

### KEY DATA

#### CLUSTER MUNITION CONTAMINATION:

UNKNOWN BUT VERY LARGE

SUBMUNITION CLEARANCE IN 2022

**325,483 M<sup>2</sup>**

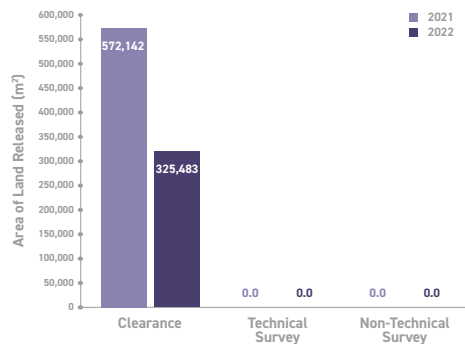
BASED ON NGO DATA

SUBMUNITIONS DESTROYED IN 2022

**70**

BASED ON NGO DATA

### LAND RELEASE OUTPUT



## KEY DEVELOPMENTS

From the outset of its attack against Ukraine that began in late February 2022, Russia's armed forces have used cluster munitions extensively against Ukrainian military objectives, as well as, in violation of international law, against the civilian population and civilian objects. The exact number of cluster munition attacks is unknown, but hundreds have been documented or reported, adding significantly to the existing contamination.<sup>1</sup> Wherever possible, the State Emergency Services of Ukraine (SESU) have cleared the contamination resulting from the use of explosive ordnance, including cluster munition remnants (CMR), immediately after use.<sup>2</sup> Prior to July 2023, Ukrainian forces had also used cluster munitions in their military operations against Russian forces on Ukrainian territory at least three times. In 7 July 2023, however, the United States (US) Department of Defense supplied Ukraine with dual-purpose improved conventional munitions (DPICM), a type of cluster munition,<sup>3</sup> and Ukraine began using the US cluster munitions against Russian forces the same month, likely adding to existing CMR contamination.<sup>4</sup>

The scale of the new CMR contamination in Ukraine is estimated to be large, but there is no credible estimate yet. Sources have suggested that the threat from unexploded submunitions might require a decade or more of concerted action.

In November 2021, the Ukrainian Cabinet of Ministers issued a long-awaited resolution on the establishment of the national mine action authority (NMAA). The NMAA was said to have assumed its full responsibilities in 2022. The two National Mine Action Centres under the Ministry of Defence (MoD) and the Ministry of Interior (MoI) were accredited and became fully operational in 2022. Additional international operators started operations in Ukraine and were undergoing accreditation in 2022 including the DanChurchAid (DCA), Humanity and Inclusion (HI), Mines Advisory Group (MAG), and Norwegian People's Aid (NPA) who has received its accreditation in 2023.

1 Human Rights Watch (HRW), "Intense and Lasting Harm: Cluster Munition Attacks in Ukraine", Report, 11 May 2022, at: <https://bit.ly/3wJ6Or4>; Amnesty International, "Everything is on fire": One month since the Russian invasion of Ukraine", 24 March 2022, at: <https://bit.ly/3lyZrgK>; Article 36, "Article 36 condemns Russia's use of cluster munitions in Ukraine", 16 March 2022, at: <https://bit.ly/3PymSES>; and Cluster Munition Coalition, *Cluster Munition Monitor 2022*, Report, 25 August 2022, at: <https://bit.ly/3miGxyT>.

2 "See how Kharkiv's bomb squad neutralizes cluster bombs in Ukraine", *National Public Radio (NPR)*, 24 April 2022, at: <https://n.pr/3NqnQ47>; and Ukraine's State Emergency Service Facebook page, 8 May 2022, at: <https://bit.ly/3G04DDJ>.

3 U.S. Department of Defense press release, "Biden Administration Announces Additional Security Assistance for Ukraine", 7 July 2023, at: <https://bit.ly/305Glvz>.

4 "Cluster bombs: Ukraine using munitions 'effectively', says US", *BBC*, 21 July 2023, at: <https://bbc.in/30t3eL0>.

## RECOMMENDATIONS FOR ACTION

- Ukraine should immediately halt all use of cluster munitions and accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- As soon as conditions allow, Ukraine should undertake a baseline survey to understand the extent and nature of its CMR contamination in all areas to which it has effective access.
- Ukraine should ensure that survey, clearance, and contamination data related to CMR are disaggregated from data relating to other explosive remnants of war (ERW) and mines.
- Given the increasing number of mine action stakeholders, Ukraine should improve the coordination among mine action stakeholders to ensure an effective and sustainable response.
- Ukraine should facilitate and expedite its processes for permission to operators to use explosives in clearance and destruction operations as well as subsequent accreditation to conduct explosive ordnance disposal (EOD).

## CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

### MANAGEMENT

- 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)
- State Special Transport Service (SSTS)
- Military Engineering School

### NATIONAL OPERATORS

- State Emergency Services of Ukraine (SESU)
- Armed Forces of Ukraine
- National Police
- SSTS
- State Border Service
- Demining Solutions
- GK Group
- The Demining Team of Ukraine
- Ukrainian Deminers Association (UDA)
- Safe Path Group

### INTERNATIONAL OPERATORS

- DanChurchAid (DCA) - seeking accreditation
- Danish Refugee Council's (DRC's) Humanitarian Disarmament and Peacebuilding sector (formally known as Danish Demining Group (DDG). Hereafter referred to as DRC
- Swiss Foundation for Mine Action (FSD)
- The HALO Trust (HALO)
- Humanity and Inclusion (HI) – seeking accreditation
- Mines Advisory Group (MAG) – seeking accreditation
- Norwegian People's Aid (NPA) – accredited in 2023

### OTHER ACTORS

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

## UNDERSTANDING OF CMR CONTAMINATION

The extent of contamination from CMR in Ukraine is not known but is expected to be very large due to the widespread use of cluster munitions in the course of the Russian assault on Ukraine. Explosive ordnance, including submunitions, are littered across cities and agricultural land, but are most highly concentrated in the east and south of Ukraine.<sup>5</sup> Russia used at least two newly developed types of cluster munition in Ukraine in 2022.<sup>6</sup> Prior to July 2023, Ukrainian forces appear to have used cluster munitions at least three times in its fight against the Russian forces on Ukrainian territories.<sup>7</sup> However, on 7 July 2023, the US Department of Defense supplied cluster munitions to Ukraine (see below), which Ukraine is now using against Russian forces, potentially adding to existing CMR contamination.<sup>8</sup>

Hundreds of Russian cluster munition attacks have been documented, reported, or alleged in at least 10 of Ukraine's 24 regions (known as oblasts): Chernihiv, Dnipropetrovsk, Donetsk, Kharkiv, Kherson, Luhansk, Mykolaiv, Odesa, Sumy, and Zaporizhzhia. Preliminary data shows at least 689 civilian casualties from cluster munition attacks in Ukraine between February and July 2022.<sup>9</sup>

According to the Office of the United Nations High Commissioner of Human Rights (OHCHR), the vast majority of civilian casualties documented by OHCHR in Ukraine since 24 February 2022 were caused by the use of explosive weapons in populated areas. Some of these weapons, such as rockets, missiles, and air-dropped bombs, carry cluster munitions. They were mostly used by Russian forces, but were also, albeit to a far lesser extent, used by Ukrainian forces.<sup>10</sup>

The OHCHR identified and corroborated at least 10 attacks by Russian armed forces and 25 attacks by Ukrainian armed forces with the use of Tochka-U missiles. Of these 35 attacks,

in at least 20 cases according to the High Commissioner's Office, the missiles were carrying submunitions that hit populated areas.<sup>11</sup>

Ukrainian forces appear to have used cluster munitions, including Uragan cluster munition rockets, in at least three locations that were under the control of Russia's armed forces or affiliated armed groups at the time. Such use was reported in Donetsk, Kharkiv, and Kherson regions (oblasts). Ukraine has not denied using cluster munitions in 2022.<sup>12</sup> In a letter to the Security Council in March 2022, Russia accused Ukraine of having launched a Tochka-U missile with a cluster warhead at a residential block in Donetsk on 14 March 2022. According to the letter, the attack led to the death of more than 20 civilians and injuries to at least 37 others.<sup>13</sup>

Human Rights Watch documented the use of six types of cluster munitions: 220mm 9M27K-series Uragan, 300mm 9M55K-series Smerch, 300mm 9M54-series guided missile, 9M79-series Tochka ballistic missile, Iskander-M 9M723 ballistic missile, and RBK-series air-dropped cluster bombs. All these cluster munitions, apart from the RBK-series, were fired from the ground by missiles and rockets. Some of these munitions were manufactured as recently as 2021, and certain have self-destructing features.<sup>14</sup>

Media sources reported that Turkey began sending cluster munitions to Ukraine, notably DPICMs, in late 2022.<sup>15</sup> Several media outlets reported that Ukraine requested cluster munitions from Estonia and the United States (US) in 2022.<sup>16</sup> Ukraine has defended its call for cluster munitions on the basis that the weapons would be used only against Russian troops and tanks, and would only target areas in Eastern Ukraine that are already largely depopulated.<sup>17</sup>

