year extension. It is not known how much AP mined area is being cleared across the whole country as Ukraine does not exercise effective control over all the territory. The scale of AP mine contamination and extent of areas no longer under control of the Ukrainian government have increased significantly since February 2022. Based on operator data, 59 AP mines were destroyed in spot tasks in 2022, but none as a result of the clearance of AP mines.
Average Score	4.6	4.4	Overall Programme Performance: POOR

DEMINEING CAPACITY

MANAGEMENT CAPACITY

- National Mine Action Authority (NMAA)
- Humanitarian Demining Centre (HDC, under the State Emergency Services of Ukraine)
- Social-Humanitarian Response Centre (under the Ministry for Reintegration of the Temporarily Occupied Territories)
- Mine Action Centre (MAC, under MoD)
- Inter-agency Working Group on Humanitarian Demining
- State Special Transport Service (SSTS)
- Military Engineering School

NATIONAL OPERATORS

- Armed Forces of Ukraine
- Centre for Humanitarian Demining of the Subsidiary Enterprise of the State Company Ukrspецexport
- Demining Solutions
- Department of Maritime Safety
- GK Group
- Modren Village and City Charitable Foundation
- National Police
- Nibulon LLC
- Patron Demining (registered as an NGO and a company)
- Safe Path Group
- SC "Ukroboronservice" (UOS)
- SSTS
- State Border Service

- State Emergency Services of Ukraine (SESU)
- The Association of Sappers of Ukraine
- The Demining Team of Ukraine
- Ukrainian Deminers Association (UDA)

INTERNATIONAL OPERATORS

- DanChurchAid (DCA) – seeking accreditation
- Danish Refugee Council Humanitarian Disarmament and Peacebuilding sector (DRC)
- FSD
- The HALO Trust (HALO)
- Humanity & Inclusion (HI) – seeking accreditation
- Mines Advisory Group (MAG) accredited for risk education and non-technical survey (NTS) in 2023
- Norwegian People's Aid (NPA) accredited for risk education, NTS, technical survey, manual clearance, and battle area clearance (BAC) in 2023

OTHER ACTORS

- ITF Enhancing Human Security (ITF)
- Geneva International Centre for Humanitarian Demining (GICHD)
- Organization for Security and Co-operation in Europe (OSCE)
- United Nations Development Programme (UNDP)
- Tetra Tech

UNDERSTANDING OF AP MINE CONTAMINATION

The extent of AP mined area in Ukraine is not known, but is certainly massive due to the widespread use of AP mines in the course of the Russian military assault on Ukraine. In April 2022, Ukraine's government said that its teams were removing thousands of explosive devices a day across the country, including from homes and businesses, and especially in the countryside.¹ Since the beginning of 2022 and as at May 2023, Ukraine reported removal of 529,367 explosive devices, including AP and anti-vehicle (AV) mines, clearing 856km² of land, and handing over 0.4km² of cleared land to the local communities.²

Humanitarian organisations and media outlets indicate that Russian forces have scattered mines in a haphazard and disorganized fashion across civilian areas.³ According to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), mine contamination is particularly concerning in the agricultural regions of Kharkiv, Kherson, and Mykolaiv where dozens of mine-related accidents are being reported every month, putting farmers trying to return to their

farms and humanitarian personnel delivering assistance at particular risk.⁴

The government of Ukraine has announced plans to return over 4,700km² of productive land into use within the next four years, and all potentially contaminated areas within 10 years. Meanwhile, many ordinary Ukrainians, pressed to regain their livelihoods, have no choice but to tackle the explosive devices by themselves. An independent International Commission of Inquiry on Ukraine has documented the removal of AP mines by civilians in Iziium city.⁵ Media sources are replete with examples of farmers using improvised methods to remove the explosives, including AP and AV mines. The techniques ranged from use of privately purchased metal detectors, agricultural tractors, manual defuzing with people's bare hands, and use of ropes to trigger tripwires. These are extremely risky undertakings made far more deadly due to the lack of laying patterns, and the widespread use of boobytraps and anti-lift devices by Russian forces.⁶

1 "Ukraine's efforts to remove booby traps left behind by Russian troops", *CBC News*, 21 April 2022, at: <https://bit.ly/3ckM1nS>.

2 2023 Article 5 deadline Extension Request, p. 1; and 2023 Article 5 deadline Extension Request, additional information (Annex 2), 1 September 2023, p. 3.

3 "Land mines create a deadly legacy for Ukraine and possibly beyond", *The Washington Post*, 12 April 2022, at: <https://wapo.st/3e2X9WP>.

4 Email from Jens Laerke (in response to media questions to OCHA), Deputy Spokesperson, OCHA, 26 May 2023.

5 Human Rights Council, Conference room paper on the Independent International Commission of Inquiry on Ukraine, UN doc. A/HRC/52/CRP.4, 29 August 2023, p. 49.

6 "'We couldn't wait': Ukrainian farmers improvise to clear their land of mines", *The Guardian*, 19 June 2023, at: <https://bit.ly/44IX13N>; Ukraine's Ministry of Agrarian Policy and Food website, 21 March 2023, at: <https://bit.ly/3r0lphu>; and "Clearing land mines by hand, farmers in Ukraine risk their lives for planting season", *CNN*, 27 March 2023, at: <https://bit.ly/3PURnrf>.

According to the Ministry of Reintegration of the Temporarily Occupied Territories of Ukraine, the number of victims of explosive devices as a result of the Russian invasion of Ukraine since February 2022 is 770, of whom 237 died and 533 were injured.⁷ In May 2023, The Office of the United Nations High Commissioner for Human Rights (OHCHR) reported that mines and explosive remnants of war (ERW) have killed or injured 263 persons during the first five months of 2023. That equates to more than 50 per month on average. OHCHR believes that the actual figures are considerably higher.⁸ This statistic is considerably lower than what was reported by Ukraine's Prime Minister, Denys Shmyhal, who said that explosive objects have killed 226 people in March 2023 alone and only in territories controlled by Ukraine.⁹ Ukraine reported 311 mine-related accidents affecting 489 people since Russia's invasion, of which, 165 were killed and 324 injured. Ukraine noted that the number of victims increases by the day.¹⁰

Ukraine claimed in several statements between March and July 2023 that about 30% of its territory should be surveyed for mine contamination or other explosive ordnance. This amounts to an area of nearly 174,000km². Despite the vast extent of contamination this figure is not credible. In its recent Article 5 deadline Extension Request, and following questions by the APMBC Committee on Article 5 Implementation, Ukraine detailed that about 50km² across 349 hazardous areas of all its potentially contaminated territories have been identified as contaminated with explosive objects, of which, 20.6km² across 192 hazardous areas were identified as minefields. Non-technical survey (NTS) of regained territories continues.¹¹ In April 2023, the State Emergency Services of Ukraine (SESU) told the media that it had found more than 55,000 explosives in Kharkiv region alone.¹²

Table 1: Explosive ordnance contamination in Ukraine (data at June 2023)¹³

Region	Hazardous areas	Area (m ²)	Mined areas	Area (m ²)	Former battle areas	Area (m ²)
Chernihiv	135	18,780,520	49	4,674,440	86	14,106,080
Kharkiv	49	5,915,613	32	4,423,439	17	1,492,173
Kherson	NTS not yet carried out					
Kyiv	127	20,932,413	92	10,501,741	35	10,430,672
Mykolaiv	24	4,019,322	8	514,855	16	350,446,673
Sumy	14	567,959	11	455,227	3	11,273,266
Totals	349	50,215,827	192	20,569,704	157	387,748,864

On 6 June 2023, an explosion destroyed the Nova Kakhovka dam in Kherson oblast in Southern Ukraine. The collapse of the 30-metre-high, 2km-long dam sent water cascading downstream along the Dnipro river, flooding vast areas of territory mostly in the Russian controlled areas to the south of the dam. The HALO Trust (HALO), which has been surveying and clearing mines along the Inhulets river, a tributary of the Dnipro, since the beginning of 2023, has been forced to suspend clearance work on seven flooded minefields. On 9 June 2023, HALO issued a press release urging civilians to remain extra vigilant of landmines. According to HALO, the torrent of water that swept through the lower Dnipro was powerful enough to dislodge landmines and, in some cases, caused 10Kg anti-vehicle mines to detonate. The mines were laid at the lowest points of the river

to prevent troops from crossing in vehicles while the area was under the Russian occupation. HALO had found around 5,000 mines in the eight weeks preceding the explosion in Mykolaiv, a city by the Dnipro river to the north-west of the dam, of which 464 mines were along the riverbank. HALO added that no exact numbers of displaced landmines can be known until the waters have subsided.¹⁴

A total of some 4km² of previously unrecorded AP mined area was discovered and added to the national database in Ukraine in 2022. Of this total, the Danish Refugee Council (DRC) identified 0.1km² across one suspected hazardous area (SHA) and two confirmed hazardous areas (CHAs),¹⁵ while HALO identified 3.92km² in 57 new hazardous areas. Some of the AP mines found by HALO were mines of an improvised nature, mainly F-1 and RGD-5 grenades installed on

⁷ 2023 Article 5 deadline Extension Request, July 2023, p. 4.

⁸ Email from Jens Laerke (in response to media questions to the OCHA Deputy Spokesperson), OCHA, 26 May 2023.

⁹ Human Rights Watch, "Landmine Use in Ukraine", Briefing Paper, 13 June 2023, p. 15, at: <https://bit.ly/44LDAaB>, citing "Statement by Prime Minister Denys Shmyhal at a Government session, Communications Department of the Secretariat of the Cabinet of Ministers of Ukraine, April 4, 2023".

¹⁰ Presentation of Ukraine to the APMBC Intersessional Meetings, Geneva, 19-21 June 2023, slide 3.

¹¹ Statement of Ukraine to the Eight Pledging Conference for the Implementation of the APMBC, 24 March 2023; US Department of State, "Demining Ukraine: A Pre-requisite for Recovery: Michael Tirre Remarks before the U.S. Helsinki Commission", 8 December 2022, at: <https://bit.ly/3KFdXzJ>; Human Rights Council, Conference room paper on the Independent International Commission of Inquiry on Ukraine, UN doc. A/HRC/52/CRP.4, 29 August 2023, p. 127; and 2023 Article 5 deadline Extension Request, pp. 1 and 2.

¹² "Ukraine war: The deadly landmines killing hundreds", *BBC News*, 19 April 2023, at: <https://bit.ly/3AusQjE>.

¹³ 2023 Article 5 deadline Extension Request, p. 2. In the additional information to the Extension Request (Annex 2) submitted on 1 September 2023, Ukraine stated that it had 140Km² (961 plots) of area suspected of contamination of mines and explosive ordnance.

¹⁴ HALO, "Kakhovka Dam: Floods Amplify Ukraine Mine Emergency", Press release, 8 June 2023 (updated on 21 June 2023), at: <https://bit.ly/3PM4Pxx>. See also: "Mines uprooted in Ukraine dam disaster could pose danger for years – Red Cross", *Reuters*, 8 June 2023, at: <https://bit.ly/3JQz969>.

¹⁵ Email from Roxana-Cristina Bobolicu, Head of Humanitarian Disarmament and Peacebuilding, DRC, 1 April 2023.

tripwire.¹⁶ All of the newly identified AP mine contamination in 2022 has occurred since the beginning of Russia's invasion of Ukraine.¹⁷

Prior to the 2022 conflict, the heaviest mine and ERW contamination was believed to be inside the buffer zone, which then separated the government-controlled areas from these controlled by the self-proclaimed Donetsk and Luhansk Republics.¹⁸ Ukraine has indicated that nationwide NTS and technical survey (TS) is only possible once its control has been fully restored over all sovereign territory.¹⁹

Ukraine is contaminated by AP mines as a result of the conflict which broke out in 2014 with the Russian-backed self-proclaimed Donetsk and Luhansk republics. The contamination has certainly surged since the Russian invasion of Ukraine that began in February 2022 due to the extensive and widespread use of AP mines by the Russian forces. The full nature and extent of contamination will remain unclear until an effective cessation of hostilities and a comprehensive survey has been completed. Prior to these conflicts, Ukraine was affected by residual contamination of mines and other ordnance, mostly as a result of heavy fighting between German and Soviet forces in the Second World War, but also from combat in the First World War. The MoD engineering units partially cleared affected areas in the mid-1970s, suggesting that a problem may remain, but the location and extent of any mine threat is not known.

Over the last few years, the Organisation for Security and Co-operation in Europe (OSCE)'s Special Monitoring Mission (SMM) in Ukraine has frequently reported on the use of both AP and AV mines.²⁰ A December 2017 report from OCHCR stated that: "The parties to the conflict continued the practice of placement of [improvised explosive devices] IEDs and AP mines in populated areas and near objects of civilian infrastructure."²¹ In 2018, the OHCHR called on all parties involved in hostilities to "cease the use of victim-activated devices".²²

At the APMBIC Intersessional Meetings in May 2019, Ukraine claimed that it had not used AP mines since it acceded to the Convention in June 2006, but accused Russia of having used AP mines in its territory since 2014. According to Ukraine, these mines have been emplaced by Russia-backed illegal armed groups in the Donetsk and Luhansk regions and it said that Russia has also laid mines on the administrative

border between Crimea and the rest of Ukraine.²³ The mines allegedly used by separatist groups include PMN-1, PMN-2, PMN-4, POM-2R, OZM-72, MES type mines, and MON-50 mines with tripwire.²⁴ In the past, Ukraine has reiterated that its armed forces are authorised to use MON-series and OZM-72 mines only in command-detonated mode (through electrical initiation), which is not prohibited under the APMBIC. According to Ukraine, all mines planted in command-detonated mode are recorded and secured, and access to the area is restricted.²⁵

The World Bank estimates that the complete set of humanitarian demining works will cost US\$37.4 billion. The needs for 2023 alone amount to more than US\$ 397 million according to Ukraine.²⁶

USE OF ANTI-PERSONNEL MINES

As at June 2023, Human Rights Watch has documented use of at least 13 types of AP mines since the 2022 assault on Ukraine. These are: MOB, MON-50, MON-90, MON-100, MON-200, OZM-72, PFM-1/PFM1-S, PMN-2, PMN-4, POM-2/POM-2R, and POM-3. The presence of AP mines was recorded in at least 11 of Ukraine's 24 regions (oblasts): Chernihiv, Dnipropetrovsk, Donetsk, Kharkiv, Kherson, Kyiv, Luhansk, Mykolaiv, Odesa, Sumy, and Zaporizhzhia. All manner of delivery methods have been documented: hand-emplaced, mechanically-laid, scattered by truck-mounted projectors, and remotely delivered by rockets.²⁷

Several new types of landmine have been used in hostilities for the first time in the ongoing armed conflict. These include the remotely delivered POM-3 AP mine, also known as the "medallion". The mine is typically aerially launched from a rocket, falling back to earth by parachute. It is equipped with a seismic proximity sensor that picks up approaching footsteps, and is said to be able to distinguish between humans and animals, making efforts to locate and destroy it far deadlier and more complicated. The POM-3 has self-destruct features that set the mine to explode after a certain period. Ukrainian deminers are using remote demining equipment to remove these mines, which is an expensive undertaking.²⁸

Amnesty International has reported that, between March and April 2022, Russian forces fired rockets to disperse PTM-1S scatterable mines on residential neighbourhoods in Kharkiv

16 Email from Denys Holovetskyi, Head of Operations, HALO, 29 May 2023.

17 Emails from Roxana-Cristina Bobolicu, DRC, 1 April 2023; and Denys Holovetskyi, HALO, 29 May 2023.

18 Email from Yuri Shahramanyan, Programme Manager, HALO Ukraine, 5 July 2018.

19 2020 Article 5 deadline Extension Request, Additional Information received on 27 August 2020, p. 98 (numbered page 3 in the document).

20 See: "Daily and spot reports from the Special Monitoring Mission to Ukraine", at: <http://bit.ly/2K4lFms>.

21 OHCHR, "Report on the human rights situation in Ukraine 16 August to 15 September 2017", December 2017, p. 5.

22 OHCHR, "Report on the human rights situation in Ukraine 16 February to 15 May 2018", June 2018, p. 29.

23 Statement of Ukraine, Committee on Article 5 implementation, Geneva, 22 May 2019.

24 Government of Ukraine, "Measures to ensure compliance", Geneva, 9 June 2017; Statement of Ukraine on Article 5, APMBIC Fifteenth Meeting of States Parties, Santiago, 29 November 2016; and Preliminary observations of the committee on cooperative compliance, "Ukraine", Intersessional Meetings, Geneva, 8-9 June 2017.

25 Committee on Cooperative Compliance, Preliminary observations on Ukraine, APMBIC Intersessional Meetings, Geneva, 8-9 June 2017.

26 Ukraine Government Portal, "The full range of humanitarian demining activities in Ukraine is estimated at USD 37.4 billion, says Denys Shmyhat", 4 April 2023, at: <https://bit.ly/44i8Q0s>.

27 Human Rights Watch, "Landmine Use in Ukraine", Briefing Paper, 13 June 2023, pp. 2, 3, 8, and 10.

28 Human Rights Watch, "Landmine Use in Ukraine", Report, 15 June 2022, at: <https://bit.ly/3P03Yss>, pp. 4, 7, and 8; "New Russian Land Mine Poses Special Risk in Ukraine", *The New York Times*, 6 April 2022, at: <https://nyti.ms/3TgF9bL>; and Presentation of Ukraine to the APMBIC Intersessional Meetings, Geneva, 19-21 June 2023, slide 4.

killing at least three civilians. This type of attack combines the attributes of cluster munitions and AP mines. Russian forces have also emplaced numerous victim-activated booby-traps as they retreated from positions they had taken, occupied, or fortified during the 2022 invasion. The booby-traps were constructed with various types of hand-grenades equipped with tripwires, including F-1, RGD-5, and RGN-type grenades.²⁹ According to Ukraine, Russian forces have laid booby-traps in residential areas, vehicles, critical infrastructures, and even food. Ukraine added that it found booby-traps in dead bodies, including those of children.³⁰ A considerable portion of the booby-traps are considered AP mines under the APMBC.

Human Rights Watch documented repeated use of AP mines by Ukrainian forces during the summer months of 2022 when Russia controlled the city of Izium and its environs. In August 2023, an Independent International Commission Inquiry on Ukraine stated it had seen photos of weapons found in Izium city indicating that PFM AP mines had been delivered by a 220-mm Uragan rockets with a range of 10–35Km, and that both Ukrainian and Russian armed forces were stationed within striking distance of Izium, but concluded it was likely that the PMF AP mines were used by Ukrainian armed forces.³¹ Use by a State Party is a serious violation of the APMBC. Ukrainian forces fired numerous 9M27K3 mine-laying rockets carrying PFM AP blast mines into at least nine different Russian-occupied areas or near Russian

military facilities in and around Izium city. Researchers verified 11 civilian casualties from these mines. The Ukrainian Prime Minister, Oleksandr Polishchuk, responded to Human Rights Watch questions saying that Ukrainian authorities cannot comment on the types of weapons used during the armed conflict "before the end of the war and the restoration of [Ukraine's] sovereignty and territorial integrity".³²

In February 2023, the President of the APMBC Twentieth Meeting of States Parties issued a statement condemning the use of AP mines "anywhere, at any time, and by any actor", and requested clarification of the allegations of AP mines use by the Ukrainian government.³³ At the subsequent intersessional meetings, Ukraine said that "it did not have information which would corroborate the veracity of allegations made by some [organisation] concerning the use of anti-personnel mines by the Ukrainian Armed forces" and that it stands ready to "conduct further inquiry into the manner and keep [the Convention] updated on the outcome".³⁴

Both Russian and Ukrainian forces have used at least 13 types of AV mine, mostly the manually or mechanically emplaced TM-62 series since the Russian assault on Ukraine in February 2022.³⁵ Russia has also used mines in Ukrainian territorial waters. Cases of sea mines being washed up the shores of Ukraine were frequent. According to Ukraine, other States in the Black Sea region were beginning to face the same problem.