- 5 Geneva International Centre for Humanitarian Demining (GICHD), "Ukraine faces massive explosive contamination one year into the conflict", 23 February 2023, at: <https://bit.ly/3KNEZVU>.
- 6 *Cluster Munition Monitor 2022*, Report, Cluster Munition Coalition, 25 August 2022, at: <https://bit.ly/3miGxyT>, p. 17.
- 7 "To Push Back Russians, Ukrainians Hit a Village With Cluster Munitions", *New York Times*, 18 April 2022, at: <https://bit.ly/41NMZgv>; HRW, "End Cluster Munition Attacks in Ukraine", 11 May 2022, at: <https://bit.ly/3lx3cTX>; Office of the United Nations High Commissioner of Human Rights (OHCHR), "Situation of human rights in Ukraine in the context of the armed attack by the Russian Federation", Report, 29 June 2022, at: <https://bit.ly/3AkenqJ>, p. 12.
- 8 U.S. Department of Defense press release, "Biden Administration Announces Additional Security Assistance for Ukraine", 7 July 2023, at: <https://bit.ly/3056lwz>; and "Cluster bombs: Ukraine using munitions 'effectively', says US", *BBC*, 21 July 2023, at: <https://bbc.in/30t3eLO>.
- 9 HRW, "Growing Civilian Toll from Russian Cluster Munition Attacks", 25 August 2022, at: <https://bit.ly/3mEd07C>; and *Cluster Munition Monitor 2022*, p. 14.
- 10 OHCHR, "Situation of human rights in Ukraine in the context of the armed attack by the Russian Federation", Report, 29 June 2022, at: <https://bit.ly/3AkenqJ>, p. 11.
- 11 *Ibid.*, p. 12.
- 12 "To Push Back Russians, Ukrainians Hit a Village With Cluster Munitions", *New York Times*, 18 April 2022; HRW, "End Cluster Munition Attacks in Ukraine", 11 May 2022; OHCHR, "Situation of human rights in Ukraine in the context of the armed attack by the Russian Federation", Report, 29 June 2022, p. 12; and *Cluster Munition Monitor 2022*, p. 15.
- 13 "Letter dated 15 March 2022 from the Permanent Representative of the Russian Federation to the United Nations addressed to the Secretary-General and the President of the Security Council", at: <https://bit.ly/41DGvRG>.
- 14 HRW, "Intense and Lasting Harm: Cluster Munition Attacks in Ukraine", Report, 11 May 2022; and online presentation to the CCM Intersessional Meetings by Mary Wareham, Advocacy Director, Human Rights Watch, 16 May 2022.
- 15 "Turkey Is Sending Cold War-Era Cluster Bombs to Ukraine", *Foreign Policy*, 10 January 2023, at: <http://bit.ly/3Kwkw6G>.
- 16 "Ukraine seeks US cluster bombs to adapt for drone use - lawmakers", Reuters, 7 March 2023, at: <http://bit.ly/3GuBL8e>; "Estonia weighing giving Ukraine cluster munitions", *Estonian Public Broadcasting*, 26 January 2023, at: <http://bit.ly/3GrCpTW>; "Exclusive: Biden administration weighs Ukrainian requests for access to US stockpile of controversial cluster munitions", CCN, 8 December 2022, at: <https://bit.ly/3Ghwiv2>.
- 17 "Ukrainian Foreign Minister Defends Call For Cluster Weapons", *Radio Free Europe*, 18 February 2023, at: <http://bit.ly/3MvmaZP>.

A US Senator visiting Kyiv in May 2023 stated that it supported the provision of the longer-range ATACMS missiles and cluster munitions as soon as possible, adding that this would increase the likelihood of Ukraine being successful on the battlefield.<sup>18</sup> On 7 July 2023, the US Department of Defence announced it would supply DPICM to Ukraine,<sup>19</sup> which Ukraine is now using on its own territory against Russian forces.<sup>20</sup> Following the US announcement, Ukrainian Defense Minister Oleksii Reznikov presented five principles that he said the armed forces would respect upon receiving the cluster munitions: use them only in Ukraine; not use them in "urban areas (cities)" but only "in the fields where there is a concentration of Russian military"; keep a strict record of where the munitions were used; conduct clearance activities after the de-occupation of the areas where the munitions were used; and report to partners on the use of the munitions and their efficiency.<sup>21</sup>

The supply of cluster munitions by the US to Ukraine has prompted denunciations in diplomatic and humanitarian circles. The United Nations Secretary-General, in support of the CCM, expressed his concern regarding continued use of cluster munitions,<sup>22</sup> while leaders from at least eleven countries expressed concern over US supply: Austria, Belgium, Cambodia, Canada, Germany, Italy, Laos, New Zealand, Norway, Spain, and the United Kingdom.<sup>23</sup>

Ukraine claimed in several statements between March and July 2023 that about 30% of its territory is to be surveyed for mine contamination or other explosive ordnance. This equates to an area of nearly 174,000km<sup>2</sup>. Despite the vast extent of contamination this figure is not credible. To date, only about 50km<sup>2</sup> of all potentially contaminated territories have been identified as mined areas or areas contaminated with explosive ordnance. Non-technical survey (NTS) of regained territories continues.<sup>24</sup> The threat from unexploded submunitions might require a decade or more of concerted action according to the Danish Refugee Council (DRC).<sup>25</sup> In April 2023, SESU told the media that it had found more than 55,000 explosives in Kharkiv region alone.<sup>26</sup>

**Table 1: Explosive ordnance contamination in Ukraine (at June 2023)<sup>27</sup>**

Region	Hazardous areas	Area (m <sup>2</sup> )	Mined areas	Area (m <sup>2</sup> )	Former battle areas	Area (m <sup>2</sup> )
Chernihiv	135	18,780,520	49	4,674,440	86	14,106,108
Kharkiv	49	5,915,613	32	4,423,439	17	1,492,173
Kherson	NTS not yet carried out					
Kijiv	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	1	455,227	3	11,273,266
<b>Totals</b>	<b>349</b>	<b>50,215,827</b>	<b>192</b>	<b>20,569,702</b>	<b>157</b>	<b>387,748,864</b>

Before 2022, Ukraine said that many unexploded submunitions contaminated the Donetsk and Luhansk regions,<sup>28</sup> with the most intensive use of cluster munitions said to have occurred in and around the city of Debalcevo in Donetsk region.<sup>29</sup> The heaviest mine and ERW contamination was believed to be inside the non-delineated 15km buffer areas on either side of the frontline separating Ukrainian government-controlled areas (GCA) from territories controlled by the self-proclaimed Donetsk and Lugansk Republics.<sup>30</sup> The HALO Trust (HALO)'s NTS identified a total area of 3.77km<sup>2</sup> across 45 tasks that are suspected or confirmed to contain CMR. HALO's teams worked on 17 tasks with confirmed or suspected cluster munition threats, covering a total area of 1,646,690m<sup>2</sup>. During the clearance process, cluster munitions were identified in four tasks, with a total area of 208,938m<sup>2</sup>. The remaining 13 tasks were still undergoing clearance, but no cluster munition threats had been found as at the time of writing.<sup>31</sup>

18 "US senators talked about cluster munitions for Ukraine", *Militaryini*, 28 May 2023, at: <https://bit.ly/42ZKtDH>.  
19 US Department of Defense press release, 'Biden Administration Announces Additional Security Assistance for Ukraine', 7 July 2023, at: <https://bit.ly/305Glvz>.  
20 'Cluster bombs: Ukraine using munitions 'effectively', says US', BBC, 21 July 2023, at: <https://bbc.in/30t3eL0>.  
21 HRW, "Ukraine: Civilian Deaths from Cluster Munitions", 6 July 2023, at: <https://bit.ly/3rHBgmN>.  
22 UN, "Daily Press Briefing by the Office of the Spokesperson for the Secretary-General", 7 July 2023, available at: <https://bit.ly/448QWgq>.  
23 HRW, "Ukraine: Civilian Deaths from Cluster Munitions", 6 July 2023, at: <https://bit.ly/3rHBgmN>.  
24 Statement of Ukraine to the Eight Pledging Conference for the Implementation of the APMB, 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>; and Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline Extension Request, 2023, pp. 1 and 2.  
25 Online presentation by Hannah Rose Holloway, Humanitarian Disarmament and Peacebuilding Coordinator, Danish Refugee Council (DRC), CCM Intersessional Meeting, Geneva, 16 May 2022.  
26 "Ukraine war: The deadly landmines killing hundreds", *BBC News*, 19 April 2023, at: <https://bit.ly/3AusQJE>.  
27 2023 APMB Article 5 deadline Extension Request, p. 2.  
28 National Security and Defence Council and State Emergency Services of Ukraine (SESU), "Humanitarian demining in Ukraine: current issues and challenges", APMB Fourteenth Meeting of States Parties (14MSP), Side event, Geneva, 2 December 2015.  
29 Interview with Lt.-Col. Yevhenii Zubarevskiy, Mine Action Department, MoD, in Geneva, 20 May 2016.  
30 Emails from Yuri Shahramanyan, Programme Manager, HALO Ukraine, 24 May 2017; and Henry Leach, Head of Programme, DDG Ukraine, 29 May 2017.  
31 Email from Denys Holovetskiy, Head of Operations, HALO, 29 May 2023.

A total of 2.2km<sup>2</sup> of previously unrecorded CMR contamination was discovered and added to the database in Ukraine in 2022. Of this total, DRC identified 0.14km<sup>2</sup> across three confirmed hazardous areas (CHAs) and one suspected hazardous area (SHA), while HALO identified 2.06km<sup>2</sup> in Kyiv and Chernihiv oblasts. All of the newly identified contamination in 2022 has occurred since the beginning of Russia's invasion of Ukraine.<sup>32</sup> 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.<sup>33</sup>

## OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Ukraine is contaminated by considerable quantities of other ERW as well as by anti-personnel and anti-vehicle mines used during the different conflicts (see Mine Action Review's *Clearing the Mines* report on Ukraine for further information on the mine problem). It is also affected by unexploded ordnance (UXO) and abandoned explosive ordnance (AXO) remaining from the First World War and Second World War<sup>34</sup> and remnants of Soviet military training and abandoned stockpiles.

## NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

There are four national supervisory and management bodies in Ukraine: a national mine action centre under the MoD (for operational matters); a Humanitarian Demining Centre (HDC) under SESU; an inter-ministerial National Mine Action Authority (serviced by a secretariat); and, since 2023, at the top of the hierarchy, an inter-ministerial committee on humanitarian demining. This complex structure will inevitably lead to overlap and confusion.<sup>35</sup>

The bodies involved in the national mine action centre (MAC) in Ukraine include the MoD; the Ministry of Interior, under which sits the SESU; the Ministry for Reintegration of the Temporarily Occupied Territories; the State Special Transport Services (SSTS), which sits under the Mol; the National Police; and the State Border Service.

In November 2021, the Cabinet of Ministers issued a resolution to provide the framework for an NMAA.<sup>36</sup> The Law defined the NMAA as an interagency State body acting on an advisory and collegial basis under the chairing of 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.<sup>37</sup> 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 State 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.<sup>38</sup> While the NMAA sits at a ministerial level, it is serviced by a secretariat that also has "some" managerial functions.<sup>39</sup>

A national mine action law was adopted by Ukraine's parliament in 2018.<sup>40</sup> But the government did not proceed with its implementation on the grounds it was inconsistent with a number of other legal acts.<sup>41</sup> Amended legislation was passed in December 2020 with final amendments based on recommendations from the mine action working group. But the new law failed to address two major concerns of 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 employment of dual-use items.<sup>42</sup>

The amended law created two National Mine Action Centres (NMACs): a National Mine Action Centre (MAC), under the MoD and a Humanitarian Demining Centre (HDC), under SESU (which sits under the STSS which is under the purview of the Mol). 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.<sup>43</sup> Both the MAC and the HDC have staff conscripted under the terms of the martial law. As a result, both centres are reported to have been overstretched and not functioning efficiently.<sup>44</sup>

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

33 2023 APMBC Article 5 deadline Extension Request, p. 4.

34 See, e.g., "During a Year in Kerch and Sevastopol neutralized 33,000 munitions", *Forum*, 4 December 2009.

35 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.