OTHER EXPLOSIVE ORDNANCE CONTAMINATION

Ukraine is also contaminated with cluster munition remnants (CMR), the extent of which is not known but is thought to be exceptionally large, as well as with considerable quantities of other ERW (see Mine Action Review's *Clearing Cluster Munition Remnants 2023* report on Ukraine for further information).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Until the end of 2022 there were three national supervisory and management bodies in Ukraine: a national mine action centre (MAC) under the MoD; a Humanitarian Demining Centre (HDC) under SESU; and an inter-ministerial National Mine Action Authority (serviced by a secretariat). In February 2023, an inter-agency Working Group on Humanitarian Demining was established and added at the top of the hierarchy.³⁶ This complex structure will almost certainly lead to overlapping responsibilities and confusion in the mine action sector.

29 Human Rights Watch, "Landmine Use in Ukraine", Briefing Paper, 13 June 2023, pp. 3 and 8.

30 Presentation of Ukraine to the APMBC Intersessional Meetings, Geneva, 19–21 June 2023, slide 5. See also, "Russians hid an anti-tank mine in a pedestrian figurine - this is a war crime" (Ukrainian), *Canal 24*, 7 August 2023, at: <https://bit.ly/45rALvB>.

31 Human Rights Council, Conference room paper on the Independent International Commission of Inquiry on Ukraine, UN doc. A/HRC/52/CRP.4, 29 August 2023, p. 49.

32 Human Rights Watch, "Landmine Use in Ukraine", Briefing Paper, 13 June 2023, pp. 2 and 15.

33 APMBC Implementation Support Unit, "Landmine treaty president to engage with Ukraine on allegations of use of prohibited weapon", Press release, 3 February 2023.

34 Statement of Ukraine, APMBC Intersessional Meetings, Geneva, 19–21 June 2023.

35 Human Rights Watch, "Landmine Use in Ukraine", Briefing Paper, 13 June 2023, pp. 3 and 10.

36 2023 Article 5 deadline Extension Request, additional information (Annex 2), pp. 1 and 2. According to the mine action Law, the MAC is tasked with the planning, organisation, and coordination of mine action activities, while the authority of the HDC is for "practical implementation of humanitarian demining". These tasks appear to overlap considerably. The NMAA and the inter-ministerial Committee on Humanitarian Demining also appear to duplicate each other's work.

In November 2021, the Cabinet of Ministers issued a resolution to provide the framework for an NMAA.³⁷ The Law defined the NMAA as an interagency State body acting on an advisory and collegial basis and chaired by the Minister of Defence. The chair will be transferred, by decision of the Cabinet of Ministers, to "the head of the Ministry that ensures the formation and implementation of State policy in the field of civil protection" once Ukraine restores territorial integrity over its internationally recognised borders.³⁸ The NMAA coordinates the ministries, central and local state bodies, local government, and other organisations (including mine action operators). The NMAA approves and ensures national mine action policy; monitors and reports on State progress in fulfilling its obligations in mine action field taken under international treaties; and coordinates the development and execution of mine action strategy, the national mine action programme, and action plans.³⁹ While the NMAA sits at a ministerial level, it is serviced by a secretariat that also has "some" managerial functions.⁴⁰

A national mine action law was adopted by Ukraine's parliament in 2018.⁴¹ But the government did not proceed with its implementation on the grounds it was inconsistent with a number of other legal acts.⁴² Amended legislation was passed in December 2020 with final amendments based on recommendations from the mine action working group. But the new Law did not fully address two bureaucratic challenges faced by the mine action community, namely: operators' licence to conduct disposal, destruction, and transportation of explosive items for EOD procedures; and operators' permits for the importation and use of dual-use items.⁴³ Discussions around legal ways to overcome the administrative hurdles have continued in the various in-country platforms. This, however, proves complicated due to the presence of existing legislation that regulates the use of dual-purpose and explosive items, which the new Mine Action Law cannot contradict.⁴⁴

The amended law created two national Mine Action Centres (NMACs): a Mine Action Centre (MAC) in Chernihiv, which sits under the State Special Transport Services (SSTS), which is under the MoD, and a Humanitarian Demining Centre (HDC) in Merefa, which sits under SESU, which is under the purview of the MoI. The secretariat of the NMAA has the responsibility of coordinating the work of the MAC and HDC. The two Centres share the remits of information management (IM), quality assurance (QA), monitoring, planning, and certification of the

operators.⁴⁵ Both the MAC and the HDC have staff conscripted away under the terms of the martial law. As a result, both centres are reported to be overstretched and not functioning efficiently.⁴⁶

In 2022, the Ministry for Reintegration of the Temporarily Occupied Territories set up the Social-Humanitarian Response Centre, a consultative and advisory body focused on promoting the formation and implementation of state policy in mine action. This includes informing the population about the dangers of explosive items, assisting victims, promoting their rehabilitation, conducting survey for the presence of unexploded ordnance (UXO), and marking and compiling specialised maps. The Ministry has also developed a mine and explosive ordnance victims database.⁴⁷ As at June 2023, the Geneva International Centre of Humanitarian Demining (GICHD) was in the process of incorporating these data into the Information Management System of Mine Action (IMSMA) database. Ukraine is using IMSMA Core, the latest version.⁴⁸

The NMAA was reported to be fully operational and to have played a central role in planning and coordination throughout 2022.⁴⁹ During the same year, the roles and responsibilities of both the MAC and the HDC have continued to evolve. The MAC underwent accreditation from April to September at the National Accreditation Agency of Ukraine. It finally received accreditation for NTS, TS, battle area clearance (BAC), manual mine clearance, and explosive ordnance risk education (EORE). In view of the potential number of international and national mine action operators and the volume of mine action tasks in Ukraine, the MAC began preparing to expand its accreditation in 2023 for use of machines, mine detection dogs (MDDs), underwater demining, and EOD. The HDC was also accredited for NTS, TS, BAC, manual mine clearance, and EOD in 2022.⁵⁰

The Mine Action Sub-Cluster (MASC) has been chaired by the United Nations Development Programme (UNDP) since 2016, and serve as a platform that supports relevant national, regional, and local actors.⁵¹ Following a temporary suspension in February 2022, meetings restarted in the middle of March and mine action stakeholders continued to meet virtually twice per month. The topics discussed varied from updates on operator's progress and coordination of mine action efforts in high-priority areas, thematic presentations, and planning of upcoming events and challenges. The meetings were attended by the Ukrainian

37 Resolution No. 1207 "On Establishment of National Mine Action Authority".

38 The Law of Ukraine on Mine Action N.2642-VIII, N.2642-VIII, at: <https://bit.ly/30V007x>, Chap. II, Art. 11; DRC Special Legal Alert – "NMAA Framework 2022", Issue 73, January 2022; and email from Miljenko Vahtarić, Organisation for Security and Co-operation in Europe (OSCE) PCU, 1 July 2022.

39 The Law of Ukraine on Mine Action, N.2642-VIII, Chap. III, Art. 23; and DRC Special Legal Alert – "NMAA Framework 2022", Issue 73, January 2022.

40 The Law of Ukraine on Mine Action, N.2642-VIII, Chap. III, Art. 23; and email from the GICHD, 17 June 2022.

41 OSCE, "Ukrainian parliament adopts legal framework for mine action, with OSCE advice provided", 10 December 2018, at: <http://bit.ly/2QdTa9o>; and interview with Miljenko Vahtarić, OSCE PCU, 7 February 2019; and email, 13 June 2019.

42 DRC-DDG Legal Alert Special, "Mine Action Law Amendment", Issue 56, September 2020.

43 Email from Ronan Shenhav, HALO, 20 April 2021.

44 Email from Oleksandr Lobov, Mine Action Specialist, UNDP, 14 August 2023.

45 The Law of Ukraine on Mine Action, N.2642-VIII, Chap. III, Art. 23; DRC-DDG Legal Alert Special, "Mine Action Law Amendment", Issue 56, September 2020; and interview with Miljenko Vahtarić, OSCE PCU, 13 February 2020.

46 Email from Denys Holovetskyi, HALO, 29 May 2023.

47 Emails from Roxana-Cristina Boboticu, DRC, 1 April 2023, and Denys Holovetskyi, HALO, 29 May 2023.

48 Email from the GICHD, 26 May 2023.

49 Emails from Roxana-Cristina Boboticu, DRC, 1 April 2023; and Denys Holovetskyi, HALO, 29 May 2023.

50 Ibid.

51 Email from Oleksandr Lobov, UNDP, 14 August 2023.

authorities (MoD, SESU, and the Ministry for Reintegration of the Temporarily Occupied Territories), operators (DCA, Demining Solutions, DRC, FSD, HALO, HI, MAG, NPA), UN agencies, other mine action stakeholders (OSCE, Tetra Tech), and donors.⁵² In 2023, the mine action subclusters were transformed to a mine action area of responsibility (AoR).⁵³

In February 2023, the Cabinet of Ministers issued a regulation No. 136, which creates a new coordination body, the Inter-agency Working Group on Humanitarian Demining. Chaired by the Minister of Economy, the Inter-agency Working Group on Humanitarian Demining “contributes to ensuring the coordination of the actions of executive authorities on issues that belong to [the competences of the Ministry of Economy]”, and “performs tasks related to providing assistance to the [NMAA] on issues related to the organisation of national anti-mine activities”.⁵⁴ The exact responsibilities of this newly created body are not yet clear, but they seem to overlap with those of the NMAA.

There is an overall positive environment and facilitation of the operators' work by the Ukrainian government (e.g. granting of visas and collaboration on security matters).⁵⁵ But operators face difficulties in acquiring permission to transport or dispose of explosives. As a result, operators could not commence the accreditation process to conduct EOD in 2022. In September 2022, the NMAA presented the requirements for obtaining permission to use explosives, a five-step process that no non-governmental organisation (NGO) has yet completed. In March 2023, and under the martial law, the NMAA announced a simplified process for obtaining permissions within a three-month period. The national operator, Demining Solutions, will reportedly be able to conduct EOD in 2023. Both the MAC and HDC have also started the process as well.⁵⁶ Ukraine has also eased procedures for the recognition of the foreign documents of demining specialists and their compliance with the requirements under the national martial law.⁵⁷

According to MAG, preventing operators disposing of explosive items has negatively impacted the capacity and resources of SESU.⁵⁸ Operators can meanwhile only mark the explosives and report them to the SESU or MoD personnel for destruction. An administrative fix is urgently needed to ease up the operational pressure from SESU and capitalise on the capacity of the existing operators. The importation of dual-use items, which has been reported to be problematic in

previous year, eased in 2022, and none of the operators has faced difficulties in this process.