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

37 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, OSCE PCU, 1 July 2022.

38 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.

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

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

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

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

43 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.

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

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 UXO, and marking and compiling specialised maps. The Ministry has also developed a mine and explosive ordnance victims database.<sup>45</sup> 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.<sup>46</sup>

The NMAA was reported to be fully operational and to have played a central role in planning and coordination throughout 2022.<sup>47</sup> 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, technical survey (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 for the expansion of 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.<sup>48</sup>

Following a temporary suspension in February 2022, subcluster 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 authorities (MoD, SESU, and the Ministry for Reintegration of the Temporarily Occupied Territories), operators (DCA, Demining Solutions, DRC, The Swiss Foundation for Mine Action (FSD), HALO, HI, MAG, NPA), UN agencies, other stakeholders (the Organization for Security and Co-operation in Europe (OSCE), and Tetra Tech), and donors.<sup>49</sup>

In 2023, an inter-ministerial committee on humanitarian demining was newly created, adding to the bureaucracy. This committee, which is headed by the First Deputy Prime Minister and the Minister of Economy, sits above the NMAA

and appears to have taken over some of the high-level tasks previously accorded to the NMAA.<sup>50</sup> The exact responsibilities of this newly created body are not yet clear, but they seem to overlap with these of 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).<sup>51</sup> 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 completed since. 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.<sup>52</sup> 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.<sup>53</sup>

According to MAG, preventing operators disposing of explosive items has negatively impacted the capacity and resources of SESU.<sup>54</sup> 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, is in short of demining equipment, particularly, of transportation means of personnel and explosive materials, mine detectors, and personal protective equipment (PPE).<sup>55</sup>

DanChurchAid (DCA) 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.<sup>56</sup>

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

46 Email from GICHD, 26 May 2023.

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

48 Ibid.

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

50 Email from GICHD, 26 May 2023.

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

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

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

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

55 2023 APMB 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>.

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

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 non-technical survey 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 8,700m<sup>2</sup> of land and disposed of 2,627 items of explosive ordnance.<sup>57</sup>

FSD has sponsored a training in Croatia for eight personnel of the NMAC on the MV4 mechanical ground preparation machine in 2022–23. Between February and March 2023, FSD trained staff from both the NMAC and SESU on manual demining, NTS, and EORE.<sup>58</sup> 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 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 information management (IM) support for Ukraine since 2020.<sup>59</sup>

In November 2022, the GICHD facilitated the first Ukraine Mine Action Donor Coordination Workshop in Geneva. The event, which was organised by Ukraine's national mine action authorities and supported by Switzerland and Germany, aimed to establish a common understanding of national Ukrainian priorities among both national and international stakeholders, discuss long-term sustainable capacities of national staff through training, and promote standardisation across all mine action activities. Next steps, including clear responsibilities and timelines, were identified during the workshop with progress being monitored by the GICHD.<sup>60</sup>

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 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 SSTS. In November 2022, HALO handed over nine vehicles, five unmanned aerial vehicles (UAVs), and PPE to the SESU.<sup>61</sup>

NPA equipped 10 SESU EOD and demining teams in 2022 with technical and safety equipment such as vehicles, detectors, pipes, blasting machines, EOD kits, hook and line kits, trauma bags, first aid kits. NPA has been working with SESU on a capacity-development project to introduce the 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.<sup>62</sup>

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 explosive ordnance contamination.<sup>63</sup>

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 the Ukrainian Deminers Association (UDA), a local Ukrainian NGO.<sup>64</sup>

## 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".<sup>65</sup>

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.<sup>66</sup> 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.<sup>67</sup> FSD has detailed SOPs on environmental management (SOP 17.0) and safe work practices (SOP 02). These SOPs are in accordance with IMAS and comply with Ukrainian legal requirements.<sup>68</sup>

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

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

59 Emails from GICHD, 19 April and 26 May 2023.

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

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

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

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

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

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

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

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

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

HALO seeks to reduce the negative impact on the environment resulting from its activities and to minimise its environmental footprint to the extent possible.<sup>69</sup> 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 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.<sup>70</sup> MAG has an environmental SOP in place in Ukraine.<sup>71</sup> 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.<sup>72</sup>

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## GENDER AND DIVERSITY

As at April 2023, no information had been provided on whether there is a gender policy and associated implementation plan for mine action in Ukraine.<sup>73</sup> No reference was made to gender or diversity in Ukraine's Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline extension request submitted in 2020 or in Ukraine's APMBC Article 7 report covering 2020.<sup>74</sup>

DRC has a global gender and diversity policy, and a country-specific implementation plan. Following an assessment conducted 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.<sup>75</sup>

FSD is committed to providing an equal opportunity working environment. NTS and EORE teams consist of at least one female. All BAC teams have female members. Senior national staff positions are filled by females. In 2022–23, FSD national staff comprised 31% female and 70% male. National staff in management positions were 19% female and 18% male, and international staff 5% female, 95% male.<sup>76</sup>

The HALO uses mixed gender NTS and community liaison teams.<sup>77</sup> HALO promotes equality of opportunity and celebrates diversity while working to eliminate discrimination, harassment, and victimisation. HALO Ukraine seeks to increase the numbers of women employed in operational roles and improve gender balance in these

roles without discriminating against any applicant during recruitment. HALO has an equality and diversity policy and globally is working on a gender and diversity implementation plan.<sup>78</sup>

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 December 2022, 148 of the total 699 employees (21%) of HALO were women. Of the managerial positions, 25 of the 139 positions (18%) were occupied by women, and 113 of the total 615 operational positions (18%) were filled by women.<sup>79</sup>

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.<sup>80</sup>

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 NTS 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.<sup>81</sup> NPA strived to increase the participation of women in its team, and by June 2023, women had filled 22% of NPA's operational positions.<sup>82</sup>

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

70 Ibid.

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

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

73 Email from GICHD, 19 April 2023.

74 2020 Article 5 deadline extension request, Annex A.

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

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

77 Emails from Yuri Shahramanyan, HALO Ukraine, 24 May 2017 and 16 May 2019.

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

79 Ibid.

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

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

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



## 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.<sup>83</sup>

The IMSMA in Ukraine, which has been developed 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.<sup>84</sup> Survey and clearance data that has been entered is validated by MAC. Due to the ongoing conflict, however, the situation is changing on a daily basis, and data continue to be fed into the database.<sup>85</sup> Some datasets of IMSMA (i.e. the locations of CHAs and SHAs identified through NTS, density of ERW-related incidents, and EORE activities) are made publicly available.<sup>86</sup>

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 needs. 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.<sup>87</sup>

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.<sup>88</sup> Following development by the IM working group and successful trials, as at April 2023, data collection forms were using the Survey123 platform, and were being used by all accredited operators.<sup>89</sup>

DRC strengthened the capacity of its information management 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.<sup>90</sup>

As at April 2023, MAG was in the process of setting up its online management information system (OMIS), which it uses across the organisation.<sup>91</sup>

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.<sup>92</sup>

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 manually fill out reports for each task in the Survey123 application, which is then automatically transferred to HALO's internal information system: GOIMS database.<sup>93</sup>

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.<sup>94</sup>

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

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

85 Email from GICHD, 19 April 2023.

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

87 Ibid.

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

89 Email from GICHD, 19 April 2023.

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

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

92 Email from GICHD, 19 April 2023.

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

94 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.<sup>95</sup> In 2023, however, this position appears to be shifting. The GICHD understands that the Cabinet of Ministers is looking closely at the strategic direction for the mine action programme.<sup>96</sup>

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.<sup>97</sup> In March 2023, Ukraine approved an action plan to survey and demine more than 4,700km<sup>2</sup> 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, 1,650km<sup>2</sup> were set to be released by the end of 2023, and 3,050km<sup>2</sup> by the end of 2024.<sup>98</sup>

There are currently no standardised criteria at national level for task prioritisation.<sup>99</sup> 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.<sup>100</sup> Local governments have been helping the MoD to prioritise tasks based on humanitarian criteria.<sup>101</sup> Operators prioritise clearance according to humanitarian impact and in discussion with the local community.<sup>102</sup>

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.<sup>103</sup> 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, 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 NTS.<sup>104</sup>

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.<sup>105</sup>

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 in Izium.<sup>106</sup>

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.<sup>107</sup> 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.<sup>108</sup> 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. By prioritising agricultural fields, HALO was able to make a significant contribution to the safety and livelihoods of local communities, allowing them to cultivate their land without fear of accidents or injury.<sup>109</sup>

MAG was not yet operational in 2022, but it planned to work in 2023 with the region, district, and local administrations to identify priority tasks and liaise with NMAC for their allocation and approval.<sup>110</sup>

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. According to NPA, clearance and survey task dossiers were issued in a timely and effective manner in 2022.<sup>111</sup>

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95 Email from GICHD, 19 April 2023.

96 Ibid., 26 May 2023.

97 Ukraine 2023 APMB Article 5 deadline Extension Request, p. 3.

98 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>.

99 Emails from Henry Leach, DDG Ukraine, 2 May 2019; Yuri Shahramanyan, HALO Ukraine, 16 May 2019; and Almedina Musić, DRC, 7 February 2022.

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

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

102 Emails from Almedina Musić, DDG, 23 April 2020; and Toby Robinson, HALO, 27 April 2020.

103 Email from GICHD, 19 April 2023.

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

105 Ibid.

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

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

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

109 Ibid.

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

111 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.<sup>112</sup> 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.<sup>113</sup>

In May 2020, the GICHD, the 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.<sup>114</sup> According to DRC, the Ukrainian government had set a deadline to finalise the NMAS by August 2021,<sup>115</sup> a target that was then postponed to April 2023 due to delays

in establishing the NMAA,<sup>116</sup> then again to April 2024.<sup>117</sup> Led by the GICHD, an NMAS revision was initiated in March 2023 during a stakeholder workshop.<sup>118</sup> 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.<sup>119</sup>

DRC, FSD, HALO, and MAG agree that the current NMAS are yet to be fully developed to meet the needs of the mine action sector in Ukraine.<sup>120</sup> 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 efforts', and reduction and cancellation criteria, among other concerns.<sup>121</sup> FSD has concerns about the lack of workable NMAS on mechanical clearance.<sup>122</sup>

### 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 MoI, 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.<sup>123</sup>

Multiple international demining organisations—DCA, DRC, FSD, HALO, MAG, and NPA—are operating in Ukraine.<sup>124</sup> As at April 2023, DCA and MAG were still undergoing their 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.<sup>125</sup> Two national operators at least were also operational in Ukraine in 2022, Demining Solutions and the UDA.