Ukraine stated that the funding of all demining activities is expended from the budget allocations of SESU under the programme: “Support Activities of Civil Protection Forces”, and that no additional funding for mine action countermeasures is provided. Ukraine's MoD is working on providing its demining units with modern means for searching for explosive objects through centralised purchases and logistical assistance from donor states and international organisations. Ukraine, however, lacks critical demining equipment, particularly explosives, mine detectors, and personal protective equipment (PPE).⁵⁹

In 2022, Ukraine allocated 25,650,000 Hryvnas (almost US\$ 70,000) to a “Mine Prevention Activities” programme aimed at reducing the social, economic, and environmental impact of explosive ordnance and informing the population about their risk.⁶⁰

DCA has supported SESU with demining equipment and provided them with training on how to identify and report on explosive ordnance. DCA was also collaborating with SESU on the development of a digital platform and an online application to report on the discovery of explosives by the public.⁶¹

The DRC capacity-building programme continued in 2022 with the provision of PPE and EOD kits for 10 SESU teams as well as technical assistance to the Interregional Centre for Humanitarian Demining and Rapid Response. DRC conducted on-the-job NTS training for 16 SESU staff in Chernihiv Oblast and an additional 16 SESU staff in Kharkiv Oblast. In August 2022, one SESU clearance team was deployed in Chernihiv Oblast. With the technical support of DRC, the SESU team reported clearing 8,700m² of land and disposed of 2,627 items of explosive ordnance.⁶²

FSD has sponsored a training in Croatia for eight personnel of NMAC on the MV4 mechanical ground preparation machine in 2022–23. Between February and March 2023, FSD trained staff from both NMAC and SESU on manual demining, non-technical survey, and EORE.⁶³

The GICHD is establishing a dedicated country programme for Ukraine, which is mandated to provide capacity-development support in a broad range of areas based on request from the

52 Emails from Roxana-Cristina Bobolicu, DRC, 1 April 2023; and Denys Holovetskyi, HALO, 29 May 2023.

53 Email from Oleksandr Lobov, UNDP, 14 August 2023.

54 2023 Article 5 deadline Extension Request, Annex 2 and additional Information, pp. 1 and 2.

55 Emails from Almedina Musić, DRC, 7 February 2022; and Imogen Churchill, HALO, 23 March 2022.

56 Emails from Roxana-Cristina Bobolicu, DRC, 1 April 2023; and Denys Holovetskyi, HALO, 29 May 2023.

57 Ukraine Ministry of Defence website, 20 March 2023, accessed on 22 June 2023, at: <https://bit.ly/3qY5Ubd>.

58 Email from Nick Guest, Humanitarian Technical Advisor, MAG, 23 March 2023.

59 2023 Article 5 deadline Extension Request, pp. 3 and 4. A detailed list of the equipment requested by Ukraine is published online by the SESU at: <https://bit.ly/46j4Pe3>.

60 2023 Article 5 deadline Extension Request, additional information (Annex 2), 1 September 2023, p. 9.

61 “One year in Ukraine”, DCA website, accessed 24 April 2023 at: <https://bit.ly/440DDzC>; and email from the GICHD, 26 May 2023.

62 Email from Roxana-Cristina Bobolicu, DRC, 1 April 2023.

63 Email from Tony Connell, Country Director, FSD, 26 June 2023.

national authorities. The GICHD delivered courses on quality management (QM) and NTS between October and November 2022. The country programme will also be able to provide capacity development in other areas, including National Mine Action Standards (NMAS), EORE, and donor coordination. The GICHD has been providing a full-time dedicated IM support for Ukraine since 2020.⁶⁴ In November 2022, the GICHD facilitated the first Ukraine Mine Action Donor Coordination Workshop in Geneva. Next steps, including clear responsibilities and timelines, were identified during the workshop with progress being monitored by the GICHD.⁶⁵

During 2022, HALO conducted several training courses on NTS and demining for personnel from the Ukrainian authorities. In October 2022, HALO ran a Level 3 EOD training course on the International Mine Action Standards (IMAS) in Kosovo to increase the EOD capacity of HALO staff and national authorities. The course included HALO staff and eight external participants from the SESU and the SSTS. In November 2022, HALO handed over nine vehicles, five unmanned aerial vehicles (UAVs), and personal protective equipment to the SESU.⁶⁶

NPA equipped 10 SESU EOD and demining teams in 2022 with technical and safety equipment such as vehicles, detectors, blasting machines, EOD kits, hook and line kits, trauma bags, and first aid kits. NPA has been working with SESU on a capacity-development project to introduce MDDs in Ukraine for use by SESU and NPA teams. The project includes building training and testing areas for MDDs, dog kennels for 14 MDDs, training of dog handlers, support in the development of SESU MDD standard operating procedures (SOPs), and establishment of national MDD mine action standards. The MDD project was continuing in 2023.⁶⁷

HI has trained 20 personnel from NMAA and other operators on the use of a small, unmanned aircraft system (UAS) in 2022.⁶⁸

On 23 February 2022, the European Union (EU) pledged €25 million to support Ukraine's demining efforts in its regained territories. The funding aims to support State mine action operators to acquire more modern equipment, build the capacities of the Ukrainian authorities to effectively manage the national mine action sector, and address large-scale mine and EO contamination.⁶⁹

Tetra Tech is implementing a US\$47.6 million project to train Ukraine's demining and EOD teams to international standards and provide them with the tools necessary to do their jobs. The project also includes the deployment of clearance and risk education teams through a Ukrainian demining association.⁷⁰ In September 2022, the Biden administration announced plans to provide \$89 million to help Kyiv clear landmines. The money was destined to fund 100 demining teams in Ukraine in 2023, identify the areas of greatest contamination, and train and equip Ukrainian deminers.⁷¹ This made Ukraine the top recipient of United States (US) aid for mine clearance.⁷²

UNDP has been supporting the Government of Ukraine in establishing a "comprehensive, coordinated, and gender-sensitive" mine action response. In collaboration with SESU pyrotechnic teams, UNDP initiated a series of projects in 2022 to ensure safe human mobility and access to essential goods and services for humanitarian support. One is focused on explosive ordnance survey and clearance to support demolition of damaged structures/ buildings and debris removal works. Within the projects, UNDP provided demining equipment and vehicles for 11 SESU pyrotechnic teams.⁷³

ENVIRONMENTAL POLICIES AND ACTION

The current Ukrainian NMAS include a chapter (11.2.9) on "Environmental regulations", and a section (12.6) on "Environment, occupational health and safety".⁷⁴

DRC has an environmental management system in place, which is stipulated in its SOP (1.13) on health, safety and environmental management. The SOPs were approved by Ukraine's military unit acting in accordance with the regulations of the certification body.⁷⁵ In 2022, DRC focused on re-establishing operations following the escalation of the conflict. Consequently, there was no capacity to focus on environmental policies and action.⁷⁶ FSD has detailed SOPs on environmental management (SOP 17.0) and safe work practices (SOP 02).⁷⁷

HALO seeks to reduce the negative impact on the environment resulting from its activities and to minimise its environmental footprint to the extent possible.⁷⁸ HALO has an environmental policy and SOPs that outline the potential negative environmental impacts that could result from large-scale demining and explosive ordnance operations. The SOPs prescribe

64 Emails from the GICHD, 19 April and 26 May 2023.

65 Email from the GICHD, 19 April 2023; and GICHD, "Ukraine faces massive explosive contamination one year into conflict", 24 February 2023, at: <https://bit.ly/3KNEZVU>.

66 Email from Denys Holovetskyi, HALO, 29 May 2023.

67 Email from Alberto Rinaldo Serra, Programme Manager, NPA, 15 March 2023.

68 HI, Ukraine Country file, accessed on 15 July 2023, at: <https://bit.ly/3DbXG22>.

69 European Union, "Ukraine: EU supports de-mining of liberated areas with additional €25 million programme", Press release, 23 February 2023.

70 Statement of Michael Tirre, Manager for Europe, US Department of State Office of Weapons Removal and Abatement Program, 8 December 2022, at <http://bit.ly/3KrEU9W>.

71 "U.S. announces \$89 million to help Ukraine clear land mines", *Politico*, 8 September 2022, at: <https://bit.ly/3NQk3ip>.

72 "Ukraine Is Top Recipient of US Mine Clearing Aid", *VOA*, 9 June 2022, at: <https://bit.ly/3pON31U>.

73 Email from Oleksandr Lobov, UNDP, 14 August 2023.

74 Emails from Almedina Musić, DRC, 7 February 2022; and Imogen Churchill, HALO, 23 March 2022.

75 Emails from Almedina Musić, DRC, 7 February and 13 June 2022.

76 Email from Roxana-Cristina Bobolicu, DRC, 1 April 2023.

77 Email from Tony Connell, FSD, 10 June 2022.

78 Emails from Imogen Churchill, HALO, 23 March 2022; and Denys Holovetskyi, HALO, 29 May 2023.

measures to eliminate the consequences of negative impacts, such as activities to ensure the regeneration of vegetation, re-planting trees, and returning cultivated soils to work sites (soil that was mechanically sieved), among others.⁷⁹ MAG has an environmental SOP in place in Ukraine.⁸⁰ NPA has a global environmental policy, which is adopted by NPA Ukraine. NPA Ukraine has environmental SOPs that cover its mine action operations. The SOPs have been revised, adopted, and translated into Ukrainian.⁸¹

GENDER AND DIVERSITY

As at September 2023, no information had been provided on whether there is a gender policy and associated implementation plan for mine action in Ukraine.⁸² In the additional information provided to its 2023 deadline Extension Request, however, Ukraine stated that female specialists were expected to constitute up to 30% of its 4,750-strong newly formed units under the MoD. Ukraine added that it consults women and persons living with disabilities during NTS and EORE activities.⁸³ In December 2021, UNDP published "Gender Guidelines for Mine Action Operations" in English and Ukrainian, with the aim of supporting in-country operators to achieve and maintain gender parity in their activities.⁸⁴

DRC has a global gender and diversity policy, and a country-specific implementation plan. Following an assessment by the GICHD of DRC's Ukraine's mission in 2021, the programme was evaluated as "very strong" in all age, gender, and diversity mainstreaming aspects. Some of the strengths assessed were integrated and inclusive community liaison and needs assessments, deployment of mixed gender humanitarian demining teams, gender-sensitive human resources practices, a positive and encouraging work culture, and an excellent awareness of the safeguarding system. All DRC's mine action data are disaggregated by age, gender, and disability. In 2022, 24% of all DRC staff members in Ukraine were women, with 25% of the operational positions and 15% of the managerial positions filled by women.⁸⁵

FSD is committed to providing an equal opportunity working environment. NTS and EORE teams consist of at least one woman. All BAC teams have female members. Senior national staff positions are filled by women. In 2022–23, FSD national staff were 30.5% female and 69.5% male. National staff in management positions were 19% female and 17.5% male, and international staff 4.75% female, 95.3% male.⁸⁶

HALO has an equality and diversity policy and globally is working on a gender and diversity implementation plan.

HALO Ukraine seeks to increase the number of women employed in operational roles and improve gender balance in these roles without discriminating against applicants during recruitment.⁸⁷ In 2021, HALO introduced a childcare support stipend covering mothers and single fathers working at HALO and has expanded the eligibility criteria several times since then. In 2022, HALO announced another stipend programme for HALO employees with children. Under the new project, female and single-parent HALO employees were able to receive monthly assistance per each of their minor children up to 17 years of age inclusive. As at June 2023, 194 of the total 736 employees—equating to 26%—were women. Of the managerial positions, 19% (22 of 118 positions) were occupied by women, and 146 of the 635 operational positions (23%) were filled by women.⁸⁸

MAG works according to its organisational gender, diversity and inclusion policy. MAG disaggregates its mine action data by gender and age and ensures an equal access for female and male candidates to all its positions. All MAG community liaison teams contain at least one female or one male member. In 2022, 52% of all MAG staff members in Ukraine were women, while 52% of operational positions and 33% of managerial positions were filled by women.⁸⁹

NPA Ukraine has a gender and diversity plan. NPA is an equal opportunity employer and disaggregates its mine action data by gender and age. The NPA non-technical survey and EORE teams are not gender balanced, but NPA is exploring new strategies to attract more women. In 2022, 30% of all NPA staff members in Ukraine were women. Of operational and managerial positions, 13% and 20% were filled by women, respectively.⁹⁰ NPA strived to increase the participation of women in its team, and by June 2023, women made 22% of NPA's operational positions.⁹¹

The UNDP Ukraine programme is guided by UNDP's 2022–25 global Gender Equality Strategy, published in 2022.⁹²

79 Ibid.

80 Email from Nick Guest, MAG, 23 March 2023.

81 Email from Alberto Rinaldo Serra, NPA, 15 March 2023.

82 Email from the GICHD, 19 April 2023.

83 2023 Article 5 deadline Extension Request, additional information (Annex 2), 1 September 2023, pp. 3 and 11.

84 Email from Oleksandr Lobov, UNDP, 14 August 2023. See "Gender Guidelines for Mine Action Operators", UNDP, 6 December 2021, at: <https://bit.ly/3E1sQcF>.

85 Emails from Roxana-Cristina Bobolicu, DRC, 1 April 2023; and Almedina Musić, DRC, 7 February and 13 June 2022.

86 Email from Tony Connet, FSD, 26 June 2023.

87 Emails from Denys Holovetskyi, HALO, 29 May and 15 August 2023.

88 Ibid.

89 Email from Nick Guest, MAG, 23 March 2023.

90 Email from Alberto Rinaldo Serra, NPA, 15 March 2023.

91 Email from Amela Balic, Deputy Programme Manager, NPA, 29 June 2023.

92 Email from Oleksandr Lobov, UNDP, 14 August 2023. See also: UNDP, "Gender Equality Strategy 2022-2025", 11 October 2022, at: <https://bit.ly/47Dol5W>.

INFORMATION MANAGEMENT AND REPORTING

As noted above, Ukraine uses IMSMA Core. In 2022, the database was hosted on two separate servers, one owned by SESU and the other by the MoD, but in 2023, IMSMA became cloud-based, with access rights and permissions to different datasets granted according to the requirements of the national authorities partners.⁹³ According to Ukraine, the national mine action database has a multi-level degree of data verification and validation, starting from operators who carry out field data collection, and ending with the secretariat of the NMAA, MAC, and HDC, who perform the final data validation.⁹⁴

IMSMA in Ukraine, which has been installed by the GICHD, is receiving new information daily on explosive ordnance identified, areas surveyed, and ongoing risk education activities. Data are collected from a variety of national and international sources and are then shared across key partners.⁹⁵ Survey and clearance data that have been entered are validated by the MAC. Due to the ongoing conflict, however, the situation is changing on a daily basis, and data continue to be fed into the database.⁹⁶ Some datasets of IMSMA (the locations of hazardous areas identified through NTS, the density of ERW-related incidents, and EORE activities) are made publicly available.⁹⁷

The GICHD deployed two full-time Ukrainian IM Advisors in 2022, whose work was overseen by an international expert in Geneva. The GICHD is planning to recruit further national experts in 2023 to meet the increased need. The GICHD collaborated closely with MAC and HDC in 2022 to enhance the report validation and verification processes, notably defining conformities and non-conformities' lists. The GICHD was also working with the MAC and operators to address non-conformities and ensure data accuracy.⁹⁸

According to DRC, all data collection forms both in hardcopy and online format cover the key qualitative and quantitative indicators of mine action activities and meet minimum data requirements in accordance to IMAS 05.10.⁹⁹ Following development by the IM working group and successful trials, as at April 2023, data collection forms were up using the Survey123 platform, and were being used by all accredited operators.¹⁰⁰

DRC strengthened the capacity of its IM staff through participation in several IT-related trainings in 2022. DRC's database architecture and paper form templates were updated in accordance with the minimums data collection requirements of the MAC. The global digital environment was put into use in 2022. DRC has also enacted a new policy for data storing and transferring to the cross-platform data entry tools.¹⁰¹

As at April 2023, MAG was in the process of setting up its online management information system (OMIS), which it uses across the organisation.¹⁰²

The GICHD continued to chair the IM working group, which met on a regular basis in 2022. In response to the outbreak of conflict in February 2022, the working group established an information management cell that aggregated mine action-related data from multiple sources and provided it to mine action stakeholders for planning and analysis. The group's meetings were attended by the NMAA, MAC, HDC, and mine action operators. The focus of the meetings was on coordinating activities, addressing existing IM issues, and introducing new IM data sources and newly developed IMSMA products to enhance operational efficiency.¹⁰³

Since the IMSMA database was launched in Ukraine, HALO's Geographical Information System (GIS) department has created a module that automatically transfers data from the internal database to IMSMA. HALO employees fill out reports for each task in the Survey123 application, which is then automatically transferred to HALO's internal information system: GO-IMS database.¹⁰⁴

To further improve the quality of data in its internal database, HALO took the following measures in 2022: added internal checks of submitted data during the data collection stage in Survey123 forms; conducted training and refreshers for team leaders on data entry; and created a separate dashboard that constantly monitors the data entered into the database and checks it for compliance with the location of semantic information. The dashboard also verifies the data for compliance with certain conditions, such as duplicated data, direct evidence coordinates not being outside the minefield range, or munitions detected not being outside the cleared area.¹⁰⁵

93 Emails from the GICHD, 17 June 2022 and 26 May 2023.

94 2023 Article 5 deadline Extension Request, additional information (Annex 2), 1 September 2023, pp. 6 and 7.

95 GICHD, "Ukraine faces massive explosive contamination one year into conflict", 24 February 2023, at: <https://bit.ly/3KNEZVU>.

96 Email from the GICHD, 19 April 2023.

97 Email from the GICHD, 26 May 2023. Link to the IMSMA-based publicly available interactive maps: <https://bit.ly/43LnOff>.

98 Ibid.

99 Email from Almedina Musić, DRC, 7 February 2022.

100 Email from the GICHD, 19 April 2023.

101 Email from Roxana-Cristina Bobolicu, DRC, 1 April 2023.

102 Email from Nick Guest, MAG, 23 March 2023.

103 Email from the GICHD, 19 April 2023.

104 Email from Denys Holovetskyi, HALO, 29 May 2023.

105 Ibid.

PLANNING AND TASKING

Ukraine does not have a national mine action strategy. In 2022, the development of any strategy was said to be contingent on a formal cessation of hostilities.¹⁰⁶ In September 2023, however, Ukraine stated that the "NMAA has defined the task of preparing the mine action strategy", without elaborating on the expected timeline for drafting such a strategy. With respect to a detailed mine action work plan, Ukraine stated that the ongoing conflict and the continuing contamination prevents it from producing a work plan with any degree of confidence.¹⁰⁷

Ukraine said that it prioritises the clearance of critical infrastructure facilities and population centres, in order to ensure safe access of the population to their homes.¹⁰⁸ In March 2023, Ukraine approved an action plan to survey and demine more than 4,700km² of agricultural land in nine regions by the end of 2024. The regions are: Cherkasy, Chernihiv, Dnipropetrovsk, Kharkiv, Kherson, Kyiv, Mykolaiv, Sumy, and Zaporizhzhia. Of this agricultural land, 1,650km² were set to be released by the end of 2023, and 3,050km² by the end of 2024.¹⁰⁹ The Ukrainian Minister of Economy, Yulia Svyrydenko, told the media that the Ministry planned to "survey, clear, and return to use most of all potentially contaminated areas within 10 years".¹¹⁰

There are currently no standardised criteria at national level for task prioritisation.¹¹¹ The MoD does not issue task dossiers but approves an annual plan with the list of all known locations planned by an operator for either clearance or survey.¹¹² Local governments have been helping the MoD to prioritise tasks based on humanitarian criteria.¹¹³

Since the renewed conflict in February 2022, and as mine action operators restarted working in newly accessible areas, the annual plan for 2022, which had been previously approved by the MoD, was no longer valid.¹¹⁴ Allocation of territorial communities for operational activities was hence produced in 2022 without an annual plan. An annual plan for 2023 was approved in early January by the MoD considering the growing number of operators, the increasing need to coordinate and prioritise, and the constant change in access

to newly contaminated areas. Under direct supervision of NMAA, the MAC has developed an interactive map for NTS planning jointly with regional authorities. This interactive tool contains different layers, including agricultural polygons which should be considered as the first priority during non-technical surveys.¹¹⁵