By December 2022, Ukraine was reported to have more than 200 demining teams of more than 1,000 personnel, and planned to expand to 400 teams of 2,000 personnel in 2023.<sup>126</sup> This is nearly four-times the capacity of that Ukraine had in 2020.<sup>127</sup> 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.<sup>128</sup> Work is underway to increase the capacity of Ukraine's national operators under the MoD to an estimated number of 5,000 personnel.<sup>129</sup> 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.<sup>130</sup>

112 Emails from Gianluca Maspoli, GICHD, 25 September 2018; and Mijenko Vahtarić, OSCE PCU, 25 September 2018; and Interview with Mijenko Vahtarić, OSCE PCU, 7 February 2019.

113 Email from GICHD, 19 April 2023.

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

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

116 Ibid. DRC, 7 February 2022.

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

118 Email from GICHD, 19 April 2023.

119 Ibid., 26 May 2023.

120 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.

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

122 Email from Tony Connell, FSD, 26 June 2023.

123 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 GICHD, 17 June 2022.

124 2020 Article 5 deadline Extension Request; and Article 7 Report (covering 2018), Form F.

125 Email from Amela Balic, NPA, 29 June 2023.

126 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/3KfXzJ>.

127 2020 Article 5 deadline Extension Request.

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

129 2023 APMBC Article 5 deadline Extension Request, p. 3.

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

**Table 2: Operational clearance capacities deployed in 2022<sup>131</sup>**

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 MV4 and 1 MV10 awaiting accreditation.
Demining Solutions	1	7	0	0	
<b>Totals</b>	<b>61</b>	<b>421</b>	<b>0</b>	<b>8</b>	

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

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 remained the same as in 2021. Thanks to secured donor funding, DRC expected to deploy six additional clearance teams and four additional non-technical survey teams in 2023.<sup>132</sup>

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 was concentrated around 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 the middle of August. In early November 2022, FSD was the first international organisation to have NTS, BAC, and EORE teams 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.<sup>133</sup> As at April 2023, FSD had around 100 staff

working in the oblasts of Chernihiv, Kharkiv, and Mykolaiv.<sup>134</sup> FSD's operational capacity consisted of eight specialised BAC teams, three mechanical clearance teams, three NTS teams, and four risk education 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.<sup>135</sup> FSD sadly lost a staff member during the conflict and lost contact with one other. Both incidents occurred while the staff were off-duty.<sup>136</sup>

ITF Enhancing Human Security has partnered with Safe Path Group, a Ukrainian NGO, to identify the location of explosive ordnance 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.<sup>137</sup>

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

<sup>131</sup> Emails from Roxana-Cristina Bobolicu, DRC, 1 April 2023; and Denys Holovetskyi, HALO, 29 May 2023.

<sup>132</sup> Email from Roxana-Cristina Bobolicu, DRC, 1 April 2023.

<sup>133</sup> Emails from Tony Connell, FSD, 24 March and 26 July 2023.

<sup>134</sup> FSD "Demining in Ukraine: the race against time", FSD website, accessed 24 April 2023 at: <https://bit.ly/41x5i9r>.

<sup>135</sup> 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.

<sup>136</sup> Email from Tony Connell, FSD, 24 March 2023.

<sup>137</sup> ITF, "Annual Report 2022", at: <https://bit.ly/3o5uIM0>, p. 94.

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.<sup>138</sup>

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, consisting of 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. With respect to clearance team, HALO operated with 10 manual teams consisting of 70 employees 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 nine members (a total of 304 personnel excluding drivers and team leaders), one mechanical clearance team of three personnel, and 18 personnel for mechanical clearance support across five teams.<sup>139</sup>

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 middle of summer 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, with a total of over 1200 operational staff members.<sup>140</sup>

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 it more effective.<sup>141</sup>

MAG had operational community liaison teams in 2022, but it did not engage in any survey or clearance activities as its teams were not yet certified. MAG expected a significant increase in capacity in 2023 as recruitment was ongoing for community liaison, NTS, mine clearance, and mechanical teams.<sup>142</sup>

## 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.<sup>143</sup> Three SESU personnel were killed on 24 December 2022 as a mine exploded while they were demining in Kherson region.<sup>144</sup> Another SESU team came under attack 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.<sup>145</sup>

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

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

140 Ibid.

141 Ibid.

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

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

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

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

## LAND RELEASE OUTPUTS AND PROGRESS TOWARDS COMPLETION

### LAND RELEASE OUTPUTS IN 2022

None of the international operators released any cluster munition-contaminated area through survey in 2022, as in the previous three years.<sup>146</sup> HALO cleared 325,483m<sup>2</sup> of cluster munition-contaminated area in Kyiv oblast in 2022, destroying in the process 70 submunitions, 1 anti-vehicle mine, and 81 items of UXO in the process.<sup>147</sup> Of the 17 tasks cleared by HALO (see Table 3 below), NTS suggested that five contained only CMR, six had a mixed CMR and anti-personnel mine threat, and the other six tasks contained a mix of CMR, anti-vehicle mines, and UXO. All the items found by HALO were reported to SESU for removal or *in situ* destruction as operators do not yet have the permission to use or move explosives.<sup>148</sup>

A total of 2.2km<sup>2</sup> of previously unrecorded CMR contamination was discovered and added to the IMSMA database in Ukraine in 2022, of which, DRC has identified 0.14km<sup>2</sup> across three CHAs and one SHA, and HALO 2.06km<sup>2</sup> in Kyiv and Chernihiv oblasts.<sup>149</sup>