DRC was unable to prioritise areas for survey and clearance according to its integrated mine action and development programming in 2022 as it had done pre-2022 conflict. DRC aims to resume its previous prioritisation approach in 2023.¹¹⁶ FSD prioritises areas based on the threat posed by the contamination, the number of potential beneficiaries, and the potential impact that will result. Infrastructure was prioritised for BAC clearance in Izium.¹¹⁷

HALO uses its "internal prioritisation matrix", which takes into account different humanitarian factors such as number of people who use the area of the task, proximity to settlements, proximity of schools and hospitals, number of accidents recorded, as well as threat type, balancing these considerations with security and access considerations.¹¹⁸ By the end of 2022, the matrix was adapted to the context of the HALO's programme, considering new priorities and criteria aimed at demining agricultural fields. The matrix also considered the number of beneficiaries, distances from residential areas, the type of threat identified, and the number of incidents.¹¹⁹ The adapted matrix allowed HALO to prioritise and plan its operations more effectively, ensuring that resources were used efficiently and effectively to clear the most hazardous areas first. HALO has prioritised agricultural areas for clearance.¹²⁰

MAG was not yet operational in 2022, but by March 2023 was operational with EORE, and in August 2023, was planning/ implementing its NTS work with the region, district, and local administrations to identify priority tasks and liaise with NMAC for their allocation and approval.¹²¹ NPA prioritises areas for survey and clearance on a needs-basis according to victim and accident data, and on requests and tasking from local administrations and the MAC.¹²²

106 Email from the GICHD, 19 April 2023.

107 2023 Article 5 deadline Extension Request, additional information (Annex 2), 1 September 2023, pp. 6 and 8.

108 2023 Article 5 deadline Extension Request, p. 3.

109 Ukraine's Ministry of Economy website, 30 May 2023, accessed on 22 June 2023, at: <https://bit.ly/3NH0SbN>; and Ukraine's Ministry of Agrarian Policy and Food website, 21 March 2023, accessed on 22 June 2023, at: <https://bit.ly/3r0lphu>.

110 "'We couldn't wait': Ukrainian farmers improvise to clear their land of mines", *The Guardian*, 19 June 2023, at: <https://bit.ly/44iX13N>.

111 Emails from Henry Leach, Danish Demining Group (DDG) Ukraine, 2 May 2019; Yuri Shahramanyan, HALO Ukraine, 16 May 2019; and Almedina Musić, DRC, 7 February 2022.

112 Email from Almedina Musić, DRC, 7 February 2022.

113 Interviews with Lt.-Col. Yevhenii Zubarevskiy, Ministry of Defence, in Geneva, 20 May 2016; and Maksym Komisarov, MoD, in Geneva, 8 June 2018.

114 Email from the GICHD, 19 April 2023.

115 Email from Roxana-Cristina Bobolicu, DRC, 1 April 2023.

116 Ibid.

117 Email from Tony Connel, FSD, 26 June 2023.

118 Email from Imogen Churchill, HALO, 23 March 2022.

119 Email from Denys Holovetskyi, HALO, 29 May 2023.

120 Ibid.

121 Emails from Nick Guest, MAG, 23 March 2023; and Jon Cunliffe, Country Director, MAG, 15 August 2023.

122 Email from Alberto Rinaldo Serra, NPA, 15 March 2023.

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

NMAS were finalised by the MoD in September 2018 after multi-year input and review from key stakeholders.¹²³ The GICHD considers that the existing NMAS are in line with IMAS. Concerns, however, have been raised by national authority partners that the existing NMAS do not contain sufficient detail in certain areas, and need to be further refined and detailed. For example, the criteria for direct and indirect evidence need to be tailored to the new operational context.¹²⁴

In April 2023, with the support of the GICHD, Ukraine developed a new standard on mine action management processes which outlines the principles for certification and implementation of mine action activities. According to Ukraine, the GICHD, together with the mine action operators and national stakeholders, were drafting further revisions of the NMAS based on best practices.¹²⁵

According to UNDP, the NMAS could benefit from additional technical guidance for safe demolition and debris removal by applying NTS, TS, and clearance for building and structures following a methodology different from that of the land release. This is particularly important given preliminary estimates that 120,000 homes and 20,000 multistorey buildings have already been destroyed or damaged in Ukraine.¹²⁶

In May 2020, the GICHD, OSCE, DRC, and HALO formed a working group with the objective of revising NMAS to better align the standards with the IMAS. The working group submitted its recommendations to the MoD, the acting NMAA at that time.¹²⁷ According to DRC, the Ukrainian government had set a deadline to finalise the NMAS by August 2021,¹²⁸ a target that was then postponed to April 2023 due to delays in establishing the NMAA,¹²⁹ then again to April 2024.¹³⁰ Led by the GICHD, an NMAS revision was initiated in March 2023 during a stakeholder workshop.¹³¹ An NMAA-GICHD co-led process will focus on land release, mechanical demining, and terminology, while an NMAA-NPA co-led process will focus on MDDs. The NMAA and the MAC are also reportedly working on the QM standards.¹³²

DRC, FSD, HALO, MAG, and NPA agree that the current NMAS are yet to be fully developed to meet the needs of the mine action sector in Ukraine.¹³³ For example, HALO believes that there are still some contentious issues within the current NMAS. These include marking demining sites, the definition of "all reasonable effort", and reduction and cancellation criteria, among other concerns.¹³⁴ FSD has concerns about the lack of workable NMAS on mechanical clearance.¹³⁵ NPA thinks that NMAS require significant improvement with respect to information management, land release, mechanical clearance, and the use of MDDs.¹³⁶

OPERATORS AND OPERATIONAL TOOLS

The MoD and several other ministries continue to deploy units that undertake clearance and destruction of mines and ERW. This includes the military engineering school, which has a licence to accredit operators; the National Guard of Ukraine; the Mol, which conducts clearance through SESU and also has an engineering department that conducts EOD; the Security Service; the SSTS, which is responsible for demining national infrastructure; and the State Border Service, which conducts demining in areas under its control on land and in the sea.¹³⁷

As at September 2023, there were 17 certified national and international mine action operators registered in Ukraine. Including Ukrainian national, international organisations, limited liability companies, and state enterprises. Of the international operators: DCA, DRC, FSD, HALO, MAG, and NPA are present. The national operators are: Demining Solutions, GK Group, Association of Sappers of Ukraine, Ukrspecexport, Ukroboronservic, Modern Village and City Charitable Foundation, department of Maritime Safety, Regime-Secret Work and Demining Nibulon, International Demining Group, Scientific and

123 Email from Gianluca Maspoli, GICHD, 25 September 2018; and Miljenko Vahtarić, OSCE PCU, 25 September 2018; and interview with Miljenko Vahtarić, OSCE PCU, 7 February 2019.

124 Email from the GICHD, 19 April 2023.

125 2023 Article 5 deadline Extension Request, additional information (Annex 2), 1 September 2023, p. 7.

126 Email from Oleksandr Lobov, UNDP, 14 August 2023, and "120,000 private houses and 20,000 multi-storey buildings destroyed or damaged in Ukraine", *Forbes*, 1 July 2022, at: <https://bit.ly/47EMqZS>.

127 Emails from Almedina Musić, DRC, 20 April 2021; and Ronan Shenhav, HALO, 20 April 2021.

128 Email from Almedina Musić, DRC, 26 July 2021.

129 Email from Almedina Musić, DRC, 7 February 2022.

130 Email from Roxana-Cristina Bobolicu, DRC, 1 April 2023.

131 Email from the GICHD, 19 April 2023.

132 Email from the GICHD, 26 May 2023.

133 Emails from Nick Guest, MAG, 23 March 2023; Roxana-Cristina Bobolicu, DRC, 1 April 2023; Almedina Musić, DRC, 7 February 2022; Imogen Churchill, HALO, 23 March 2022; and Tony Connell, FSD, 10 June 2022.

134 Email from Denys Holovetskyi, HALO, 29 May 2023.

135 Email from Tony Connel, FSD, 26 June 2023.

136 Email from Alberto Rinaldo Serra, NPA, 21 August 2023.

137 Interview with Col. Oleksandr Shchebetiuk, Ukrainian Armed Forces, in Geneva, 26 June 2015; email from Anton Shevchenko, OSCE, 23 June 2015; "Mine Action in Ukraine", Side event presentation by Lt.-Col. Yevhenii Zubarevskyi, MoD, Geneva, 17 February 2016; Article 7 Report (covering 2018), Form F, and email from the GICHD, 17 June 2022.

Production Company, and Patron Demining. In addition, as at August 2023, one unit of the SSTS and six SESU units were undergoing mine action operator certification.¹³⁸

As at April 2023, DCA, and MAG were still undergoing accreditation. In February 2023, NPA was accredited for NTS and EORE, and in June 2023, NPA received its accreditation for manual demining, TS, and BAC.¹³⁹

As at mid 2023, Ukraine was reported to have more than 200 demining teams of more than 1,000 personnel.¹⁴⁰ Ukraine plans to expand its demining capacity significantly to reach 300 teams of 1,500 personnel of SESU.¹⁴¹ As at August 2023, the Ukrainian MoD was forming 10 battalions and 3 separate demining companies which consist of 4,750 personnel as part of the SSTS and support forces command. The units being formed will be exclusively tasked to conduct humanitarian demining.¹⁴²

As at May 2023, the SESU stated that they had more than 30 demining teams, including three underwater teams, deployed in Chernihiv, Kharkiv, Kherson, Konopelniuk, Kyiv, and Mykolaiv regions.¹⁴³ The first Deputy Minister of Defence said in an interview that the MoD, together with the company Tetra Tech, plan on creating a joint training centre that will have the capacity to train 500 specialists per year.¹⁴⁴

Table 2: Operational clearance capacities deployed in 2022¹⁴⁵

Operator	Manual teams	Total deminers*	Dogs and handlers	Machines**	Comments
DRC	8	54	0	0	The same capacity as at the end of 2021
HALO	44	304	0	6	1 John Deere Tractor; 1 JCB Excavator 2 Robocuts TRAXX; 1 mini Robocut S300 1 Armtrac.
FSD	8	56	0	2	1 X MV4 and 1 X MV10 awaiting accreditation.
Demining Solutions	1	7	0	0	
Totals	61	421	0	8	

* Excluding team leaders, medics, and drivers unless otherwise stated. ** Excluding vegetation cutters and sifters.

As at August 2023, the national, international, and commercial operators planned to carry out survey and clearance of a total area of 83,920km² in territory under Ukrainian control. NTS activities were planned in all of the northern, eastern, and southern oblasts of Ukraine.¹⁴⁶

DRC deployed four NTS personnel of two teams in 2022. All of DRC's TS teams are trained and equipped to conduct manual mine clearance and BAC. The number of manual clearance and NTS teams remained the same as in 2021. Thanks to secured donor funding, DRC expected to deploy six additional clearance teams and four additional NTS teams in 2023.¹⁴⁷

FSD temporarily suspended its demining operations after February 2022. Operations restarted in July 2022 as FSD relocated its operations from Kramatorsk, Mariupol, and Sloviansk in the East to Chernihiv in the North. EORE (both online and in person) and NTS operations restarted first in July followed by EOD/BAC operations in August. FSD's NTS efforts concentrated on the outer villages of Chernihiv city. Recruiting and training of seven BAC teams started in July 2022 with the first two teams becoming operational by mid August. In early November 2022, FSD was the first international organisation to have NTS, BAC, and EORE teams

138 2020 Article 5 deadline Extension Request; Article 7 Report (covering 2018), Form F; and 2023 Article 5 deadline Extension Request, additional information (Annex 2), 1 September 2023, pp. 2 and 3. Note: Ukraine's additional information refers to 16 operators but does not mention MAG which is also present and undergoing accreditation.

139 Email from Amela Batic, NPA, 29 June 2023.

140 The US Department of State, "Demining Ukraine: A Pre-requisite for Recovery: Michael Tirre Remarks before the U.S. Helsinki Commission", 8 December 2022, at: <https://bit.ly/3KFdXzJ>.

141 Presentation of Ukraine to the APMBIC Intersessional Meetings, Geneva, 19–21 June 2023, slide 7.

142 2020 Article 5 deadline Extension Request; Article 7 Report (covering 2018), Form F; and 2023 Article 5 deadline Extension Request, additional information (Annex 2), 1 September 2023, pp. 2 and 3.

143 "More than 30 demining groups are working on demining de-occupied territories", *Ukrinform*, 23 May 2023, at: <https://bit.ly/3NnTKzI>.

144 "Ukraine will train 500 demining specialists per year – Pavlyuk", *Ukrinform*, 5 May 2023, at: <https://bit.ly/3JrH0fo>.

145 Emails from Roxana-Cristina Bobolicu, DRC, 1 April 2023; and Denys Holovetskyi, HALO, 29 May 2023.

146 2023 Article 5 deadline Extension Request, additional information (Annex 2), 1 September 2023, pp. 4 and 5.

147 Email from Roxana-Cristina Bobolicu, DRC, 1 April 2023.

deploy into the recently regained territories of Kharkiv oblast, conducting operations in and around Izium. The EOD/BAC teams mainly conducted spot tasks until December 2022, when the NMAA ordered FSD to halt its spot task clearance until a certification process had been completed. FSD received certification for both the MV4 and MV10 machines in April 2023 and deployed both machines in Kharkiv oblast in support of SESU infrastructure projects.

In March 2023, FSD signed a contract with the World Food Programme (WFP) to start survey and clearance of agricultural land, and intended to redeploy its MV4 and MV10 machines in support of that project.¹⁴⁸ As at April 2023, FSD had around 100 staff working in the oblasts of Chernihiv, Kharkiv and Mykolaiv.¹⁴⁹ FSD's operational capacity consisted of eight specialised BAC teams, three mechanical clearance teams, three NTS teams, and four EORE teams. FSD intended to form two rubble removal teams in July 2023 and was in the process of introducing drones for NTS and mechanical teams.¹⁵⁰ FSD has sadly lost a staff member during the conflict and lost contact with one another. Both incidents occurred while the staff were off-duty.¹⁵¹

ITF Enhancing Human Security has partnered with Safe Path Group, a Ukrainian NGO, to identify the location of EO through NTS and TS activities, marking and recording it for future disposal or removal. The project began in October 2022 and an operational base was selected in Kharkiv in December 2022. Ten selected personnel were enrolled into the SESU IMAS level II course, with the aim of establishing two NTS and TS teams in Kharkiv and Poltava regions.¹⁵²

NPA received its accreditation for NTS and EORE in February 2023, and in June 2023 was accredited for TS, BAC, and manual demining. NPA established an operational presence in Sumy oblast and recruited 20 NTS personnel across ten teams in 2022. The recruited teams were not, however, deployed in 2022 as they were only accredited in February 2023. NPA planned to increase the numbers of its NTS teams to 12 and to further recruit ten clearance teams. In addition, NPA planned to train and deploy a total of 4 MDD teams, each consisting of two MDDs, two dog-handlers, and one team leader. As at April 2023, NPA has recruited and trained two clearance teams. One team had completed training and deployed for manual clearance in June 2023. The second team was undergoing training and expected to be deployed by mid July. As at July 2023, NPA was training five additional manual teams and eight MDD handlers to be operational by August of the same year.¹⁵³

HALO, the largest international operator in the country, suspended its operation in the east of Ukraine following the Russian invasion in February 2022. It relocated to the central

part of the country and resumed operations in May 2022. At the beginning of 2022, HALO had eight NTS teams with a total of 33 members. This has expanded to 16 NTS teams, each with four members (a total of 64 personnel) by the end of the year. Each team contained a supervisor and a senior supervisor in addition to the NTS personnel. HALO operated with 10 manual clearance teams totalling 70 staff at the beginning of 2022. Throughout the year, large-scale demining trainings were conducted of over 100 trainees each. By the end of the 2022, HALO had 44 manual clearance teams each of 9 members (a total of 304 personnel, excluding drivers and team leaders), 1 mechanical clearance team of 3 personnel, and 18 personnel for mechanical clearance support across 5 teams.¹⁵⁴

HALO has undergone a significant restructuring in the central part of Ukraine, involving the recruitment of new employees, training, and the formation of new survey and clearance teams. At the start of the operational year, which began in the mid-summer of 2022, the number of employees and teams was lower than in 2021. However, with the financial support of donors, HALO not only restored its performance to 2021 levels, but even significantly increased operational capacity. HALO intended to double its 2022 operational capacity in 2023. This includes 35 NTS teams, 92 manual demining teams, 21 mechanical support teams, and 12 mechanical teams, for a total of more than 1,200 operational staff.¹⁵⁵

HALO has made considerable progress using drones to identify UXO and mines during survey and clearance. HALO Ukraine has a drone team responsible for both flights and image processing. As a result, most surface items could be identified with a high probability. This provides credibility and speeds up the clearance process, allowing teams to focus on evidence points during the clearance process, making more effective progress.¹⁵⁶

Ukraine has been exploring the use of unmanned aerial vehicles (UAVs) for mine detection using various technologies with promising results. The use of drones has proven both efficient and cost effective especially when deployed shortly after contamination and before the mines are covered with vegetation, allowing to quickly cover large areas and significantly speeding up survey operations.¹⁵⁷ Denmark provided Ukraine with six UAVs for the scanning of mines and unexploded ordnance (UXO) in July 2023 as part of its assistance package to the Ukrainian army.¹⁵⁸ A Canadian drone-maker has supplied demining groups with a handful of UAVs decked out with a suite of sensors designed to map areas with suspected mines. The sensors include magnetometers, several different kinds of cameras, and radars. The Canadian company expected to have two

148 Emails from Tony Connell, FSD, 24 March and 26 July 2023.

149 FSD, "Demining in Ukraine: the race against time", accessed 24 April 2023 at: <https://bit.ly/41x5i9r>.

150 Swissinfo, "Demining: how the Swiss are helping to make Ukraine safer", 4 April 2023, at: <https://bit.ly/41uQTuk>, and email from Tony Connell, FSD, 26 July 2023.

151 Email from Tony Connell, FSD, 24 March 2023.

152 ITF, "Annual Report 2022", at: <https://bit.ly/3o5uIM0>, p. 94.

153 Emails from Alberto Rinaldo Serra, NPA, 15 March 2023, and Amela Balic, NPA, 29 June 2023.

154 Email from Denys Holovetskyi, HALO, 29 May 2023.

155 Ibid.

156 Ibid.

157 Presentation of HI to the APMBIC Intersessional Meetings, Geneva, 19-21 June 2023.

158 "Denmark Hands Over 6 UAVs to Ukraine for Mine Scanning", *Gwara Media*, 14 July 2023, at: <https://bit.ly/46SecBG>.

dozen mine-spotting drones by the end of 2023.¹⁵⁹ POSTUP Foundation has tested the use of a magnetometer-equipped drones to map a minefield in Kyiv region in March 2023, and was working on a second prototype of the magnetometer technology.¹⁶⁰ Since the summer of 2023, NPA NTS teams have been using UAVs for imagery in all NTS tasks and as at August of the same year, NPA was introducing the use of UAVs prior to and during clearance.¹⁶¹

MAG had operational community liaison teams in 2022, and as at August 2023, was starting NTS with the aim to be operational in TS, manual clearance, and BAC by September 2023.¹⁶²

DEMINER SAFETY

A SESU deminer told the press in January 2023 that 64 deminers had been injured and 13 killed in the line of duty.¹⁶³ Three SESU personnel were killed on 24 December 2022 as a mine exploded while they were demining in Kherson region.¹⁶⁴ In March 2023, the Kherson military administration said that four bomb disposal experts and one civilian were injured while defuzing mines in the village of Posad-Pokrovsk in Kherson region.¹⁶⁵ Another SESU team came under attack in May 2023 while demining in the Kherson region. The attack led to the killing of 18 persons, including six SESU specialists, in addition to the injury of 46 civilians and two paramedics.¹⁶⁶

LAND RELEASE OUTPUTS AND ARTICLE 5 COMPLIANCE

LAND RELEASE OUTPUTS IN 2022

According to data provided operators, a total of 0.36km² of mined area was released in 2022, of which, 0.17km² was cleared, 0.01km² was reduced through TS, and 0.17km² cancelled through NTS.¹⁶⁷ No AP mines were found as a result of the land release, suggesting either a lack of prior survey or inadequate survey, but HALO reported 59 AP mines separately for spot-task removal by SESU.¹⁶⁸

In addition, 4.02km² of previously unrecorded AP mine contamination was discovered by DRC and HALO.¹⁶⁹

SURVEY IN 2022

A total of 184,416m² of AP mined area was released through survey in 2022. Of this, 173,100m² was cancelled through NTS by DRC and 11,316m² was reduced through TS by HALO.¹⁷⁰

Total cancellation by DRC in 2022 was significantly less than in 2021 whereby DRC cancelled 798,207m² of mined area as it implemented only during the first two months of 2022, before the start of the Russian invasion of in February.¹⁷¹ HALO did not cancel land through NTS, but reduced 11,316m² of AP mined area through TS. Of the 11,315m² reduced, 7,893m² included anti-vehicle or mixed threat areas.¹⁷² The total area reduced by HALO in 2022 is less than that of 2021 where HALO reduced 26,207m², but these figures are not comparable due to the suspension and relocation of operation that occurred since February 2022.