Table 3: CMR clearance by HALO in 2022<sup>150</sup>

Oblast	District	Sub-district	Locality	Area cleared (m <sup>2</sup> )	Submunitions destroyed	Other UXO destroyed
Chernihivska	Baryshivska	Talalaivska	Velyka Doroha	2,740	0	10
Kyivska	Brovarskyi	Velykodymerska	Hrebelky	2,507	0	0
Kyivska	Buchanskyi	Makarivska	Andriivka	622	0	0
Kyivska	Brovarskyi	Baryshivska	Lukianivka	19,600	44	0
Kyivska	Brovarskyi	Baryshivska	Lukianivka	5,533	9	0
Kyivska	Brovarskyi	Baryshivska	Lukianivka	5,580	16	0
Kyivska	Brovarskyi	Baryshivska	Peremoha	7,069	1	0
Kyivska	Buchanskyi	Nemishaivska	Nemishaieve	178,557	0	53
Kyivska	Buchanskyi	Dmytrivska	Myla	70,067	0	0
Kyivska	Buchanskyi	Makarivska	Andriivka	731	0	9
Kyivska	Buchanskyi	Borodianska	Dmytrivka	2,844	0	9
Kyivska	Buchanskyi	Borodianska	Dmytrivka	4	0	0
Kyivska	Buchanskyi	Makarivska	Korolivka	2,734	0	0
Kyivska	Buchanskyi	Makarivska	Lypivka	394	0	0
Kyivska	Buchanskyi	Makarivska	Lypivka	11,359	0	0
Kyivska	Baryshivska	Velykodymerska	Zalissia	11,503	0	0
Kyivska	Buchanskyi	Makarivska	Makovyshche	3,639	0	0
<b>Totals</b>				<b>325,483</b>	<b>70</b>	<b>81</b>

<sup>146</sup> Emails from Roxana-Cristina Boboticu, DRC, 1 April 2023; Nick Guest, MAG, 23 March 2023; Alberto Rinaldo Serra, NPA, 15 March 2023, Tony Connell, FSD, 24 March 2023 and 24 March 2021; Almedina Musić, DRC, 7 February 2022 and 20 April 2021; Imogen Churchill, HALO, 23 March 2022; and Ronan Shenhav, HALO, 20 April 2021.

<sup>147</sup> Email from Denys Holovetskyi, HALO, 29 May 2023

<sup>148</sup> Ibid.

<sup>149</sup> Emails from Roxana-Cristina Boboticu, DRC, 1 April 2023; and Denys Holovetskyi, HALO, 29 May 2023.

<sup>150</sup> Email from Denys Holovetskyi, HALO, 29 May 2023.

DRC focused its operations from cancellation to defining new hazardous areas in 2022. DRC cleared 0.16km<sup>2</sup> of land in 2022 in Kyiv and Chernihiv Oblasts. This was new contamination resulting from the 2022 conflict. Items found during clearance included 64 UXO and 52 AXO. DRC also found 58 items of UXO during NTS. In total, 174 items of UXO were found by DRC in 2022, none of which was a submunition.<sup>151</sup>

FSD has located more than 1,200 explosive devices since February 2022 none of which was CMR.<sup>152</sup> According to SESU, a total of 773.6km<sup>2</sup> were reportedly released and 311,593 items of UXO, including submunitions and landmines were destroyed between 24 February 2022 and 2 January 2023.<sup>153</sup> As at February 2023, the Ukrainian authorities report that they have already located, recorded, and removed over 305,000 mines and explosive devices.<sup>154</sup> In Kharkiv region alone, SESU reported having removed 50,000 items of explosive ordnance.<sup>155</sup> The disaggregation by type of ordnance is not known.

The SESU has been clearing explosive ordnance contamination continuously or shortly after munition use. Between 2019 and 9 May 2023, Ukraine claimed to have cleared 1,020km<sup>2</sup> of land, disposing in the process of 45,791 explosive devices.<sup>156</sup> This claim is better understood as land release.

## PROGRESS TOWARDS COMPLETION

No target date has been set for the completion of CMR clearance in Ukraine, nor is it realistic to expect one for the foreseeable future given the ongoing hostilities. In addition to what is being cleared by international operators, substantial CMR clearance is being undertaken by the MoD and the SESU, some of which is conducted immediately after the contamination has occurred. The clearance conducted by Ukrainian national bodies was not reported. The 2022 conflict has certainly resulted in new and large-scale contamination. While initial estimates project a timeline of anything between five and twenty years to complete the CMR clearance, these remain pure speculation until Ukraine has conducted a national survey to assess the scale and nature of its new contamination.<sup>157</sup>

For its part, Russia has obligations under international human rights law to clear CMR as soon as possible, in particular by virtue of its duty to protect the right to life of every person under its jurisdiction, which pertains to any areas of Ukraine over which it exercises effective control.

151 Ibid.

152 Email from Tony Connell, FSD, 24 March 2023, and "Demining in Ukraine: the race against time", FSD website, accessed on 24 April 2023, at: <https://bit.ly/41x5i9r>.

153 State Security Service of Ukraine (SESU) website, 2 January 2023, accessed on 22 June 2023, at: <https://bit.ly/3GcP3oK>.

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

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

156 2023 APMBC Article 5 deadline Extension Request, p. 1.

157 Online presentation by Hannah Rose Holloway, DRC, CCM Intersessional Meeting, Geneva, 16 May 2022.