A total of just above 4km² of previously unrecorded AP mined area was discovered and added to the database, all of which has occurred since February 2022. Of this, 100,910m² was discovered by DRC in one suspected hazardous area (SHA) and two confirmed hazardous areas (CHAs),¹⁷³ and 3,917,383m² in 57 SHAs and CHAs combined.¹⁷⁴

159 "Drones are sniffing out landmines in Ukraine", *AXIOS*, 29 August 2022, at: <https://bit.ly/30fJ7AM>.

160 "UAV mine detection system tested in Kyiv Oblast", *Ukrainska Pravda*, 21 March 2023, at: <https://bit.ly/3Dhe1Co>. A magnetometer is a carbon stick a little over a metre long with two sensors at the ends. These sensors measure the magnetic background of the field at a frequency of 200Hz.

161 Email from Alberto Rinaldo Serra, NPA, 21 August 2023.

162 Emails from Nick Guest, MAG, 23 March 2023; and Jon Cunliffe, MAG, 15 August 2023.

163 "Ukrainians wrap up landmine clearance exercises in Cambodia", *Associated Press*, 20 January 2023, at: <https://bit.ly/41FPJge>.

164 "Three emergency services workers killed while demining Ukraine's Kherson", *Reuters*, 25 December 2022, at: <https://bit.ly/3G04bdy>.

165 "Exploding mines in southern Ukraine kill one and injure five", *The New York Times*, 14 March 2023, <https://bit.ly/3DgnaLG>.

166 "The occupiers shelled the Kherson region: 6 employees of the State Emergency Service were killed", *Apostroph*, 6 May 2023, at: <https://bit.ly/3pgfu8G>.

167 Emails from Roxana-Cristina Bobolicu, DRC, 1 April 2023; and Denys Holovetskyi, HALO, 29 May 2023.

168 Email from Denys Holovetskyi, HALO, 29 May 2023.

169 Emails from Roxana-Cristina Bobolicu, DRC, 1 April 2023; and Denys Holovetskyi, HALO, 29 May 2023.

170 Emails from Roxana-Cristina Bobolicu, DRC, 1 April 2023; and Denys Holovetskyi, HALO, 29 May 2023.

171 Email from Roxana-Cristina Bobolicu, DRC, 1 April 2023.

172 Email from Denys Holovetskyi, HALO, 29 May 2023.

173 Email from Roxana-Cristina Bobolicu, DRC, 1 April 2023.

174 Email from Denys Holovetskyi, HALO, 29 May 2023.

CLEARANCE IN 2022

According to operator data only, a total of 172,918m² of mined land was cleared in Ukraine in 2022, all by HALO. In addition to what is being cleared by international operators, substantial clearance is being undertaken by the MoD and the SESU, some of which is conducted immediately after contamination has occurred. However, as at July 2023, clearance of AP mines conducted by Ukrainian national bodies in 2022 had not yet been reported.

During its clearance of 172,918m², HALO did not find any AP mines during clearance but only two AV mines and three items of UXO, which it reported to the authorities for destruction. Separately, HALO found and reported 59 AP mines for in situ destruction over the course of 2022. Of the 59 AP mines, 54 were PFM-1, four were MON-50, and one was of an improvised nature (an F1 grenade laid with tripwire).¹⁷⁵ As noted above, operators are not authorised to conduct EOD in Ukraine which has further overstretched the already strained capacity of the national authorities:

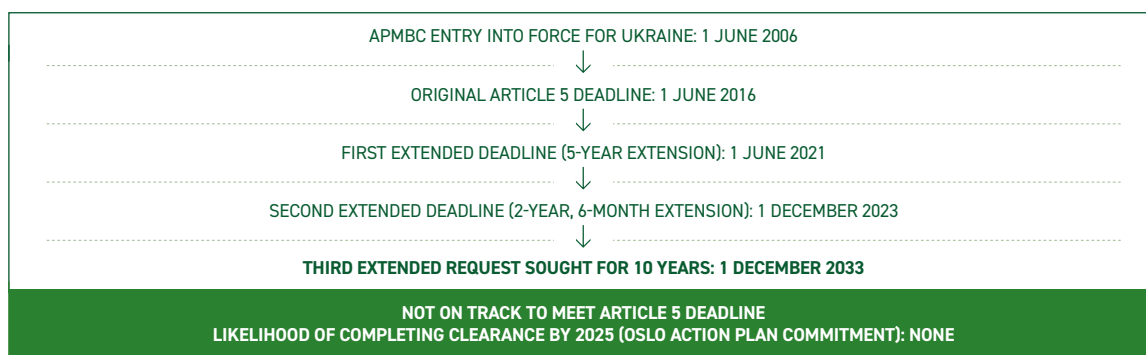
The clearance figure of 2022 constitutes a small proportion of the 1,173,773m² HALO cleared in 2021, and whereby HALO destroyed 11 AP mines, four AV mines, and 78 items of UXO.¹⁷⁶

HALO's drop in clearance is ascribed to the suspension of operations after the winter standdown, the relocation from the east to the centre of Ukraine, and the need to recruit and build capacity of newly hired staff. Since the resumption of its operation in May 2022, HALO has worked on seven tasks of a total area of 182,577m².¹⁷⁷

DRC cleared 158,945m² of battle area in 2022 in Chernihiv and Kyiv Oblasts. DRC did not encounter any AP mines during the clearance but found in the process 64 items of UXO and 52 items of abandoned unexploded ordnance (AXO).¹⁷⁸ In 2021, DRC cleared 85,227m² of AP mined area and destroyed 12 items of UXO.¹⁷⁹ The areas cleared in 2022 were suspected to contain AV mines, UXO, and AXO. There was no clearance of areas suspected to contain AP mines. The size of the areas cleared and the number of items found increased due to the shift in operational areas.¹⁸⁰

Ukraine reported having cleared 78.18km² of land from explosive objects, neutralising in the process 315,068 items of EO. No further information was provided on the types of devices destroyed.¹⁸¹

ARTICLE 5 DEADLINE AND COMPLIANCE



Under Article 5 of the APBC (and in accordance with its latest extension), Ukraine is required to destroy all AP mines in mined areas under its jurisdiction or control as soon as possible, but not later than 1 December 2023. Ukraine would not meet this deadline and in April 2023, submitted an Article 5 deadline extension request for consideration by the Twenty-First Meeting of States Parties (21MSP) seeking a 10-year extension. Following feedback from the Committee on Article 5 Implementation, Ukraine said that it does not object to reducing the requested extension to five years, through to 1 December 2028.¹⁸² However, in September 2023, Ukraine submitted additional information to the Convention maintaining its request for a 10-year extension period. Ukraine justified the requested period of extension by the continued Russian aggression, the use of remote mining of its border territories, and the lack of understanding of the duration of hostilities.¹⁸³

¹⁷⁵ Ibid.

¹⁷⁶ Email from Imogen Churchill, HALO, 23 March 2022.

¹⁷⁷ Email from Denys Holovetskyi, HALO, 29 May 2023.

¹⁷⁸ Email from Roxana-Cristina Bobolicu, DRC, 1 April 2023.

¹⁷⁹ Email from Almedina Musić, DRC, 7 February 2022.

¹⁸⁰ Email from Roxana-Cristina Bobolicu, DRC, 1 April 2023.

¹⁸¹ 2023 Article 5 deadline Extension Request, p. 1.

¹⁸² Ibid., Additional Information, p. 1.

¹⁸³ 2023 Article 5 deadline Extension Request, additional Information (Annex 1), 1 September 2023, p. 1.

In 2020, Ukraine had stated that the fulfilment of its deadline was dependent upon “completion of hostilities, restoration of the constitutional order and gaining the full control over the occupied territories, including over the state border between Ukraine and the Russian Federation”.¹⁸⁴ The 2022 conflict has resulted in huge new contamination. The time needed to clear AP mines in Ukraine can only be estimated once hostilities have ended and a national contamination survey has been completed.¹⁸⁵

Apart from the 59 AP mines reported by HALO and removed by the Ukrainian authorities, no AP mines were found during clearance in 2022, although clearance continues in 17 of the 19 tasks that were being cleared. Previously, both HALO and DRC were clearing large mined areas without finding any AP mines. Clearance data are not available from areas outside of government control, though it is believed that, at least in earlier years, pro-Russian rebels conducted some ad hoc clearance.¹⁸⁶

Table 3: Five-year summary of AP mine clearance

Year	Area cleared (m ²)
2022	172,798
2021	1,259,000
2020	830,477
2019	697,012
2018	391,819
Total	3,351,106

While Russia is not a State Party or signatory to the APMBC it also has obligations under international human rights law to clear AP mines as soon as possible in any areas of Ukraine over which it exercises effective control, by virtue of its duty to protect the right to life of every person under its jurisdiction.

PLANNING FOR MANAGEMENT OF RESIDUAL CONTAMINATION

Ukraine has not provided information on whether it has a plan in place for dealing with residual risk post completion, which is years away in any event.

¹⁸⁴ 2020 Article 5 deadline Extension Request, p. 5.

¹⁸⁵ Online presentation by Hannah Rose Holloway, DRC, CCM Intersessional Meetings, Geneva, 16 May 2022.

¹⁸⁶ Side event presentation by Mark Hiznay, Human Rights Watch, in Geneva, February 2015; and interview, 18 February 2015.